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BECOMING ATTACHED

BY ROBERT KAREN

The struggle to understand the infant-mother bond ranks as one of the great quests of modern psychology—one that touches us deeply, because it holds so many clues to how we became who we are. I have a friend who does not want to be a father, because he fears he will be as emotionally stingy with his child as his mother was with him. This dread, that our character mirrors one of our parents', is very common, and the terrible certainty some of us have that we will re-enact the worst aspects of our upbringing with our own children is not only widespread but seems distressingly well founded. The abused child does indeed often become the child-abuser, and evidence suggests that many other behavioral and emotional tendencies are passed down through the generations.

Theories to explain this unwanted inheritance are plentiful. But scientifically verifiable explanations have been elusive. Indeed, until the past two decades nothing could be said with scientific authority about almost any dimension of the mother-child bond, let alone how aspects of relatedness, good or bad, are transmitted. The multitude of voices confuses not only parents but also the judges and government agencies that make decisions about young lives.

What do children need, at a minimum, in order to feel that the world of people is a positive place and that they themselves have value? What experiences in infancy will enable them to feel confident enough to explore, to develop healthy peer relations, to rebound from adversity? What custody or foster-care arrangements will best serve their emotional needs if the family should dissolve, and at what point do we decide that a neglectful or abusive mother is worse than a kind stranger? Which of us are at risk of being parents who will raise insecure children, and what can be done to minimize that risk? These are all questions of huge theoretical and practical interest.

Today, with mothers spending less time at home, with families falling apart and being reshaped in

new combinations, and with debates raging about the emotional needs of schoolchildren and the advantages and disadvantages of day care, understanding all this seems more urgent than ever. One group of researchers and clinicians, known as attachment theorists, claim that they've discovered some answers and are on the road to finding the rest. But although they've dazzled many of their peers, altering some of our most basic attitudes toward early child care, their contributions have frequently met with skepticism, opposition, or rebuke.

In 1958 Harry Harlow reported a study that every student now learns of in Introductory Psych. Inspired by the pioneering work of the psychoanalyst Rene Spitz, who had shown that infants raised in foundling homes without handling or loving attention withered away and often died, Harlow, an animal-learning theorist, devised an experiment with rhesus monkeys. He took infant monkeys from their mothers shortly after birth and raised them with two surrogate "mothers" one made of wire mesh, the other covered with terry cloth. Either "mother" could be equipped with a feeding nipple. Even when the wire "mother" was the only one providing food, the infant monkeys became more attached to the terry-cloth "mother," cuddling it, running to it when frightened, and using it as a base (or explorations). The experiment appeared to disprove the assumption, common among both Freudian and social learning theorists, that infant attachment to mother is mainly a function of feeding. To rhesus infants at least, warm contact seemed more important.

As persuasive as Harlow's study was, experiments with monkeys can tell us nothing definitive about human attachment. And given the restrictions on what a researcher can do with human subjects, a more conclusive statement on the infant-mother bond seemed unlikely.

But a decade after Harlow began putting infant monkeys through a variety of extreme deprivations in order to capture the essentials of mothering, Mary

Ainsworth, with much the same goal, was conducting experimental observations of human babies in a Baltimore lab. Using a technique called the Strange Situation, Ainsworth embarked upon a longitudinal study of attachment during the infants' first year. In an approach that was extremely unusual at the time, researchers closely observed mothers and children in their homes, paying careful attention to each mother's style of responding to her infant in a number of fundamental areas: feeding, crying, cuddling, eye contact, and smiling. At twelve months the infant and his mother taken to the lab and the infant was observed as the mother was separated from him. During two intervals a stranger was in the room; during another the baby was alone.

Ainsworth spotted three distinct patterns in the babies' reactions. One group of infants protested or cried on separation, but when the mother returned, they greeted her with pleasure, frequently stretching out their arms to be picked up and molding to her body. They were relatively easy to console. Ainsworth labeled this group "securely attached."

She labeled the other two groups "insecurely" or "anxiously" attached. One group of anxious babies, called "ambivalent," tended to be clingy from the beginning and afraid to explore the room on their own. They became terribly anxious and agitated upon separation, often crying profusely. An ambivalent baby typically sought contact with his mother when she returned, but simultaneously arched away from her angrily, resisting all efforts to be soothed.

The second group, called "avoidant," gave the impression of independence. They explored the new environment without using their mothers as a base, and they didn't turn around to be certain of their mothers' presence, as those labeled securely attached did. When the mother left, the avoidant infant didn't seem affected. And on her return he snubbed or avoided her.

Without the painstaking observation that had come before, Ainsworth's findings would have been relatively insignificant, no more than a demonstration that babies reacted differently when separated from and reunited with their mothers. But because Ainsworth's team had observed each of these mother-child pairs for seventy-two hours over the prior year, they were able to make specific associations between the babies' attachment styles and the mothers' styles of parenting. Mothers of securely attached children were found to be more responsive to the feeding signals and the crying of their infants, and to readily return the infant's smiles. Mothers of

anxiously attached children were inconsistent, unresponsive, or rejecting. The three patterns seen in laboratory observation proved directly related to the way the babies were being raised.

The importance of the Strange Situation was not immediately apparent when Ainsworth's article describing her research was published, in 1969. But her findings marked the beginning of a critical shift in perceptions about infancy and child rearing, set in motion a prolonged debate that divides infancy researchers to this day, and signaled a revolution in the field of developmental psychology—the branch of psychology that studies the processes by which we progress from infancy to adulthood. Before Ainsworth, numerous methods had been devised to measure conceptual and cognitive development. Many of them had been introduced by the Swiss psychologist Jean Piaget, who showed the steps by which a child's mind grasps the complexity of his world. But almost no procedures were available for assessing or measuring an infant's social and emotional development — certainly none at this level of complexity. Although real-life experiences were widely assumed to shape personality, no one had been able to demonstrate exactly which experiences mattered. Ainsworth, at a stroke, changed all that, and in subsequent research she and her followers laid siege to much of the received wisdom of the field, offering new explanations of how our inner world is developed and organized and what all this means in terms of security, personality, and future relationships.

In succeeding studies attachment researchers found that without intervention or changes in family circumstances, attachment patterns (formed in infancy) persist. At age two, insecurely attached children tend to lack self reliance and show little enthusiasm for problem solving. At three and a half to five years, according to their teachers, they are often problem kids, with poor peer relations and little resilience. At six, they tend to display hopelessness in response to imagined separations. Reliable, statistically verifiable information like this—about what infants need in order to feel secure and how they are likely to feel and behave in later years if they don't get it—had never before been available.

Parents, too, were examined. Mary Main, a former student of Ainsworth's and now a professor at the University of California, Berkeley, found that the way parents remember and organize their own childhood experiences is a powerful predictor of which attachment group their children will fall into. This was the first research bolt to show intergenera-

tional transmission of secure and insecure attachment and to attempt to distinguish between adults who have retained the negative legacy of their childhood and those who have worked through it.

Questions about child-rearing that had only been speculated about could now be answered with greater authority. For years mothers had been warned against picking up their babies when they cried. It seemed contrary in nature and intuition, but behavioral theory asserted that picking up the child reinforced the crying, and if you did it enough you'd have a monstrous crybaby on your hand. Attachment research seems to have disproved this, at least as a general principle.

Ainsworth's central premise was that the responsive mother provides a secure base. The infant needs to know that his primary caregiver is steady, dependable, there for him. (Throughout this article, for simplicity's sake, I'll refer to the primary caregiver as the mother-though fathers and nonrelated adults can also be primary caregivers-and I'll use the male pronoun for the infant.) Fortified with the knowledge of his mother's availability, the child is able to go forth and explore the world. Lacking it, he is insecure, and his exploratory behavior is stunted. This was an astonishing assertion in the behaviorist-dominated atmosphere of the late 1960s, when most experts warned against spoiling children with too much responsiveness.

Warm, sensitive care, Ainsworth insisted, does not create dependency; it liberates, and enables autonomy. "It's a good thing to give a baby and a young child physical contact," she says, "especially when they want it and seek it. It doesn't spoil them. It doesn't make them clingy. It doesn't make them addicted to being held."

To many mothers, Ainsworth's prescriptions seem as natural as maternity itself. (Of course you pick up your baby when he cries!) But as pleasing as it is to discover that psychology is catching up to intuition-finding that little children do indeed need nurturing and consistency, that the way you are with your baby will profoundly affect his personality development, that what happens to him when he's little will influence what he becomes later-it is equally displeasing to encounter a body of evidence suggesting that you yourself have been or aren't or won't be doing it right. Attachment theory, which seems implicitly to advocate a stay-at-home role for the mother, has thus provoked both rage and enchantment.

The day-care issue has been the most explosive (see "Babes in Day Care," by Ellen Ruppel Shell, August, 1988, Atlantic). Attachment-theory proponents tend to see full-time day care in the first year as a risk, and Jay Belsky, an attachment researcher at Pennsylvania State University, has voiced the concern that if you put your baby in substitute care for more than twenty hours a week, you are running a serious risk of his becoming anxiously attached-which could skew his subsequent efforts to relate to the outside world. Such assertions, needless to say, have drawn heavy fire, and bristle with political implications.

In twenty years of Strange Situation research, stable middle-class American homes have consistently produced babies of whom about two thirds are securely attached and one third are insecurely attached. As these numbers suggest, being securely attached hardly ensures that babies will grow up free of neuroses or even of insecurities. It means only that they have been given confidence that someone will be there for them and that they are thus at least minimally capable of forming satisfying relationships and of passing on that ability to their children. But in unstable homes, where parents, often single, are under great stress, and where neglect or abuse is more common, this minimal bulwark is often missing and the numbers of insecure children swell. Larry Aber, the director of the Barnard Center for Toddler Development, at Columbia University, estimates that of the 100,000 four-year-olds in New York City today, as many as half may be insecurely attached. He believes that we need "dramatic preventive measures" to help these children and expects that attachment research will make its most important clinical contribution in the search for such measures. Other experts would reject both ends of this assertion.

The controversy adds urgency to the question of whether attachment principles can be justly claimed to have scientific validity. Resistance has certainly been vigorous among classical analysts, behaviorists, and those who favor a genetic view. Jerome Kagan, a developmental psychologist at Harvard, believes that the Strange Situation is not a reliable measure, and thus that much of attachment thinking is flawed. "Ainsworth had a very small sample," Kagan says; "it was restricted in variety; it's certainly not enough to build a theory on." Besides, he asks, can we really expect six minutes of reunion behavior in an unfamiliar room to reveal an emotional history between parent and child "comprising over a half-million minutes in the home"?

Friendlier critics are concerned about a reductionist tendency to assume that quality of attachment is all-important. They argue that other aspects of parenting, such as teaching, playing, and having fun, may go well even if attachment goes poorly. Others believe that in focusing so much on the primary caregiver, which usually means the mother, attachment theory has not paid adequate attention to the father's role.

Nevertheless, leading psychoanalytically oriented infancy researchers, such as Daniel Stern and Stanley Greenspan, acknowledge that attachment theory has filled in a piece of the puzzle. "It's too early to say how big a piece," Stern says, "but it's certainly a piece, and it's a nice piece." Psychotherapists are finding that familiarity with attachment concepts is helping them in their work with patients. "My training in the attachment interview," says Ariette Slade, of New York's City University, "has dramatically changed the way I listen to how patients talk." And attachment concepts have increasingly influenced the advice that baby doctors give both parents and lawmakers. T. Berry Brazelton, a famed Boston pediatrician who has popularized his own brand of attachment theory, says, "My whole thinking has been based on it."

Attachment theory was itself born of three unlikely parents: ethology, developmental psychology, and psychoanalysis—disciplines that have not traditionally troubled themselves with one another's findings. But in 1951 the biologist Sir Julian Huxley began talking ethology to John Bowlby the British psychoanalyst who originated attachment theory. Huxley urged Bowlby to read Konrad Lorenz, considered the father of modern ethology particularly Lorenz's work on imprinting in newborn goslings, a phenomenon by which the infant birds attach themselves to the first moving object they see. Bowlby did so and became imprinted himself.

Captivated by ethological ideas, Bowlby now had a biological basis for his belief that a child needs a reliable ongoing attachment to a primary caregiver and that he suffers grievously, even irreparably, if that attachment is interrupted or lost. He developed the concept of "internal working models" to describe how the infant's sense of self and other unfolds through interactions with that primary caregiver. A brilliant synthesizer, Bowlby was the first theorist to exhaustively combine cognitive and emotional development, to build a bridge between Mahler and Freud. Having written the three-volume work *Attachment and Loss*, he is the uncontested father of the movement. But Mary Salter Ains-

worth's Strange Situation put attachment theory on the map, by providing empirical evidence for a number of conclusions that until then had only been intuited. She made the bridge from Piaget to Freud sturdy enough for half the field of developmental psychology to traverse. "Our whole developmental approach was cognitive until she came along," Brazelton says, referring to the pre-Ainsworth emphasis on such functions as perception, memory, and abstraction. "She enabled psychology to look at the emotional development of children in a reliable, quantifiable way." Says Bowlby, "Her work has been indispensable. It's difficult to know what might have happened otherwise."

Ainsworth, now seventy-six, lives in semi-retirement in a suburban home near the University of Virginia in Charlottesville, where she taught for many years. "The fact that the Strange Situation was not in the home environment, that it was in the lab, really helped," she says with a laugh. "I only did it as an adjunct to my naturalistic research, but it was the thing that everyone could accept somehow. It was so demonstrable."

A bright-eyed woman whose short brown hair, is streaked with white and blond, Ainsworth has a face that changes gently from intellectual delight to feisty engagement to shy vulnerability. In discussing her work she reveals both pride and modesty, and an uncommon willingness to credit others. The penetrating gaze she trains on an interviewer is suggestive of her years as a teacher and a clinician.

Although she never had children of her own, Ainsworth is the matriarch of a far-flung but close-knit family of attachment researchers and theorists, many of whom have been intellectually nurtured by her since their graduate-school days and still see her as a guiding force in their work. They, in turn, have helped make her one of the biggest names in developmental psychology since Piaget. Ainsworth is all but unknown to the public (and to many psychoanalysts and psychiatrists, who tend to be unfamiliar with trends in developmental psychology), and yet her fame in the world of infant development exceeds that of John Bowlby himself.

"I've always said that if there were a Nobel Prize for this kind of thing, she would get it," says Alan Sroufe, of the Institute of Child Development at the University of Minnesota. "When I went to school, I was taught that only behaviors were real, not relationships—they didn't exist. Ainsworth demonstrated that there can be a psychology of relationships and that relationships can be measured. That's why you

get Nobel Prizes, isn't it?"

The Search for a Theory of Relatedness

By 1950, when Ainsworth and Bowlby first met, many researchers had grown dissatisfied with the lack of attention paid by classical analysis to the influences of relationships, especially in early life. It wasn't that Freud ignored relationships or failed to see that the way one was raised would influence one's emotional well-being. But after discarding his trauma (or "seduction") theory about the origin of neurosis, he came to place more and more emphasis on the unconscious workings of the individual psyche and the instincts or "drives" that motivate it. Classical analysts retained this tight focus—often ignoring Freud's speculative thoughts in other directions—and in their writings the nature of the patient's relationships, past or present, often seemed incidental.

But Freud wasn't even in his grave before new schools of thought were generating new questions about our first relationships and their lasting impact on us. Soon interpersonal and social theorists, family-systems theorists, and object-relations theorists (in psychoanalysis the unfortunate word object usually means "person") were all struggling over the relational ground left uncharted by the classical Freudian model.

When, at sixteen, Ainsworth (then Mary Salter) entered the University of Toronto, in 1929, she quickly found that her first mentor, William Blatz, had his own ideas about relatedness. The subject matter of Blatz's abnormal-psychology class consisted almost entirely of his "security theory," and, troubled by insecurity herself, she was drawn to it. "I was impressed with his idea that the child derives security from being near his parents," Ainsworth says. "That security enables him to move out to explore his world, to learn about it, and to acquire the skills to master what he encounters out there. I don't remember if he called that 'using the parent as a secure base from which to explore the world, but that is how I finally came to phrase it.'"

Ainsworth recalls Toronto's psychology department as being imbued with a messianic feeling, one that she quickly came to share, and retains to this day: that the science of psychology could be used to improve the quality of human life fundamentally. She became a psychology major, did her doctoral dissertation on Blatz's security theory, and in 1939 became a lecturer at the university, before doing a three-year stint as an army major in charge of per-

sonnel selection during the Second World War. In 1946 she returned to the University of Toronto, where she and Blatz co-directed a team studying security in various aspects of adult life. She also began training as a diagnostician during those years, and later co-authored a volume on ink-blot technique with Bruno Klopfer, the leading Rorschach interpreter of the day.

Blessed with a quick mind and a keen eye, the young psychologist was a brilliant and eager researcher. But she had neither the hunger nor the disposition of a scientist on the make. Although intellectually tough, interpersonally she was often softer. In 1950, when she married Len Ainsworth, who was younger than she and had recently completed his masters degree in psychology, she readily dropped her work in favor of his education. "It didn't seem like a good idea for Len to remain at the U of T for his Ph.D. so we went to England. He got admitted to University College, London, and I went along."

If Ainsworth did not have destiny writ large in her features, the man who placed the help-wanted ad that she answered in the London *Times* did. Bowlby had opinions, determination, and presence. Ainsworth's four years with him and his small team would alter the course of her career. She was taken not only with his ideas but also with his formidable and secure personality. "He made no bones about the fact that he was single-handedly fighting the analytic establishment, that it pained him some, but that he was convinced he was on the right track. It was a long time before I felt any sense of getting close to him or being a friend. But I had no difficulty whatsoever making him into a surrogate father figure—even though he's not much older than I."

During that first interview Ainsworth and Bowlby discovered that their interests coincided to a remarkable degree. It was the beginning of a professional marriage that would prove as fruitful and enduring as any in the history of psychology.

Bowlby

Seven years her senior, John Bowlby had already made a name for himself with the publication of *Forty - four Juvenile Thieves* which noted the high proportion of delinquent boys who had suffered early maternal separations. He was now at work on a report to the World Health Organization on the mental health of homeless children, who were a big problem in the postwar years. Published in 1951, *Maternal Care and Mental Health* warned against separating children from their mothers—even mothers

who were untidy and neglectful. It asserted that children suffering maternal deprivation are at increased risk for physical and mental illness, and that even a clean, well-meaning, and well-run institution-unless it somehow provided a true maternal substitute-was unlikely to save a small child from being irreversibly damaged by the age of three.

During the late thirties Bowlby was supervised in child treatment by Melanie Klein, a brilliant and original Vienna-born analyst and the inventor of psychoanalytic play therapy, who had won a large following in England after arriving there in 1926. One of the first avowed object-relations theorists and a giant in the field to this day, Klein is also remembered by some for being eccentric, devious, and nasty.

"I trained with the Kleinians," says Bowlby, eighty-three, a soft-featured man with bushy white eyebrows, thinning white hair, and a proper, somewhat detached upper-class bearing. "But I parted company with them, because I held that real-life events-the way parents treat a child-are of key importance in determining development, and Melanie Klein would have none of it. The object relations that she was talking about were entirely internal relationships"-that is, fantasy. "The notion that internal relationships reflect external relationships was totally missing from her thinking."

The very first case in which Klein supervised Bowlby, in the spring of 1938, set the tone. "I was seeing a small hyperactive boy five days a week. He was anxious, in and out of the room, all over the place. His mother used to bring him, and her job was to sit in the waiting room and take him home again. She was an extremely anxious, distressed woman, who was wringing her hands, in a very tense, unhappy state. But I was forbidden by Melanie Klein to talk to this poor woman."

In Bowlby's earlier work at the London Child Guidance Clinic, he says, "we were seeing parents as much as children and dealing, so far as we could, with parents' emotional problems, an approach that has become widespread today. But Klein was a purist and insisted that he see only the child.

"Well, I found this a rather painful situation, really. After three months the news reached me that the mother had been taken to a mental hospital, which didn't surprise me. And when I came to report this to Melanie Klein, her attitude was "What a nuisance-we shall have to find another case." The fact that this poor woman had a breakdown was of no clinical interest to her whatever; it might have been

the man in the moon who was bringing this boy. So this horrified me, to be quite frank. And from that point onwards, my mission in life was to demonstrate that real-life experiences have a very important effect on, development."

When a goose or a duck is born, it attaches itself to the first moving object it sees. Almost invariably that will be its mother; although if a human scientist elbows his way in) view first, the gosling or duckling will become hopelessly attached to him and follow him everywhere. Other instincts can similarly be distorted, or fail to develop at all, depending on what the young animal encounters or fails to encounter in its environment. We know this and many other facts about the bonding behavior of birds and mammals, thanks to the work of ethologists like Konrad Lorenz and Niko Tinbergen. While Ainsworth was in London, Bowlby became, as he puts it, "addicted" to the work of these men. He immediately sensed that human beings, too, must have such bonding behaviors and intergenerational cues, that they, too, must be predisposed toward some sort of relational experience, and that with them, too, nature's intentions could go awry-as they obviously had with that hyperactive boy-if the environment failed them.

"I mean, talk about *eureka*," he says. "They were brilliant, first-class scientists, brilliant observers, and studying family relationships in other species-relationships which were obviously analogous with those of human beings-and doing it so frightfully well. We were fumbling around in the dark; they were already in brilliant sunshine."

In addition to suggesting improved strategies of investigation, ethology gave Bowlby an explanation: separations from the mother are disastrous developmentally because they thwart an instinctual need. Bowlby soon declared that clinging, sucking, and following are all part of the child's instinctual repertoire, and that the goal of these behaviors is precisely to keep the mother close by. He saw the child's smile as a "social releaser" that elicits maternal care. And he abandoned the Freudian notion of drives, arising out of hidden forces like libido and aggression, which accumulate within us and crave discharge. Instead, Bowlby saw an array of innate behavior patterns-relationship-seeking patterns like smiling, babbling, looking, and listening-that are enriched and developed by the responses they call forth from the environment.

Bowlby proceeded to define a series of developmental stages based on the maternal bond. During

the first year the child is gradually able to display a complete range of "attachment behaviors," protesting his mother's departure, greeting her return, clinging when frightened, following when able. Such actions are instinctual and rooted in the biological fact that proximity to one's mother is satisfying, because it is essential to survival. The establishment, maintenance, and renewal of that proximity begets feelings of love, security, and joy. A lasting or untimely disruption brings on anxiety, grief, and depression.

Both Melanie Klein and Anna Freud, the rival doyennes of British psychoanalysis, found the analytic-ethological concoction Bowlby was brewing distasteful, and they let their followers know it. Analytic critics charged him with, among other things, gross simplification of psychological theory; assuming that all pathology results from disturbances of the infant-mother bond (when it was well known that early medical and environmental traumas could equally be at fault), and overlooking the infant's ability to develop a negative concept of his mother on wholly irrational grounds—such as a failure to relieve his suffering despite her best efforts, or the arrival of a new sibling, which can bring forth intolerable feelings of abandonment, rage, and guilt. The debate was bitter, even though the participants were largely in the same camp, all of them psychoanalysts who accepted basic analytic principles. Even Rene Spitz, whose work on institutionalized children Bowlby respectfully cited, joined the public scolding.

Bowlby did find some fellow analysts at least cordial to his views. Most closely kindred was D. W. Winnicott, a pediatrician turned psychoanalyst who had attained great stature as a theorist and was also the British equivalent of Dr. Spock. Winnicott too, had taken strong positions, some of them pre-dating Bowlby's on both the centrality of the infant-mother bond and the critical importance of the quality of mothering. His ideological proximity, although expressed in different language, gave Bowlby some comfort during this time.

But regardless of whether Bowlby's radical restructuring of psychoanalytic concepts was correct, he had plainly found a hole in analytic theory. For however closely attuned psychoanalysts had become in their practices to the impact of real life events and the ways in which parenting styles affect personality, their theories did not reflect it. In their writings psychoanalyses still focused mainly on the individual psyche and the workings of the unconscious in the average expectable environment. That was a big gap, and Bowlby was determined to fill it. He chose

to do so by studying separations in and disruptions of the parent-child relationship in the five years of life, "because I thought that was researchable." Such investigations became the focus of his little unit in the Tavistock Clinic.

Ainsworth's responsibility in Bowlby's unit was to analyze and make sense of an enormous quantity of data that his people had collected, and to determine the direction for future research. One of those whose material she reviewed was James Robertson, a social worker who died recently, in the age of seventy-seven. Robertson had been making detailed observations of young children who were being sent to the hospital, where, in the early 1950s, parents were allowed only very limited visits. Robertson's skillful observations captured the inconsolable agony and despair these separations created. When psychiatric experts insisted that no such trauma could have occurred, Robertson was infuriated. He decided to buy a camera and film the thing. His harrowing documentary, *A Two Year Old Goes to Hospital*, about little Laura's eight-day separation from her parents, was influential in changing hospital practice to allow parents to make routine visits and to stay the night with their hospitalized children.

"It was Jimmy's work I most admired," says Ainsworth, who spent many hours wrestling Robertson raw data into theory. "In studying separation he got acquainted with the families before the child was separated; he did observations of their behavior during the separation, and followed them when they came home. And I made up my mind that whenever I went elsewhere and could start a project, it would be a study of this sort—direct observation in the natural environment—that is what I did in Uganda."

Ainsworth's Home Studies

In 1954 Ainsworth followed her husband to Uganda, where she launched one of the pioneering studies in modern infant research. With no lab, with meager institutional support, with no help in collecting or analyzing the data, accompanied only by her interpreter, she rounded up twenty-eight unweaned babies from several villages near Kampala and began observing them in their homes, using the careful, naturalistic techniques that Lorenz and Tinbergen had applied to goslings and stickleback fish. It was a happy time for her. She loved doing research, and she loved the contact with babies, which her own marriage had failed to produce.

Ainsworth immediately felt that Bowlby had been right. A baby is not a passive-recipient creature

who becomes attached to his mother because she satisfies his needs. "These were very active babies. They went after what they wanted. I began to see certain behaviors that indicated that the baby was becoming attached, and I was able to list them in chronological order of appearance. There was, for instance, the differential stopping of crying. The mother picked up the baby, the baby would stop crying, but if somebody else cried to pick him up at that point, he would continue to cry. Differential smiling. Differential vocalizations. I began to see different situations, where attachment to the mother could be spotted; and you could differentiate an attachment figure from some other person, even a familiar person."

Ainsworth classified the twenty-eight Ganda babies she saw as secure, insecure, or nonattached (a category she would later discard), and created some crude scales to rate the degree of sensitivity and responsiveness in the mother. These classifications and ratings would become much more refined in her next project.

For a third time Ainsworth changed countries to follow her husband—this time to Baltimore, where, within a few weeks, a teaching and clinical job was patched together for her at Johns Hopkins University. Seven years passed before she managed to start her next longitudinal study, during which Lime she divorced her husband and began her own analysis. The connection with Bowlby had grown thin, but when he visited her in 1960, just as her marriage was dissolving, she presented him with the findings that she eventually published as *Infancy in Uganda*. This was the only major study done outside his own unit offering empirical support for his theory. In terms of their relationship, Ainsworth says, "that made all the difference." Once his most capable adherent, she had become an equal colleague. In a few years she would be a partner.

"What I hoped to do in the Baltimore study was to replicate the Uganda research and make it more systematic. But now that I'd done one study, there were specific things I was curious to observe; I wasn't just letting the moving finger write on the blank slate anymore."

Backed by a solid research grant, Ainsworth got together a team of four observers to make 18 four-hour home visits to each of twenty-six families. Other researchers had observed infant-mother interaction in the lab—in one case, a lab that was fitted out to look just like a home. But to Ainsworth, a home in a lab was not the same as a real home.

"Just take feeding. In the home environment I could see how a mother responded to infant signals when she had a lot of other demands on her time, with the telephone and housekeeping and other kids. I saw one mother who was working very hard to put her six-week-old baby on three meals a day—and she was breast-feeding at that! She would say, 'I don't know why the baby's crying. He was fed at seven o'clock this morning'—it now being after twelve. She would pick it up and play with it very nicely for a while and then put it down, and it would cry again. She would dangle a rattle, she would do this, do that, she even gave it a bath one day to fill up the time till one o'clock, with the baby off and on screaming. You would never observe that type of thing in the lab."

Ainsworth and her colleagues acted like friends, not furniture-talking, helping, holding the babies, becoming part of the family—in order to encourage the mothers to act naturally. "To have somebody there for an extended period of time just watching and taking notes could be very tension-producing. Besides, I wanted to see whether the baby would smile at us, whether he would cuddle when we picked him up, and how the baby would behave with us in comparison with the mother." She was excited to find that the behaviors she'd identified as attachment behaviors in the Kampala infants were also abundantly evident in Baltimore, suggesting that babies everywhere speak the same attachment language.

If Ainsworth had stopped there, she would have produced another valuable pioneering study. But she had a problem in making a certain critical comparison between Ugandan and middle-class American babies. "I all along had this idea about a secure base. It was so conspicuous with the Ganda babies. If the mother was there, the kid would roam all around the room and explore things, looking back at her and maybe giving her a smile, but focusing most of his attention on the environment. And just as soon as the mother got up to leave the room, the chances were the baby would shriek and absolutely stop any kind of exploratory behavior.

"Now, the Ganda babies are used to having their mother with them all the time. Whereas the Baltimore babies come and go, come and go, and they were much less likely to cry when their mother left the room. So when they were happily exploring, it wasn't clear if it was because the mother was there or not."

For Ainsworth, these questions brought to mind a paper she had read in 1943 called "Young Children in an Insecure Situation," by Jean Arsenian, who had put babies into a playroom, some with their mothers and others by themselves. "Arsenian didn't talk about exploratory behavior, but she made it quite clear that the ones brought in with their mothers could take a constructive interest in the environment - while the others spent most of their time crying. I always remembered that

"So I thought, all right, if you do see the secure base phenomenon very clearly at home, that doesn't necessarily mean it doesn't exist. It could very well be different in a strange environment, such as Arsenian used. If I could bring the children into the university with their mothers, maybe I could see how they used the mother to explore." Thus the Strange Situation was born. New research by Harry Harlow, in which rhesus monkeys were able to explore a frightening new environment only when accompanied by their cloth "mothers," further confirmed her thinking.

"I thought, 'We'll have the mother and baby together in a strange environment with a lot of toys to invite exploration.' Then we'll introduce a stranger when the mother's still there, and see how the baby responds. Then we'll have a separation situation where the mother leaves the baby with the stranger. How does the baby respond to the departure? And when the mother returns, how does the baby respond to the reunion? But since the stranger was in the room during the first departure, maybe we'd better have an episode in which the mother leaves the baby entirely alone. Then we could see whether the return of the stranger lessens whatever distress has occurred. Finally, we'll have another reunion with the mother. We devised this thing in half an hour."

Ainsworth divided the twenty-three babies who went through the first Strange Situation into three main groups and eight subgroups, and, to her amazement, these categories have held up for twenty years and through studies of thousands of children.

"The thing that blew my mind was the avoidant response." The avoidant children, who seemed indifferent to their mothers' comings and goings, even to the point of snubbing them on reunion-who looked so extraordinarily independent-had appeared quite insecure in the home. They had cried and showed more separation distress than the secure babies. And they turned out to have mothers whom the observers had rated as interfering, rejecting, or neglectful.

Ainsworth noticed that in the Strange Situation these avoidant one-year-olds behaved like the older child who has had a long depriving separation and comes home and ignores his mother. "Here were these kids who had never had a serious separation behaving just that way." The avoidant response suggested that the infant and the older child were using the same coping defense. Further, it implied that Ainsworth had hit upon the thing that Bowlby had only dreamed of-a procedure to assess the effects not of drastic separations and loss but of the everyday details of parenting.

"I did not intend this as a way of assessing attachment," she says, "but it certainly wound up as that. We began to realize that it fit in with our impressions after seventy-two hours of observation in an amazing way. But instead of seventy-two hours of observation we could do a Strange Situation in twenty minutes."

In the history of psychology a great many procedures had been devised for assessing individuals, and new ways of diagnosing, describing, and categorizing them were repeatedly being developed-but no one before had come up with a method of assessing relatedness. And no one before had found a way to assess how styles of parenting contributed to individual differences. Through this ingenious project, capping years of research, Ainsworth had begun her revolution.

For the next twenty years Ainsworth would be occupied with the fallout from this work. Because she had made such a painstaking description of each infant-mother pair, the statistical analyses took years to work through. Meanwhile, she would be training others to use the Strange Situation technique, supervising new research, writing, teaching, and serving as the leader of a growing attachment community. Of the Baltimore study Ainsworth now says, "It turned out to be everything that I hoped it would be, and it has drawn together all the threads of my professional career. Each piece of data analysis we did, with very few exceptions, had some sort of bang to it. It was always such a pleasure to find things working out, and we had an awful lot of things work out." The constantly appearing evidence, meanwhile, constituted more raw material for Bowlby's grand synthesizing machine. It was fed into the three volumes of his *Attachment and Loss*, which made their way into publication from 1969 to 1982.

Years passed, however, before the importance of what Ainsworth had done became apparent. The Baltimore study had been conducted from 1963

through 1967, but its findings did not begin to appear in published form until 1969, and Ainsworth's book, *Patterns of Attachment*, was not completed until 1978. The Strange Situation procedure could not easily be learned from a manual; developmentalists had to go through training to master it. The longitudinal studies that Ainsworth's students conducted, which supported and extended her work, did not start seeing print until the late seventies. And beyond all that, scientists are cautious, new ideas are slow to catch on, and the attachment ideas turned out to be especially problematic for some, offending reigning theorists and threatening others by calling specific parenting styles into question. Even Bowlby took Ainsworth's work in stride at first. As he himself eventually said, "I hadn't yet seen the payoff."

The Payoff

I got interested in the field because I went to her lectures," says Inge Bretherton who was

A thirty-four-year-old undergraduate, returning to college after her children started elementary school, when she first heard Ainsworth speak, at Johns Hopkins, in 1969. "I thought, oh, here is somebody who's studying real children in real environments. Almost nobody else was doing that at the time. Back then everybody was a behaviorist. You couldn't talk about the inner life, so to speak, or the internal world. Not in developmental psychology. I had gone to lectures in Cambridge where every time the person talked about consciousness he made quotation marks in the air. That was the sort of climate in which all this developed."

Bretherton, now a leading attachment scholar who teaches psychology at the University of Wisconsin, was just one of many bright students Ainsworth began attracting at that time, people who would carry attachment work with them to other universities throughout the seventies and eighties.

Everett Waters was an undergraduate chemistry major at Johns Hopkins when he met Ainsworth, in 1971, and volunteered to help in her research. Waters, who now teaches at the State University of New York at Stony Brook, soon abandoned chemistry and in 1972 entered the University of Minnesota. There he met Alan Sroufe, a young assistant professor. Sroufe was intrigued by what Waters told him about Ainsworth's work, and before long the university was buzzing with attachment research. That Minnesota's Institute of Child Development, prestigious and centrist, had gotten into attachment was enormously helpful to Ainsworth, who needed the

support. Behavioral critics, as Bowlby puts it, were "clobbering her," much as conservative analysts had clobbered him.

Staunch opponents of psychoanalysis and any other theory that posits the existence of unconscious processes or structures of the mind, behaviorists believe that human actions are best understood in terms of environmental conditioning. Their studies had shown that if rewarded, a behavior increases in frequency; if punished, it diminishes. Surely, if Ainsworth's babies were crying or sitting quietly, those behaviors must have been reinforced in similar circumstances, the children must have been responding to familiar cues from their mothers, and Ainsworth must have misread her data. That infants may have built-in needs for certain kinds of relatedness, that they develop unconscious working models of self and other, which reflect in part how well their mothers tend to meet those needs, and that their behavior reflects such internal considerations were heresy in the American university of that time.

But the Strange Situation's value did not escape a handful of infancy researchers, who saw that they had been given an extraordinary tool, a Rosetta stone of sorts, with which they could decipher the traces of an infant's experience with his parents. Once they could do that, all sorts of questions previously confined to theoretical speculation were suddenly accessible to empirical study. In the coming years psychologists would use the Strange Situation - sporadically at first, then with greater frequency, and finally in a flood of empirical excitement to correlate attachment style with self-esteem, with cognitive abilities, with persistence in solving problems, with peer relations, with romantic love, with maternal depression, and with just about everything else that seemed relevant. The results would range from inconclusive to contradictory to stunningly consistent. No one would be more prolific in applying Ainsworth's techniques than Sroufe.

Sroufe, at forty-eight, is a soft-spoken and deliberate man with a commanding presence and a crusading ardor for the principles he believes in. Articulate, both in person and in print, he broke the ice for many developmentalists with his influential and widely reprinted 1977 article "Attachment as an organizational construct," which was co-authored by Waters. Sroufe's passion for Ainsworth's work derives partly from his own history of difficulties with the research methods that preceded hers.

"In the past," Sroufe explains, "developmental psychology thought there were two ways of doing

things you either counted discrete behaviors or you did global ratings. The problem with discrete behaviors is it takes a tremendous amount of observation to get anything that's worthwhile, and it's hard to know what they mean. To know that one mother picks up her kid more than another mother does, or that one child talks to other children more than a second child does—that may tell you something, but it probably doesn't."

Global ratings, on the other hand, allow an observer to use his own judgment: How sensitive is this mother? How sociable is that child? "But," Sroufe says, "global ratings have always had the reputation of being subjective and unreliable. People can't agree. Well, Ainsworth's methodology is neither of those.

"She has one scale called Cooperation and Interference. On the cooperative end the parents fit what they do to the child. They do things in a timely manner, they do things when the child is open to them, they don't do things at cross-purposes to the child. On the other end, interfering, the parent is coming in doing things when the child isn't ready. Ainsworth showed that mothers of babies who later are avoidant hold their babies as much as mothers of babies who later are secure. So if you just measure frequency of holding you get no difference. But there's one circumstance in which mothers of babies who are later avoidant do not hold them, and that's when the baby signals that it wanes in being held. So you could have counted a lot of holding and you would have gotten nothing."

Blessed with sophisticated facilities, a steady flow of cash from funding agencies, their own nursery on campus staffed by teachers trained to do their ratings, fleets of observers when needed, and summer camps equipped with remote cameras, the Minnesota researchers have been able to follow various samples of children from different socioeconomic strata, taking the initial attachment patterns described by Ainsworth and extending their implications to later and later periods of life.

They have found that two-year-olds assessed as secure at eighteen months were enthusiastic and persistent in solving easy tasks and effective in using mammal assistance when the tasks became more difficult. In contrast, their anxiously attached counterparts tended to be frustrated and whiny. They found that preschoolers who had been judged securely attached as infants were significantly more flexible, curious, socially competent, and self-reliant than their anxiously attached counterparts. The se-

curely attached children were more sympathetic to the distress of their peers. More assertive about what they wanted, and more likely to be leaders. Similar findings persisted through elementary school age.

Some of the most intriguing Minnesota material, much of it since confirmed by other studies, concerned avoidant kids. They have proved far less able to engage in fantasy play than securely attached children, and when they have engaged in such play, it has more often been characterized by irresolvable conflict. Children with histories of secure attachment tend to be neither victims nor exploiters when placed in pairs, but avoidant kids often victimize other insecurely attached children. Critics had claimed that infants labeled "avoidant" were simply more independent, but the fact that they grew up to be four-year-olds who sought contact with their teachers at a greater rate than securely attached children suggested otherwise. That they were frequently sullen or oppositional and not inclined to seek help when injured or disappointed, however, spoke poignantly of their avoidant patterns.

According to Sroufe many teachers react with tragic consistency when dealing with the three types of children. They tend to treat securely attached children in matter-of-fact, age appropriate ways; to excuse and infantilize the clingier ambivalent children; and to be controlling and angry with avoidant ones. "Whenever I see a teacher who looks as if she wants to pick a kid up by the shoulders and stuff him in the trash," Sroufe says, "I know that kid had an avoidant attachment history."

In following a sample of 180 children from poor homes, Sroufe and his colleague Byron Egeland have found that nurses' ratings of the mothers' interest in their new babies accurately predicted future quality of attachment. They have also discovered that a child's attachment classification can change, usually as a result of a major alteration in the mother's circumstances: for instance, a single mother's forming a stable partnership with a new man. That the first year's effects, though still assumed to be profound, are not necessarily indelible is a hopeful sign.

The 180 Minnesota children are now heading into adolescence. "You couldn't name a federal priority that we can't access with the data coming in!" Strafe says. "Drug abuse, delinquency, AIDS, teenage mothers—we'll be able to tell what their histories were and who was in the risk group." Needless to say, he expects security of attachment to be a principal factor in predicting healthy functioning in the

teenage years.

They Are Leaning Out for Love

If attachment theory is correct, the insecurely attached child has developed a strategy for dealing with his mother's unavailability or inconsistency. The ambivalent child (ambivalent children represent about 10 percent of children from middle-class U.S. homes) is desperately trying to influence her. He is hooked by the fact that she does indeed come through on occasion. He picks up that she will respond sometimes perhaps out of guilt-if he pleads and makes a big enough fuss. And so he is constantly trying to hold on to her or to punish her for being unavailable. He is wildly addicted to her and to his efforts to make her change.

The avoidant child (20 to 25 percent) takes the opposite tack. He becomes angry and distant (even though I remains no less attached). His pleas for attention have been painfully rejected, and reaching out stems impossible. The child seems to say, "Who needs you-I can do it on my own!" Indeed, some parents unwittingly promote such grandiosity in the child. If the mother can convince herself that her child is vastly superior to other children, she has an excuse for her lack of nurturing attention: This kid is special, he barely needs me, he's been doing his own thing practically since he was born.

In such cases the mother's lack of nurturance likely has its own tragic reasons, often originating in the neglect that she experienced when she herself was young. Needs and longings that she has long repressed make her angry, depressed, or disgusted when she sees them in her child.

Meanwhile, if she, too, is somewhat grandiose, the idea of a superior kid, who has no needs, will reinforce her own sense of superiority. This style of nonrelatedness can thus pass down through the generations, along with values that conveniently support it ("Our family believes in independence; we're not namby-pambies").

Some of these patterns of anxious attachment may be responsible for certain well-known maladaptive syndromes. Bowlby believes that avoidant attachment lies at the heart of narcissistic personality disorder, one of the predominant psychiatric concerns of our time, and it may also be at work in the legions of people who achieve a rigid independence from their families by becoming emotionally cut off, a pattern first identified by the family theorist Murray Bowen. Other correlations are sure to emerge.

Insecurely attached children are believed to be relatively amenable to change throughout their early years. Avoidant children, for example, will seek attachments with teachers and other adults, and if they are lucky, they will find a special person who will provide them with an alternative model of relatedness. Recent research has shown that if a child is securely attached to his father (or to another secondary caregiver), that will be the greatest help in overcoming an insecure attachment to his mother. Even if it's only an aunt the child sees occasionally, the knowledge that she cares will keep a different quality of relatedness alive in him. Studies of resiliency indicate that a child's having had such a person in his life can make an enormous difference in his ability to believe in himself and overcome adversity.

But the insecurely attached youngster often has difficulty finding such an alternate attachment figure, because the strategies he has adopted for getting along in the world tend to alienate him from the very people who might otherwise be able to help. The behavior of the insecurely attached child-whether aggressive or cloying, all puffed up or easily deflated-often tries to tire the patience of peers and adults alike. It elicits reactions that repeatedly reconfirm the child's distorted view of the world. People will never love me, they treat me like an irritation- they don't trust me, and so on.

Even a mother who has sought therapy, who has found a stable mate, who has overcome distracting financial problems-who is now able to be more nurturant-may have a hard time reaching the child who has adopted such survival strategies. She may find it hard, for example, to persuade him to give up his angry estrangement and be open to receiving love from her again; or to let go of the clinginess, the guilt, and the power struggles, and trust that she has changed, that she will not neglect him this time, that he can let her be a separate person and she will still be there for his needs. Getting such a message across requires the patience and consistency to persist until the child builds up a new set of expectations, or, if you will, a revised internal working model.

Roger Kobak, a psychologist at the University of Delaware, believes that distorted attachment patterns grow out of the way the child learns to deal with negative feelings. A secure child is able to communicate negative feelings like anger, hurt, jealousy, and resentment in a meaningful way. He can cry or shout, fall silent, or say "I hate you," confident of a sensitive response. The insecure child does not have this confidence. His mother, unable to handle her

own negative feelings, either becomes dismissive or overreacts. As a result, his negative feelings are either walled off from his consciousness or revved up to the point where they overwhelm him. His ability to communicate his pain is gradually shrunken and disoriented until it virtually demands misinterpretation.

Indeed, parents of insecurely attached children consistently misinterpret their behavior. "Parents often think these anxiously attached kids don't love them," Sroufe says. "They think the kid's rejecting them. The mothers of ambivalent kids think, 'He doesn't like me; he's just ornery'", and so forth. Are you kidding? He doesn't like you? You are the center of the universe!"

Ideally, insecurely attached children need to be reached by adolescence, because it is in childhood that change is most easily accomplished without therapeutic intervention, when a steadfast parent or an available reach, can turn a child around. Sroufe cites the example, from his work with preschoolers, of a child whose devious and hostile behavior, combined with a swaggering false confidence, alienated his teachers. But when the teachers were instructed to confound his feelings of low self-esteem by refusing to reject him, and to seek out opportunities to be close to him, he gradually changed his behavior and formed a close bond with one of them.

For abused children, the problem of repair is even thornier, because the messages they get and the working models of relatedness they develop are more confused. Pat Crittenden, a former student of Ainsworth's and a psychologist at the University of Miami who works with families under severe stress, says, "An abusing mother tends to be fairly coercive and demanding, even hostile, but to come across as almost sickly sweet. She is unlikely to scream and yell at her child. She is far more likely to paste a smile on her face and with gritted teeth demand that her child do something. The child then learns to associate a positive expression of feeling with a really negative experience. And so when he goes off to school, or meets other members of his family, or maybe later meets a pact or a potential lover, he will misinterpret positive expressions of feeling. He will assume that people who appear to be nice are being coercive."

Abused children have typically been found to fall within a fourth attachment category, called "disorganized." A child in this category seeks proximity with his mother in distorted ways. He may approach her backwards, or freeze suddenly in the

middle of a movement, or sit for a time and stare off into space. His reactions, unlike the strategies of avoidant and ambivalent babies, seem to suggest the collapse of strategy.

When parents hear about all this, they may wonder, could I get a Strange Situation done on my kid? And yet that by itself would be pointless. The assessment was devised as a research tool, and its power is based on percentages. Some infants who receive sensitive care look anxiously attached, and some who have neglectful parents look secure. Sroufe has been asked by courts to help settle custody cases by putting the child through a Strange Situation with each of his parents, but he has steadfastly refused, because a certain percentage of children will either be mislabeled or reveal patterns that do not result from the predictable parenting styles.

Structures of the Mind

The attention given to the interpersonal strategies and outlooks of young children inevitably raises the question of how these mental constructs show up in adults. In what form do early attachment patterns persist in our lives? If we can't watch adults' reunion behavior, if we can't put adults in a lab and see them crying, crawling to their mothers, or allowing themselves to be comforted, can we in some other way access their internal working models? That is the question that has occupied Mary Main, and she has come up with some ingenious answers.

Main began by examining the parents of securely and anxiously attached children to see what correlations she could find. She used a sample of mothers and fathers of six-year-olds whose attachments had been assessed at twelve or eighteen months. In the course of a cleverly devised and very demanding sixty to ninety minute interview, which seems to evoke in adults some of the same feelings that the Strange Situation evokes in infants, she asked the parents to describe their childhoods and their important relationships. She later analyzed the interview transcripts (or variations in the ways they responded). Four patterns emerged.

One group, which Main labeled "autonomous," easily remembered early experiences with their parents and clearly saw them as telling. They seemed self-reliant, objective, and able to incorporate painful memories into their discussion. Main was confident that these adults either had had secure attachments as children or had somehow been able to rework insecurely models in order to achieve a more balanced and realistic view of what it means to re-

late to others. To the extent that their childhood experience was bad. They were able to acknowledge it and had insights about its effects. In some cases they could understand and forgive their parents. Their children were for the most part securely attached.

A second group, which Main described as "dismissive of early attachments," tended to be indifferent to their deepest feelings about relationships. They remembered little of their childhood bonds and offered idealized portraits of their parents. When probed, however, they recalled incidents that contradicted this perfection, with details that suggested parental neglect or rejection. These detached adults typically presented themselves as strong and independent, but they were in many ways reminiscent of avoidant children, still unable to face the reality of their early disappointments and hurt. The majority of their children showed an avoidant attachment pattern.

The third group, which Main labeled "preoccupied with early attachments," came across as somewhat confused and incoherent about their relational past. During the interview they tended to become flooded with intense negative memories, which brought forth feelings of anger and dependency that they could not easily manage. The childhood struggle with their parents, and their ongoing efforts to please them, seemed palpably present. Their children tended to display an ambivalent attachment pattern.

A fourth group of adults corresponds fairly consistently with the fourth "disorganized"-group of children. Adults in the fourth category are typically found to be suffering from unresolved childhood traumas, such as physical abuse or the loss of a parent.

Main has found that her assessment of adults corresponds to the attachment classification of their children 76 percent of the time. Another study has found a match-up of 85 percent. The work of Main and her students on the transmission of attachment patterns may bring us closer to understanding the process by which our parents become a part of us- It helps explain why we seem to go through life mad-deningly constrained to one of four roles mother, father, self with mother, self with father- in our relationships with others.

Psychoanalysis has a rich body of concepts concerning just this process, and attachment theorists sometimes seem to be reinventing this psychoanalytic wheel. If so, it is a wheel with a difference. For

it is one thing to talk about internal structures of the mind-especially the mind of an infant, who has few or no words-and quite another to investigate them empirically. This difference represents a second aspect of the attachment revolution.

The Temperament Debate

To many developmentalists and to many others who have heard about attachment principles through popular authors, one of the attractions of the material has been how commonsensical it is. It seems only right that our earliest relationships become a part of us, and that something like an internal working model accounts for the types of relationships we develop later in life.

"It's intuitively pleasing, that's what's getting in the way," says Jerome Kagan, one of Ainsworth's most consistent antagonists. "Because it makes intuitive sense, people are assuming it's right. But most of the time intuition is wrong. I mean, intuitively the sun goes around the earth, right? Intuitively the earth is flat, right? Why is psychology the least advanced science? Because our intuitions aren't very good."

Kagan, an influential psychologist at Harvard University who eschews ideological labels ("I'm part of the reasonable school"), is the author of *The Nature of the Child*, which casts a critical eye on such popular assumptions as "a mother's love for her infant is necessary for the child's future mental health" or "the events of infancy seriously influence the future mood and behavior of the adolescent." His position on attachment is complicated, because he attacks it from several directions, and his objections are not always compatible, though he argues them all with great verve and authority.

Kagan first of all believes that too much attention is paid to early experience. Children, he argues, even after suffering extreme loss, are far more resilient than we tend to think. He cites studies of teenagers who experienced deprivation when very young and rebounded handsomely in adolescence.

According to Kagan, the commotion about attachment is mainly a sign of contemporary mores. "In the forties and fifties the children now called securely attached were called overprotected, and that was a bad thing. My view is, if you're attached, you are motivated to adopt the values of your parents. If your parent values autonomy, you'll be autonomous; if your parent values dependency, you'll be dependent. Because most American parents in this historical moment value autonomy, their attached children are autonomous."

Kagan argues that some of the children whom Ainsworth has labeled securely attached become upset when left alone in the Strange Situation not because they're securely attached but because they're unable to deal with uncertainty. They've been trained for dependency, and are showing the ill effects of this training.

Similarly, Kagan believes that many children who have been classified as avoidant in the Strange Situation have simply been trained to control their fearful responses. They learn such control not because they've been ill treated but because control is something their parents value. He further charges that attachment theorists have placed too much emphasis on security—that is something they value—and are not attentive enough to the advantages that our society confers on those able to handle adversity. Thus a parent rated as insensitive on Ainsworth's scales might actually be giving a child superior training for the modern world.

Needless to say, such interpretations challenge the very core of attachment theory that consistent availability and warmth yields autonomous children. They also run counter to many of Sroufe's empirical findings.

A researcher who investigates inborn temperament, Kagan in any case plays down the long-term impact of parenting, for he strongly believes that genes contribute to much of what we become. He cites studies that indicate that children who are assessed as irritable shortly after birth are likely to be classified as anxious a year later. He insists that many children classified as avoidant appear indifferent to their mothers' comings and goings not because they've given up hope of getting anything from their mothers but because they are better able to handle stress. Compared with their counterparts who have been labeled secure or ambivalent (with equal injustice, according to Kagan), the so-called avoidant children are simply constitutionally less fearful. He remains unmoved by Minnesota studies showing that the heart rate of an avoidant child goes way up when the mother leaves the room and way up again when she returns, even as the child's behavior remains calm, data that seem to suggest that the avoidant child is indeed angrily estranged. Kagan argues that heart-rate acceleration in such situations may be a function of temperament and says he has unpublished data to suggest just that.

Other developmentalists similarly favor a genetic approach, and in recent years an eruption of new research—much of it on identical twins who have

been raised separately—seems to have convincingly established that a great many of what we think of as personality traits are inherited. There seems to be a genetic predisposition toward shyness or sociability, toward thrill-seeking or placidity, toward easygoingness or irritability. But whether you trust others or not, whether you anticipate love or rejection, whether you feel good about yourself as a person—are these things inherited? No, Ainsworth says. These are not inherited traits, they are learned; and although subject to change, they are initially determined by the sensitivity and reliability of the care you received in your first years. Although Sroufe goes so far as to contest that any baby is inherently difficult, some attachment theorists will now acknowledge that at the extreme fringes of temperament, which are what Kagan tends to study, anxious attachment may indeed have some genetic basis. But generally they believe it is far more likely that temperament alters the style of a secure or insecure pattern, not the pattern itself.

In a study by Jay Belsky, mothers' evaluations of their infants' temperament at three months and nine months bore no correlation to the infants' attachment patterns at twelve months. Sroufe, in another study, identified new mothers who were depressed and unresponsive, and evaluated their babies. "We could show—really clearly—deterioration in those kids. They looked pretty good at three months, but at six months they didn't look so good. About half of them were anxiously attached at twelve months, and all of them were at eighteen months. We're talking a serious downhill slide. What are you going to say? The baby was born a downhill slider?"

One of the charged issues tucked into the temperament debate is the blaming and defending of mothers. Attachment theorists are careful to point out that attachment isn't everything—an insensitive caregiver is not the only road to psychopathology. Nevertheless, the emphasis placed on attachment classifications, and the assumption that those classifications reflect maternal sensitivity exclusively, can give the impression that all psychiatric sorrows emanate from bad mothering. At this point in its evolution attachment theory does not seem to account adequately for the poor mother-infant fit; the mother who has a hard time relating to the infant hot does come alive to the toddler; or the baby who, because he is extremely irritable or aggressive, because he is not as smiley and responsive as some, or because he is constitutionally unable to take much pleasure in the attachment relationship, may require an unusual degree of sensitivity and patience. A mother who

might be fine with the average baby may not have the emotional wherewithal to handle a baby closer to the temperamental fringe. Studies of mothers with children in more than one attachment category seem to support this idea in certain cases. The mother's difficulty with a particular child may also owe much to her life circumstances, such as receiving inadequate emotional support from either her husband or society as a whole. And it may be complicated by unnecessary self-blame. In all such cases, attributing anxious attachment simply to maternal insensitivity would be both unscientific and unfair.

Stephen Suomi, Harlow's successor at the University of Wisconsin, now at the National Institute of Child Health and Human Development, has been working on the interaction between temperament and attachment in rhesus monkeys (he's actually done modified Strange Situations on them). Suomi has found that heredity seems to determine whether a rhesus monkey will be socially forward or retiring, and that excessive timidity in and of itself can lead to problems in relationships. But these are only tendencies, he says. A nurturant mother-in some cases it may have to be an exceptionally nurturant mother-can erase temperamental deficits.

Some of the temperament findings are being slowly absorbed into attachment thinking. But genetic determinism continues to irk Ainsworth. "Those who claim that it's all in the genes say that the way the baby is handled in the first years of life doesn't really matter a damn. That's a trend I deplore. You just have to observe abusing mothers with their children over time, as my friend Pat Crittenden does, and you'll see-it sure has an effect. It doesn't necessarily mean the child is going to abuse his own children, although a lot of them do, but it certainly makes it very difficult for them to have normal, satisfactory interpersonal relationships."

Even at this level the temperament debate may never be completely settled. For it can always be said, no matter how abysmal the mother's parenting style or how dysfunctional the child, what a miserable mother has simply passed on her miserable genes. And as Ainsworth says, "There's no way of winning that argument." At the current stage of research a lot depends on whose statistics and judgment you trust and what makes the most sense. A lot also depends on how much faith you have in Ainsworth's seminal study of a quarter century ago.

Ainsworth's study was not unimpeachable. As her former student Michael Lamb, now the chief of the Section on Social and Emotional Development at

the National Institute of Child Health and Human Development, pointed out in a controversial 1984 critique, Ainsworth was not able to get perfect reliability checks on all observers in the home situations (were they definitely measuring the same thing?). No videotapes were available for review. Also, except for research in Germany by Klaus and Karin Grossmann, Ainsworth's study has rarely been replicated, which is quite surprising when one considers the skyscraper of research and theoretical conclusions that is balancing on this small base. In every study that begins by assessing infants in a Strange Situation at twelve or eighteen months and continues to evaluate those children for years afterward, assumptions are being made about the style of the parenting each child has received, and conclusions are being drawn about the effect that style has had on every aspect of the child's life. But the parenting itself is almost never assessed. It is only inferred from the infant's Strange Situation classification. That inference is possible mainly because of Ainsworth's twenty-three Baltimore families. If her study is flawed and the correlations it demonstrated are open to question, the whole attachment edifice begins to wobble.

Ainsworth is not insensitive to this and would like to see more replications. But longitudinal studies of that magnitude take time, money, and immense effort. Young workers prefer breaking new ground to tilling the old. Although Ainsworth believes that much has been established in partial replication, the question lingers.

Attachment and Modern Living

Meanwhile the field has been transformed. In the past twenty years infants and mothers have been observed as never before, with some researchers using film and doing frame-by-frame analyses. Such work has tended both to bolster and to spread attachment ideas, partly because it has demonstrated a level of attunement and communication between mother and infant that was not perceived before.

The groundbreaking work of psychoanalyst Margaret Mahler on the process of separation and individuation in infancy has also stimulated new thinking about the early bond. Like Ainsworth, Mahler made pioneering observations of mothers and children, but, probably because she was more a wise observer than true scientist - neither employing a rigorous methodology nor generating testable hypotheses - her impact has been more limited. Very influential in psychoanalysis, which has always relied on informed speculation, her concepts have

made few inroads in developmental psychology, which favors scientifically testable assumptions.

The Strange Situation, in contrast, has proved to be the great enabler of further studies-indeed, the most widely employed assessment tool of its kind. Today attachment research is, to use Ainsworth's word, "zooming," each month, it seems, bringing fresh evidence of the importance of quality of attachment in our lives. Both research psychologists (who work in academia) and clinicians (the social workers, psychologists, and psychiatrists who treat patients) are drawn to the theory because attachment does something that is rare in psychology: it combines the pleasures of testable hypotheses with the prospect of changing the world

"I really do think that this work has great relevance to the well-being and happiness of mankind," Ainsworth says. "It sounds corny, and I don't go around shouting it from the rooftops, but that's what's, behind the whole thing as far as I'm concerned."

There is something simple and life-affirming in the attachment message-that the only thing your child needs in order to thrive emotionally is your emotional availability and responsiveness. You don't need to be rich or smart or talented or funny; you just have to be there, in both senses of the phrase. To your child, none of the rest matters, except inasmuch as it enables you to give of yourself. What's more, you don't have to be an outstanding mother, just-in Winnicott's famous phrase-a "good enough" mother.

The pressures on people to think otherwise, however, are relentless, especially in an urban environment where whether you get your child into the right nursery school can seem more important than how he experiences your love. The "superbaby" phenomenon, which encourages parents to believe that what kids really need is to have their IQs juiced up with a rigorous program of infant stimulation, is emblematic of those pressures.

"I don't think it's healthy," Ainsworth says, "to be at the child too much, to have him taste this, and smell that, and feel this, trying to enrich all aspects of his life. It's too much, it's intrusive. The normal kind of interaction that takes place in the course of routines, where there is some conversation and smiling back and forth and perhaps a little play, or in periods that are consciously devoted to play-I think that is what the infant needs in the way of stimulation. That doesn't mean the child's interest in other things shouldn't be encouraged, but he'll have that

interest if he just has a chance to explore. Stimulation is something you *do* to somebody else. Its experience the child needs."

Where Ainsworth's message has been heard, it has helped to refocus child-rearing debates away from argue over specific techniques and toward the more comprehensive issue of sensitivity. Questions like whether to breast-feed or bottle-feed or at what age to introduce solid foods, though still important, no longer carry the same urgency. Attachment theory suggests that babies thrive emotionally because of the overall quality of the care they've experienced, not because of specific techniques. A bottle-fed baby whose mother is sensitively attuned will do better than a breast-fed baby whose mother is mechanical and distant.

Ainsworth has been accused by some feminists of being out of touch with what they see as current life-styles, because she is skeptical about the viability of working motherhood. But she contends that it's the children who are out of touch, by perhaps millions of years, for that is when our evolutionary adaptations were forming - including adaptations that may have made proximity to the primary caregiver a cornerstone of secure development. "It's very hard to become a sensitively responsive mother if you're away from your child ten hours a day," she says. "It really is."

But unlike Bowlby, who strongly believes in full-time care giving, who contends that women are best equipped biologically to play this role, and who would like to see a campaign equivalent to the Attorney General's crusade against smoking to convince parents that day care is bad for their babies, Ainsworth admits the possibility that supplemental mothering could be arranged without harm to the child. "From the point of view of the child's general welfare, the mother should be pretty consistently available. That doesn't mean she has to be there every moment, can never go out, never have anybody else look after the child, or anything like that. But fairly consistently available. Women's - lib people have been finding it comfortable to assume that it doesn't matter what you do and that a woman owes it to herself to work and do what fulfills her. People who focus primarily on the welfare of children tend to ignore what suits the mother. But it's really a matter of how do we adjust these two things. Had I myself had the children I longed for, I like to believe I could have arrived at some satisfactory combination of mothering and a career, but I do not believe that there is any universal, easy, ready-made solution."

As for currently available day care, the research itself is still in its infancy, and Ainsworth prefers not to comment. We don't know how the quality of day care affects attachment outcomes, how many kids are really at risk, how the risk differs at different ages, or whether (to state the case at its most extreme) a mother who stays home bored and resentful is better than one who comes home happy and fulfilled.

Important, too, are the larger societal trends of which day care is only a part. Ainsworth sees the pressures and penchants of modern life pushing us toward anxious attachment, with the unhappy consequences of psychological distress, discordant relationships, and weakening social ties. "People used to have more leisure, more time for fun, for sociability. Now everybody's too busy to be sociable. It's sad."

Economic and social conditions in many Western countries tend to force both parents to work, to penalize those who put their careers on hold for several years, and to give little support to parents, working or not. Traditional societies, as Bowlby stresses, often enjoyed an abundance of secondary attachment figures. Families were stationary, interdependent, and surrounded by relatives, from grandmothers to adolescent aunts, who all pitched in with baby care. While this way of life may be irrevocably lost, compensations could be developed. We could make it easier for mothers and fathers to take time off from work for infant care, train teachers to deal constructively with anxious attachment styles, put additional adults in classrooms to allow for the supplemental connections that seem to benefit kids who are anxiously attached to their mothers, and provide greater support to families. Needless to say, we are ages away from making such commitments.

The Partnership

You have to think decades," says Bowlby, who sees the struggle for a more child-centered society as requiring a huge scientific and civic campaign akin to the one that abolished polio. "We now have ample evidence that certain types of experience in childhood are risk factors. Plainly there is every reason to abolish those risk factors if we can."

If Bowlby has not yet won a consensus on this point, he has at least had the satisfaction of seeing many of his once heretical views widely accepted. His is now an indisputably major name in the field, and in the past few years he has received the honors and accolades accorded to significant innovators. In private conversations even some former detractors

have come around. "Fortunately," he says dryly, "I come from a long-lived family."

He was fortunate, too, to find a partner who was able to put some of the central features of his theory to the test and then mobilize much of developmental psychology to follow in her footsteps. He looks back now on his four decades of collaboration with Ainsworth with pleasure, gratitude, and perhaps a touch of guilt about her long comparative obscurity.

Despite her own prominence with many who barely know Bowlby's work, to Ainsworth he remains the senior partner. That they have not been riven by the jealousies and competitiveness that have destroyed so many other scientific enterprises may have something to do with her supportive femininity, a trait that men like Bowlby thrive on. "I think that women on the whole are much readier to take the lead from a male mentor than the other way around," she says.

To her students, Ainsworth remains a formidable and dominating presence, capable of a no-nonsense approach to the work and hardly self-effacing in her views. But the relationship with Bowlby suggests a more self-doubting side. "I was pretty insecure as a child, and I suppose I never really let it go," Ainsworth says. "If a paper was turned back with a severe criticism or a grant proposal was turned down as having no value, I would immediately think, well, maybe I'm just no good; maybe there isn't anything at all to this thing I value so much." It seems fitting that Bowlby, who appears blissfully unfamiliar with the experience of self-doubt, did the grand synthesis. While Ainsworth was the one to clarify the origins of the more commonplace insecurities that haunt us.

That she is entering the spotlight now – with major awards and guest lectureships—both pleases and embarrasses her. Unlike Bowlby, who holds the light as if he were born to it, she doesn't seem at home. "It sounds corny and modest," she says with a touch of urgency. "But it's the ideas I've been so enthusiastic about and so eager to put forward, not myself. You ask whether it took a lot of patience to do those longitudinal studies. Well, yeah, it takes patience; I don't think there are any useful shortcuts. But it never felt that way to me, because I find the firsthand details so awfully interesting. The data collections for those longitudinal studies were among the most interesting things I've ever been into in my life."