

CHAPTER ONE

Twins

And What They Tell Us About Who We Are

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TWO LIVES-- ONE PERSONALITY?

A pair of identical twin girls were surrendered to an adoption agency in New York City in the late 1960s. The twins, who are known in psychological literature as Amy and Beth, might have gone through life in obscurity had they not come to the attention of Dr. Peter Neubauer, a prominent psychiatrist at New York University's Psychoanalytic Institute and a director of the Freud Archives. Neubauer believed at the time that twins posed such a burden to parents, and to themselves in the form of certain developmental hazards, that adopted twins were better off being raised separately, with no knowledge of their twinship.

Neubauer also recognized the exceptional research possibilities such a separation offered. Studies of twins reared apart are one of the most powerful tools that scholars have to analyze the relative contributions of heredity and environment to the makeup of individual human natures. Identical twins are rare, however, and twins who have been separated and brought up in different families are particularly unusual. Neubauer was aware of a mere handful of studies examining twins reared apart, and in most cases the twins being studied had been separated for only part of their childhoods and were reunited at some point long before the study began. Here was an opportunity to look at twins from the moment they were separated, and to trace them through childhood, observing at each stage of development the parallel or diverging courses of their lives. Because the sisters shared the same genetic makeup, one could evaluate the environmental effects on the twins' personalities, their behavior, their health, their intelligence. Such a study might not set to rest the ancient quarrel over the relative importance of nature versus nurture, but there were few other experiments one could imagine that would be more pertinent to an understanding of the human condition.

Neubauer sought out other instances in which newborn twins were being placed for adoption, eventually adding three other pairs of identical twins and a set of identical triplets to his project. The complete study has never been published, and Neubauer is reluctant to discuss the details of how he enlisted twins into the project. Indeed, much of the history of the study has been kept secret. In any case, by the time that Amy and Beth were sent to their adoptive homes, there was already an extensive team of psychologists, psychiatrists, pediatricians, observers, and testers waiting to follow them as they moved from infancy to adolescence. Every step of childhood would be documented through psychological and ability tests, school records, parental and sibling interviews, films, and the minutes of nearly 1,000 weekly conferences. Not surprisingly, the

study was slanted toward psychoanalytical concerns. "In particular, we were looking for the psychological variables which influence developmental processes," says Neubauer. One would expect identical children placed in separate environments to be formed by different family dynamics. Broadly speaking, the personality differences between the girls as they grew older would measure the validity of the most fundamental assumption of clinical psychology, which is that experience--and, in particular, our family background--shapes us into the people we become.

The agency that placed the children shortly after their birth informed the potential adoptive parents that the girls were already involved in a study of child development, and the parents were strongly urged to continue it; however, neither the parents nor the girls themselves would ever be told that they were twins.

The sisters were fair-skinned blondes with small oval faces, blue-gray eyes, and slightly snub noses. Amy was three ounces heavier and half an inch taller than Beth at birth, an advantage in weight and height that persisted throughout their childhood. The girls were adopted into families that were, in certain respects, quite similar. They were placed in Jewish homes in New York State. The mothers stayed at home, and in each family there was a son almost exactly seven years older than the twin. (In Beth's family, there was an older sister as well.) In other respects, the environments were profoundly different: notably, Amy's family was lower class and Beth's was well off. Amy's mother was overweight and socially awkward. Her personality was flat and her self-esteem was low. Although she had a compassionate side to her nature, she was an insecure mother who felt threatened by her daughter's attractiveness. Beth's mother, on the other hand, doted on her daughter and for the entire ten years of the study spoke positively of Beth's personality and her place in the family. The team described Beth's mother as pleasant, youthful, slim, chic, poised, self-confident, dynamic, and cheerful. Whereas Amy's mother seemed to regard Amy as a problem, a stubborn outsider, Beth's mother treated her daughter as "the fun child." Instead of separating Beth from other members of the family, Beth's mother went out of her way to minimize the differences, to the extent of dyeing her own hair to emphasize their similarities. The girls' fathers were very much like each other--confident, relaxed, at ease with themselves--but different in their treatment of the girls. Amy's father came to agree with his wife that Amy was a disappointment, whereas Beth's father was more available and supportive. Amy's brother was a handsome academic star, the golden boy of the family. Beth's brother, however, was a disturbed child who suffered from learning disabilities and uncontrolled behavior that got him expelled from several schools and in trouble with the law. All in all, the research team characterized Amy's family as a well-knit threesome--mother, father, and son--plus an alienated Amy. It was a family that placed a high value on academic success, simplicity, tradition, and emotional restraint. Beth's family, on the other hand, was sophisticated, full of energy--"frenetic" at times--and it tended to put more emphasis on materialism than on education. Clearly, Beth was more at the center of her home than Amy was in hers.

And how did these identical twins in such contrasting environments turn out? As might be expected, Amy's problems began early and progressed in a disturbing direction. As an infant, she was tense and demanding. She sucked her thumb; she bit her nails; she clung to her blanket; she cried when left alone. She wet her bed until she was four and continued to have "accidents" for several years more. She was prone to nightmares and full of fears. By the age of ten, when the study concluded, she had developed a kind of artificial quality that manifested itself in role-playing, gender confusion, and invented illnesses. Shy, indifferent, suffering

from a serious learning disorder, pathologically immature, she was a stereotypical picture of a rejected child. The team proposed that if only Amy had had a mother who had been more empathetic, more tolerant of her limitations, more open and forthcoming (like Beth's mother), then Amy's life might have turned out far better. If only her father had been more consistently available and affectionate (like Beth's father), then she might have been better able to negotiate the oedipal dramas of childhood and achieve a clearer picture of her own sexual role. If only her brother had been less strongly favored (like Beth's brother), Amy would have been spared the mortifying comparisons that were openly drawn in her family. In theory, if Amy had been raised in Beth's family, the sources of her crippling immaturity would have been erased, and she would have been another kind of person--happier, one presumes, and more nearly whole.

In nearly every respect, however, Beth's personality followed in lockstep with Amy's dismal development. Thumb-sucking, nail-biting, blanket-clenching, and bed-wetting characterized her infancy and early childhood. She became a hypochondriac and, like Amy, was afraid of the dark and of being left alone. She, too, became lost in role-playing, and the artificial nature of her personality was, if anything, more pronounced than that of Amy's. She had similar problems in school and with her peers. On the surface, she had a far closer relationship with her mother than Amy did with hers, but on psychological tests she gave vent to a longing for maternal affection that was eerily the same as her identical sister's. Beth did seem to be more successful with her friends and less confused than Amy, but she was also less connected to her feelings.

The differences between the girls seemed merely stylistic; despite the differences in their environments, their pathology was fundamentally the same. Did their family lives mean so little? Were they destined to become the people they turned out to be because of some inherent genetic predisposition toward sadness and unreality? And what would psychologists have made of either girl if they had not known that she was a twin? Wouldn't they have blamed the symptoms of her neurosis on the parenting styles of the family she grew up in? What does that say about the presumptions of psychology?

Twins pose questions we might not think to ask if we lived in a world without them. They are both an unsettling presence, because they undermine our sense of individual uniqueness, and a score-settling presence, because their mere existence allows us to test certain ideas about how we are the way we are. Every culture has had to confront the twin phenomenon and come to its own response. Often that response has been to kill the children and to ostracize or kill the mother as well--an implicit acknowledgment of the threat twins can pose to the presumptions of an established order. From ancient times men have been known to cut off one of their testicles in the mistaken belief that it would eliminate the possibility of twin conceptions. Other cultures worship twins as a divine gift; for instance, the voodoo practitioners of West Africa and Haiti exalt twins as supernatural beings with a single soul, who are to be revered and feared. Once a year anyone connected to twins, living or dead, is obligated to make offerings at a ceremonial feast in their honor to avoid "chastisement." In our own culture, we tend to dote on twins and mythologize their specialness through daytime talk shows, which turn them into freaks but which also, to be fair, provide a forum to marvel at the wonder and the mystery of the twin event. Perhaps all these responses are ways of holding twins at bay, since too close a study of twinship might lead to discoveries about ourselves that we are unwilling to make.

In the mid-sixties, when Neubauer began his enquiry into the lives of separated twins, there were no major U.S. twin registries; now the University of Minnesota keeps track of more than 8,000 twin pairs; Virginia Commonwealth University

operates the "Virginia 30,000," which follows 15,000 twin pairs plus their siblings, spouses, and parents; there are major registries in Kansas, California, and Kentucky, and smaller ones all over the country. The Veterans Administration maintains records of all twins who served in the Second World War and Vietnam. Pennsylvania State University, with several other institutions, oversees the Black Elderly Twin Study, which uses Medicare records to track down black twins throughout the United States. It is the only large-scale ethnic study in the country, but it may also become the largest study of genetics and aging among women in the world. In Holland, Denmark, Sweden, Norway, Finland, and Australia nearly every twin in the country has been identified. Moreover, in recent years, the technical analysis of twin studies has become increasingly sophisticated and subtle, often taking into account multiple environmental factors, non-twin relatives, and long-term observations. As a result of the variety and complexity of twin studies, along with powerful tools for analysis, the field of behavioral genetics has caused a revolution in the universities that has spilled into political life, reshaping the way our society views human nature and changing the terms of the debate about what government can and should do to improve the lives of its citizens.

Much of the argument over individual differences in intelligence, for instance, arises from the variation between IQ test scores of identical and fraternal twins, the difference being a measure of how much of what we call intelligence is inherited. The field of psychology has been shaken by separated-twin studies, such as the one of Amy and Beth, suggesting that the development of an individual's personality is guided by his genes, with little regard for the family in which he is raised. Matters that instinctively seem to be a reflection of one's personal experience, such as political orientation or the degree of religious commitment, have been shown by various twin studies to be partly under genetic control. Because of the growth of twin studies, and also adoption studies, which examine unrelated individuals reared together (and which complement the study of twins reared apart), the field of behavioral genetics has been able to study traits such as criminality, alcoholism, smoking, homosexuality, marriage and divorce, job satisfaction, hobbies, fears; the results suggest that there are significant genetic contributions in all cases. Even disciplines such as linguistics and economics have seized upon twins as a way of understanding language formation (by looking at twins who create a private idiom), or of calculating the additional earning potential of higher education (by comparing twins who go to college versus twins who don't). There is an air of irrefutability about such studies that make them so appealing. When Linus Pauling proposed that vitamin C could cure the common cold, for instance, twin pairs were separated into two groups, one of which received vitamin C and the other a placebo. Both caught colds, which effectively destroyed Pauling's theory. There are now so many scientists seeking to study twins that the annual festival of twins in Twinsburg, Ohio, allows researchers to set up carnival tents, where browsing twins can stop to take stress tests or fill out questionnaires about their sex lives. Festival organizers even sponsor a prize for the best research project. Last year 90,000 people--most of them twins--attended the event.

All this comes after several decades of heightened political struggle between those, on the one hand, who believe that people are largely the same and that differences are imposed upon them by their environment, and those, on the other hand, who conclude that people differ mainly because of their genes, and that the environments they find themselves in are largely of their own making or choosing. Obviously, the roots of liberal versus conservative views are buried in such presumptions about human nature.

This argument has been raging for centuries, with science entering evidence on

either side and public opinion shifting in response. Using twins, and also data derived from adoption studies, scientists can now estimate what proportion of the variation in our intelligence, our personality, our behavior, and even seemingly random life events such as bankruptcy or the death of a spouse, might be caused by inherited tendencies. The broad movement from environmentalism to genetic determinism that has occurred in psychology over the last thirty years has foreshadowed the increasingly popular belief that people are genetically programmed to become the way they are, and therefore little can be done, in the way of changing the environment, that will make an appreciable difference in improving test scores or lowering crime rates or reducing poverty, to name several conspicuous examples.

The hallmark of liberalism is that changes in the social environment produce corresponding changes in human development. But if people's destinies are written in their genes, why waste money on social programs? Such thinking has led to a profound conservative shift in the last thirty years. This can be demonstrated by comparing the shifting climate of opinion in the United States, which in 1965 produced the Great Society--a vast number of social programs designed to improve the health and welfare of the poor, the elderly, and the minority populations--and in 1995 brought about the Contract with America, which generated cutbacks in many of those same programs and marked a change in attitude about what government can be expected to do for its citizens. These changes have taken place not only in the West but in many other countries as well. Indeed, the widespread retreat of communism as a force in world politics is doubtlessly linked to the collapse of faith in social engineering, caused by the failure of communism to create the positive changes expected of it.

The genetic idea has had a tumultuous passage through the twentieth century, but the prevailing view of human nature at the end of the century resembles in many ways the view we had at the beginning. That is that people are largely responsible for their station in life, and that circumstances do not so much dictate the outcome of a person's life as they reflect the inner nature of the person living it. Twins have been used to prove a point, and the point is that we don't become. We are.

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