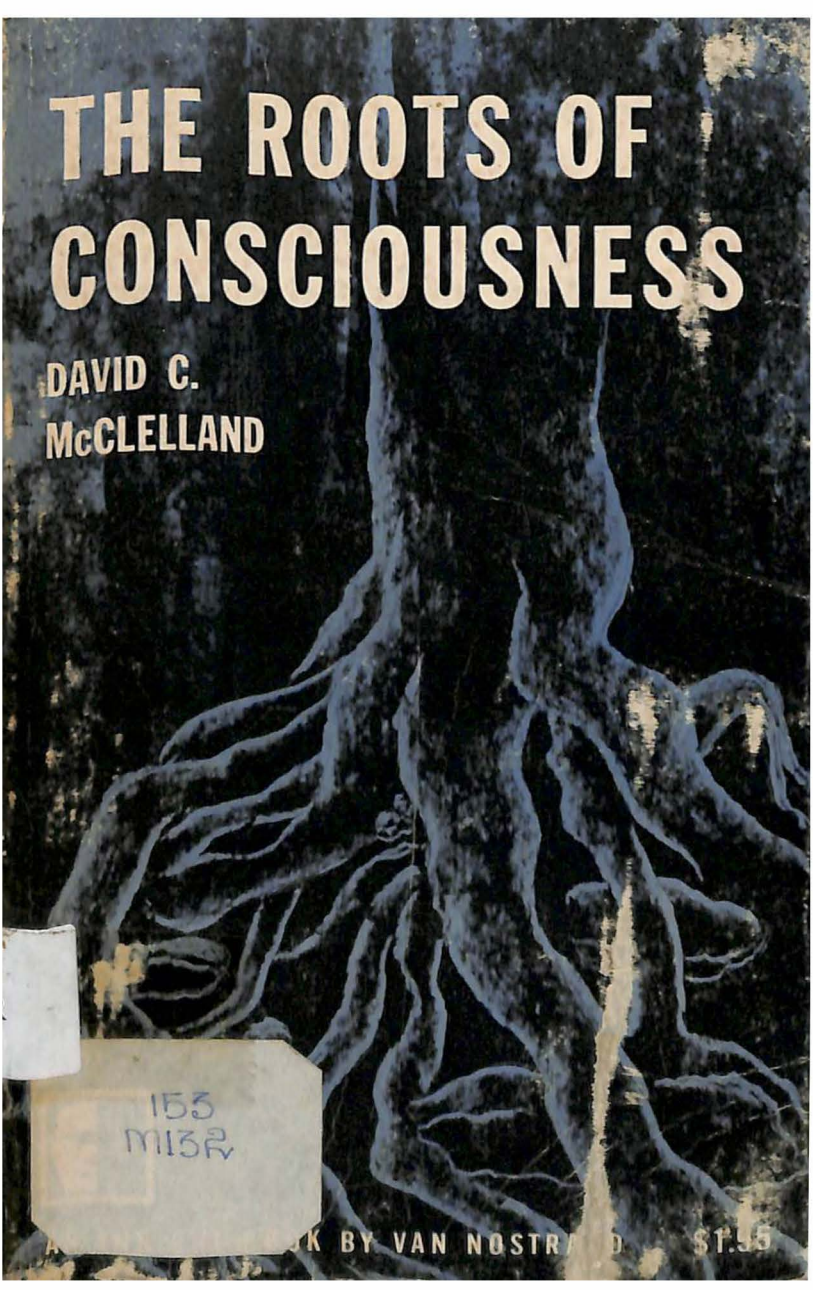
THE ROOTS OF CONSCIOUSNESS

DAVID C. McCLELLAND



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by
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Preface

This is a book about human motives—about the reasons why men do what they do. It deals more with the roots of consciousness than with consciousness itself—with the reasons behind the reasons that men assign to themselves and others in accounting for the behavior of individuals and groups. In a sense, then, it is a book about "The Unconscious," but for me unconscious processes have never seemed mysterious, terrifying—something to capitalize—but rather "almost known" or "recognized when pointed out," unexamined rather than forced into the cellar and kept under lock and key. The psychologist is simply someone who has special methods and special skills for examining the unexamined, for discovering what individuals and groups of individuals or cultures don't know about themselves. Or if they do know or half suspect what he discovers, then the psychologist's job may be more one of presenting a finding in such a way that they will have to believe it. The reader will therefore find tables in the book. They are there because the modern explorer of unconscious processes, unlike Freud, must back up his interpretations with the kind of evidence that will satisfy the rigorous standards of the scientific community. The reader who is ready to believe on the basis of the coherence of the argument can skip the tables. But I warn him that some of the findings in this book will stretch his common sense to the limit. After all, it deals with the *roots* of consciousness. Perhaps he had better study the tables—along with the sceptic.

The papers were originally written on different occasions for a variety of reasons. So they do not fit easily into a logical sequence. They should be regarded more as a series of detective stories in which the plot and char-

acters differ, but the central problem is the same—"who done it, and why?" Nevertheless I have written an introductory comment to each chapter to explain its relation to other chapters and to the central problems of human motivation to which all the chapters are related.

DAVID C. MCCLELLAND

Cambridge, Mass.

Contents

I

Freud and Hull: Pioneers in Scientific Psychology*

The first chapter is introductory to what follows because it explains what kind of a psychologist I have tried to be in all my investigations. I have wanted to deal with Freudian psychodynamics in the rigorous quantiative way characteristic of a modern behavioral scientist like Hull. Such a standpoint is not easy to maintain. It is open to attack from both sides—from the creative, imaginative, psychoanalytic psychologists who regard the concern for numbers, tables, and proof as either unnecessary or immature, and from my scientific colleagues, many of whom regard psychodynamic phenomena as wholly unreliable, nonexistent, or unimportant. I have been accused by the former of being against psychoanalytic thinking and by the latter of having fled the laboratory for the humanities. I have tried hard to avoid either alternative and to steer a straight course which would have the best of both worlds. The reader will have to judge for himself from subsequent chapters whether such an effort has been worthwhile. This one explains how it all started.

To a group of psychologists at least, an attempt to discuss these two men at the same time would be somewhat surprising—Sigmund Freud, the cultured European, expert on dream-life, founder of psychoanalysis; Clark L. Hull, backwoods American, expert on learning, founder of a kind of later-day Newtonian system of behavioral psychology. Yet both claimed to be scientists, both contributed in a major way to psychological theory, and both are key figures in contemporary psychology. Cer-

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tainly no Ph.D. candidate in psychology today can safely ignore either of them and even most undergraduate students of psychology must study rather carefully both psychoanalysis and Hull's system of behavior theory.

So we have an apparent parodox: here are two men who differed radically in personality, in cultural background, in scientific approach, in the kind of behavior they care about, yet both are major figures in contemporary psychology. Why is this? To try and find an answer, let us look at some of these differences a little more closely. Fortunately we have at last an eminently sane and thorough biography of Freud by Ernest Jones (3) which gives a great many details about Freud's early scientific career which have subsequently been lost sight of in the furious controversies over psychoanalysis. As for Hull, he is too recently dead for anyone to have attempted a systematic evaluation of his career, but we do have his own autobiographical statement (2) and in his case I can draw on my own personal knowledge since I studied under him at Yale University in the late 30's. Freud (1856-1939) lived most of his life in Vienna, and was in many ways a vintage product of a rich center of European culture. His family was not very well off and he was always short of money in his student days, but he was nevertheless encouraged in his early intellectual and cultural interests by the traditional Jewish respect for knowledge and learning. He grew up to be a true scholar in the old sense, knowing some eight different languages, and being well-versed in the classics of all cultures. He is one psychological scientist who has sometimes been more accepted in literary circles than in scientific ones. He started his professional career as a physiologist and neuroanatomist but was forced, in the end, to go into the practice of medicine to earn a living.

Hull (1884-1952) by way of contrast, was almost the stereotype of an American pioneer. He was brought up in a log cabin in Michigan and spent his early years attending a one-room school and clearing stumps from the land to prepare it for farming. His formal education was as poor as Freud's was rich, although he seems to have read a good deal on his own, and mentions in particular Spinoza's *Ethics*. His father was practically illiterate and

did not finish learning to read until his wife taught him after they were married. The family had been strongly Protestant, but his parents were "free thinkers," just as Freud's parents were with respect to their strong Jewish tradition. Hull originally planned to enter some practical profession like mining engineering but on a summer job he contracted poliomyelitis (at the age of 24) which permanently crippled one leg and forced him to change his occupation to that of school teaching—fortunately for science. What could be a more extreme difference in background than this—Freud, the cultured, well-educated European; Hull, the practical pioneer American! How they both ended up in psychology is a fascinating problem in itself, but we cannot take time to dwell on it here. It will have to do to say that Hull apparently decided quite on his own during his prolonged convalescence from poliomyelitis that psychology was the field for him and got his mother to read him James' *Principles of Psychology* since his own eyes were too weak at the time. Freud, on the other hand, seems to have been drawn into psychology gradually from the experience he had in his clinical practice with "nervous" cases.

As psychologists they differed greatly. Freud began his professional life by studies in neuro-anatomy and then moved on to the aphasias as being somewhere between physical and mental disease and finally ended up in the functional neuroses with studies of dream-life, hypnosis, sexual instincts, and the like. In his work we run across concepts like libido, repression, defense mechanisms, the censor, the unconscious, the Superego, etc. In Hull we find a totally different line of development. He began working with serial verbal learning, then turned to aptitude testing, and finally spent the major portion of his career dealing with data derived from studies of learning functions in the white rat at Yale University. At only one point did their empirical interest overlap. They both studied hypnosis—neither, it may be noted in passing, with much success. Freud gave it up because it was an undependable therapeutic instrument, and Hull gave it up partly because he thought that he had demonstrated that it was merely a form of suggestibility similar in kind, if not in extent, to waking suggestibility, and

partly because of the opposition of medical authorities in New Haven. Hull dealt in concepts like habit strength, excitatory potential, reactive inhibition, drive and the like. His mature and most developed work is represented by a page of definitions, axioms, deductions, and equations, whereas Freud's is represented by a page of closely reasoned analysis of inner mental life. It is small wonder that people have doubted whether they were in the same field.

In fact, throughout the last twenty or thirty years there hasn't been much tendency to treat them as part of the same discipline. Psychoanalysis grew up quite independently of academic psychology and American behaviorists were not slow in following their European colleagues in branding Freud both unscientific and absurd. Unfortunately we do not have recorded what these two men thought of each other. In fact, we could not really expect Freud would have taken time out in his late seventies to read Hull's aggressively behavioristic papers which began to appear around 1930, fully 35 years after Freud's major work had begun. The best that we could expect from psychoanalysts on Hull is a terse "no comment," meaning perhaps that most of Hull's system is irrelevant to human psychology. On the other hand, Hull certainly knew about Freud's work through the influence of men like Professor John Dollard whom he knew at Yale, but it does not seem to have influenced his thinking much. Perhaps his comment on one of his early teachers at Wisconsin, the clinical psychologist Jastrow, will serve to represent somewhat his attitude toward men like Freud; "His mind could scintillate in a brilliant fashion, but his approach to psychology was largely qualitative and literary. . . . He would sometimes lecture for five minutes at a time in perfectly good sentences, yet hardly say a thing" (2, p. 147).

Yet this is clearly not the whole story. Two facts stand out as contributing strongly to the impression that Freud and Hull basically had something very important in common. First, some of the most extreme systematic behaviorists of the Hull school have had a great personal interest and respect for psychoanalysis. Perhaps it was because Hull's system had little to say about their inner experi-

ences and their own personal problems. So they turned to psychoanalysis as a personal, originally non-professional interest, perhaps, one might almost say, as providing a philosophy of life. A number of these behaviorists were psychoanalyzed. Secondly, Professors Dollard, Miller, and others at Yale attempted formally to state some of the psychoanalytic concepts in terms of the Hullian principles of behavior. Oddly enough, this did not prove a very difficult task, at least in its initial stage, a fact which strongly suggests that there must have been some basic similarities in approach between the two men. Some of their values at least should have been similar.

Let us look for a moment for these similarities. On the personal level, despite their enormous difference in background, they were alike in several important respects. Both were prodigiously hard workers. Freud, when he was writing "The Interpretation of Dreams" often saw patients eight to ten hours a day and then worked past midnight writing his books. Hull's working habits were the opposite although they were equally intense. He used to wake early in the morning around 5:00 A.M. and think in bed several hours before rising and going to his office at Yale. He kept "a permanent notebook of original ideas, concerning all sorts of psychological subjects as they came to me" (2, p. 147). At his death he had some twenty-eight such volumes in which his ideas had been persistently and continually worked through to their ultimate implications. Freud published more, partly because his active psychoanalytic period lasted for fully 40 years while Hull's mature work was all done in about 18 years between 1930 and 1948. But behind every page of Hull's work there was a vast amount of intricate reasoning and calculation, much of which could be condensed to a single equation taking up one line.

Both men were also tremendously courageous and honest. They both believed that the truth must be pursued at all personal cost. The attacks that Freud had to suffer because he was a Jew and because he persisted in attributing sexuality to infants are too well known to need review here. Hull never was as violently and personally attacked, but it is certain that he came in for his share of ridicule over the tedious and elaborate proofs of

his theorems and propositions. Such challenges seem to have led both of them to redouble their efforts to do what they thought the science of psychology needed most.

Thirdly, they were both what might be called "close thinkers." Although Freud's thinking did not result in carefully worked out geometrical or algebraic proofs, no one who has read his works can deny that he wrestled with a problem as closely and thoroughly as did Hull, particularly in his early years when he was still formulating some of his basic ideas. Finally, both men had a grand vision of the great new science of psychology which spurred them on to tremendous efforts. Someone has said that to make a great contribution to any field of knowledge, one must have an image of one's own greatness. It can be said that both Freud and Hull had an image of greatness. Both were modest about it, but the idea that a real science of psychology was possible gripped both of them and they both felt that it was their sacred duty to show how this could be done. And both had confidence in their ultimate success: "We shall win through in the end" (Freud). "It would be nice to know how these and similar scientific problems turn out" (Hull). Neither of them had the slightest doubt that ultimately the problems of understanding human behavior scientifically would be solved.

What was this science of psychology to be like? Again we find they had much in common. Both were extremely anti-religious and deterministic. Both openly disbelieved in God and Freud nearly caused a family crisis by refusing at first to go through the "superstitious nonsense" of a Jewish wedding ceremony. Hull reacted violently against his narrow sectarian upbringing and felt that "religious considerations interfere with the evolution of science" (2, p. 162). Their determinism was thoroughgoing and can perhaps best be illustrated by the way both of them treated the problem of "free will" or "spontaneity." Freud recognized characteristically that the subjective feeling of free will was an important psychological fact to be explained. His explanation consisted of demonstrating that so-called chance acts or trivial "choices" really have an unconscious motive behind them which a

skillful analyst can always discover. Thus, no act is uncaused and the *illusion* of free will simply comes from the fact that some of our motives are unconscious (3, p. 365). Hull, on the other hand, in his presidential address before the American Psychological Association in 1936 spends a good deal of time getting rid of such notions as "consciousness" or "spontaneity" as being thoroughly unnecessary in a scientific system. His explanation is, in principle, the same as Freud's. Two acts, A and B, may have different strengths, so that A appears rather than B. But if A is unsuccessful in satisfying a need (motive) its strength will gradually diminish according to known laws of the extinction process, and finally B will "spontaneously" appear because its strength is now relatively greater than A's. No "free choice" is involved. In his own words, "This theorem is noteworthy because it represents the classical case of a form of spontaneity widely assumed, as far back as the Middle Ages, to be inconceivable without presupposing consciousness" (1, p. 12). Both men believed firmly in natural law and took much delight in explaining traditional moral and religious concepts as perfectly natural phenomena.

Their psychologies were also to be quantiative. This comes as no surprise in the case of Hull who spent the last years of his life trying to set up scales and units for measuring his basic concepts like habit strength, but it is perhaps unusual to claim that Freud, who appeared so qualitative in his writing, was also really quantitatively oriented. Yet Ernest Jones, who has analyzed Freud's earliest "general theory" which was never published, leaves no doubt about Freud's ultimate way of thinking about mental phenomena. Jones describes the work thus: "The aim of the 'project' is to furnish a psychology which shall be a natural science. This Freud defines as one representing psychical processes as quantitatively determinate states of material elements which can be specified. It contains two main ideas: (1) to conceive in terms of Quantity which is subject to the general laws of motion, whatever distinguishes activity from rest; (2) to regard the neurones as the material elements in question" (3, p. 385). In another place Freud speaks of a goal which plagues him, "To see how the theory of mental

functions would shape itself if one introduced quantitative considerations, a sort of economics of nervous energy" (3, p. 347). It is quite clear from his subsequent work which deals with the libido, or drive concept, and its various ways of being checked and diverted that he had fundamentally in mind a quantitative concept of neural or electrical energy which was seeking to be discharged.

Both men also felt that psychology ultimately rests first on physiology and ultimately on physics. This is clear from the statement quoted above about Freud's first "general theory" and it is well known that Hull always hoped to find some confirmation of his theory at the physiological level. Both men ultimately were disappointed in not being helped more by nerve physiology and had to go on without it, but they believed that ultimately the laws of physiology and psychology would be found to be similar or at least consistent with one another.

Finally, in both of their systems the organism is conceived as being guided in its functioning by the satisfaction of needs or the "discharge of tension." It is difficult here to use words that will apply equally well to both systems of thinking, but clearly they both have very much the same idea in mind. It runs something like this: The organism seeks to preserve a state of equilibrium; anything which disturbs it will call out adjustive responses which will continue until the equilibrium is restored. Freud had in mind apparently a simple reflex model in which a stimulus sets up an excitation which "sets out" through the nervous system until it can discharge itself in a response. Generalizing this idea, he spoke of states of "unpleasure," or, as it has been more recently translated, tension, which keep the organism upset and active until they are discharged either directly or indirectly. The direct discharge, or primary process, as it was called, may simply involve the hallucination of the desired state of affairs as in a dream. The indirect, or secondary process, involves an instrumental adaptive response in real life which produces the desired event in fact rather than in fancy. Hull did not concern himself at all with the primary process since, as a behaviorist, he

did not concern himself with dreams and the like, but the secondary process describes almost exactly the way he thought the organism functioned. Certain biological needs like hunger, thirst, and sex (here a bow to the Freudians, although he never worked with sex as a drive) made the organism active until it successfully discovered a response which reduced the need. Then in the proposition which is basic to his whole system, Hull postulated that the reduction in need automatically strengthens the connection between the stimulus and response preceding it, a statement of the well-known "law of effect," which is usually thought to have been formulated first by Thorndike in this country. It is interesting to observe, however, that Freud, thinking along very similar lines, had come to an identical conclusion in the 1890's: "When this [the process of satisfying a desire] occurs, associations are forged . . . with the perceptual image of the satisfying object on the one hand, and on the other hand, the information derived from the motor activity that brought that object within reach" (3, p. 392). In Hull's terms, he is saying that need reduction forges a connection between the "stimulus" and the response-produced stimulus, a conception quite similar to Hull's in most respects. It is probably because the basic "model" of how the organism functioned is so similar for the two men that it was so easy to incorporate certain Freudian notions into Hull's system. Both men were essentially natural scientists, who had been strongly influenced by the theory of evolution, and who tended, therefore, to think of the organism as responding and adapting to changes in the environment so that it could survive or maintain its equilibrium.

Having covered some of the superficial differences between the two men and some of their basic similarities, we are in a better position to summarize how they differed in their approach to the scientific study of psychology. In the first place, they differed markedly in their attitude toward experimentation. Freud was no experimenter, as Jones makes very clear. His early success in the laboratory was with the microscope where he spent hours and hours dissecting, inventing new methods of staining, and analyzing different kinds of nervous tissue.

He tried experimentation three times, all unsuccessfully according to Jones (3, p. 54). His last attempt was to measure the effects of cocaine on muscular strength as measured by a dynamometer, a problem which, except for the nature of the drug used, was quite similar to many such studies performed by academic psychologists like Hull and others. Freud had a marked preference for "seeing" over "doing." He spoke of experimentation in terms of "mutilating animals or tormenting human beings" (3, p. 53). One of his objections to hypnosis was that it was a "coarsely interfering method." Instead, he preferred to listen carefully and analyze. Hull was much more the practical American "doer." He thought that much valuable time was wasted in controversy that could better be settled by the resort to experiment. In his autobiography he quotes with favor Thorndike's comment "that the time spent in replying to an attack could better be employed in doing a relevant experiment" (3, p. 154). It is true, however, that most of his own experiments, particularly in his later years, were done not with human beings, but with rats. So one might argue that the logical superiority which experimentation should have given him over Freud was dissipated to a considerable extent because he did not employ it in the areas where it might have revealed the most useful facts for understanding human nature.

Another really basic difference between the two men was in the kind of behavior in which they were interested. Hull, true to the American tradition, was concerned almost wholly with the psychology of learning, with discovering how the organism adapts to new situations. He wanted to know what shape the learning curve took, what its major determinants were, what happened when practice ceased, etc. In all of this he was satisfied to use white rats because they seem to learn pretty much the same way as human beings do, at least so far as the simple kinds of associative learning are concerned in which Hull was interested. Freud, on the other hand, was interested in dreaming rather than in learning. Dreaming provides of necessity a kind of psychological data which belongs exclusively to the human sphere and which leads readily into studies not only of abnormal

psychology, but of art and literature. It involved Freud in problems of memory for content and of perception, problems which Hull failed to deal with satisfactorily in his system. To the extent that Hull neglected dream life, Freud neglected the psychology of learning. If one may presume to stand in judgment, we might conclude that to the extent that both of them tried hard to build general systems of psychology, each began from too narrow a base. But this has always been true in the history of science. If each man pushes his insights to the limit, perhaps some future genius can see how they fit together, as Einstein could for certain physical phenomena.

Finally and most important of all, they differed enormously in the relative emphasis they placed on induction and deduction. Hull was fascinated by deductive systems from his earliest youth. While in his teens he "tried to use the geometrical method to deduce some negative propositions regarding theology" (2, p. 144). Later in college he constructed a "logic machine" which would satisfactorily "deduce" all the implications of a set of propositions plugged into it. But let him put it in his own words. "The study of geometry proved to be the most important event of my intellectual life; it opened to me an entirely new world—the fact that thought itself could generate and really prove new relationships from previously possessed elements" (3, p. 144). It is probably fair to say that all of his serious intellectual work was patterned after the geometrical model. He worked out a number of miniature systems complete with axioms, definitions, and derivations of theorems which he would then put to the "observational check." He believed that all secondary laws of human behavior could be derived from certain primary laws and so he dedicated his life to discovering the primary laws "together with the scientifically true and unmistakable definitions of all critical terms involved. These laws should take the form of quantitative equations readily yielding unambiguous deductions of major behavioral phenomena, both individual and social" (3, p. 162). It was his particular *bête noire* to read theorists whose propositions and principles were so unclear, confusing and ambiguous that it was impossible to test any of them experimentally.

Freud, on the other hand, took quite a different tack. He feared the deductive method and consciously set himself against using it for fear that it would lead him into empty philosophical speculation. Here we must invoke the difference in the historical period in which the two men grew up. In Freud's time it was revolutionary to be empirical, to turn one's attention to actual observation of human behavior. To be excessively theoretical was to be identified with philosophers whom one was revolting against. By Hull's time, however, there had already been a considerable mass of data collected by experimentation and observation, and Hull felt that the real problem was now to bring some order into it. He had nothing but contempt for the man who came into his office on Monday morning and looked around the laboratory asking, "Now what shall I do next?" He felt that this "dry as dust" empiricism was getting nowhere, that it did not lead to an accumulation of knowledge in a systematic form.

Even though the difference between the two men can readily be explained in historical terms such as these, it remains a fact that Freud, as a person, was always much more impressed by the singular observed fact than Hull was. Freud stayed much closer to his data. After all, his theories had their basis in the consulting room and he had to check them constantly against the symptoms of his patients. In the early days when he was attempting to check his hypothesis that hysteria, as a neurosis, always had a sexual etiology, he had to test it against case after case as they came to him for consultation. He felt that he had to explain every little fact, no matter how small and how apparently insignificant. (See, for example, his "Psychopathology of Everyday Life".) Hull, on the other hand, was much more willing to attribute things to "chance" and in this sense was not so thorough-going a determinist, at least in practice. When a particular rat did not behave the way he was supposed to according to Hull's theory, it did not concern him unduly because, by this time, statistical considerations could be invoked and it was possible to attribute the deviation to some chance factor and still argue that the general results of the experiment were in agreement with

the hypothesis. Freud retained throughout his long life the basic conviction that "theory is all very well, but it does not prevent [the facts] from existing" (3, p. 208). The same could not be said of Hull in practice, though I am sure that he would have subscribed to this sentiment in theory. When facts turned up which seemed actually to be inconsistent with his theory his common reaction was: "Give me time. It is not possibe to make all deductions at once; the system must be built up gradually." This is certainly a justifiable attitude, but in the end his loyalty was primarily to the system (as indeed it might well be, considering the amount of energy and time he had put into it) rather than to curious, apparently inexplicable, facts in themselves.

As a result of this last difference in particular, both men had their characteristic weaknesses as scientists. In Freud's case, he kept so close to his observations over the years as an inductive scientist that his theoretical system was constantly in a state of flux. The concepts used did not relate to each other in any clear systematic way because they were constantly growing, changing and developing as new observations were made. One may argue that a scientist must keep his theorizing flexible, but one also has a right to expect that it is not so flexible as to make it impossible to test systematically. Freud, himself, was temperamentally disinclined to follow up on the detailed checking of his insights, as Jones points out, and this shows in the end in his system. He could have used some of Hull's rigor.

As for Hull, his weakness ultimately lay in the fact that he whittled away at the inductive process until observation became merely a means of checking his previous theoretical assumptions. This has the disadvantage which has characterized all such elaborate deductive systems in the past. It leads its exponents to look at only those phenomena which are covered by the system. Other phenomena tend to be neglected, though they may be equally important, simply because they do not "fit" in the system anywhere and to make them fit may cause a radical, not to say painful, revision in the enormous superstructure of propositions and derivations which the system involves. Hull speaks rather fondly in his auto-

biography of a machine which he built over a number of years which would calculate coefficients of correlation automatically. He relates that many of his friends joked with him about it, claiming that it would never work. "But," he concludes, somewhat proudly, "it really worked exactly according to plan" (2, p. 151). What he failed to add was that although it did work, no one ever used it, partly because other more efficient ways of calculating coefficients of correlation had developed in the meantime, and partly because psychologists became more interested in statistical measures which had to be calculated with other types of machines. Some psychologists have the same thing to say in effect about his mathematico-deductive systems. They work all right, and they stand perhaps as a model of what can be done, but it is doubtful if they will be used partly because there will be more efficient ways of accounting for the same facts, and partly because there are important facts which will have to be accounted for by other theoretical models.

But what is our final evaluation of the contribution of these two men to the scientific study of psychology? To begin with, we must not underestimate the fact that they both inspired in a number of younger men the firm conviction that a science of psychology was possible. Such a belief has not been widely held, and, as we have seen, they both fought valiantly against doubts on this score wherever they arose, but particularly in religious circles. Then if we were to summarize Freud's lasting contribution in one word, it would have to be "ideas." He left behind him probably more important ideas about the nature of human psychology than any other man since Aristotle. Many of these ideas have not been checked by what most of us would regard today as adequate scientific methods, but they are a rich legacy which psychologists will draw on for years to come.

To summarize Hull's lasting contribution in one word, we would have to choose "system." By this we need not refer to his own elaborately worked out mathematico-deductive models. It is more the attitude which his models imply than the particular models themselves. No one, and here I speak from personal experience, could be long associated with Hull without catching some of

his enthusiasm for exactitude, clarity, and system in stating propositions and ideas. The following comment is typical: "Too often what pass as systems in psychology are merely informal points of view containing occasional propositions. . . . Some authors are prone to the illusion that such propositions could be deduced with rigor in a few moments if they cared to take the trouble. Others assert that the logic has all been worked by them 'in their heads,' but that they did not bother to write it out; the reader is expected to accept this on faith. Fortunately, in science, it is not customary to base conclusions on faith" (1, p. 30).

It would be difficult to make much of a case for Hull as an original thinker or for Freud as a systematic one, but certainly we may agree that the "system" of the one and the creativity of the other are both absolutely essential for a successful scientific approach to psychology.

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2

Achievement Drive and Economic Growth*

The root of consciousness that I know most about is the achievement motive—described in this chapter for an audience of businessmen because it has turned out to be the key to a certain personality type that is symbolized by the hard-driving business entrepreneur. Businessmen have been interested to learn what makes some of them tick or run so hard. Most of them accept this psychological diagnosis as essentially true. In fact they could rightly say they had known all along what the scientists are now telling them. What is different is that the scientist is much more precise in describing, measuring, and discovering the correlates of what has gone under such loose titles as "the profit motive," "the success urge," or simply "drive." Folk psychology or common sense about such matters is more often right than wrong (partly because it contains aphorisms to cover all possibilities), but it is dreadfully inaccurate as to details. My secret hope is that by undermining the intellectual content of the argument over whether or not the "profit motive" is necessary for a sound economic order, I may as a scientist make a contribution to improvement in relations between East and West. It should help a little for both sides to realize that the profit motive is at best a very imprecise and misleading term for a psychological characteristic—the achievement drive—which has had far-reaching consequences in history.

[What accounts for the rise in civilization? Not external resources (i.e., markets, minerals, trade routes, or factories), but the entrepreneurial spirit which exploits

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those resources—a spirit found most often among businessmen.

¶ Who is ultimately responsible for the pace of economic growth in poor countries today? Not the economic planners or the politicians, but the executives whose drive (or lack of it) will determine whether the goals of the planners are fulfilled.

¶ Why is Russia developing so rapidly that—if it continues its present rate of growth—it will catch up economically with the most advanced country in the world, the United States, in 25 or 30 years? Not, as the U.S.S.R. claims, because of the superiority of its Communist system, but because—by hook or by crook—it has managed to develop a strong spirit of entrepreneurship among its executives.

¶ How can foreign aid be most efficiently used to help poor countries develop rapidly? Not by simply handing money over to their politicians or budget makers, but by using it in ways that will select, encourage, and develop those of their business executives who have a vigorous entrepreneurial spirit or a strong drive for achievement. In other words: *invest in a man, not just in a plan.*

What may be astonishing about some of these remarks is that they come from a college professor, and not from the National Association of Manufacturers. They are not the defensive drum ratlings of an embattled capitalist, but are my conclusions, based on nearly 15 years of research, as a strictly academic psychologist, into the human motive that appears to be largely responsible for economic growth—research which has recently been summarized in my book, entitled *The Achieving Society*.[1]

Since I am an egghead from way back, nothing surprises me more than finding myself rescuing the businessman from the academic trash heap, dusting him off, and trying to give him the intellectual respectability that he has had a hard time maintaining for the last 50 years or so. For the fact is that the businessman has taken a beating, not just from the Marxists, who pictured him as a greedy capitalist, and the social critics, who held him responsible for the Great Depression of the 1930's, but even from himself, deep in his heart.

One of the queerest ironies of history, as John Kenneth Galbraith points out in *The Affluent Society*,[2] is that in a sense Marx won his case with his sworn enemies, the capitalists. Marx loudly asserted that they were selfish and interested only in profits. In the end many agreed. They accepted the Marxist materialistic view of history. The modern businessman, says Galbraith, "suspects that the moral crusade of reformers, do-gooders, liberal politicians, and public servants, all their noble protestations notwithstanding, are based ultimately on self-interest. 'What,' he inquires, 'is their gimmick?' "[3]

If not only the Marxists, but Western economists, and even businessmen themselves, end up assuming that their main motive is self-interest and a quest for profit, it is small wonder that they have had a hard time holding their heads high in recent years.

But now the research I have done has come to the businessman's rescue by showing that everyone has been wrong, that it is *not* profit per se that makes the businessman tick but a strong desire for achievement, for doing a good job. Profit is simply one measure among several of how well the job has been done, but it is not necessarily the goal itself.

THE ACHIEVEMENT GOAL

But what exactly does the psychologist mean by the "desire for achievement"? How does he measure it in individuals or in nations? How does he know that it is so important for economic growth? Is it more important for businessmen to have this desire than it is for politicians, bishops, or generals? These are the kinds of questions which are answered at great length and with as much scientific precision as possible in my book. Here we must be content with the general outline of the argument, and develop it particularly as it applies to businessmen.

To begin with, psychologists try to find out what a man spends his time thinking and daydreaming about when he is not under pressure to think about anything in particular. What do his thoughts turn to when he is by himself or not engaged in a special job? Does he

think about his family and friends, about relaxing and watching TV, about getting his superior off his back? Or does he spend his time thinking and planning how he can "sell" a particular customer, cut production costs, or invent a better steam trap or toothpaste tube?

If a man spends his time thinking about doing things better, the psychologist says he has a concern for achievement. In other words, he cares about achievement or he would not spend so much time thinking about it. If he spends his time thinking about family and friends, he has a concern for affiliation; if he speculates about who is boss, he has a concern for power, and so on. What differs in my approach from the one used by many psychologists is that my colleagues and I have not found it too helpful simply to *ask* a person about his motives, interests, and attitudes. Often he himself does not know very clearly what his basic concerns are—even more often he may be ashamed and cover some of them up. So what we do is to try and get a sample of his normal waking thoughts by asking him just to tell a few stories about some pictures.

Stories Within Stories

Let us take a look at some typical stories written by U.S. business executives. These men were asked to look briefly at a picture—in this case, a man at a worktable with a small family photograph at one side—and to spend about five minutes writing out a story suggested by the picture. Here is a very characteristic story:

> "The engineer is at work on Saturday when it is quiet and he has taken time to do a little daydreaming. He is the father of the two children in the picture—the husband of the woman shown. He has a happy home life and is dreaming about some pleasant outing they have had. He is also looking forward to a repeat of the incident which is now giving him pleasure to think about. He plans on the following day, Sunday, to use the afternoon to take his family for a short trip."

Obviously, no achievement-related thoughts have come to the author's mind as he thinks about the scene in the picture. Instead, it suggests spending time pleasantly with his family. His thoughts run along *affiliative* lines.

He thinks readily about interpersonal relationships and having fun with other people. This, as a matter of fact, is the most characteristic reaction to this particular picture. But now consider another story:

> "A successful industrial designer is at his 'work bench' toying with a new idea. He is 'talking it out' with his family in the picture. Someone in the family dropped a comment about a shortcoming in a household gadget, and the designer has just 'seen' a commercial use of the idea. He has picked up ideas from his family before—he is 'telling' his family what a good idea it is, and 'confidentially' he is going to take them on a big vacation because 'their' idea was so good. The idea will be successful, and family pride and mutual admiration will be strengthened."

The author of this story maintains a strong interest in the family and in affiliative relationships, but has added an achievement theme. The family actually has helped him innovate—get a new idea that will be successful and obviously help him get ahead. Stories which contain references to good new ideas, such as a new product, an invention, or a unique accomplishment of any sort, are scored as reflecting a concern for achievement in the person who writes them. In sum, this man's mind tends to run most easily along the lines of accomplishing something or other. Finally, consider a third story:

> "The man is an engineer at a drafting board. The picture is of his family. He has a problem and is concentrating on it. It is merely an everyday occurrence—a problem which requires thought. How can he get that bridge to take the stress of possible high winds? He wants to arrive at a good solution of the problem by himself. He will discuss the problem with a few other engineers and make a decision which will be a correct one—he has the earmarks of competence."

The man who wrote this story—an assistant to a vice president, as a matter of fact—notices the family photograph, but that is all. His thoughts tend to focus on the problem that the engineer has to solve. In the scant five minutes allowed, he even thinks of a precise problem—how to build a bridge that will take the stress of possible high winds. He notes that the engineer wants to find a

good solution by himself, that he goes and gets help from other experts and finally makes a correct decision. These all represent different aspects of a complete achievement sequence—defining the problem, wanting to solve it, thinking of means of solving it, thinking of difficulties that get in the way of solving it (either in one's self or in the environment), thinking of people who might help in solving it, and anticipating what would happen if one succeeded or failed.

Each of these different ideas about achievement gets a score of +1 in our scoring system so that the man in the last incident gets a score of +4 on the scale of concern or need for achievement (conventionally abbreviated to *n* Achievement). Similarly, the first man gets a score of −1 for his story since it is completely unrelated to achievement, and the second man a score of +2 because there are two ideas in it which are scorable as related to achievement.

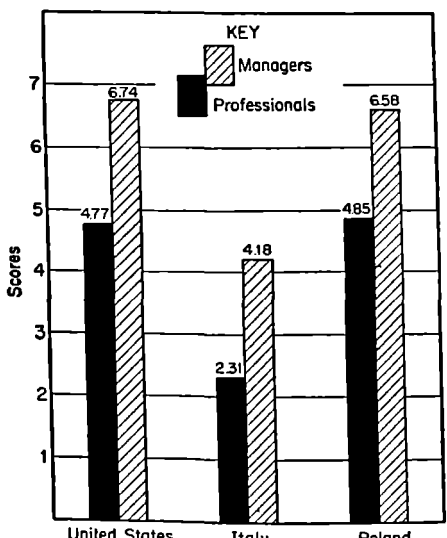
Each man usually writes six such stories and gets a score for the whole test. The coding of the stories for "achievement imagery" is so objective that two expert scorers working independently rarely disagree. In fact, it has recently been programmed for a high-speed computer that does the scoring rapidly, with complete objectivity, and fairly high accuracy. What the score for an individual represents is the frequency with which he tends to think spontaneously in achievement terms when that is not clearly expected of him (since the instructions for the test urge him to relax and to think freely and rapidly).

Thinking Makes It So

What are people good for who think like this all the time? It doesn't take much imagination to guess that they might make particularly good business executives. People who spend a lot of their time thinking about getting ahead, inventing new gadgets, defining problems that need to be solved, considering alternative means of solving them, and calling in experts for help should also be people who in real life *do* a lot of these things or at the very best are readier to do them when the occasion arises.

I recognize, of course, that this is an assumption that requires proof. But, as matters turned out, our research produced strong factual support. Look, for instance, at EXHIBIT I. It shows that in three countries representing different levels and types of economic development managers or executives scored considerably higher on the

Exhibit I. *Average* n *Achievement scores of managers and professionals in three countries*



average in achievement thinking than did professionals or specialists of comparable education and background. Take the two democratic countries shown there:

In the United States the comparison was between matched pairs of unit managers and specialists of the same position level, age, educational background, and length of service in an electric appliance company. The managers spent more of their time in the test writing about achievement than the specialists did.

The same was true of middle-level executives from various companies in Italy when contrasted with students of law, medicine, and theology who were roughly of the same intelligence level and social background.

In other words it takes a concern for achievement to be a manager in a foreign country like Italy, for instance, just as it does in the United States. It is worth noting in passing, however, that the level of achievement thinking among Italian managers is significantly lower than it is among American managers—which, as will be shown later, quite probably has something to do with the lower level and rate of economic development in Italy.

What about a Communist country? The figures for Poland are interesting, because (1) the level of concern for achievement is about what it is in the United States, and (2) even in businesses owned and operated by the state, as in Poland, managers tend to have a higher concern for achievement than do other professionals.

Another even more striking result, not shown in EXHIBIT 1, is the fact that there is *no real difference* between the average *n* Achievement score of managers working for the U.S. government (9.3) and those in U.S. private business generally (8.90). Apparently, a manager working for the Bureau of Ships in the Department of the Navy spends as much time thinking about achievement as his counterpart in Ford or Sears, Roebuck; government service does not weaken his entrepreneurial spirit. Whether he is able to be as effective as he might be in private business is another matter, not touched on here.

Careful quantitative studies of the prevalence of achievement concern among various types of executives also yield results in line with what one would expect. Thus, sales managers score higher than other types of managers do.

In general, more successful managers tend to score higher than do less successful managers (except in government service where promotion depends more on seniority). The picture is clear in small companies, where the president tends to score higher than his associates. In large companies, the picture is a little more complicated. Men in the lowest salary brackets (earning less

than $20,000 a year) definitely have the lowest average *n* Achievement scores, while those in the next bracket up ($20,000 to $25,000 a year) have the highest average *n* Achievement level. Apparently an achievement concern helps one get out of the ranks of the lowest paid into a higher income bracket. But from there on, the trend fades. Men in the highest income brackets have a somewhat lower average concern for achievement, and apparently turn their thoughts to less achievement-oriented concerns. Possibly these men are doing well enough to relax a little.

BUSINESSMEN & ACHIEVEMENT

Businessmen usually raise either one of two questions at this point:

(1) "Where can I get this test for *n* Achievement? It sounds like a good way of picking young executives!"

(2) "Why is this concern for achievement specific to being a success as a business manager? What about other types of achievement? Why isn't the entrepreneurial spirit necessary for success as an opera star, a preacher, a great teacher, or a great scientist?"

The answer to the first question, unfortunately, is simple: no practicable, marketable test for assessing achievement concern exists as yet. The method of measurement we have been using is too sensitive, too easily influenced by the social atmosphere surrounding the people who take the test, to give reliable individual results. Under carefully controlled conditions it works adequately to distinguish large groups of people like managers versus professionals, but it is not yet useful for individual selection. What we have here is a theoretical, scientific "breakthrough," not a practicable working device.

The second question is harder to answer but it takes us further in the direction of understanding exactly what kind of a person it is who spends a lot of his time thinking about achievement. To begin with, the facts are clear: many important types of professionals (doctors, lawyers, priests, or research scientists) fail to score on the average as high as business executives, yet clearly their work is

in every sense as much of an achievement as the businessman's. How come?

Let us consider a particular case for a moment—that of the research scientist. Certainly his work represents an important achievement, for he is the one who often makes the breakthrough on which new technological and economic advances depend. Shouldn't he be thinking about defining a problem, doing a good job of solving it, getting help from experts, etc.?

Yet, when we tested a number of such scientists—including several outstanding Nobel prize winners—we found, somewhat to our surprise, that they were not unusually high in *n* Achievement but rather tended to be average. Then it occurred to us that having a very high concern for achievement might make a person unsuitable for being a research scientist. Why? Simply because in research a man must often work for what may become very long periods of time without any knowledge of how well he is doing. He may not even know if he is on the right track for as much as five or ten years. But a man with a high need for achievement likes to know quickly whether he is accomplishing anything and quite possibly would become frustrated by the lack of feedback in basic science as to whether he is getting anywhere. He would then more likely move into an area such as management where results are more tangible. On the other hand, the research scientist obviously needs *some* achievement concern, or he is not likely to want to engage in his occupation at all.

Characteristics of Achievers

Considerations like these focus attention on what there is about the job of being a business entrepreneur or executive that should make such a job peculiarly appropriate for a man with a high concern for achievement. Or, to put it the other way around, a person with high *n* Achievement has certain characteristics which enable him to work best in certain types of situations that are to his liking. An entrepreneurial job simply provides him with more opportunities for making use of his talents than do other jobs. Through careful empirical research we know a great deal by now about the man with high

n Achievement, and his characteristics do seem to fit him unusually well for being a business executive. Specifically:

1. *To begin with, he likes situations in which he takes personal responsibility for finding solutions to problems.* The reason is obvious. Otherwise, he could get little personal achievement satisfaction from the successful outcome. No gambler, he does not relish situations where the outcome depends not on his abilities and efforts but on chance or other factors beyond his control. For example:

Some business school students in one study played a game in which they had to choose between two options, in each of which they had only one chance in three of succeeding. For one option they rolled a die and if it came up, say, a 1 or a 3 (out of six possibilities), they won. For the other option they had to work on a difficult business problem which they knew only one out of three people had been able to solve in the time allotted.

Under these conditions, the men with high *n* Achievement regularly chose to work on the business problem, even though they knew the odds of success were statistically the same as for rolling the die.

To men strong in achievement concern, the idea of winning by chance simply does not produce the same achievement satisfaction as winning by their own personal efforts. Obviously, such a concern for taking personal responsibility is useful in a business executive. He may not be faced very often with the alternative of rolling dice to determine the outcome of a decision, but there are many other ways open to avoid personal responsibility, such as passing the buck, or trying to get someone else (or a committee) to take the responsibility for getting something done.

The famed self-confidence of a good executive (which actually is related to high achievement motivation) is also involved here. He thinks it can be done if *he* takes responsibility, and very often he is right because he has spent so much time thinking about how to do it that he does it better.

2. *Another characteristic of a man with a strong achievement concern is his tendency to set moderate achievement goals and to take "calculated risks."* Again

his strategy is well suited to his needs, for only by taking on moderately difficult tasks is he likely to get the achievement satisfaction he wants. If he takes on an easy or routine problem, he will succeed but get very little satisfaction out of his success. If he takes on an extremely difficult problem, he is unlikely to get any satisfaction because he will not succeed. In between these two extremes, he stands the best chance of maximizing his sense of personal achievement.

The point can be made with the children's game of ring toss, some variant of which we have tried out at all ages to see how a person with high *n* Achievement approaches it. To illustrate:

The child is told that he scores when he succeeds in throwing a ring over a peg on the floor, but that he can stand anywhere he pleases. Obviously, if he stands next to the peg, he can score a ringer every time; but if he stands a long distance away, he will hardly ever get a ringer.

The curious fact is that the children with high concern for achievement quite consistently stand at moderate distances from the peg where they are most apt to get achievement satisfaction (or, to be more precise, where the decreasing probability-of-success curve crosses the increasing satisfaction-from-success curve). The ones with low *n* Achievement, on the other hand, distribute their choices of where to stand quite randomly over the entire distance. In other words, people with high *n* Achievement prefer a situation where there is a challenge, where there is some real risk of not succeeding, but not so great a risk that they might not overcome it by their own efforts.

Again, such a characteristic would seem to suit men unusually well for the role of business entrepreneur. The businessman is always in a position of taking calculated risks, of deciding how difficult a given decision will be to carry out. If he is too safe and conservative, and refuses to innovate, to invest enough in research or product development or advertising, he is likely to lose out to a more aggressive competitor. On the other hand, if he invests too much or overextends himself, he is also likely to lose out. Clearly, then, the business executive should be a man with a high concern for achievement who is

used to setting moderate goals for himself and calculating carefully how much he can do successfully.

Therefore, we waste our time feeling sorry for the entrepreneur whose constant complaints are that he is overworking, that he has more problems than he knows how to deal with, that he is doomed to ulcers because of overwork, and so on. The bald truth is that if he has high *n* Achievement, he loves all those challenges he complains about. In fact, a careful study might well show that he creates most of them for himself. He may talk about quitting business and living on his investments, but if he did, he might then *really* get ulcers. The state of mind of being a little overextended is precisely the one he seeks, since overcoming difficulties gives him achievement satisfaction. His real problem is that of keeping the difficulties from getting *too* big for him, which explains in part why he talks so much about them because it is a nagging problem for him to keep them at a level he can handle.

3. *The man who has a strong concern for achievement also wants concrete feedback as to how well he is doing.* Otherwise how could he get any satisfaction out of what he had done? And business is almost unique in the amount of feedback it provides in the forms of sales, cost, production, and profit figures. It is really no accident that the symbol of the businessman in popular cartoons is a wall chart with a line on it going up or down. The businessman sooner or later knows how well he is doing; salesmen will often know their success from day to day. Furthermore, there is a concreteness in the knowledge of results which is missing from the kind of feedback professionals get.

Take, for example, the teacher as a representative professional. His job is to transmit certain attitudes and certain kinds of information to his students. He does get some degree of feedback as to how well he has done his job, but results are fairly imprecise and hardly concrete. His students, colleagues, and even his college's administration may indicate that they like his teaching, but he still has no real evidence that his students have *learned* anything from him. Many of his students do well on examinations, but he knows from past experience that

they will forget most of that in a year or two. If he has high *n* Achievement and is really concerned about whether he has done his job well, he must be satisfied with sketchy, occasional evidence that his former pupils did absorb some of his ideas and attitudes. More likely, however, he is not a person with high *n* Achievement and is quite satisfied with the affection and recognition that he gets for his work which gratify other needs that he has.

The case of the true entrepreneur is different. Suppose he is a book publisher. He gets a manuscript and together with his editors decides that it is worth publication. At time of issuance, everyone is satisfied that he is launching a worthwhile product. But then something devastatingly concrete happens—something far more definite than ever happens to a teacher—namely, those monthly sales figures.

Obviously not everyone likes to work in situations where the feedback is so concrete. It can prove him right, but it also can prove him wrong. Oddly enough, the person with high *n* Achievement has a compelling interest to know whether he was right or wrong. He thrives and is happier in this type of situation than he is in the professional situation.

Two further examples from our research may make the point clearer. Boys with high *n* Achievement tend to be good with their hands, to like working in a shop or with mechanical or electrical gadgets. What characterizes such play again is the concrete feedback it provides as to how well a person is doing. If he wires up an electric circuit and then throws the switch, the light either goes on or it does not. Knowledge of results is direct, immediate, and concrete. Boys with high *n* Achievement like this kind of situation, and while some may go on to become engineers, others often go into business where they can continue getting this kind of concrete feedback.

What Money Means

In business, this feedback comes in the form of money, in costs and profits that are regularly reported. It is from this simple fact that the confusion between the so-called

profit motive and the achievement motive has arisen in the minds of both Marxist and classical economists. For, in the typical case, a concern for profit in a capitalist economy does *not* mean that the businessman is primarily interested in money for its own sake. Rather, this concern is merely the *symptom* of a strong achievement concern, since profitability in a capitalist economy provides the best and simplest measure of success. It provides the same sort of concrete knowledge of achievement that a person with high *n* Achievement seeks all the time. Research findings clearly support this analysis. If you simply offer a person with high *n* Achievement a larger money reward for doing a certain task, he doesn't do any better than he did without the prize. In fact, he tends to do a little worse because the money makes him nervous. Not so the person with low *n* Achievement; he works harder when he has a chance of taking some money away from a situation. The money in and of itself means more to him than it does to the person with high *n* Achievement.

Of course, it follows that concrete measures of achievement other than money could be devised by other types of economic systems to satisfy the entrepreneurial spirit. Something like this has apparently happened in Communist states like Poland and Russia, where plant managers work under a fairly rigid quota system which demands that they make their quotas—or else! In the free enterprise system a businessman must make his profit—or else. The psychological effects, so far as the achievement motive is concerned, are apparently pretty much the same. In both systems the manager gets feedback in concrete terms as to how well he is doing. If he has high *n* Achievement, he is more likely to live and survive under such a challenge.

While these three characteristics of people with a strong concern for achievement—the desire for personal responsibility, the tendency to set moderate achievement goals, and the need for concrete feedback of results—are the most important, there are some other minor characteristics possessed by these people which tend to suit them for an entrepreneurial job. They like to travel, they are willing to give up one bird in the hand to get two

in the bush, and they prefer experts to friends as working partners. But to discuss any of these in detail would take us far afield.

ACHIEVING NATIONS

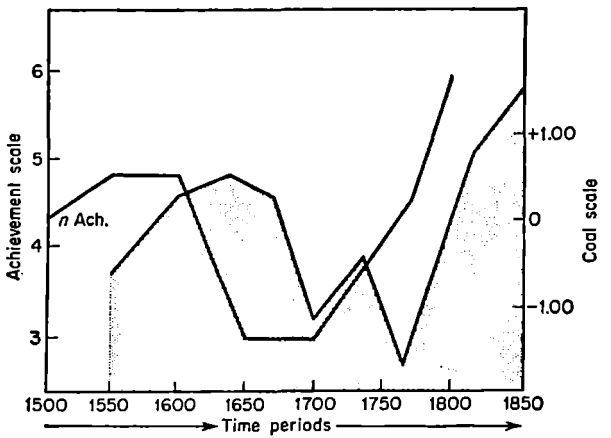
If the theory underlying the experiments determining *n* Achievement in individuals is correct, then what is true for groups of individuals might well prove true for nations. Does a high achievement concern herald a nation's rise? Let's take a look at the facts.

Naturally, tests of individual businessmen in particular countries would not prove very much about the influence of achievement concern on the nation's success. However, we figured that by coding popular literature of past and present, we could get a rough estimate of the strength of the concern for achievement in a given country at a given time period. So we took samples from various time periods of a wide variety of the most popular imaginative literature we could find—poems, songs, plays —and scored them for *n* Achievement just as we had scored the simple stories written by individuals.

When we plotted the number of achievement ideas per hundred lines sampled in a given time period against economic indexes for the same time period, we got two curves that showed a very interesting relationship to each other. Normally, we found, a high level of concern for achievement is followed some 50 years or so later by a rapid rate of economic growth and prosperity. Such was certainly the case in ancient Greece and in Spain in the late Middle Ages. Furthermore, in both cases a decline in achievement concern was followed very soon after by a decline in economic welfare. The relationship between the two curves is shown most dramatically in EXHIBIT II, which plots the data for the 300-year time span from Tudor times to the Industrial Revolution in England.

There were two waves of economic growth in this time period, one smaller one around 1600 and a much larger one around 1800 at the beginning of the Industrial Revolution. Each wave was preceded by a wave of con-

Exhibit II. How achievement thinking expressed in English literature predicts the rate of industrial growth 50 years later



Note: Achievement thinking (*n* Ach) = Mean number of achievement images per 100 lines.

Rate of industrial growth = Rate of gain in coal imports at London, as deviations from average trend (standard deviation units).

cern for achievement reflected in popular literature, a smaller one prior to the growth spurt around 1600 and a larger one prior to the Industrial Revolution.

What clearer evidence could one ask for? What people are concerned about determines what they do, and what they do determines the outcome of history!

Present Confirms Past

In modern nations, too, the picture is very much the same. Children's stories used in public school textbooks proved to be the most standardized form of popular literature that we could get from a large number of different countries. As a matter of fact, the simple

imaginative stories that every country uses to teach its children to read are very similar in format to the stories produced by individuals when we test them as described earlier, particularly if one concentrates as we did on second-, third-, and fourth-grade readers, where normally political influences are quite unimportant. The stories could be coded quite easily by the standard *n* Achievement scoring system.

Growth rates had to be estimated from the only figures available that could be trusted on such a wide variety of countries—namely, the figures showing electric power consumption—but there is ample evidence to show that electricity consumed is probably the best single available index of gross national income in modern times.

The *n* Achievement scores, when compared with the subsequent rates of economic growth for various countries, confirm the findings of the historical studies to a surprising extent. The higher the *n* Achievement level in the children's readers around 1925, the more rapid the subsequent rate of economic growth. (For 22 countries, the correlation was actually a substantial .53.) Furthermore, the higher the *n* Achievement level in a country's children's readers around 1950, the more rapid its rate of growth between 1952-1958. In fact, of 20 countries above average in *n* Achievement in 1950, 13 (or 65%) showed a rapid rate of economic growth in 1952-1958, whereas, of 19 low in *n* Achievement, only 5 (or 26%) achieved a rapid rate of growth.

Prediction Possibilities

How meaningful are these findings, especially when one realizes the crudity of the data? In a certain sense, the cruder one admits the data to be, the more remarkable the findings appear. After all, the data suggest that one could have got a pretty good line on the economic future of various countries by studying its stories for children in 1925—regardless of a major depression, a World War, and a host of other political and economic factors.

Is it possible that we have stumbled on a way of predicting the future course of history? And from such

an almost laughable source—stories for children—rather than the serious pronouncements of statesmen, generals, and economists? How is it possible?

The best interpretation of such findings would appear to run something as follows. The stories tell us what is on the minds of significant élites in the country, what these influential persons tend to think about most naturally, when they are "off guard," so to speak, and not under any particular pressure to think one thing or another. In this sense, the stories are exactly analogous to the ones written for us by individuals. If you ask a man whether he is interested in achievement, the chances are that he will tell you that of course he is. Similarly, if you were to ask a country's leaders whether they wanted their nation to forge ahead, they would find it unpatriotic to say no. But, regardless of what such leaders say in public, the stories in the children's readers of many nations will show whether their peoples' thoughts turn naturally to achievement or to matters other than achievement.

Here is an illustration. Take a simple story theme like one in which some children are building a boat. Such themes are frequently borrowed by one culture from another and appear in several different readers, but the way they are embroidered may be quite different and quite revealing. For example:

In Country A, an *achievement*-oriented country, the emphasis is on making the boat, on constructing something that will work, and not sink or tip over in a strong wind.

In Country B, the emphasis may be on *affiliation*, on the fun that the children have in playing together to sail their boat. Here little may be said about the details of constructing a seaworthy craft and much about the personal interaction of the children.

In Country C, the story may center on *power*, and describe how the children were organized to produce the boat. One boy might set himself up as a leader, coordinating the work of the other children and telling them what to do.

Apparently, what comes most readily to the minds of

these authors—whether concepts of achievement, affiliation, or power—reflects sufficiently well what is on the minds of key people in the country. And not only will these concepts seem natural and pleasing to the readers of these stories but will determine what they spend their time doing in the years to come. Thus, if the stories stress achievement, it means that an entrepreneurial spirit is abroad in the land. It indicates that many key people are thinking in achievement terms even when they do not need to.

In a nation, a strong achievement orientation affects particularly the business or economic sector of the population. And if the entrepreneurial types are strongly motivated to do well, they apparently succeed in getting the economy moving at a faster rate. So the children's stories are a symptom of the quality or "drive" of the entrepreneurial sector of an economy.

Rising and Falling Nations

With this in mind it is interesting to look at scores for particular countries—if only to make a better guess as to where to invest one's money! A generation ago, the North European countries, particularly Sweden and England, were very high in *n* Achievement, but both have fallen in the 1950's to well below average. Is it just a coincidence that one hears reports of stagnation or "maturity" in both economies? Are England's present difficulties the fault of outside circumstances, or do these difficulties stem from the fact that its citizens have lost their achievement drive? For some reason, the Central European countries—France, Germany, and Russia —were all low in achievement concern in 1925, but by the 1950's all had increased sharply.

The case of Russia is particularly critical for us. How does the United States stand in achievement motivation as compared to the U.S.S.R.? According to a historical study, achievement concern in the United States increased regularly from 1800 to around 1890 but has decreased more or less regularly since, although there is a possibility that the decline has leveled off in the past 30 years. We are still above average and, in fact, were

at approximately the same level as Russia in 1950, although we were probably on the way down while they were certainly on the way up.

From the point of view of this analysis, the argument as to whether a socialist or a free enterprise system is the better way of stimulating an economy has been based on a false premise all along. Americans claimed that the success of their economy resulted, naturally, from the free enterprise system. Then, when the Soviet Union scored successes in outer space and in other fields, the Russians immediately claimed these great economic and technological achievements stemmed from the superiority of their system.

Both contentions may well be wrong. Economic success and technological development depend on achievement motivation, and the rapid rate of Russian economic growth is due to an increase in her achievement concern just as ours was a generation or so earlier. There are other issues involved in comparing the two social systems, of course, but so far as this particular issue is concerned it has been misunderstood by both sides.

Need for Acceptance

There is one final question that must be answered before we move on. Is it possible that achievement motivation will be aroused in *any* nation which comes in contact with modern technology and sees vividly the opportunity for a better life? Can't achievement motivation be "borrowed" or assimilated from one nation to another? Are there not good illustrations of countries in which need for achievement has risen as they see more and more clearly the possibilities of growing and developing into modern, economically advanced nations? Are we just describing the "revolution of rising expectations" in fancy psychological jargon?

Opportunity is part of the story, of course. It does arouse people to act, but it arouses precisely those who have some need for achievement *already*. The soil must be ready for the seeds, if they are to grow. After all, many countries have been in touch with Western technology for generations—for example, the Islamic nations around the Mediterranean; yet they have been very slow

to respond to the possibilities of a better life clearly presented to them all this time.

Consider, for example, a nation like Nigeria, which provides a good illustration of how opportunity and motivation must interact. Nigeria is essentially a federation of three regions, each of which is dominated by a different cultural group. Only one of these groups—the Yoruba—is known to be very high in need for achievement. In fact, long before the Yoruba had much contact with the West, this tribe was noted for its skill and interest in trade and native financial transactions. An indication of the validity of the achievement theory is shown by the fact that the Yoruba tribe, when exposed to new opportunities, produced a much stronger and more successful economic response than did the other tribes—as would be predicted. The regional bank operated by the Yoruba is in a much sounder position, for example, than the other two regional banks in Nigeria.

Opportunity challenges those who are achievement-oriented. Like two other groups high in *n* Achievement, American Jews and American Catholics between the ages of 35 and 45 (President Kennedy, for instance), the Yoruba reacted vigorously to develop economic opportunities as they became available. Exposure to economic and technological opportunities did not produce as vigorous a response from groups lower in *n* Achievement in Nigeria any more than a similar exposure has done through the years to similar low *n* Achievement groups in the United States.

WHAT CAN WE DO

Is it inevitable that the achievement concern shown by U.S. citizens should continue to decline? Must we fade out in time as all other civilizations have in the past? Not if we understand what is happening and take steps to change it. Not if we move decisively and quickly to influence the sources of achievement concern in individuals and in our nation.

What are those sources? Clearly, not race or climate—those traditional external explanations of the superior energies of some nations. For Russia's *n* Achievement

level has increased decisively since 1925, while Sweden's and England's have dropped. Certainly there have been no equally decisive changes in the gene pools or the climates of those nations in that time period.

In fact, external factors are usually unimportant, though occasionally they may play a role, as they have in helping to create generally high levels of *n* Achievement in immigrant countries like the United States, Canada, and Australia. Such nations tended to attract immigrants higher in *n* Achievement, because:

1. They drew their population initially from countries that were higher in achievement concern than those from which the Latin American countries drew.

2. They provided a haven for many persecuted religious minorities whose achievement concern was very strong.

3. They did not provide as many opportunities for getting rich quick as did Mexico and Peru, for example, with their plentiful supplies of gold and silver.

In short, countries like the United States were lucky. The barrier to migration was so formidable that primarily those with high *n* Achievement climbed it.

Historians have sometimes claimed that it was the great frontier in the United States that provided the challenge and stimulus to development. Nonsense. Great frontiers have existed and still exist in many South American countries without eliciting a similar response. It was the achievement-oriented immigrants to America who regarded the frontier as a challenge to be overcome. It was not the frontier that made them achievement-oriented. Opportunities, like new frontiers, always exist, but it takes a certain kind of person to see them and believe he can exploit them.

While our distance from Europe, our tolerance for religious minorities, our good fortune in drawing immigrants initially from countries high in *n* Achievement tended to ensure that we got more citizens with high achievement motivation, our later restrictive immigration policies have drastically reduced our chances of continuing to receive such people. These policies continue to give preference to immigrants from the North European countries, whose achievement drive has dropped

significantly, and to restrict immigration from other countries where the *n* Achievement has been rising sharply. It would be a tragic irony of history if in an endeavor to protect ourselves, we managed to shut off the supply of that entrepreneurial spirit that made our country great!

Sources of Achievement

Where does strong achievement motivation come from? Values, beliefs, ideology—these are the really important sources of a strong concern for achievement in a country. Studies of the family have shown, for instance, that for a boy three factors are important in producing high *n* Achievement—parents' high standards of achievement, warmth and encouragement, and a father who is not dominating and authoritarian. Here is a typical study that reveals this fact:

> A group of boys were blindfolded and asked to stack irregularly shaped blocks on top of each other with their left hands, at home in front of their parents. Separately, the mothers and fathers were asked how high they thought their sons could stack the blocks. Both parents of a boy with high *n* Achievement estimated that their boys should do better; they expected more of him than did the parents of a boy with low *n* Achievement. They also encouraged him more and gave him more affection and reward while he was actually doing the task. Finally, the fathers of boys with high *n* Achievement directed the behavior of their sons much less when they were actually stacking the blocks; that is, they told them less often to move their hands this way or that, to try harder, to stop jiggling the table, and so forth, than did the fathers of boys with low *n* Achievement.

Other studies have shown that fathers must be respected by their sons; but after the boy is capable of achieving something for himself, his father must stop directing every step he takes if the boy is to develop a strong concern for achievement.

In a sense, however, these family studies only push the question further back. Where did the parents get their standards? Why do some emphasize achievement and affectionately reward self-reliance? Because, very simply, they themselves believe in achievement for their

family or for their political, social, or religious group. For one reason or another they are caught up in some great wave of achievement ideology.

One of the paradoxes of history is that often the achievement concern was not itself initially directed toward business or economics. For instance, the two great waves of achievement concern in the history of England shown in EXHIBIT II were each associated with waves of Protestant reform or revival, whose explicit aims were not secular but strictly religious. The Methodists, for example, in the second wave of the English Protestant revival, stressed religious perfection in this life; yet even John Wesley recognized with some puzzlement that devout Methodists tended to get rich, a fact which he considered a handicap in attaining religious perfection.

But now we can understand what happened. The strong concern for Christian perfection in this world tended to produce an achievement orientation in Methodist parents and their sons that turned the boys toward business because, as we have shown above, an achievement concern is most easily satisfied in business. In our day, it is the secular religions of nationalism and communism that have placed the highest emphasis on achievement and tended to create higher levels of *n* Achievement in underdeveloped and Communist countries. Communism lays the same claims to superiority as a means of salvation that Christianity once did. However wrong we may feel it to be, we must recognize that it tends to create a strong atmosphere of achievement that has important consequences for economic growth.

THE ACHIEVEMENT CHALLENGE

If we are to compete successfully with Russia in the economic sphere, we must develop an achievement ideology at least as strong as hers. If we are to help poor countries develop rapidly and become self-reliant, we must recognize that the first order of priority lies in fostering the entrepreneurial spirit in those countries, not in simply providing them with material capital or in meeting their physical needs.

Oddly enough, a businessman knows this about his own company. He knows that in the final analysis it is the spirit in the company that counts most—the entrepreneurial drive of the executives, the feeling of all that they are working together to achieve a common goal; it is not "hardware" that counts in the long run—the size and slickness of the plant, or the money in the bank. These assets will melt away like snow in a hot sun without the proper achievement orientation in the company. Knowing this, the wise executive acts accordingly. He is concerned to keep the achievement orientation of the company alive by talking about its aims, by setting moderate but realizable goals for himself and his associates, by assigning personal responsibility, by making sure that people know how well they are doing, by selecting executives with high *n* Achievement or by developing it in those who need it.

What is true for a business is also true for a country, but this is not widely recognized. And we must realize that it is important to foster the achieving spirit not only at home but abroad if we are to be effective as a nation. American foreign policy is currently based on two main strategies: (a) the provision of political freedom and (b) material aid. Both are excellent goals, but they are not enough. How long would a company last if its chief goals were freedom from interference by others and freedom from want? It needs positive, specific goals such as a more effective marketing program, or a strict cost reduction program; something dynamic is necessary to keep a company—and a country—alive and growing.

Over and over again we have failed to learn the lesson that political freedom without a strong drive for progress is empty and impossible to maintain for long. China was politically free under Chiang Kai-shek, but it lacked the dynamic of a really self-sacrificing achievement effort until it was taken over by the Communists. Unless we learn our lesson and find ways of stimulating that drive for achievement under freedom in poor countries, the Communists will go on providing it all around the world. We can go on building dikes to maintain freedom and impoverishing ourselves to feed and arm the people behind those dikes, but only if we develop the entre-

preneurial spirit in those countries will we have a sound foreign policy. Only then can they look after their own dikes and become economically self-sufficient.

Compare India and China, for example. Despite newspaper reports to the contrary, economic experts assure us that China is developing much more rapidly economically today than is India. Why? Is it because the West has given less material help to India than the Communist world has to China? Probably not. Is it because there is less political freedom in India than in China? Certainly not. Yet if the keystones of our foreign aid policy are the ensuring of political freedom and the granting of economic aid, these measures are clearly not doing very well as far as developing India is concerned. Russia has apparently exported something more important to China—namely, an achievement dynamic that has galvanized the whole country. There is absolutely no evidence that this dynamic needs to be associated with regimentation and lack of personal freedom as it is in China, for the United States had this dynamic once, still has quite a lot of it, and could export it more effectively—if we really tried.

Hard to Export

Actually, we have been hampered in exporting our achievement dynamic, not only by a misguided emphasis on material as opposed to motivational factors, but also by a laudable desire to avoid appearing superior. When Americans travel and discover how poor people are in many countries and how inferior their political institutions appear to be to ours, they often either withdraw in horror into their own American enclaves and become "ugly Americans" or they remember their college anthropology and become cultural relativists, deciding that after all there is some good in all ways of life and we must not impose ours on other people. Neither of these reactions is very intelligent. For the fact is that all poor countries are going to modernize and want to modernize. They refuse to remain quaint, impoverished specimens for the anthropologist to study.

How can we help provide such countries with an achievement dynamic without seeming to impose it on

them? One simple way is to sell them on *their own country* and *its* possibilities, not on *ours*. It may sound absurd to say that our job is to help sell the Tanganyikans on Tanganyika or the Mexicans on Mexico, but the fact is that in many of these countries most of the people have never even heard of the nation of which they are citizens, and know little or nothing about the possibilities for a better life that they may have at home.

In other words, our job really is to do what Americans have been so good at doing—creating wants, selling a people on their future, making them believe in their own achievement.

Our other difficulty is organizational. Somewhere along the line we decided that federal funds for foreign aid must be spent by federal employees, usually in the form of grants or loans to be doled out by federal employees in other countries. This is a natural enough policy, because foreign relations are sensitive matters, but there is nothing inevitable about it. In fact, there is considerable evidence that aid channeled through nonofficial or private agencies is much more welcome in many countries and also less expensive.

Private organizations in the U.S. have had a long record of useful service abroad. Why should their resources not be increased by federal grants so that they can do their job even more effectively and on a larger scale? Why do new federal agencies have to be created all the time to try to hire people away from such groups when they are already organized to do a good job? Why must the Peace Corps compete for scarce specialists, whom it is currently having trouble recruiting? Why couldn't it make grants to organizations which already have such specialists on their staffs and instruct them to expand their efforts abroad?

Often such organizations can do a better job because they are not official representatives of Uncle Sam. They would certainly be more welcome in countries like Mexico, which will not accept Peace Corps volunteers because as U.S. employees they have political significance. What if some of these organizations are religious, when we believe in the separation of church and state? This is true, of course, but *all* Russians sent abroad are

"religious" Communists. Can we really object to helping a few Christians go abroad, particularly if they are not official representatives of our government?

CONCLUSION

Our biggest challenge is to find some way to harness the enormous potential of American business to help develop poor countries. Why should creeping federalism continue to spawn new agencies for providing economic assistance to foreign countries when such agencies already exist under private ownership in the United States? For example, if Brazil needs a new electric power system somewhere, why should our government not help by working out a contract, complete with all the necessary credits or loans, with one of our own light and power companies? Aid, in other words, would be on a company-to-company basis rather than on a government-to-government basis. In the long run, it would probably prove to be cheaper and more efficient. More important, the achievement orientation of our business executives could make itself felt in various ways in the newly developing companies abroad.

This idea has many complexities which need to be worked out—some of which are dealt with in *The Achieving Society*—but basically it is designed to harness some of the enormous reserves of achievement ideology and skill in American business to the gargantuan task of developing poor countries. Money is not enough. Drive and enthusiasm are needed. Ways of locating and exporting these resources must be found.

If there is one thing that all this research has taught me, it is that men can shape their own destiny, that external difficulties and pressures are not nearly so important in shaping history as some people have argued. It is how people respond to those challenges that matters, and how they respond depends on how strong their concern for achievement is. So the question of what happens to our civilization or to our business community depends quite literally on how much time tens of thousands or even millions of us spend thinking about achievement, about setting moderate achievable goals,

taking calculated risks, assuming personal responsibility, and finding out how well we have done our job. The answer is up to us.

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Encouraging Excellence*

The realization that boys with a strong need for Achievement constitute a valuable national resource has led me in this chapter to an open attack on the American school system which saves its rewards almost exclusively for a certain type of child—the academically gifted. The difficulty is that the soundness of our economic order and of our political order—in fact, the foundation of our whole society—depends on the encouragement of other types of excellence. The academically talented are an important asset to a community, but they are not the only asset, and ways must be found of encouraging other types of talent if our society is to survive and grow. This chapter represents an attempt to consider further the implications for society of scientific information now available on nonacademic types of talent, such as the need for Achievement discussed in the preceding chapter.

Americans have already discovered, and are pursuing with alarming vigor, a system for encouraging excellence. It may be summed up briefly in the following formula: *the best boys should go to the best schools and then on to the best jobs.* The implications of the formula are eminently practical: the nation engages in a country-wide talent search to discover by means of objective psychological tests who the ablest youngsters are. The tests identify the ablest students regardless of race, creed, color, economic condition, or teacher's opinion. Once discovered, these students ideally go to the best schools. In order to facilitate the process, the schools, in their turn, participate in the talent search and encourage the best students to apply. Since many of the colleges cur-

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rently defined as best are in the expensive Ivy League, National Merit Scholarships are provided so that the ablest young people can attend them. Once they are in the best colleges, the students, if they continue to do their academic best, can look forward to being recruited by professional schools or business for the most important positions in developing and serving the nation.

The American formula for encouraging excellence involves a single upward mobility ladder based on academic performance and running from West Redwing, Minnesota, to Harvard, to President of the United States or General Dynamics. The formula is an attractive one and has always appealed to important American values—like belief in achievement and in giving everyone a fair chance to get ahead according to his merit. Only recently, however, have we been in a position to put it into effect with any real efficiency. We have developed objective psychological tests that can be and have been administered to tens of thousands, if not millions, of students, so that we can discover the ablest ones quickly and within small margins of error. We have begun to get better organized in providing nation-wide scholarship competitions administered by some of the better universities or independently. Mass communication networks—the radio, the press, TV—have knit the country together so that the talented boy in West Redwing has a better chance of knowing than he did a generation ago that Ivy League colleges exist and that in the rankings of institutions for academic merit, they stand at the top. Shouldn't he, as the ablest boy in his town, go to the place where he can get the best education and have the greatest chance to realize his own potential and be of most use to his country? Isn't this the model of success most Americans have in mind when they think about "encouraging excellence" today? To be sure, local considerations still apply—alumni bring pressure to admit a quarterback, or Alabamans may not want their sons to go out of the state to school, but such events may be viewed as unfortunate imperfections in the idealized, rational model in terms of which most thinking people are planning the future of the nation.

In fact, to raise any questions about the rational

model is a little like being against virtue. It is so obviously practical, efficient, democratic, and nonauthoritarian. For, after all, no one is forcing anybody to do anything. In fact, the model calls only for creating a climate of persuasion in which excellence is defined, identified, and encouraged to go to the top. Why, then, does it make us slightly uneasy? Why does it positively give John Hersey the shivers in *The Child Buyer*? His Orwellian nightmare revolves precisely around what happens when the ablest boy in a small town is offered the "best" kind of education (though it is considerably different from Harvard's!) in order to maximize his own potentialities and his contribution to his country. Why does Jerome S. Bruner state with some concern that "the danger signs of meritocracy and a new form of competitiveness are already in evidence?" [1] What has led Dael Wolfle of the American Association for the Advancement of Science to insist on the diversity of talent? [2]

Let us look at the balance sheet for a moment: what do we gain by such a system and what do we lose? On the credit side, it has certainly helped to set uniformly high academic standards everywhere and to provide an upward channel of mobility for talented youngsters no matter what their social class or racial background may be. Not even Texans can argue for the superiority of their academic institutions if their students regularly score lower on scholastic achievement tests. And no one can deny that a high test score and a National Merit Scholarship have given many an underprivileged boy or girl a break they would never otherwise have had. These are important matters: we believe in an open society with rewards given for uniformly high standards of achievement and, to a very considerable extent, we have created one. Access to high-level positions in our society probably depends less on social class background and more on individual merit than in any other country today.[3] Why complain? We do indeed have a great deal to be proud of, and a long way to go in introducing the academic merit system everywhere in the country, yet we must also look ahead lest such a system lead us into a kind of overspecialized excellence that would be

as fatal in the long run as the overspecialization of the dinosaur.

If we restrict ourselves to the better colleges, or what are called more euphemistically the "preferred" colleges, the debit side of the merit system is also impressive though less obvious. Consider the extreme case: suppose the better colleges should admit only the academically talented—those whose grades and scores on scholastic aptitude tests are high. The supposition is not unreal for many of them; the Directors of Admissions can proudly report annually that a higher and higher proportion of the freshmen are from the top quarter of their secondary-school classes. What is wrong with such a method of encouraging or rewarding excellence?

The core of the problem lies in the definition of excellence implicit in our current nation-wide attempts to recognize and encourage talent. Ability means, for the purposes of these tests, academic excellence, skill in taking examinations, in following instructions and finding solutions to problems set by others. This is an extraordinarily important type of excellence. It can be discovered by techniques already well developed. It is related to success in many different types of occupations. It deserves and needs encouragement, particularly in lower-class areas as yet untouched by the general American recognition of the importance of academic achievement. But it is not the only type of excellence. It just happens to be the only one that we psychologists can measure at the present time with any degree of certainty, and, therefore, it tends to get more than its share of attention.

If the better colleges go on admitting solely or primarily on this basis, everyone will lose in the long run. The better colleges will lose because they are excluding students whose excellence, though not so obvious, can contribute much to making a college experience more educational for all concerned. Society will lose because young people with very important nonacademic talents will not be exposed to the most liberalizing kind of education. Most importantly, the students themselves will lose—both those admitted and those not admitted—

because the system tells them that there is *only one kind of excellence that really counts:* the ability to take examinations and get good grades in school. A single standard of success is being promoted, which, in Riesman's telling phrase, tends to homogenize our cultural value system. Americans all too often, anyway, end up wanting exactly the same thing: the same car, the same standard of living, the same toothpaste, the same wife—all as promoted on television or in the newspapers. Now they must all want the same education—so long as it is the *best* (like the best toothpaste, which is like every other toothpaste only more so) and so long as they can demonstrate what they got out of it, all in exactly the same way, by getting good grades and being promoted upward on the identical ladder of success in the system. So the boy who does not "make" it, who does not get good grades, or get into the "best" college, may well define himself as a failure in terms of the only norm that seems to count. What satisfaction can he get out of alternative paths of life, even out of an alternative kind of education, particularly when he knows that education at a "good" college is increasingly a necessity for leadership in our society? If he is a boy with political talents, and mediocre academic ones, is it likely any more that he can be President of the United States like Harry Truman without a college degree? How can he feel that he can contribute importantly to society if he does not make the academic grade? Or if, on the other side of the picture, a girl happens to have excellent academic talent, how can she feel that she can contribute to society if she marries and has a family, which prevents her from following the professional career that the merit system tells her is the one thing she is ideally suited for? Overstressing academic merit can discourage young people with types of talent that are very important for our society and can create in them a discontent and sense of frustration that lasts a lifetime. Must we not encourage other varieties of excellence along with the ability to do well in course work?

To be sure, there have always been those who have insisted on the importance of musical and artistic talents or athletic prowess. I even know of a case in which a

college director of admissions admitted an excellent 'cello player with a "C" average prediction to complete the college string quartet, though nowadays in one of the better colleges he would have been most ambarrassed to admit publicly that he had given similar preference to a quarterback. But with all due respect for such visible talents, I should like to focus attention for a moment on less visible, more intangible types of excellence. For the fact of the matter is that Americans are "rating and ranking happy." What they can see and measure on a scale of excellence, they will encourage. They can recognize musical and athletic talent early and, therefore, they find ways of giving youngsters with these talents the encouragement and rewards they deserve. But my concern is with important types of excellence that are not so readily recognizable or so obviously meriting reward.

Let me give three brief illustrations of what I have in mind. For over a dozen years now, I have been concerned as a professional psychologist with understanding the nature of a particular human motive called the "need for Achievement," the desire to do a good job of work. In a crude sort of way, we can measure it, and by now we have developed a pretty fair understanding of what people are like in whom such a need is very strong.[4] To oversimplify a little, they seem characterized by "the entrepreneurial spirit," by a desire and a capacity to do well in situations which challenge their ingenuity and resourcefulness. They are particularly apt to be successful in business, rather than the professions, and wherever a large number of them collect in a particular country at a particular time, the country has tended to show rapid economic development. In short, these men represent a valuable national resource, a type of excellence that should be encouraged. In a very real sense, it is on them that the future economic well-being of everyone in the country rests. Yet their need for Achievement does not lead them to do particularly well in school. Perhaps the reason lies partly in the fact that they like to solve problems set by themselves, rather than those set for them by others; but the fact remains that whatever the reason, they are not likely to be viewed with particular approval by their teachers or selected for help by present

tests of academic excellence. Where do they fit in the current system for encouraging excellence?

Or consider another example—curiosity. My colleague Richard Alpert and his students want to measure this important human characteristic and to discover how it can be encouraged by the educational process. But note how it requires a type of behavior in a sense directly opposed to the academic excellence so feverishly promoted by our testing and grading systems. That is, curiosity may be defined as a desire to know, or as the knowledge of, things one is not supposed to know; whereas academic excellence is defined as knowing what one is supposed to know or has been taught. To test for curiosity, one might have to inquire into matters that the student had not been taught at all or that he could not be expected to know because of insufficient background in his previous training or in the test item itself. Such procedures might be unfair to the good and conscientious student, but they tap a type of excellence not currently identifiable or assisted in any way. Let me say again: I do not want to discourage academic excellence or unduly praise curiosity. For the moment I want merely to argue that curiosity is an important type of excellence that we should be concerned with developing.

Finally, let us consider briefly the problem of excellence in the other half of the human race, women. Ours is a male-oriented society. It is so male-oriented that the women, particularly the better educated ones, have tended to accept male definitions of excellence and have felt unhappy about not being able to achieve great success in terms of such standards. A recent nation-wide survey has clearly shown that women are unhappier and worry more than men.[5] They ought to. They are caught up in a system which does not encourage or recognize the types of excellence at which they are best. They enter the competition in academic skill just as the boys do. They receive National Merit Scholarships. They go to the best colleges; but there the system is apt to break down. Their superior academic performance suits them much less for their future role in life than it does the boys. They do not become President of the United States or of General Dynamics, or even very often Nobel-prize-winning sci-

entists. It is small wonder that many of them feel frustrated and unhappy over lost opportunities. They have been gulled. They have swallowed the male definition of excellence, in terms of full-time work, visible achievements, measurable results (e.g., money earned), the manipulation of nature, etc. There are other types of human excellence without which life would hardly be worth living, and I do not mean sewing or the art of polite conversation. I do mean such characteristics as sensitivity to other human beings, compassion, richness and variety of imaginative life, or a lifelong concern for a particular scientific problem, whether one is paid to work on it or not. These are less visible and less measurable types of human excellence, but nonetheless important for all that.

Here we encounter a problem that will shock some and amuse others. Should these qualities be measured? Should we psychologists try to find ways of discovering who are the young people with the highest need for Achievement, the greatest curiosity, the most social sensitivity, or the greatest imaginativeness? The romantic answer is, "no." Must we, after all, bring even these human qualities into the same "rating and ranking" competition that currently marks the field of academic competence? The practical answer, I am afraid, is "yes," for two reasons. On the one hand, no one can stop the psychologists; they are already developing crude measures of many such qualities outside the strictly academic sphere and are likely to be increasingly successful at it in the years to come.[6] On the other hand, a very good case can be made for the use of such other measures in defense against the exclusive use of academic criteria in deciding what kind of excellence to encourage.

Careful studies have repeatedly shown that, despite the fact that most human judges insist on taking other factors into account in making selections of any kind, their final decisions are almost perfectly correlated with the single quantitative score that they have, namely, some form of academic achievement or aptitude test score.[7] They like to think that they are taking other factors into account, but in actuality they do not, and the reason is simple: the other factors are not expressed

in quantitative terms, but come in the form of vague verbal descriptions or recommendations that are very hard to compare in making final choices. So the choices are made in terms of the one available quantitative measure: for academic promise. If we want to encourage a concern for other types of excellence in this merit-oriented society of ours, we may have to develop measures of other types of excellence.

But suppose they can be identified. How are they to be encouraged? Does it mean the schools should teach and grade curiosity, the need for Achievement, imaginativeness, and sensitivity? That way lies certain disaster. It is caricatured by those educators who have argued that everyone must be good at something and that therefore the schools must discover and teach that something, whether it be cooperativeness in play or preparation for happiness in marriage. Cultivating other types of excellence need bring no changes in the curriculum of the schools, though it may require a change in the attitude of some teachers. Teachers still have to teach content—geology, English, mathematics, or social science—but they can encourage human beings. They can teach in ways that show a genuine respect for curiosity or the entrepreneurial spirit. The schools have always feared that concern for other types of excellence than academic performance would lower standards. Why should it? Suppose a student of algebra is curious and spends so much time picking up odd bits of information about mathematics that he does not learn his algebra. Should he be given an "A" for his curiosity? Certainly not, because he has not learned his algebra. However, it does not follow that the teacher should not encourage curiosity, admire the student's willingness to go off on his own, or perhaps even change the way he teaches mathematics so as to engage the student's curiosity more. The teacher-student relation should not be limited strictly to the grade-giving function, nor should the grade come to summarize all that a student has learned in college or high school.

As a matter of fact, the human qualities we are speaking of do not develop by formal teaching nor do they require the external rewards of grades. How can a student

be taught to be curious in the usual way? A contradiction is involved. Can he be taught that he is supposed to learn what he is not supposed to learn? Certain "progressive" schools have come to grief precisely by trying to give instruction in such matters as creativity and curiosity, which almost by definition defy formal instruction, because they involve a student's doing things on his own that are different from what he is expected to do. Or consider the need for Achievement, the desire to do a good job in a situation involving personal challenge. At the present time we do not know how to increase it by formal instruction, nor are we sure that we would want to even if we could. Would it not make the intense competitiveness of the country even worse? Furthermore, research has shown that external rewards, such as grades, are not only meaningless for such people, they may actually be disconcerting. A person with a strong need to achieve works best when left alone to pursue his own goals. Offering him special incentives or rewards only serves to put him off his stride, unlike the person with a low need for Achievement, who needs such rewards to spur him on.

If the usual methods of encouraging excellence—by teaching and grading—do not work for such qualities, what does? Unfortunately, psychologists have only just begun to work on such problems. Their efforts to date have been almost wholly directed to identifying various types of academic talent and measuring the effects of various methods of teaching and grading it. Only a few mavericks have strayed into studying the nonacademic effects of education. However, one conclusion is already fairly well established, even at this early stage in the research. Schools and colleges tend to develop distinctive "personalities," distinctive and persistent climates of opinion that have rather marked effects on students attending them. R. H. Knapp and H. B. Goodrich have noted this in demonstrating that certain undergraduate colleges excelled in the production of scientists, whereas others produced more humanists, or lawyers.[8] P. E. Jacob has surveyed studies of value attitudes in various colleges and come up with some similar findings.[9] Certain values are more common on some campuses than others. At

Haverford the students are more community-minded, at Wesleyan they express a stronger ethical-religious concern, at state universities they are more often interested in promoting their careers than in a general liberal-arts education.

More recent research has pinpointed some of these influences more precisely. For example, academically talented boys were brought together from high schools all over New Hampshire for a six-week summer session at one of the state's oldest and most distinguished private schools for boys. The summer program almost certainly enriched their education in the formal sense, but it also had important effects on their values and outlook on life. For example, before they arrived they had viewed authority as bad, arbitrary, and ineffective. After the summer school experience, they viewed authority as good, strong, and impersonal. They also were more concerned about problems of impulse control or discipline and had developed a sophisticated suspiciousness of the world not characteristic of their fellow classmates who had remained behind in the high schools.[10] Now none of these attitudes or personal qualities was consciously taught by the masters at the private school or consciously learned by the bright students attending it. Yet the effects were very marked, and in the long run they may be more important in the future lives of the boys than the extra amount of mathematics and biology they picked up during the summer.

A somewhat similar study has been started at Harvard University. Preliminary results suggest that Harvard may be having an effect on its students very much like the one people have been claiming it has had for over a hundred years. It turns out students who tend to feel indifferent, superior, and slightly disillusioned. There are very few "committed romantics" among its graduates. Henry Adams' description of the Class of 1858 is still amazingly accurate in 1960:[11]

> Free from meannesses, jealousies, intrigues, enthusiasms, and passions; not exceptionally quick; not consciously skeptical; singularly indifferent to display, artifice, florid expression, but not hostile to it when it amused them; distrustful of themselves, but little disposed to trust anyone else; with not

much humor of their own, but full of readiness to enjoy the humor of others; negative to a degree that in the long run became positive and triumphant. Not harsh in manners or judgment, rather liberal and open-minded, they were still as a body the most formidable critics one would care to meet, in a long life exposed to criticism.

This is the Harvard style—a type of excellence, if you will, that is strongly encouraged among students who attend Harvard. Not all of them acquire it, of course, but its very existence points a moral. Educational institutions can and do have important influences on the human qualities we have been talking about, in subtle ways that are not as yet understood. Should we not, therefore, encourage varieties of excellence among such institutions as a means of promoting a similar variety in the characteristics of students who attend them? Harvard may promote "objectivity" and a kind of critical sophistication, while Texas produces unashamed enthusiasts. College X may be a haven for the curious, and College Y, a woman's college, may stress the life of the mind, the world of the imagination. Why should it not be so?

There are certain to be those at Harvard who will object to its style, who will think that it should turn out more committed people. But why should a college or any educational institution be all things to all students, or, what is worse, be like every other institution? Harvard encourages a certain type of excellence. Let other colleges encourage other types. It means, of course, that not all the best brains in the country should go to Harvard, however good it may be academically. Society needs brainy romantics as well as brainy critics. The most serious weakness in the argument that the best students should go to the best schools is the naive assumption that the best schools academically can be the "best," too, in the effects they have on character and personality, in shaping other types of human excellence. But let this not be an excuse for easy local pride. No college or university can lay a serious claim to the best students in its area if it is all things to all men and has developed no distinctive excellence of its own.

Varieties of excellence in individuals, therefore, can be encouraged by varieties of excellence in the educa-

tional institution they attend; but one more step is necessary for such a system to work. The institutions must avoid admitting students solely in terms of one type of excellence, namely, academic promise or performance. That is, if our new model provides for a variety of types of excellence encouraged in a variety of excellent ways, then one type of excellence must be prevented from becoming a monopoly and placing a strong restraint on "trade." Academic excellence has very nearly reached a monopoly position, despite the protests of admissions officers that they are still operating in terms of "other criteria." They are fighting a losing battle. The logic is inexorable. Students with the highest predicted grade-point averages are increasingly the ones admitted to any school or college. The last bastion in the Ivy League colleges of the East is about to crumble: alumni sons can no longer receive preference. Sons of Harvard professors have received some preference in the past in being admitted to Harvard, but a recent report on admissions at Harvard has demonstrated that on the average they do less well academically than do boys who are admitted solely on the basis of their academic performance. The report therefore recommends the abolition of the preference for sons of Harvard professors.

Now I hold no particular brief for the sons of alumni or Harvard professors; but I strongly object to the stranglehold that academic performance is getting on the admissions process. So long as there were other means of getting into our better colleges, at least there was a chance of admitting some students who were not marching in tune to the academic lock-step. A Franklin D. Roosevelt or a Chief Justice Harlan Stone might slip in through the side door as a son of an alumnus or graduate of a distinguished private school—though on the basis of academic performance neither could get in the front door today. Yet they represent for me a type of excellence that deserves an education in one of the "preferred" colleges. Yet even if they got in today, they would not stay long, if a practice tried out at Amherst College (where Justice Stone was an undergraduate) spreads. There for a time a student had to live up to his predicted grade-point

average or he was expelled, even though he was earning passing grades. Here is concern with one type of excellence with a vengeance. The Amherst professors argue that if a student who should be getting "A's" is only getting "C's," he could better cultivate his curiosity, his need for Achievement, or the life of the mind somewhere else, say, at home watching television or working in the local gas station. Anyway, he is a bad influence on the other boys, who must keep up their performance in the academic lock-step.

It is difficult not to be misunderstood on this point. Academic excellence is a wonderful thing. As a teacher, I much prefer to have conscientious people in my classes who do what they are told, read their assignments, and turn in interesting papers on time. I am annoyed by that boy in the back of the room who comes late to class, never participates in the discussion, and appears to be listening only half-heartedly to the pearls of wisdom I am dropping before him, and I certainly will give him a low grade—but is that all there is to education? Am I or his college having no influence on him except in terms of what is represented in that grade? Does it mean nothing for the future of the country that the scion of one of our great fortunes received such a ribbing from a sociology professor at Yale that it is alleged to have changed his whole outlook on life? He did not graduate, and, probably, with the greater efficiency of our academic predictors today, he would not have been admitted; but is that all there is to the story?

The clock is certainly not going to be turned back. The old leisurely, relaxed admissions procedures cannot be reinstated with the competitive pressure for entrance into college growing year by year. What can be done, practically speaking? I have a dream about a new type of admissions procedure that I would at least like to see tried out at one of our better colleges. First, the admissions office would set a floor for predicted academic performance. It should not be set too high. For the sake of argument, let us say that it is set at "C," a passing grade at most colleges. Only those boys who on the basis of the usual academic tests had a predicted average

grade of "C" would be further considered for admission. Then, within that group, quotas should be set up for various types of excellence. For example, the one hundred boys with the highest academic prediction should be admitted, then the one hundred with the most curiosity, another hundred with the highest need for Achievement, one hundred with the greatest imaginativeness or the most political ability, and so on down the list. The professors would be sure to protest, and perhaps they should get the quota of the academically talented up to fifty percent, but at least the principle would be established that other types of excellence deserve the kind of education that college is giving. For the professors should not have the exclusive say as to who should be educated. Quite naturally they like people who are like themselves, but they do not represent the only type of excellence in the country that is important or needs encouragement. What a revolution in values it would bring if only a few National Merit Scholarships were given for the highest scores on tests of curiosity, creativity, or imaginativeness! I shudder to think of the difficulties of developing such tests and trying to keep the schools and parents from figuring out ways to get around them, but frankly, I see no other effective way in the long run of breaking the stranglehold that academic excellence is getting over the American educational system and the American hierarchy of values. Perhaps some first-rate college will be brave enough to try it out in the short run on a smaller and less public scale.

Our national problem is that we have tended to focus increasingly on encouraging one type of excellence, and a practical, measurable, action-oriented type of excellence at that. Other types of human excellence exist, particularly those involving character and the inner life, and the world of imagination and human sensitivity. They can be measured, if necessary, to combat the stress on academic performance. They, too, need encouragement, and they can be encouraged by less stress on the purely academic side of life and more stress on the unique styles of educational institutions that most influence such other human qualities.

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4

The United States and Germany: A Comparative Study of National Character*

A psychologist is not satisfied simply to complain about or argue rationally against a national characteristic like the system of rewards in the American school system described in the last chapter. He wants to know why Americans have developed a system that threatens to become so specialized that it may undermine the society which supports it. The answer to the question, "Why do Americans behave the way they do?" takes one into the explicit and implicit values that guide the American way of life—which is the theme of this chapter. To deal with it properly, one needs a comparative frame of reference. After all, almost anything one could say on this topic (and almost everything has been said by somebody) would be true of some Americans. A more meaningful question is: "Is this or that value more characteristic of Americans in general than of Germans in general?"

The roots of consciousness dealt with here and in the next few chapters are not so much individual motives like the need for Achievement as they are implicit values shared by a group of people who go to make up a culture. The old-fashioned term national character *describes what is involved if it is understood to mean characteristics of a people which they more or less recognize and which measurably differentiate them from other peoples.*

The present chapter is based in part on an article published in a scientific journal, but it has been almost

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a lifetime in preparation. I fell in love with Germany and German literature at the age of 16 under the guidance of a Swiss tutor who had escaped most improbably from her previous employment as governess to the children of the last Czar of Russia to the plains of central Illinois where I grew up. At that age I was easily carried away by German romantic idealism. Then came the shock of Hitler and the Nazi period, punctuated by a lifelong friendship, formed in a Quaker work camp, with a man who turned out to be the son of Konrad Adenauer. During the war I felt certain that our hatred of what the Nazi had done had made us incapable even as social scientists to interpret German character without a bias. After the war, in 1951 and again in 1961, I spent hours at the Salzburg Seminar in Austria arguing with Germans and with other Europeans as to what Germans were about and why. I lectured in Germany and discussed her problems at length with psychological colleagues who had lived through the Nazi period. On the other hand, some of my first and most revered teachers and friends were German Jewish refugees. I helped operate a hostel for Jewish refugees from Vienna in 1941. It seems to me that I have been partly immersed in the "German problem" nearly all my life. Yet the more I talked with people in the 1950's, the more convinced I became that no one had yet grasped the core of German national character. The Americans have tended to swing back to their earlier admiration for German idealism. The Germans find it almost impossible to understand what hidden motives could have produced the horrors of the Nazi period. I felt that I must do the best I could as a psychologist to explain German character, contrasting it with American character to highlight the virtues and defects of each.

Again I have tried to steer a middle course and to interpret as best I could without fear or favor. If conflicting feelings help one to be fair, I can certainly confess to such feelings about Germany, which remains for me a source of admiration and fear.

Much has been written about the conscious ideals and unconscious motives of both Germans and Americans,

but little of it has been based on factual evidence systematically gathered for comparative purposes. Instead it often represents the opinions of a more or less acute observer trying to make sense out of what each country has done—for example, an historian trying to explain the complex evolution of the American system of government or perhaps a psychiatrist trying to account for the German "madness" under Nazism. The result is some confusion. Are the Germans really authoritarian or just unusually idealistic? Are the Americans shallow conformists, immature in their understanding of political and historical events, as some Germans contend? Is the spirit of German militarism dead? Indeed, were the Germans ever militaristic, or were they just responding as any nation would to unusual dangers from without? In what sense, if any, is the United States more democratic today than Germany?

One can find many answers to such questions—so many that psychologists have by and large thrown up their hands at trying to develop a scientific basis for one answer or another. Doesn't it depend on one's viewpoint and the particular evidence one chooses to cite to support his argument? Anyway, can one generalize about a whole nation? If some Germans are militaristic, so are some Americans. Aren't all peoples more or less fundamentally alike? Is it right to speak of differences in national characteristics? The sceptics have had an easy time in this field—on the one hand, dismissing the case for a particular national characteristic for lack of hard evidence and, on the other, arguing for the similarity of all mankind.

Yet the notion persists that despite obvious overlaps in the types of people in them, nations do differ in the way they behave. Hence the people who make them up must differ somewhat in their values and attitudes, unless one wants to take the extreme environmentalist point of view that differences in reaction are always due to differences in the situation. The problem is to discover more systematically and empirically what the differences in values are and then to use the differences to attempt to interpret the peculiarities of national behavior. This of course is what de Tocqueville did when

he wrote his famous book on America. He was a keen observer of the behavior of individual Americans. He noted how they differed from Europeans he had observed and then used the differences to help explain American political and social institutions. The modern psychologist has only one advantage over de Tocqueville (not to mention the obvious disadvantage of not being as penetrating as de Tocqueville was)—he has available a larger array of empirical and statistical techniques for discovering what differences in national values exist. He thus can build his interpretations on a more solid base of established fact.

So as a means of beginning our interpretation of German and American character, let us turn to a simple empirical study of the values, attitudes, and activities of some high school boys in the two countries (see McClelland, Sturr, Knapp, and Wendt, 1958). It is only one of several such comparative studies, but its results provide a key that seems unusually promising to the understanding of how values differ in the two countries. The investigators were careful to match the two sets of boys as to background: they were drawn largely from the middle to upper middle classes and were part of the educational élite that is preparing to go on to a University education. They were comparable then, but representative only of relatively élite groups in their respective countries. On the other hand, it is precisely such élites which lead in determining social and political behavior so that the lack of wider representativeness does not seem to be a serious flaw in the study.

To determine how the boys differed in values requires an open mind and a wide variety of test instruments. Some previous studies have been marred by the desire to prove, for example, that Germans are more authoritarian, or that Americans are more other-directed. The ideal is to let the findings speak for themselves, to get as varied as possible samples of the behavior of American and German boys to see how they differ. The study attempted to approximate this ideal in two ways: (1) by using open-ended testing devices including a fantasy test and such general questions as "what are the three things you would most like to teach your children?" and (2)

by constructing a direct answer questionnaire which covered as wide a variety of topics as possible (e.g., attitudes toward self and society, family, one's country, friendship, achievement, etc.). The fantasy test asked the boys to write out brief imaginative stories to pictures and was designed to see what type of content came most readily to their minds, when there was no particular pressure to think one thing or another (as in a direct-answer questionnaire item).

There were many significant differences in the way individual items on the questionnaire were answered by the German and the American boys. The difficulty with interpreting such differences directly is twofold: (1) it was extremely difficult to provide German translations which conveyed exactly the same feeling on such emotionally toned items as "There is no satisfaction in any good without a companion"; (2) superficially at least items which should tap the same value were at times answered in opposite fashion by the two groups of boys. Thus while the Germans agreed significantly more with the item just given, they agreed *less* with the following item also touching on affiliative relationships, "No sane, normal decent person would ever think of hurting a close friend."

Therefore the investigators resorted to factor analysis to determine which *groups* of items were answered in the same way in the two countries. Such a procedure gets around translation difficulties by showing, to use a simple example, that boys who agree with item A in Germany also agree with item B and disagree with item Y. If the American boys react the same way to these three items, then one seems on safer ground to infer that items A, B and Y are tapping roughly the same value area in the two countries. Despite translation problems they are being responded to similarly.

The factor analyses were conducted separately in the two countries and yielded two matching factors plus a set of items that shifted from one factor to the other in the two countries, as shown in Table 1. The value behind the answers to the items in Factor A is easily recognizable as "rational striving"—an emphasis on hard work, rationality and conscientiousness (even toward

TABLE 1

Matching Factor Patterns of Items from a Questionnaire Administered to United States and German Boys of High School Age

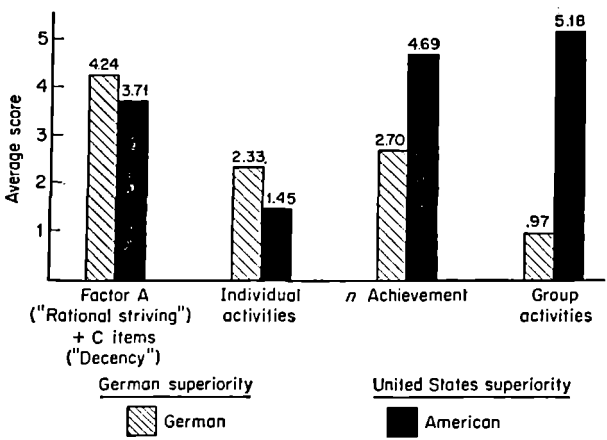
Factor A: *Rational striving, rationality* (5 items)	Factor B: *"That's life," resignation* (4 items)
34. I work like a slave at everything I undertake until I am satisfied with the results.	16. There are some people like great artists and musicians who can be forgiven for not being considerate of others, kind to the poor, etc.
8. I set difficult goals for myself which I attempt to reach.	12. Planning only makes a person unhappy since your plans hardly ever work out anyway.
28. Respect is due an older man no matter what kind of a person he is.	23. When a man is born, the success he's going to have is already in the cards, so he might as well accept it and not fight against it.
35. A child should never be asked to do anything unless he is told why he is asked to do it.	13. There is no such thing as a really permanent friendship. Your friends change with circumstances.
6. (Disagree) Nowadays with world conditions the way they are, the wise person lives for today, and lets tomorrow take care of itself.	
Answered like Factor A in Germany ($r = +.40$) U.S. ($r = .06$)	Answered like Factor B in U.S. ($r = .28$) Germany ($r = -.13$)

C items: *Idealistic concern for others, for "decent" social behavior* (4 items)

27. A man with money cannot learn how to behave in polite society if he has not had the proper upbringing.
2. No sane, normal, decent person would ever think of hurting a close friend.
7. It is better to go without something than to ask a favor.
18. There is hardly anything lower than a person who does not feel a great love, gratitude and respect for his parents.

older people, to try to explain the one item that doesn't fit this scheme too well). Factor B represents a quite different emphasis on the need to accept the "slings and arrows of outrageous fortune." It is not a popular point of view in either country but the interesting point is that those who held it tended also to express sentiments favoring the "proprieties" or "decent social behavior" (C items) in the United States, but not in Germany. On the contrary in Germany the boys most in favor of "decency" were also most in favor of "conscientiouness" or

Figure 1. Some differences in the values, motives and activities of German and American high school boys, aged 16-19. Differences between the two countries are highly significant in each comparison (After McClelland et al., 1958).



rational striving. Obviously value sentiments are differently organized in the two countries. Formal obligations to others are tied in with obligations to reason and to self in Germany, but not at all in the U.S. where a concern for decency goes along with a very un-American type of resignation. Let us turn to other results before trying to explain this somewhat puzzling shift.

Figure 1 shows the major other national differences found in the study. The German boys agreed more with the items in Factor A ("rational striving") and much

more with the C items ("decency") than did the American boys. Furthermore in answer to an item asking them to list extracurricular activities (clubs, hobbies, sports, etc.), they listed more individual pastimes than the American boys did (e.g., stamp collecting, hiking, listening to music). The Americans, on the other hand, listed many more *group* activities, in a ratio of 5 to 1 (e.g., team sports and clubs). They also wrote more stories in the fantasy test containing achievement themes so that their average *n* Achievement score (the sum of these themes) was considerably higher.

The meaning of these results can be conveniently discussed in terms of Table 2, which has been organized to show how each culture has patterned the double obligation of the individual in society to fulfill some of his own needs and also to satisfy some of society's needs. That is, every functioning society must to a certain extent satisfy both sets of needs. If it fails to satisfy individual needs, then it should eventually collapse through *apathy* or *rebellion*. If, on the other hand, social obligations are neglected through exclusive concern with individual satisfaction, the society should eventually collapse through *anarchy*. No one is interested in the welfare of others and society degenerates into the "war of all against all." Between these two theoretical extremes, cultures may be conceived as working out various patterned solutions to the double obligation to the individual and to society—solutions which appear as norms to be learned as a member of the society grows up. These norms can then be discovered in the behavior and attitudes of individuals like the high school age boys in the present study, though, of course, there will be variations in the extent to which any given boy perfectly reflects the norms. Our task is to work out the ideal typical pattern for the culture from the responses they give, recognizing that there are differences in the extent to which the norms have been interiorized or accepted by particular individuals.

Table 2 suggests that in the United States a high spontaneous interest in achievement (obligation to self) is counterbalanced by much experience in group activities in which the individual learns to channel his achievement needs according to the opinions of others, thus ful-

TABLE 2

Norms for Handling Obligations to Self and Society in the United States and Germany

	Obligation to Self	Obligation to Society
United States	High *n* Achievement, concern for self-development	High participation in group activities, greater sensitivity to the opinions of others
Germany	High concern for rational striving, greater participation in individualistic activities, more pride in self-control	Greater concern over obligations to an idealistic, explicit code of decency or propriety

filling society's needs. The concern for achievement is part of a more general theme of self-fulfillment, or realizing one's potentialities. One of the open-ended questions asked the boys to list the three things they would most like to teach their children. The answers were coded as being oriented toward self-development (e.g., to do well in school, to appreciate music, to be intelligent, etc.) or toward social obligations (e.g., to be kind, to respect others, and to be loyal to one's friends). The Americans gave relatively more self-development responses than the Germans did ($p < .02$).

If the American is so concerned with achievement and self-actualization, what keeps him in line? What prevents unbridled individualism? The answer apparently lies in his much greater participation in group activities. If the many clubs which the American student joins are to function (particularly if they are directed by majority rule), he must learn a good deal about getting along with other people and doing things cooperatively. Answers to the following two items from the questionaire back up this interpretation:

#9. The negative opinion of others often keeps me from seeing a movie or play I had planned to attend.

#24. My political opinion is easily swayed by the editorials I read.

Both the American and German boys tended to disagree with these items but the Germans much more than the Americans ($t = 3.77$, $p < .001$). That is, the American boys were more willing to admit they were influenced by public opinion. They were more "other-directed," to use Riesman's well-known term. The American's obligation to develop himself, to achieve, is checked and channelled by the opinion of others in the groups in which he participates so that individualism does not run rampant.

The German pattern for handling the two sets of obligation is quite different. For one thing it is more *explicit*, part of a conscious idealistic code that the individual learns and states openly on a questionnaire. The American code is *implicit* in the sense that the individual is not openly *taught* that he *should* have high *n* Achievement (in fact many do not know whether they have it or not) or that he should participate in group activities. It is widely recognized that Americans are "joiners" and do strive hard for achievement, but neither of these facts is part of an explicitly worked out code that is recommended to adolescents as a proper way to behave to hold society together. In fact it takes a psychologist to point out that an implicit pattern has been worked out that satisfies both obligations fairly well.

In Germany, the reverse is true. The pattern starts with an explicit recognition of one's obligations to work hard (Factor A) and to live up to an idealistic code of decency governing interpersonal behavior (C items). The matrix of mutual obligatons is clear and is consciously taught and learned: hence the emphasis in Germany on not asking a child to do something without giving an explanation (item 35, Table 1). On the surface, one might expect that Germans would demand unquestioning obedience from their children, but the fact is that German boys agreed much more with this item than American boys did ($p < .01$). The Americans don't expect reasons because they live more according to an implicit code of behavior than Germans do.

If there is a problem for Germans, it is in the area of maintaining individuality (obligation to self) in the light of such strong social obligations. They solve it by insist-

ing on the importance of *power* over oneself, or power to direct one's own activities. This shows up in the greater number of individual activities they list, but more importantly in the answers to the following two questions:

#7. It is better to go without something than to ask a favor.

#15. If you get bad news, it is better to hide what you feel and behave as if you didn't care.

The Germans agreed much more with both items ($p < .001$ than the Americans did, suggesting that they have more pride in *self-control*, more interest in developing a self with the *willpower* to exercise restraint under such circumstances. This kind of self fulfills its obligations to society, not by "achieving in conformity with group expectations" as in the United States, but by proudly controlling selfish interests to fulfill one's explicit duties to the whole of society. The sense of self comes not from achievement but from self-direction and control.

The results of this one study have proved illuminating, but the question now is whether they help explain other data or well-known peculiarities of the two nations. Let us try first to make the value formulas for each country both more general and more explicit. Then we can apply them to the understanding of national characteristics.

If an individual American were able to put into words the norms under which he is supposed to fulfill his obligations to self and society he might say something like this:

"I want to freely choose to do well what others expect me to do." There are four essential elements in this formula:

1. *Free choice according to one's desires or wishes.* Nothing is more sacred in the American way of life than the notion that the individual must be *free* to choose what he *wants* to do. No institution can be allowed to interfere with that sense of personal freedom to choose—no church, no monopoly, no authority of any kind. Furthermore, Americans have developed a rationale which argues that what a person wants to do is in the end what

is best for him to do. Under the right conditions it leads to self-actualization and personal achievement. But development of the individual as well as development of the society starts with the desires or motives of the individual. Without them no learning or development can take place. No social order is possible except that based on the desires of its members.

2. *Action.* In the American creed the next core idea is that what counts is *action*, not thought or belief, which are of secondary importance to Americans. What does it matter what a person believes as long as he does a good job? Note that the most important institution which might try to police thoughts or beliefs in the United States is nevertheless called the House "Un-American *Activities* Committee." While it has on occasion tried to punish people for holding wrong beliefs, it operates with what success it has (which has not been great in the long run) chiefly where people have *done* wrong things, not just thought them. It is no accident that American psychology is largely behavioristic in the sense of being interested in overt actions rather than in fantasies, dreams, thoughts or beliefs. In fact a recent President of the American Psychological Association defined personality as "the sum of potentialities for action"—a phrase which nicely captures the feeling that it is only in action that the person really becomes actualized.

3. *Achievement.* The individual not only *wants* to *choose* to *do* something, he must do it *well.* In fact a basic tenet in the American creed is that everyone can and should do something well. He should "realize his potentialities" by developing them to the full. The achievement-orientation of Americans has been noted by nearly all observers from de Tocqueville down to Kurt Lewin, the emigré German psychologist who wrote shortly after his arrival that he found "probably no other people as interested in individual *accomplishment* . . . as the Americans" (1936, p. 277).

4. *Other-directedness.* Americans have always seemed very paradoxical to Europeans because on the one hand they obviously value personal freedom so much, and yet on the other they turn out to have produced one of the most "conformist" civilizations of all time. The apparent

paradox is explained by the value formula. Americans want to freely choose to do what others want them to: hence the great importance of the opinion of others, as represented in public opinion polls and the mass media. When a housewife reads Spock on child care, the Gesell norms for child behavior, or the Sunday Times Magazine on how to react to her children, she is finding out what others think is best, but she maintains her sense of personal freedom when she decides whether to apply such norms to her behavior. Usually she chooses to go along with the majority or expert opinion, but she feels none the less free for that. She is like someone who holds up a finger to see which way the wind is blowing and then freely chooses to go in that direction. The wind doesn't *make* her go that way; neither can public opinion make her do anything, but she does it anyway. In an attitude survey on what to do if you had mistakenly punished your child for something he didn't do, middle-class Americans agreed almost completely with the following alternative: "Whatever you do, you should do what the neighbors are doing to avoid bringing your child up differently." Both British and Austrian respondents disagreed just as strongly with this opinion.

Yet there is just as good evidence from other questionnaires that Americans do not believe in social pressure to produce such conformity and will resist it if it is applied. The neighbors shouldn't tell her what to do. Sanford (1952) reports, for instance, that when ordinary Americans are presented with a cartoon showing a man addressing a group of people with the words, "Since I'm head of this group, you'd better do as I say," the typical response they assign to a group member is, "You're nuts." In another attitude survey, Americans rejected the idea (more than British respondents) that other men in a factory have a right to *make* a new man work at their speed. This doesn't mean Americans won't conform—in fact, they probably are more conforming than the British. It just means that they react very negatively to group pressure to conform. The American should find out for himself what the group norm is and then, of his own free will, conform to it. Many experimental studies of opinion formation in small groups show that this in ef-

fect is what most Americans do (cf. Festinger, 1954). They prefer not to deviate too far from the group norm. Years of experience in many group activities (see Figure 1) have taught them how to be sensitive to others without being told.

The value formula is both a creation and creator of American history, religious and social theory, and political institutions. It should be regarded as a shorthand analytic device which is useful in interpreting American national characteristics. For example, it is easy to recognize in it the essentials of American pragmatism as expressed philosophically by William James and educationally by John Dewey. The progressive education movement which developed out of this philosophical climate is guided by the formula. The child "learns by *doing*" (action-orientation). Successful teaching and learning is in accordance with the child's *interests* and *needs*. Group activities (plays, clubs, sports, hobbies) are very important for developing cooperative *responsiveness to others*. Every individual can do something *well*—has a potential for fulfillment as a person.

Political theory fits the formula equally well. Every school child learns the importance of political freedom to choose one's government. "Give me liberty or give me death," in the ringing words of Patrick Henry. Government is chosen by the people in free elections. Furthermore every individual's wishes and needs are as important as the next person's. There must be *equality* before the law, equality of oportunity to realize the potential in each person. The sum total of individual wishes is the majority opinion which in political theory all *must* be willing to accept once it is properly established. It is ironic to discover social observers crying out in anguish at the extent to which Americans are guided by public opinion polls, by the mass media, by advertising when on other occasions they extol the virtues of democracy. Yet in psychological terms democracy is possible precisely *because* Americans are willing to abide by the opinions of the majority, at least until they can change those opinions by free public discussion. Other-directedness is the psychological precondition of a democratic political system, yet few ordinary Americans or even political ex-

perts seem to recognize this fact explicitly, despite some glaring examples of countries that have tried unsuccessfully to maintain a democratic political system in the absence of sufficient respect for majority opinion to make it work. Germany is a case in point as we shall see in a moment.

Finally there is a distinct flavor of achievement, progress, and optimism about American political ideology. The system by meeting the needs of individuals all asking to fulfill themselves provides in particular for technological progress and improvement in the standard of living (satisfaction of basic needs) for all.

This is not to say that the American value formula serves to unite all political, educational and social thinking into a smooth (if rather unconscious) working whole with no problems. On the contrary, like most such value formulas it contains the defects of its virtues and many sources of conflict and strain which may in the end undermine it. For example, consider just two political problems that it creates. In the field of foreign policy it has been applied to newly developing nations as if all people "naturally" operated (or could operate) according to the same psychological processes as Americans do. That is, we want them to be democratic and hold free elections, assuming on the basis of American experience that once the "will of the people" has been expressed in a majority vote, the rest of the people will abide by it. They often don't, of course, because they have not been trained to be responsive to public opinion. They even have difficulty arriving at any kind of consensus or majority view at all because unlike Americans they have not had years and years of experience as individuals in clubs and teams arriving at group decisions.

Or consider another aspect of the same attitude. Americans in giving aid to underdeveloped countries frequently state publicly that "no strings are attached," that the recipient government is free to do what it chooses politically, that we are bringing no pressure to bear on it, etc. If it should do something we don't approve, however, we may immediately proclaim our disapproval and threaten to cut off our support. Other countries are apt therefore to consider Americans hypocritical: they talk

one way and act another. But the fact is that behaving in this way is quite consistent with the American value formula: we do not believe in bringing pressure to bear on people (we resent it and resist it when applied to ourselves). We do want people and governments to feel free to choose what to do, but we also expect that they will choose to do what others (including especially ourselves as an influential friend) expect them to do. If they don't, we are shocked and surprised, just as we are shocked and surprised at all nonconformity to public opinion. Our values have been violated. This may make sense to us internally, but in the foreign policy field it leads to endless misunderstandings among nations that are guided by different value formulas.

Or consider just one other illustration of the difficulties the formula creates: it undermines public service—working for the government. Polls show that the civil service ranks quite low in prestige among occupations in the United States, considerably lower than in Germany, for example (cf. McClelland, 1961, Chapter 6) where it is among the most highly esteemed careers. Working for the government has low prestige in the United States because it appears to violate the value formula at several points: the civil service is perceived as a bureaucracy in which *freedom of choice* is minimal, in which it is impossible to do anything well because of confusing red tape, and in which one much act according to "rigid" rules and regulations, not according to *majority opinion* at the time as to how one could act most easily and efficiently. Rational order is much more important in the German value formula as we shall see in a moment: hence their higher regard for the civil service and its rules which apply regardless of what errant human beings may think at the moment. So the obvious difficulty Americans have is that, on the one hand, they want government to do more and more things for them, and on the other, they don't want to work for it. Something has to give, but fortunately there is plenty of play in the system. There are millions of Americans, perhaps particularly among minority groups, who are less firmly committed to the dominant value formula and who therefore are quite happy to work for the government. This too

has its dangers, if in time the civil service recruits largely people whose values are not typical of the people who required the expansion of its services.

TABLE 3

Strengths and Weaknesses of American and German Value Codes

	Normative ideal	Virtues	Sources of strain	Excesses
United States				
Obligation to self	Achievement, self-actualization	Full use of individual capacities	Blockage of individual desire by group needs	"Beatnikism," license
Obligation to society	Other-directedness	Humanitarianism	Inability to get consensus, changing norms	Overconformity, lack of originality, identity diffusion
Germany				
Obligation to self	Individual self direction (will power)	Self-discipline, work over pleasure, sacrifice of personal impulses	*Überforderung*, demanding too much of the individual	Arrogance, pride
Obligation to society	Loyalty to an idealistic code of decency	Order, organization	Necessity for rationalizations to get compliance, determining source of authority	Totalitarianism, "Befehl ist befehl," loss of individuality

But no value system is without the weaknesses of its virtues. Table 3 has been constructed to illustrate the point and to re-introduce direct comparison of the virtues and vices of the American and German value formulas. The American way of life excels in developing latent potentials of individuals to the utmost: hence our great emphasis on counselling and vocational guidance. It also produces a widely admired humanitarianism. We like to do for others what they want and need; hence our insist-

ence on knowing what people want, not on giving them what we know is good for them. Not that we don't know; we just want them to ask us to do what we know we should do—again a queer twist to many peoples in other countries. Hence also our great admiration for the medical career: it so obviously combines doing things that others need (humanitarianism) with self-actualization and high achievement—down to the high income it normally produces. The dangers of the American way are equally obvious—especially to outside observers like the Germans. Insistence on self-actualization means that frustration is defined as blockage of individual desires (cf. for example, Dollard, *et al.*, 1939), that all frustration may be viewed as bad (cf. theories of neurosis as due to frustration), and that consequently individuals may seek to express themselves without social restraint of any kind in a type of behavior labelled "beatnikism" in the United States and "license" in less kindly disposed countries like Germany (cf. Wolff and Mischel, 1963). Such an extreme represents over-valuation of one pole of the formula—self-actualization—with corresponding neglect of the other-directedness pole. But other-directedness also has its weaknesses. Two have been particularly evident ever since Plato criticized democracy as unworkable nearly 2500 years ago. If you rely on the opinion of the masses, he thought, (1) you could never get consensus; the horses would run down the sidewalks and (2) even if you did get it, it would change so fast you would never be able to govern. It is the potential changeableness, and lack of rational basis for norms based on public opinion or other-directedness that particularly upsets people like the Germans. Yet they are equally ready to criticize the over-conformity and lack of originality that the system has produced in actual practice in the United States. Even American political parties don't seem to represent wide differences of opinion, stemming from different ideological bases. The system works despite such criticisms, but it is a fact that the ever-present and necessary concern to get consensus, to punish extreme deviance and non-conformity, has seemed to produce on the one hand a kind of slavish conformity and on the other, a kind of "hollow man" whose values, beliefs, and very

identity are determined by the latest fads and fashions promoted in the mass media. Those who complain unduly about such undoubted defects of the formula might ask themselves, however, how they would otherwise handle the problem it solves—namely the problem basic to the survival of a democracy—of how to get a consensus and how to get people to go along with it once it is achieved.

The German value formula gets caught up in none of these problems though it has others of its own. The way in which it combines self-direction with an explicit code of decency or honor might be stated as follow, as understood by an ideal-typical German: "I must be able to believe and do what I should for the good of the whole." The German starts with an "I must"— a sense of obligation, of living up to standards expected of him, rather than with an "I want" as the American does. In fact starting with "I want" seems inexcusably selfish to the German. "Wants" need often to be suppressed for the good of the whole. Hence the emphasis on *will power*: "I must *be able to* do what I should." Paradoxically it is in the very sacrifice of one's personal interests, feelings, and pleasures that one gets a sense of individuality and self-respect. After all an "ego" or a will that can hide pain and bad news, or refuse to ask for help when needed, is worthy of respect. The self gets its identity not from actualization or achievement as in the United States, but from the *power to control and direct itself.*

Both belief and action are important in Germany, but belief is much more important than in the United States where, as we have seen, too strongly held or explicit beliefs may interfere with getting a consensus as to what to *do*. The point about the German code of social obligation is that it derives its authority not from majority opinion, but from the rationality and "expertness" with which it is presented. Hence the great stress on explanations and reasons for everything one does all the way from explaining to a child why you are making him go to bed early to the extraordinary legal rationalizations the Nazis worked out for exterminating the Jews and taking their property. In the former instance, the German parents might explain to the child that it is good for his

health to get lots of sleep. The American parent might think: how hypocritical! They just don't want the kids around to bother them in the evening. Why don't they say so? He presumably would say so to his children, thereby teaching them that "public opinion"—the desire of the American parent for some peace—is important. The German parent would very likely regard such a statement as immoral on the part of the parent, who after all should have the welfare of his children primarily at heart and should therefore not even think such selfish thoughts, let alone express them. Neither parent is, of course, hypocritical or immoral. Each is just operating according to his value scheme, which looks quite confusing to the other.

The will power of the individual German should be exercised on behalf of others, not particular other human beings, but on behalf of a code which is designed to promote the welfare of others. This point is difficult to grasp for Americans who are used to considering the welfare, wishes and needs of particular others or even of groups of such particular others who have expressed their needs in a public opinion poll. But in Germany loyalty is to a system, to a code of honor, to rules governing interpersonal obligations which rationally bring the greatest good to society, even though they may hurt *particular* individuals on a particular occasion. This idea is hard to get across even in Germany, since it obviously interferes at times with perfectly natural human sympathies for particular others. So the Germans make the point exceedingly explicit in song and story. Living up to the code not only means self-sacrifice, it means sacrifice of particular others. Thus McGranahan and Wayne (1948) note that in German plays "we find . . . various murders of beloved persons consciously carried out by sympathetically portrayed characters." The characters are sympathetic because they *must* on occasion sacrifice even their "nearest and dearest" in the interests of a higher, more idealistic goal. The same theme appears in a popular German fairy tale for children, *Der treue Johannes*, in which a father's loyalty to the code is tested by requiring him to cut off the heads of his twin sons. He has wrongly and repeatedly failed to trust his loyal servant, who in

consequence is gradually turned into a stone statue. The master at last realizes that he has committed the unforgiveable sin—failed to live up to the code of decency or mutual obligation and loyalty. He begs the magical powers to tell him how he can do penance for his crime, rid himself of his guilt, and bring the servant back to life. He is told that if he cuts off the heads of each of his twin sons and smears the blood on the statue, the stone will turn again into living flesh. He is torn, as only a German can be torn, between his personal love for his sons and his duty to the code. But not for long: with a great effort of will he suppresses his "selfish" desires, sacrifices his sons, one by one, and brings the statue back to life. Happily the heads are put back on the sons and they can come back to life (since he has passed the test), but then to be sure that his wife can pass it too, he shuts the boys up in a closet, tells her of the dreadful decision he has been asked to make of sacrificing his sons to do his duty, and makes her give her opinion as to what he should do. She, in greater agony, finally gives her consent to the sacrifice. The moral is clear: duty is even more important than mother love and at times it brings us extraordinary personal suffering. In fact Germans learn in this way that the ultimate test of the sincerity of one's commitment to the code of idealistic obligation to others is the extreme to which one will go in the sacrifice of personal interests or even the interests of *particular* others. It is in this latter sense that the German concern with decency is "ideological" rather than "personal," as McGranahan and Wayne (1948) point out.

The strengths and weaknesses of such a value formula are readily apparent, as outlined in Table 3. Germans excel in their capacity to discipline themselves, to put work above pleasure, to sacrifice personal impulses to the common good. They, and many other peoples, admire their industriousness, but it is worth noting in passing that their hard work often has a very different meaning than American hard work in the pursuit of achievement or self-actualization. To the German hard work is an *end* in itself because it demonstrates that the person has control over his selfish impulses to be lazy, etc. To the American hard work is a means to an end, and he sees no

point in it if it fails to achieve that end or if he has no goal that requires it.

The insistence on a rational, systematically worked out code which governs the system of interpersonal obligations produces the famous German success at devising orderly and efficient organizations. Max Weber's conception of a bureaucracy as an institution governed by universalistic rules—applicable to everyone—is a good example of this type of thinking. And German bureaucracies—including particularly the civil service—are notoriously efficient, orderly, and highly admired by the Germans themselves. The army as a special type of bureaucracy also thrives under such a value formula. A modern army requires orderliness and above all rational systems of supply, of integration of various types of fighting forces, of chains of command. It also requires above all discipline, and the willingness to sacrifice personal interest—even one's life—for the good of the whole. Hence it is not surprising that Germans make good soldiers and have produced excellent armies. They have the values that armies need, just as Americans have the values that really promote humanitarian concerns and the medical profession.

The weaknesses of the system are especially apparent to outsiders because will and self-discipline can easily develop into pride and arrogance. It is but a short step from, "I *must* be able to master myself to prove I am human" to "I am a great man because I can—certainly greater and more moral than those who cannot control their selfish impulses." Self-righteousness is a vice that develops quite easily from the virtue of self-discipline. The obverse side of the coin is less obvious to outsiders than it is to Germans. They constantly fear that *too much* will be demanded of them, more than they can give, and that they will be found morally lacking—or more specifically, degenerate, weak, corrupted by evil influences from the East (cf. Wolff and Mischel, 1963, or Thomas Mann's *Magic Mountain*), above all *unable to control themselves*. Thus typically German psychologists when they want to frustrate a subject do not block him in something he wants to do, as American psychologists do, but they demand too much of him and use the term

Überforderung (demanding too much) to describe the process (see Mierke, 1955).

To avoid this kind of humiliation and moral defeat, Germans will go to what seems to others to be extreme lengths to endure hardships and discipline themselves. This behavior has been variously attributed to "identification with the aggressor," "authoritarian-submission," "sado-masochistic trends," and the like (cf. Schaffner, 1948). All such explanations suffer from doing little more than naming the behavior (i.e., Germans obey because they *like to submit*) and from interpreting it in ways which, however acceptable they may be to outsiders (particularly if they dislike Germans), do not make sense to Germans as the rationalizations that at least consciously lead them to do their duty. The difference between the interpretation of such behavior that we have been giving and the one traditionally given by psychologists and psychiatrists, can be made clearer with an example.

McGranahan (1946) asked some German and American high school students the following question:

> "Do you think a boy is justified in running away from home if his father is cruel and brutal?"

Three out of four American boys said they felt the boy was justified in running away, whereas the German boys split 50-50. McGranahan is inclined to interpret this finding as supporting the hypothesis that Germans are more submissive and more used to obeying family authority without question no matter how cruel it may be. They are undoubtedly more obedient and submissive to proper authority—which can certainly become a vice if carried to excess as it was during the Nazi persecution of the Jews—but the point we are trying to make is that they are not simply sado-masochistic, liking to be ordered around and hurt. Rather the vice stems directly from an excess of the virtuous emphasis on self-discipline for the common good. Thus the German boy may understand the question about running away from a cruel father in terms of whether he is willing to endure personal discomfort to follow the code governing children's obligations to their parents, which is seen by him to be clearly cor-

rect in the abstract so that not living up to it for personal reasons seems like a form of selfishness. The issue is for him a moral one; for the American boy it is more of a practical one: can he make out on his own away from home?

But whatever the reason, Germans and others realize that the danger of totalitarianism is great among individuals in whom such feelings are strong. A vicious cycle develops in which the individual sacrifices himself more and more to the interests of the system to prove he is an individual which means in the end that he is a nothing, a cog in a giant machine, who does what the machine requires, who in effect has given up his individual capacity for self-direction by constantly using his will power to do his duty. Doing always what one should can, like over-conformity in the United States destroy spontaneity, creativity, self-expression and what is more, on occasion produce a truly frightening human machine, like the Nazi organization, which can transgress all accepted codes of decency.

This suggests another central problem with the German value formula. How could a people so concerned with decency have become so "indecent" under Hitler? This is a problem not only to outsiders, but to Germans themselves, who feel forced almost to deny that anything so indecent could have happened in Germany or at least to deny that they had any part in it (Wolff and Mischel, 1963). The denial is understandable in view of the emphasis they place on moral rationality, though Americans have trouble understanding German defensiveness about Nazism because rationalizations in the interest of maintaining a moral order are less important to Americans. They are therefore more willing to admit inconsistencies: what seems right now just didn't then, to an American, but not to a German. What is right must always and inescapably rationally *be* right.

But how then could they have done so many "wrong" things, committed so many "crimes against humanity"—in terms of their *own* standards, not just those of their conquerors? The difficulty with the German system lies in the procedure for establishing what is so inescapably correct. In theory one's obligations should be "obvious"

to all, but in practice, of course, there are many complexities in human existence that cannot be answered by simple reference to an explicit code—complexities that the German fears and prefers to ignore because they make him feel as if there is no firm, unshakable basis for what he does. He has developed two *de facto* ways of handling these fears and uncertainties—one, by resolving them through a rational process of logical argument; the other and simpler, by referring them to an authority—someone who obviously knows more about it or who has some moral or legal right to decide. The former method leads to the dialectic so characteristic of German intellectual life in which a position stated as rationally and convincingly as possible is challenged as directly and completely as possible by another carefully worked out position. American intellectuals have often been puzzled by the extent to which their German colleagues engage in polemics in which the opposition is caricatured and proved not just mistaken in part, but conclusively and utterly *wrong*. The American advances an idea somewhat tentatively as a hypothesis which he may defend more or less vigorously, but he is ordinarily quite willing to adjust it if someone else comes along with a better idea—because ideas are not so crucial to him as they are to the serious German who is often trying to establish the firm and unshakeable moral basis for existence. On such critical, life-and-death matters, to compromise is not only weak, it is "un-German" in seeming to deny the importance of knowing what one *should* do, what is morally correct. German intellectuals like Hegel decided that these battles of opposing positions would eventually lead to the "truth" by a process of thesis, antithesis, and synthesis, but in point of fact arguments among experts would often leave the ordinary German confused as to what is right.

So he relies on a simpler method of finding out: he turns to authority, to someone who knows the rules *better* than he does or who should be in a position to know better than he does. Authority may be based on many factors—age, sex, experience, one's religious or political position. Older people are in a better position to know some things, men other things, religious or political ex-

perts still others. The German respects all these types of authority because they all can tell him what he should do and, above all, he must know what it is morally right for him to do. It is easy to see then—though somewhat ironic—how he could be trapped into truly horrendous "indecency" simply by his desire to be sure he is moral. He refers moral questions to expert authorities—often to government leaders as the representatives of order and the system—and if these authorities happen to be immoral, like Hitler and his associates, and if they are good at developing convincing rationalizations to support their position, the average German is likely to be a long time in discovering that he has been misled—and to be even longer in admitting it. For after all his basic code says that he must do no wrong, and his system for insuring that he doesn't is to rely on those who know better than he does. As many observers have pointed out, such a value formula fits best with a kind of benevolent monarchy as a political system in which there is a genuinely "good" person at the top to help define morality for everyone else. Adenauer's current hold on German political life despite repeated "defeats" appears to derive in large part from this fact—from the need of the Germans for a moral leader. His authority does not derive from a monarchic system, but he is a very old man of much greater experience than his colleagues and he is also very obviously a *good* man.

This raises the question as to whether Germans have changed as a result of two major military defeats and a shocking exposure of indecency during the Nazi period. Must they not have learned that their value code, however laudable, traps them into untenable positions? Weren't they democratized by the long American occupation? A good case can be made, on both theoretical and empirical grounds, for the conclusion that they have not changed their basic value formula much. After all it is not immediately obvious, even after this much psychological analysis, why German *virtues* led to such great national catastrophes, and it is certainly not clear to the average German that it is his desire to do his duty, to make himself do what is right as shown to him by his betters, that has caused so much trouble. It is all too easy

to *deny* the troubles, to *blame* them on evil influences (the Evil East), or even to accept the common American diagnosis that the troubles are due to some wicked, authoritarian Germans or an evil streak perhaps in all Germans that must be kept under control—a notion that is completely in line with the German stress on morality and desire to suppress all signs of evil and license. Furthermore, alternative values are not attractive to Germans—certainly not the American alternatives of relying on public opinion to determine what is right. After all what does the public know? It is often wrong, even or especially in the mass; it has no special claim to authority. What is more, its opinion is changeable and no stable morality can be built on it.

The empirical evidence is equally convincing. The study discussed at the outset was conducted after World War II in 1955, and it provided the basis for developing the value formula in terms of which we have been analyzing German national character. A quite independent study of German children's readers (McClelland, 1961) demonstrates that stories read by nine-year-olds in German public schools in the 1950's did not differ in key relevant aspects from those read by the same group in the mid-1920's. Specifically, both in the 1920's and in the 1950's the stories were above the international average in the number of references to *power* (attempting to control or influence others) and below average in the number of references to *affiliation* (establishing and maintaining friendly interpersonal relations). On an international basis, this peculiar and fairly rare combination of story characteristics has been associated in almost every instance with dictatorial political regimes, in which the rights of individuals and minorities are not respected. It appeared in Japanese stories before Tojo, in Spanish stories before Franco and again in the 1950's when he was still in power, in Russian stories in Stalin's time and at present, in Argentine stories during the Peron regime, in Iraq at the time of the bloody revolution in the 1950's, etc. What it apparently reflects is a strong concern, at least among significant élites in a country, with having one's way (need for Power) which is not checked by an equal concern for particular other individuals (need

for Affiliation). These are the psychological preconditions for ruthlessness. In Germany the power need is clearly implicit in the value formula in two respects—in the need for *will power*, the power to discipline and direct one's self and in the need for an authority to tell one what is right, what one should do. The affiliation need is weak, as we have already seen, because it is often necessary to hurt particular others in the interest of living up to the code of interpersonal obligations. As a matter of fact in Germany stress on the ideological code (Factor A) is negatively related to need for Affiliation (McClelland, *et al.*, 1958, p. 251). So the reader findings are quite consistent with the value code as we have developed it, and they show that there has been very little change in affiliation and power concerns in Germany between the 1920's and the 1950's. This does not mean that German values can't change—or American values either for that matter. For example, Austrian stories were very like the German ones in the 1920's, but by the 1950's they had lost their concern for power. The Austrians apparently decided to accept their relative unimportance as a nation with good grace and a sense of humor.

What it does mean is that those Americans are wrong who think that the Germans have fundamentally changed and are now good democrats like the Americans. The Germans have a political but not a psychological democracy. They have a political democracy because they are told they should by authorities whom they trust and admire (including Adenauer, and even, paradoxically, their conquerors—who must have had some kind of a better system to beat them). They have not by and large been much converted to relying on the wisdom of majority public opinion—although German mass circulation magazines and television may be doing more in this respect than generations of lectures by American experts on political democracy. They will continue to have a democratic system just as long as their expert authorities favor it.

Americans are impressed by Germans, and think they must have changed, just as they did after World War I, because there are aspects to the German value formula

that are highly appealing to Americans. We admire the self-discipline of the Germans, their capacity to put work over pleasure, partly because it looks as if they are achievement-oriented as we are. We envy their order and efficiency, their moral certainty (up to a point), partly because we are always so uncertain, so fearful that we cannot get a consensus or that if we do, it will change tomorrow. We tend to forget that both the compulsive industriousness and the moral rectitude can be dangerous if carried too far, as they have been in the recent past. We need to remember, as do Germans themselves, that their moral outrage on such specific points as recognition of East Germany is based not only on realistic power politics but also on value attitudes that go way beyond practical considerations. Almost any German can explain with great vigor and indignation that it is *morally wrong* to admit that the East German regime exists, that it has no rational basis for existing—neither political or moral—because it has been forced on Germans who don't want it and because it quite irrationally divides German-speaking peoples who belong under the same government (forgetting for the moment other such peoples in Austria and Switzerland). Most Americans recognize the force of these arguments but what they are not prepared for is the lengths to which Germans will go once they have decided what is *right*, what *should* be done. Many refuse to consider for example, a Machiavellian maneuver which would trade recognition of the East German regime for some real practical political advantage because it involves acquiescence in what is clearly and rationally wrong. Others would be quite prepared to start a war over the principle—even if it led to the destruction of all concerned (in a kind of Samson complex)—because the code says that one must expect to suffer personally to do one's duty by what is *right*.

In other words nations, like human beings, are influenced by "realities," by practical considerations as to what constitutes self-interest, but they are also influenced by their value codes, by their national characteristics. Germans shout: "No compromise with what is right! We must do our duty no matter what the consequences to ourselves may be." Americans declaim: "Self-determina-

tion and free elections—but they'd better freely elect to do what we want." Both are speaking from the highest moral considerations. In fact one can say that neither country could exist for long without the value code implicit in such sentiments. What may be helpful is a little more self-consciousness on both sides as to the formulas by which we live so that we are not trapped by them into untenable positions or into misunderstanding each other's intentions so that we consider one another evil, hypocritical, or selfish. Every value code has its virtues and also the defects that derive directly from those virtues.

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5

French National Character and the Life and Works of André Gide*

Creative writers often provide the surest guides to the deepest levels of human motivation. They are products of their culture, but they are able to express its deepest meanings more vividly than anyone else for those who can read what they are saying. In this chapter I have tried to use a novella *by André Gide to highlight some of the basic themes in French national character, just as in the previous chapter I used tests of individuals to isolate themes in German and American national character. The difficulties such an approach encounters are two: How representative is the work of imaginative literature analyzed? Would the same results be obtained if one were to study another work of creative fiction—for example,* Les Ambassades *by Roger Peyrfitte? And, how can one tell when the interpretation itself is a work of creative fiction rather than an elucidation of the perhaps unconscious intent of the author?*

All one can do, as I have done in this chapter, is to try to check the interpretations against other information —such as that provided by anthropologists studying French culture and by the facts of Gide's life. The more analyses from different points of view agree, the more one gains confidence that they are neither unrepresentative nor fictional. Still this chapter has never before been published, in part because when I wrote it a dozen years ago I knew little at first hand of French culture, and in part because it is neither psychology, nor anthropology, nor literary criticism. It is included here because it certainly has some of the roots of French consciousness cor-

* Prepared initially as a lecture given in 1950 and here published for the first time.

rectly identified and because it illustrates another method of discovering the implicit values of a culture.

Psychologists interested in the roots of consciousness are always tempted to interpret literature. For one thing, a poem or a novel seems to be very much like the imaginative productions—dreams or daytime fantasies—that the clinical psychologist ever since Freud has typically used to try to understand a person's deepest and often unconscious motives. For another, the public often urges the psychologist on, saying: "What was this author really after?" or "Why did he write like that?" At the same time authors like William Faulkner warn the psychologist to stay away. After all, he argues, "What does it matter what kind of complexes I have? It is my work that counts. Judge that. I am unimportant. If I hadn't written me, someone else would have."

Faulkner is right, of course. It is the work of art that counts. To use it to understand the man is the psychologist's privilege, his particular game if you will, but it should not be mistaken for literary criticism. Still the psychologist can contribute to literary criticism by helping the reader understand or appreciate a work of art. Since the connoisseur of fiction draws on his knowledge of life as he has experienced it and on his other reading of fiction or history to appreciate a particular novel, there is no reason why his experience of the novel will not be richer and fuller for having the psychologist point out certain aspects of it that he might not otherwise have noticed. To understand how something is created—out of what inner psychological conflicts or against which cultural expectations—should certainly add to the sum total of one's appreciation of it. What is wrong is to assume that the psychologist somehow knows *more* than anyone else, that he is somehow getting at the truth behind the appearance that deceives everyone else. He may notice things that would otherwise pass unnoticed because of his particular kind of expertness, but so does the historical scholar or the linguistic expert or the critic who has read a thousand similar works. His role is as modest as theirs. All do their best to contribute to the understanding and appreciation of a great work of

art, but in the end they must all acknowlerge that the work itself is much greater than the sum of all their contributions to knowledge *about* it.

The psychologist needs to be more modest than he has sometimes been for another reason. All too often he has been tempted, after Freud, into overly simple analyses in terms of Oedipal triangles, fears of castration, or whatnot that are based on certain universal human experiences without regard to the shape they are given by culture. Here the cultural anthropologists can be particularly helpful—to any psychologist who takes the trouble to read them—because some of them have been concerned precisely with cultural variations on certain universal themes in human experience. Knowledge of personality dynamics needs to be supplemented much more often than it has been by knowledge of cultural values in analyzing works of art.

The present essay was undertaken to show more precisely what such a sentence means. How can knowledge of personality dynamics and of cultural values contribute to the understanding of a distinguished piece of fiction? To provide a good illustrative analysis, we need not only an imaginative work of fiction, but also a revealing personal document about the author and a perceptive analysis by anthropologists of his culture. In choosing to study Gide's *Theseus*, we have been guided by these considerations. It is a highly dramatic work of art—the fictionalized autobiography by a famous legendary ruler of Athens in classical times. It also contains much of a psychological nature that is puzzling and needs explication for the ordinary reader. The reasons why Theseus behaves as he does are not at all obvious. Why, for example, does he feel no emotion when he accidentally (on purpose?) causes his father to commit suicide? If the reader has no desire to know the answer to such questions, if he is content to remain mystified, or if the work of art contains no such psychological puzzles, then there is no need to call on the psychologist for help. But the average reader is ordinarily both fascinated and confused by the character of Theseus as depicted by Gide.

Furthermore in this case, the other two requirements for a successful study can be fulfilled. Gide has left us

an extraordinarily frank autobiographical fragment, *si le grain ne meurt* . . . , and Margaret Mead and Rhoda Métraux (with others) have completed an anthropological study of French values published as *Themes in French Culture* which is based on interviews with French informants and on a study of French legal and social institutions, novels, films, linguistic usage, everyday life —in short, on anything French that would contribute to an abstraction of the important themes in French culture. Let us begin with their analysis of a few of the key ideas which organize the way the French perceive themselves and their world. Then we can turn to Gide's life and finally to the work of art itself, *Theseus*.

The major theme, according to the anthropologists, in French thinking is the idea of *civilisation* itself. To Frenchmen, their *civilisation* is something permanent, something unique, and not to be equalled by other cultures. They feel themselves to be the direct descendants of classical Greek and Roman civilization, as the culmination of an historical process, and as such they have an historic duty to preserve and hand down a very precious heritage. Furthermore, they appear convinced that other people should and would think the way French people do if they would only think clearly and rationally and clarify their feelings. Training in *civilisation* is extremely important. It is something that one must learn as a child through prolonged contact and study. In fact there seems to be some doubt among Frenchmen that anyone can ever be a true member of French *civilisation* who is not born and brought up in it.

The core of *civilisation* is the *foyer*. Although the word *foyer* has many of the connotations of the English word *home*, it also manages to convey the impression of a physical-spatial image like a circle within which the French family, in a carefully defined set of dyadic interpersonal relationships, carries on its central role as the preserver of an historic tradition. The *foyer* consists of the father (*père de famille*) who founds the family, a mother (*mère de mes enfants*) and ideally children who consolidate the family since they make it possible to carry on the tradition. Within the family circle exists a series of dyadic relationships between pairs of individuals

—father-son, father-daughter, mother-daughter, etc.—which the anthropologists found to be rather precisely defined and understood by the participants in each instance. A complete discussion of these roles would take us far afield, as would any attempt to discuss the French themes in detail, but we shall refer below to such relations as that between father and son and mother and son. Their main point is that the *foyer* is something like a crystal, made up of a network of mutually defined roles which must be performed correctly or the stability of the *foyer* will be threatened and with it the whole of *civilisation*. In this connection they found an analysis of the role of the adopted child especially illuminating. One of their group made a careful study of the verbatim record of the proceedings of the *Conseil d'Etat* which drew up the *Code Civil* in 1801-02 which has persisted pretty much in its original form until recently. He found that the problem of the adopted child was an especially difficult one for the legislators, precisely because adoption threatens to upset the "natural" biological order of obligations within the family. "In 1801 the whole question of adoption was—as it remains today —a thorny one for the French because of their particular conception of the family, as well as because of the sharp distinctions made by them between those who belong within and those who should remain outside the *foyer*" (3, p. 135). "The adopted child retained rights in and duties towards its family of birth and it acquired only certain rights in relation to its adopter. Nevertheless, the crucial problem of the handling of family property seems never to have been solved entirely satisfactorily; nor was the problem of the obligations of relatives of the adopting person to the adopted one ever fully worked out" (3, p. 149). The adopted child, in other words, was and is perceived as something of a "stranger" or intruder within the *foyer* who threatens to disrupt the natural and right ordering of family role relationships.

Another major theme discovered by the Métraux group is what they call the "split-off father image." The father image is "split in two parts, a protective and benevolent part, and a dangerous and destructive part. The good impulses of the father are thought of as centering in the

very closed and emotionally positively toned setting of the family stronghold, the *foyer*, or household. The evil impulses are to be directed outside of, beyond, away from this sacred ground." Evidence for the bad aspect of the father they find in folk tales, imaginative associations of informants and in the common bogeyman figures used to frighten children, such as *croquemitaine, Ramponneau, Loup-garou, Lustucru*, and so forth (3, p. 28). The psychic value of this split is obvious. Within the family the father can appear the picture of everything which is good, honest, just, and above all reasonable. "Only when he is outside the home are his doings something of a mystery" (3, p. 32). Around his somewhat mysterious existence outside the home accumulate all the childhood hates and fears of the father which, in turn, coalesce into the bogeyman figure, which persists long after childhood as a kind of embodiment of the evil side of man's nature —as something monstrous, terrible, not human, the very opposite of whatever is good and reasonable in man.

This double image of the father persists in French literature and films where the hero is often an older man who is torn between his protective and benevolent impulses toward the *jeune fille* (daughter figure) and his sexual desires for her. The basic love triangle in French thought is the competition of a father figure with a son figure over a young girl (daughter symbol). Usually the father figure is disappointed in his dangerous desire which, if permitted, would wreck the *foyer*. "But the adult audience [in French films], while maintaining at a deeper level its response to the father figure, seems to enjoy turning the tables upon him, sending the menacing personification away empty handed. Thus, in some of the films one can almost picture a sad and disappointed *croquemitaine*, shaking his head and going away with an empty sack, when all the good little boys have gone to sleep" (3, p. 31). If the father wins out over the younger man, only evil and destruction can follow; the *foyer* is threatened or wrecked. The idea seems to be that "if the older man, the father, accepts his fate, though it means his destruction or his failure in love, he also fulfills his destiny, he serves to maintain the con-

tinuity of culture . . . life goes on . . . it is *civilisation*" (3, p. 41).

The final theme in French culture discovered by the anthropologists which we will discuss here is what they call "distantiation." For simplicity's sake we will include in this concept the idea of "balance" which they also found basic to the French way of life. Common to both notions is the idea that one should avoid excess, avoid too much emotional involvement. One must keep careful control of one's impulses or they may be overwhelming. One way of keeping control is to keep such impulses in a state of "half-satiation" so that they are neither *indulged* (in which case they might gain control over reason) nor *suppressed* (in which case they might erupt in overwhelming violence). The connection here with the classical conception of the Golden Mean or of moderation in all things is obvious. Another means of control is through keeping one's distance from emotional problems. The anthropologists feel that the father, for example, maintains his authority in the family partly by keeping apart from the children rather than by direct exercise of command. He remains aloof, a somewhat mysterious figure, who does not concern himself overmuch with the children, but whose authority may be invoked by the mother to control the children. In other words the usually dangerous Oedipal conflict arising from love and hate of the child for the father is avoided in part by splitting the father image and in part by removing the father from too active an emotional participation in the conflict. The French emphasis on control, whether through distantiation, balance, or some other means, is reflected in their strong distaste for physical (though not verbal) aggression, in their insistence on balance and control in children, even at the level of posture and movement, in their unwillingness to project movement into ink blot tests (or their painting!) and perhaps nowhere more clearly than in their essential sympathy for the person who commits the *crime passionnel* because his control was not good enough to withstand the animal, instinctive side of human nature which every Frenchman fears may break through in him, too.

With this brief and oversimplified orientation in French culture, let us now take a look at Gide's life. He was born into a family which was well-to-do, Protestant, prominent, and strong in the traditions of the *foyer*. His father was a well-known legal authority and his uncle Charles a distinguished professor of economics. Although he had no brothers and sisters, his family circle was nevertheless large, since it included in addition to his mother and her life-long English companion, Anna Shakleton, a large number of aunts and uncles and first cousins with whom he lived on intimate terms. Gide's early life in the traditional French family differed in three important respects from what might be considered normal. First, his family was Protestant rather than Catholic, which probably served to intensify the relationships within it and which may also have accounted for an extreme Puritanism which demanded a degree of impulse control which does not appear to have been typically French, if the anthropological analysis is correct. In the second place Gide's father died when André was eleven, just at the point when, according to psychoanalytic theory, Oedipal conflicts should have been rearoused by puberty. And finally Gide was atypical in that he early showed signs of real or neurasthenic illness which led his worried mother and relatives to protect him in a way which appears to have interfered with normal social development. Let us look at some of these facts more closely in the light of our previous analysis of French culture.

First, what about the father figure? The very first memory reported in Gide's autobiography is of his father cutting out paper dragons for him "which we launched into the air from the balcony" (1, p. 3). The persistence into adulthood of an association between his father and dragons cannot fail to catch our attention in the light of the anthropological hypothesis about the split-off, evil aspects of the father image. Fortunately Gide himself is even more explicit on this point. "After my father's death, for instance, big boy as I was, I took it into my head, that he was not really dead, or at any rate—how can I put this kind of apprehension?—that he was only dead to our visible, diurnal life, but that at night he used

to come secretly while I was asleep and visit my mother" (1, p. 20). Certainly in his mind his dead father seems associated with the "bogeyman" characteristics of French middle-class life. Later on, he gives several incidents which show how this vague threat could exercise a powerful influence on his emotions, although he does not always connect it directly with the father. Several times a kind of "terror" seized him. "Why did I again feel, as I fell convulsively sobbing into mama's arms, that indefinable anguish, the very same exactly that I had felt at my little cousin's death? It was as though the special sluicegate of some unknown, unbounded, mystic sea had suddenly been opened and an overwhelming flood poured into my heart. I was not so much unhappy as terrified" (1, p. 116). Gide tells of another instance in which a friend of his, a boy of about his own age, is about to walk down a street which Gide's mother has warned him not to enter since bad women were supposed to live there. "Suddenly," says Gide, "I felt overwhelmed by some enormous presence—a religious, a panic terror, took hold of me—the same as had come upon me at the time of little Emile's death and on the day I had felt myself cut off from humanity. Shaken by sobs, I flung myself down before my school fellow. 'Bernard,' I cried!; 'Oh, I implore you, don't, don't!' " With Bernard's assurance that he knew all about the "profession" those women followed, Gide finally calmed down, largely in his surprise "that *it*—this dragon of my imagination—could be considered so coolly, without a shudder of terror" (1, pp. 170-171). The associations involved here form a coherent picture—father-dragon; father-terror; terror-death of a little boy like me; sex-terror (dragon of my imagination). To the psychoanalytically oriented reader they add up to a description of a classical Oedipal triangle with typically French overtones. When his father died, André felt at first that his hated rival was out of the way. In fact the only emotions that he can remember feeling at the time of his father's death are happiness in having his mother exclusively to himself and pride at being the center of attention in school (1, p. 79). We can argue that such feelings brought guilt in their train because of his love for his father and that this guilt got

converted into the idea that his father was not really dead but existed "out there" somewhere, a vaguely menacing figure who was threatening to kill him, like little Emile, for having such impulses. The unconscious boyhood wish for getting rid of the rival father was fulfilled —the father was dead—but the fulfillment brought guilt in its wake, guilt which turned to terror, terror of retaliation and punishment, terror in particular over sexual impulses as the root of the whole conflict, a point to which we will return in considering his relationship to his mother.

Gide's mother was an extraordinarily "good" woman, absolutely devoted to the Protestant Puritan ethic. In his own words, "I'm afraid I have not succeeded in showing how full of 'good will' she was (I use this expression in the scriptural sense). She was always striving after what was good—after what was better, and would never consent to rest in a state of self-satisfaction. . . . she was continually trying to diminish her imperfections, or the imperfections she discovered in others" (1, pp. 145-146). For years after his father's death, in fact up to the time of her own death, she exercised a close and never-ceasing supervision over everything Gide thought or did. Rebellious and irritated as he was by this, he never really succeeded in escaping her dominance until the end. But again let him describe it in his own words. "I think it might have been said of my mother that the qualities that she loved were not those of the persons she tyrannized over but those she wished them to acquire. . . . She had a way of loving me that sometimes almost made me hate her and touched my nerves on the raw. You whom I shock, imagine if you can, the effect of being constantly watched and spied upon, incessantly and harassingly advised as to your acts, your thoughts, your expenditures, as to what you ought to wear, or what you ought to read, as to the title of a book" (1, pp. 325-326). One can readily see how this relationship to his mother formed the major part of his emotional life all during his adolescence and his early manhood. He may have been constantly annoyed by her, but she was the rock on which his life centered, so much so in fact that he was absolutely lost when she died. "The very liberty,

which during my mother's lifetime I had so craved for, stunned me like a wind from the open, suffocated me—perhaps, indeed, frightened me. I felt dazed, like a prisoner unexpectedly set free, like a kite whose string has been suddenly cut, like a boat broken loose from its moorings, like a drifting wreck at the mercy of wind and tide" (1, p. 330). The only thing he felt he could do was to search for a substitute immediately, and he now attached himself in marriage as quickly as he could to his cousin Emmanuèle, whom he had loved since early childhood and who had many of the same virtues as his mother.

Next we must turn to Gide's sexual life, partly because his openly-avowed homosexuality is so well-known and partly because it will give us an opportunity to outline in sharpest detail the central conflict of his life. In his own words one of the most remarkable things about his life up to the age of 22 was that he had had no sexual experience whatsoever. This is the more remarkable because it was not at all common in the circle in which he moved. In fact he reports how his friends made fun of him for his virginity and on several occasions tried to surprise it. One friend even went so far as to hire a prostitute to go call on him one evening in the guise of a literary visitor, but Gide was only shocked and annoyed by this practical joke and threw her out. Yet the basis for his sexual inhibitions is fairly clear. There is first of all the fact that as a small boy he had been severely punished for masturbating publicly in school, but this by itself would scarcely account for his continued anxiety over sex. A more important fact is the fear of his mother's disapproval, a fear which was firmly based on his knowledge of how severe she was on lesser imperfections in human nature. But his fear probably had deeper roots even than this; if we adopt the Oedipal hypothesis, outlined above, we must conclude that his anxiety was based primarily on fear of retaliation by the evil, bogy father for committing the act which involves the ultimate disloyalty to the father—namely, sexual possession of a woman, however remotely she may resemble the mother. Whatever the reason, Gide was unable to overcome his sexual inhibitions, much as he was ashamed of the fact.

Finally at the age of 22 he and a friend who had similar difficulties fled to North Africa with the express intention of overcoming their scruples. The cure progressed fairly satisfactorily; significantly Gide's first sexual contact was with an Arab boy, in other words with a sexual object about as far removed from the mother as possible with regard to age, sex, color, and surroundings. That is, since his anxiety over sex was most closely connected with the mother figure, if our argument is correct it should have been easiest to overcome this anxiety with a sexual partner as unlike the mother as possible. And such was the case. After his initial experience Gide began to make progress toward more normal heterosexuality but at a crucial moment, just when he and his friend had begun to entertain a dancing girl in the evenings, his mother appeared on the scene. As the girl was leaving the apartment in the early morning something critical happened. "Just at that moment, that is to say, before she had vanished, I saw the shutters of my mother's room open and my mother leaned out of her window. Her glance followed Meriem's flight for a moment; and then the window closed. The catastrophe was upon us." When Gide saw his mother subsequently at breakfast he defiantly told her that the girl had come not only for his friend but for himself as well. "I remember her tears. . . . She wept and wept; I felt she was inconsolably, infinitely sad so that if I had the face to tell her Meriem was coming back I had not the courage afterwards to keep my word" (1, p. 279). In fact from then on his sexual impotence with women returned in full force and we can understand better how he had to find continued substitute satisfaction in homosexuality.*

The significance of this episode does not lie especially in the sexual sphere itself. In this case the sexual conflict is just peculiarly symptomatic of a much greater conflict which always remained at the core of Gide's personality—the conflict between breaking loose from

* It is interesting to note that this analysis was written before the posthumous publication of Gide's book *Et nunc manet in te*, in which he describes his sexual inhibitions with his wife who, if our analysis is correct, was really a mother substitute toward whom his inhibitions should have been most acute.

the French Puritan family tradition and the doubt, mortification, and self-torture he experienced for trying to break loose. One can understand in these terms his preoccupation with the "pure gratuitous act," the *act without antecedents*. Thus he has Lafcadio in one story throw a complete stranger out of a train window just for fun, without any real reason. The value of such an act lies precisely in the fact that it has no roots in the past. It is pure revolt, revolt which is not even *against* a particular person or institution. In much this sense Gide wished to cast off, forget, leave behind, his Puritan conscience, but of course he could not. On the other hand we find even a certain masochistic delight in the torture of his conscience. Prométhée in another story actually uncovers his liver to the eagle which hurts him as it eats but which is finally strong enough to carry him away. In the French sense, Gide was out of balance, he could not achieve *bonheur* because his impulses had been strongly repressed rather than half-satiated. The only possible result of such repression is a swing from one extreme to the other, from sensuous over-gratification to extreme guilt and self-punishment. Eventually Gide found a certain balance and sanity in writing about his conflicts, in encouraging a literary revolt, in sponsoring young, rebellious and unpopular authors, in advocating Communism as a form of anti-traditionalism, while at the same time he lived personally more or less within the normal French family tradition married to his virtuous cousin Emmanuèle.

Now what about *Theseus*? Before we turn to the work of art that Gide produced, perhaps it would be well to summarize briefly the Greek legend on which it was based:

> *Theseus*, in Greek legend, was a king of Athens and national hero of Attica, son of Aegeus by Aethra, the daughter of Pittheus of Troezen, in Peloponnesus. He was educated at Troezen, at the house of Pittheus, and passed for the son of Poseidon (Neptune). When he came to years of maturity he was sent by his mother to his father, and a sword and sandals were given him by which he might make himself known to Aegeus in a private manner. On arriving at Athens he narrowly escaped being poisoned by Medea, the sorceress,

but his father recognized the sword and received Theseus as the successor to his throne. He next caught alive the wild Marathonian bull; but a much more important service was the slaying of the Minotaur and the freeing of Athens from the tribute of seven youths and seven maidens annually to Crete to be devoured by that Monster. Fearing his son had perished while in Crete, Aegeus destroyed himself; hence Theseus on his return succeeded his father as ruler of Athens. The Athenians were governed with mildness, and Theseus made new regulations and enacted new laws.

—THE ENCYCLOPEDIA AMERICANA

Gide's version of the story concentrates on his visit to Crete to slay the minotaur, but what is remarkable about it is the character he creates for Theseus, who takes the center of the stage throughout. He is pictured as retelling the story of his life in his old age in the first person and as omitting none of his exploits through false modesty!

Now suppose we make the assumption psychologists usually make in interpreting an imaginative story, namely that the hero in it reflects, to some degree at least, the personality of the author of the story. In the present instance this seems particularly justified partly because most of Gide's heroes seem to be working out his own conflicts, and partly because the idea of Theseus was one which had occurred to him very early in his literary career and which he constantly thought about over a thirty-year period until he finally wrote it out a few years before his death. Furthermore, Theseus acts clearly as Gide himself would have *liked* to act. Theseus is a man of great willpower, not bound by tradition, never tortured by self-doubt. In fact, the main theme of Gide's story of Theseus' life seems to be a consideration of what a man can do *by himself*, by his own unaided efforts, if he has a strong enough will and avoids "entangling alliances." While Gide as a man was interested in self-realization, he certainly never achieved it to the extent that his Theseus does. In short, Gide and his creation, Theseus, are both like and unlike each other. How do they differ? Most significantly, Theseus did not have a moral mother to dominate his early life nor is he homosexual as Gide was. Theseus was responsible for his father's death just as Gide may have felt he was in imagi-

nation, but unlike Gide, Theseus certainly was not tortured by thoughts that his father was no longer dead and might return to persecute him. Above all, the most striking difference between Gide and Theseus is that the latter was never tortured by the kind of self-doubt and guilty conscience that plagued Gide throughout his long life. These important differences suggest that what Gide is really saying in *Theseus* is that self-realization is possible if, and only if, one is not hampered by certain obstacles—obstacles such as Gide felt had held him back.

The most important obstacle to be removed is the dominating, moral mother. Thus in Gide's version Theseus appears to have no mother at all, which is the more remarkable since in Plutarch's original version of the story Theseus' mother plays an important part. According to Gide it is Aegeus, his father, who brings Theseus up. The reason for the shift is in all likelihood Gide's conviction, based on his own experience, that one cannot be free like Theseus if he is brought up by his mother. There is a lot of further evidence of Theseus' fear of getting caught by women. Thus he believes in "loving them and leaving them" and tries to follow his father's advice to "Go ahead but don't get stuck" (2, p. 65) as he chases one woman after another. To clarify his views further, he says, "There was one woman who, ostensibly to safeguard my life, would have bound me to herself by a cord—a thin one, it is true, but a fixed rein nonetheless" (2, p. 65). He is referring here to Ariadne, who held the string which he unwound in the labyrinth so that he could find his way back to reality. But he regarded her as a "ball and chain" and finally dumped her off on an island on his way back to Athens. No conventional wife-mother figure was going to hold Theseus back, as Gide's mother had held him back! For Frenchmen, and especially for Gide, the wife-mother represents the heart of tradition, the center of the *foyer*, the carrier of *civilisation* which binds and prevents freedom of action. The moral seems to be: Sex is all right as long as it doesn't seduce you into founding a family and assuming the load of traditional obligations which will hamper self-realization. As for me (Gide) homosexuality is one way to escape such a fate but for other men (with less domi-

nating mothers!) like Theseus, one *can* love them and *leave* them.

Interestingly enough the other two important women in the Theseus story represent themes we have previously touched on. Pasiphae, the mother of the minotaur by a bull, is the absolute embodiment of sex, of pure animal sensuality, and as such absolutely revolting to Gide-Theseus. Is it too much to guess that she is the split-off sensual aspect of Gide's mother image, disgusting because of Gide's guilt over having incestuous wishes and because of the difficulty he would have in reconciling it with the reality image of his mother, who was so pure and asexual in all respects? Phaedra on the other hand, represents the typical *jeune fille* of the French love triangle, the young daughter figure with whom the middle-aged man (Theseus) falls in love. As we have seen, such love is supposed to be hopeless in French culture. The father figure must give way to the younger man, to the son. But in *Theseus* the opposite happens. Theseus wins Phaedra, but the consequences are terrible: she falls in love with his son by a former union; Theseus kills his son in a fit of jealous rage and Phaedra commits suicide. Once again Gide manages to underline the fact that one can be a rebel like Theseus only at great cost to traditional French institutions. Theseus refuses to abdicate to his son and the family does not continue as it should according to the French; Theseus can maintain his rebelliousness only at the cost of destroying continuity in the *foyer*, but of this more later.

Successful self-realization not only requires freedom from normal wife-mother ties; it is also most likely to be successful if there is an actual break in the biological continuity of the family—if the son is adopted or a bastard. Thus Theseus hints that Poseidon, not Aegeus, is really his father. This frees him from tradition in a way which is peculiarly French (the adopted child theme), and which is peculiarly characteristic of Gide too. Let us hear him on the subject as he puts words into the mouth of another adopted son, Oedipus. "Oh certainly not—I don't at all mind knowing that I am a bastard. When I thought I was Polybius' son, I tried to ape his virtues. I kept asking myself: 'What is there in

me that I do not owe to my forefathers?' Attentive to the lesson of the past I looked only to yesterday for approval and advice. Then suddenly the thread was broken. [Note the "thread" image again.] I had gushed up from the unknown; no longer any past, no longer any father's example, nothing to lean on any more; everything to be built up anew—country, forefathers—all to be invented, all to be discovered. Nobody to take after but myself" (2, p. 25). This kind of biological break with the past is an extremely important theme throughout all Gide's writing. As Pierre-Quint says, the theme of the "triumphant bastard" delights Gide "exactly because he is a check on the traditional principle of the family" (4, p. 243). Gide is so obsessed by this idea that we may wonder if there is not something in his own life history which gives the idea its peculiar emotional tone and importance. In fact, we may well ask, why all this concern with self-realization, with a break from family tradition anyway? Was it just his possessive mother? On psychoanalytical grounds we might expect that one defense that he might unconsciously develop against the terror of the bogy father's return described above, is the belief that he is not really his father's son and that therefore his father has no reason to revenge himself on him. As he cried in despair as the "terror" overtook him once, "I'm not like other people . . . not like other people!" (1, p. 110). Although Gide nowhere mentions this fact specifically in his autobiography, it is at least an interesting coincidence that in the year of his death Gide's father published a work entitled "De la condition de l'enfant naturel et de la concubine dans la législation romaine." Had Gide known how concerned his father was in his legal work with the problem of bastardy, and it seems unlikely that he could have avoided knowing it, it is not a far stretch of the imagination to believe that later, after his father's death, under the stress of his Oedipal conflicts, he would come to believe that he himself was somehow illegitimate. Is it too farfetched to assume that somehow the idea lodged in the hothouse imagination of a neurasthenic adolescent boy, doted on as an only son by his widowed mother, that he was somehow a bastard —especially when such an idea would have served to

allay some of the anxieties aroused by acute Oedipal conflicts? The title of his autobiography itself, "Si le grain ne meurt," is revealing in this respect. The English translation of this, "If It Die," does not succeed in giving the full meaning of the phrase, but the passage in St. John from which it is drawn does: "Except a corn of wheat fall into the ground and die, it abideth alone; but if it die it bringeth forth much fruit." Again the same theme: biological continuity, representing the family tradition, must die out, or at least appear to die out before a genuinely new, creative life can arise. For our purposes there is no necessity to prove in any biological sense that Gide was somehow illegitimate. It is only necessary to show that he had personal reasons for being intensely concerned with this problem as a boy or perhaps much less than this, that as an intelligent dramatist he was aware that the best way to symbolize successful revolt to a French audience was to place it in the hands of the adopted or illegitimate son—of the stranger in the *foyer*.

The third precondition for successful self-realization is to slay the monster "that each one of us encounters at the beginning of his journey" and "that may prevent him from going farther" (2, p. 38). In the light of our anthropological analysis, we can readily recognize in this monster the typically French bogy figure who is really the split-off, evil aspect of the father image. Theseus got rid of his father rather easily when he "forgot to run up the white sails in place of black on the ship that carried me home from Crete" (2, p. 63) so that his father Aegeus commits suicide in the belief that his son was not returning triumphant from his visit to Crete. Theseus furthermore was able to kill all sorts of monsters, "No one can deny it. I think I have performed some notable services; I have purged the earth once and for all of a host of tyrants, bandits, and monsters" (2, p. 64). There was no bogy father in Theseus' way who might hold him back from complete self-realization, no consciousness of guilt for having done away with his father such as may have plagued Gide unconsciously. Thus once again Gide seems to be saying "He, Theseus, is freer to realize him-

self than I was; he had not my handicap of a mysteriously threatening monster."

There is yet another precondition for freedom. The *foyer* must be destroyed, the "cellular regime" of the French family must go. Certainly in Theseus' case there is no remnant of a *foyer* left, in the French sense, either in his family of orientation or his family of procreation, to use the rather awkward sociological terms. As the intruder in the family, the adopted son, he got rid of his father whom he felt was standing in his way, even with respect to his father's wife Medea. Then he spends most of the rest of his life trying to escape from being tied down to a woman, who like Ariadne, would have him found a family. In the end when he does settle down with Phaedra, the solution to the problem is short-lived, and when the typical French conflict between the father and son comes up over the young wife, he refuses to give way and kills his son instead, while Phaedra in despair commits suicide. Here Gide seems to be saying, "Self-realization is a fine thing, but it is also cruel; it breaks up the center of traditional life; it is only possible if the *foyer* is destroyed." More than this, it is in the end finally destructive of close friendships outside the *foyer*. Theseus finally breaks with his closest friend and companion in revolt, Pirithoüs, when the latter feels that Theseus should slow down, that perhaps they had done enough. As Theseus says, "I realize that constancy and friendship can prevent a man from advancing—can even pull him backwards. After a certain point, one can only go forward alone" (2, p. 108). Everything again in the nature of a personal tie to other people must be sacrificed to self-realization, to the free exercise of will.

One final means by which Theseus achieves his emancipation is the typical French attitude of "distantiation," which we mentioned above. Theseus' chief characteristic in fact is lack of involvement. He manages to go through the most deeply emotional experiences a man can have—those of aggression and love—without becoming much involved in them. The stage is set by his early experience with Perigone. "I had just killed her father, and by way of amends I got her a very handsome son, Menalippes. I have lost track of both of them—breaking free, as usual,

and anxious never to lose any time" (2, p. 67). In similar fashion he seems relatively unaffected over killing his father or his favorite son, over the suicide of his wife, over the dirty trick he played on Ariadne or over the loss of his lifelong friend, Pirithoüs. The only way to self-realization is to keep free of emotional entanglements, to keep life at a distance, to handle it with a light touch. This is Theseus' touch as much as any Frenchman's.

So much for the means of getting free, for the preconditions Gide thought necessary for self-realization either because of his own personal experience or because of his typically French ideas about the nature of man and society. What then are we to make of the Minotaur, the strange, vaguely pleasurable monster whose conquest by Theseus provides the climax of the story? He seems to represent another pitfall of self-realization—in fact, the very opposite kind of an obstacle to those already discussed. The first obstacles arise from traditional ties which interfere with breaking loose. The monster seems to be the danger of going over to the other extreme in breaking loose, namely the extreme of pure self-indulgence and pleasure. The heady perfume of freedom may be such as to overwhelm one or, like the gases in the Cretan labyrinth, lead to a drunkenness of the senses which paralyzes the will. In explaining to Theseus how difficult it will be to get out of the labyrinth Daedalus says "but the most surprising thing about the perfumes is that when one has inhaled them for a certain time they are already indispensable; body and mind have formed a taste for this malicious insobriety; outside of it reality seems charmless and one no longer has any wish to return to it" (2, p. 86). The maze in fact is so dangerous that Icarus, Daedalus' son, has been caught by it despite his father's efforts to get him out with a pair of wings—caught because, though he escaped, he is insane and dead. The Icarus story appears to be Gide's effort to picture how the Christian church tries to escape from the pitfalls of sensuality by renouncing this life in favor of life after death and by developing a mind insanely confused by theology. Obviously Gide's hero, Theseus, is not to escape temptation by this route.

How is he then to escape? What will keep him from being overwhelmed by sensuous pleasure? Strangely enough, a thread which ties him to Ariadne—a thread which symbolizes tradition. But this is going to be a regard for tradition with a difference. Theseus is merely going to use it as a tool in his process of self-realization. He will hold the ball and unwind the thread as he goes through the maze. Tradition is necessary for his salvation but he will control its use, and after he escapes he will throw Ariadne over and rid himself of the "tie that binds," "the tangible symbol of duty" (2, p. 86). Gide seems to feel some real ambivalence here about tradition and duty. He is throwing it over but can't do without it completely. One is reminded of the remark so often made by successful men who have broken away from traditional religion to the effect that they were glad they had a religious upbringing because it gave them certain values that have made them successful, but now they feel they can do without it and they don't want their children to experience the same superstitions as they did.

But what about the Minotaur himself? Strangely enough he is young and beautiful, the very epitome somehow of sensuousness. Theseus claims not to have remembered much about how he vanquished him, but he does report that he was able to do it because the creature was "witless" and that on the whole the conquest was "somewhat voluptuous" (2, p. 95). These two facts are helpful because they suggest that intelligence, the French emphasis on reasonableness, is one of the means by which Theseus is saved from the pitfall of sensuous self-indulgence. Pleasure is witless, and apparently readily recognized as such in its deepest essence. But what are we to think of the conquest itself which is somehow vaguely voluptuous? Why is it that Theseus, who is so proud of his usual monster-slaying, cannot remember exactly what happened? Has the Minotaur any deeper significance? Here we can only guess and our guess must be a rather tenuous hypothesis arrived at from our previous information about Gide and French culture. The Minotaur suggests readily enough the bogy father figure except that he is somehow pleasurable rather than terrifying. Perhaps the meaning of the meeting lies pre-

cisely in this; perhaps what Gide is saying is that one must discover that the father is not really terrifying. In fact, confrontation with the "monster" can be actually pleasurable (in a rearousal of childish affection for his father, possibly also sought in his homosexual relations). If one can only discover this, namely that there is nothing to slay but possibly something to enjoy, one is then free, free from the terrors of the avenging conscience which arises out the Oedipal conflict, free from the necessity for slaying monsters. The bogy father disappears, and what do we find in its place?—the witless (irrational) product of the union between the false (incestuous) image of the father (the bull) and the false (incestuous) image of the mother (the sensuous Pasiphaë), a figment of the imagination created by the pressures of libidinal pleasure urges culminating in the Oedipal conflict, a monstrous figment which may hold one in check and direct one's whole life until it is confronted—when it dissolves into the strangely pleasurable reality behind it.

What is the reward of all this struggle for self-realization—of pursuing one's monster until it is defeated? Theseus' reward is that he remakes the city. "I have fulfilled my destiny. Behind me I leave the city of Athens. It has been dearer to me even than my wife or my son. My city stands. After I am gone, my thoughts will live on there forever. Lonely and consenting I draw near to death. I have enjoyed the good things of earth, and I am happy to think that after me, and thanks to me, men will recognize themselves as being happier, better, and more free" (2, p. 115). In order to remake civilization for the benefit of those who are to come Gide-Theseus has had to wreck his own life and in particular wreck the traditional ties of the older *civilisation* which would have hampered him in his efforts to make a brave new world. In his meeting with the blind Oedipus at the end of the play, Gide confronts Theseus with the opposite solution to the conflict between tradition and freedom. Oedipus, like Theseus, was self-reliant, slew monsters, started off on the track of the brave new world, but he asked too many questions about his family, about tradition, and in the end he gave up his revolt, and returned to a devoutly religious Puritanism, which Theseus es-

capes. Blind as Oedipus is to the things of this world, he has achieved "a state of unearthly beatitude" in the service of God and the life of the spirit. Theseus, and through him Gide, seems to wonder for a moment whether or not Oedipus' solution may not be correct after all. He is impressed by "a nobility equal to my own" (2, p. 111). Again we note a curious parallel between Oedipus' blindness and one of the earliest experiences in Gide's life—that of a friendship he had as a very young boy for another little boy who was going blind. "But my real despair began when I realized that Mouton was going blind. . . . I ran away to cry in my room and for several days I practised keeping my eyes shut and going about without opening them, so as to try and realize what Mouton must be feeling" (1, p. 8). Perhaps the blind way, the religious way of Gide's mother, of tradition, may be the right one, but in the end Gide has Theseus resolutely decide that while he knows he may be wrong, he has chosen his lot, and he must stick to it. As he says to Oedipus, "But my thoughts can never march with yours along that road. I remain a child of this world, and I believe that man, be he what he may, and with whatever blemishes you judge him to be stained, he's duty bound to play out his hand to the end" (2, p. 115). Thus in the final page of one of the last things he wrote, Gide presents in the form of the meeting of these two men, the conflict between freedom and tradition, between self-realization and religion, which was the central conflict of his whole life. He is still on Theseus' side, on the side of revolt, but with his upbringing he cannot finally escape the suspicion that his mother was right after all.

One final word about Gide's position in France as a writer. Many of the ideas he discussed in his plays and novels were completely un-French—his homosexuality, extreme anti-traditionalism, etc. How then could he be highly regarded by Frenchmen as a writer of whom they could be proud? The answer seems to be that he was never regarded as belonging "outside the pale," as a true enemy of French *civilisation*. He never went that far, but instead assumed the role of the adopted son, the "triumphant bastard," the stranger within the foyer,

who, for reasons completely understandable to a Frenchman, is exactly the person who would cause trouble. Thus even in his role as a rebel he is being traditional, and in similar fashion, as I have tried to show, he has used other typically French themes to illustrate his ideas. He is a conventional rebel—because he accepts the idea that anti-traditionalism carries with it all the penalties Frenchmen believe it should and also the idea that, penalties or not, rebellion is essential to the continuance of *civilisation* at a new and finer level in which the traditions of the past are united with the new ideas of the future through the catalytic action of free men like Theseus.

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6

Psychoanalysis and Religious Mysticism*

If in previous chapters I could be accused of cheek in claiming to have laid bare the roots of civilization and modern American, German, and French culture, in this one I stand convicted of ὕβρις in the highest degree. For here I attempt to analyze the psychoanalytic movement itself—the very tradition that fashioned many of the tools with which I work. What is more, the analysis leads directly into very controversial issues—the relation of psychoanalysis to Jewish mysticism and its developing character as a religious movement. Yet my viewpoint is not different here from what it has been in previous chapters: Psychoanalysis has its basic psychological character just as any culture does—a character only half recognized by its adherents, but more or less acceptable once it is laid out for study. What makes the analysis of roots more painful in the case of religious movements is the fear that exposure will destroy some of the mystique, some of the healing power they wield. If this is true—and I doubt if it is seriously true for more than a handful of people—the loss is surely outweighed by the gain in understanding that self-knowledge always brings.

Furthermore one must always respect the miracle of growth of a new movement whatever its roots. Nowhere is this better expressed than in the famous Suffering Servant passage of Deutero-Isaiah which has inspired every Jewish reform movement from Christianity to psychoanalysis:

"And he shall grow up before him as a tender plant, and as a root out of a dry ground: he hath no form nor

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comeliness; and when we shall see him, there is no beauty that we should desire him."

The root must grow in a certain soil, dry though it may be, and it is my job to explain the nature of the soil and the root, but that the tender plant grows at all is beyond my powers to explain.

Speaking publicly about religious matters presents many difficulties for a behavioral scientist today. To admit to a religious point of view, to some personal commitment, is to violate the most fundamental rule governing the behavior of a scientist—namely, to be objective. Personal bias serves only to distort the search for truth. So it is part of the professional role of the scientist, particularly if he is interested in human affairs, to keep himself free from entangling commitments, to remain in a state of suspended judgment so far as many of life's most serious issues are concerned.

And most of my colleagues live up to their professional role with great strictness so far as religion, and in particular Christianity, is concerned. I can hardly think of a psychologist, sociologist, or anthropologist of my generation who would admit publicly or privately to a religious commitment of any kind. Furthermore it is my impression that the taboo on religion holds for more than those who should remain professionally objective. Very few intellectuals in my circle take Christianity seriously except as an historical or social phenomenon. The only exceptions are those whose professional role more or less requires them to take a religious stand—i.e., those who teach religion and those who are in a position of public responsibility. I have known men whose interest in religion appears to have begun the moment they assume public office. It is apparently just as inconceivable for a President of the United States to be irreligious as it is for a professor of psychology to be religious. The requirements of their roles are just different, and are normally followed without much deviation. With the two exceptions noted, objectivity or suspended judgment on religion is the rule, at least in the intellectual circles in which I move. A psychological colleague of mine has told me that the same condition exists among under-

graduates. He has found in his intensive study of a number of them that they talk readily enough about their sex lives, but unwillingly and with great hesitation about their religious convictions. He has concluded that it is not sex which is a delicate subject in our generation but religion.

So I am faced with great difficulty. I do not teach religion nor am I a public figure. What is more I am a psychologist who should remain objective. Yet I must "break role," transgress the taboo against religion and reveal at least to a certain extent my personal religious convictions. I have had to overcome considerable internal resistance to do so, and you may well wonder why it was necessary. Why could I not deal with a subject like psychoanalysis and religion objectively without revealing my own personal convictions? The answer lies in part in what I will have to say and in part in my own personality. It will be necessary for me to talk at length about the unconscious religious assumptions of psychoanalysis and I thought it only fair to reveal my own so that whatever bias I bring to the task may be discounted and corrected by others. Furthermore in religious matters I am a nonconformist from a long line of dissenters, and I suspect that my desire to speak out is motivated by a culturally nurtured spirit of opposition which in this case has turned itself against the conspiracy of silence on religion. Be that as it may, let me confess at the outset that my remote ancestors were Huguenots and strict Presbyterians from Scotland and northern Ireland, that my mother was reared a Covenanter—one of the most radical forms of Presbyterianism, that my father is a Methodist minister and that I am a convinced Quaker whose approach to religion is primarily mystical. It would be hard to find a background of more "radical" Christianity. Its relevance to my theme will become clearer as I proceed.

Psychoanalysis stands in striking contrast to Christianity in intellectual circles. It is enthusiastically accepted, or at least taken very seriously, by the very same men who ignore or despise Christianity. Unfortunately I have no precise figures, but it is my strong impression that an influential minority among both faculty and students in our great urban universities have either been psycho-

analyzed or would like to be. It has been seriously proposed in one university department known to me, that a psychoanalyst be added to the permanent staff of the department whose function would be largely to analyze his fellow staff members. In Cambridge where I live it is as difficult to spend an evening with friends without discussing some aspect of psychoanalysis as it was perhaps a hundred years ago to spend the same kind of an evening without discussing Christianity. But is it fair to compare the two phenomena in this way? After all psychoanalysis is not overtly a religious movement. It is a technique for helping the mentally ill and for discovering some of the ways in which the mind works as a contribution to scientific psychology. But whatever its conscious intention, as a *social movement* its functions are much broader than these. Its leading practitioners have charisma: they are looked up to, admired and treated as beyond the ordinary run of humanity in much the same way as ministers and priests have been at various times in the past. It has managed to give meaning to life to many troubled intellectuals who could find no meaning elsewhere. Its metaphysics—Freudian and neo-Freudian conceptions of the nature of man and existence—are seriously discussed by leading intellectuals of the day in much the same way as theological questions were discussed in an earlier day. Above all it *heals* and we should not forget that one of the basic and most fundamental appeals of Christianity as described in the New Testament was its healing power. At least on the surface then —and the idea is by no means original with me—psychoanalysis has many of the characteristics of a religious movement. Nowhere that I know of is this more simply and movingly expressed than in Thomas Mann's treatment of psychoanalysis in *The Magic Mountain*. Mann came into contact early with analysis around the time of the First World War and, with what appears now to be an unusual flash of poetic insight, understood its basic religious character. At the tuberculosis sanitarium where the scene of *The Magic Mountain* is laid, there is a resident psychoanalyst, Dr. Krokowski, who concludes his first lecture to the assembled patients on psychoanalysis by stating that "symptoms of disease are nothing but

a disguised manifestation of the power of love; and all disease is only love transformed." The reference here is of course to the Freudian theory that all neurosis has at its root some sexual difficulty, some deformation in the normal development of the libido, but Mann purposely phrases Dr. Krokowski's conclusion in religious terms. He then continues:

> Dr. Krokowski had raised his voice and so drawn attention once more upon himself. He was standing there behind his table with his arms outstretched and his head on one side—almost despite the frock coat, he looked like Christ on the Cross!
>
> It seemed at the end of the lecture Dr. Krokowski was making propaganda for psychoanalysis; with open arms he summoned all and sundry to come unto him. "Come unto me," he was saying, though not in those words, "Come unto me, all ye who are weary and heavy laden." And he left no doubt of his conviction that all those present *were* weary and heavy laden. He spoke of secret suffering, of shame and sorrow, of the redeeming power of the analytic.

Perhaps Dr. Krokowski is pictured as proselytizing a little too openly for the Psychoanalytic Institutes of today, but I can personally vouch for the fact that his missionary zeal is not altogether dead among contemporary psychoanalysts. They are committed people. They *believe* in the "redeeming power of the analytic" in a way which many Christian ministers might envy.

Is the resemblance of psychoanalysis to a religious movement superficial, a mere compelling metaphor, based on a few functional similarities in meeting peoples' needs? I think not. The resemblance is far more deeply rooted than that. It is based on the fact that psychoanalysis did not spring full-blown from Freud's mind, like Minerva from the head of Jove. Rather, as a remarkable little book by Bakan has recently demonstrated,[1] it drew heavily on the traditions of Jewish mysticism, particularly as they flowered in Hassidism in Central Europe late in the nineteenth century. Freud was himself, of course, violently anti-religious, although he always considered himself culturally a Jew. Nearly all of the early leaders

[1] David Bakan, *Sigmund Freud and the Jewish Mystical Tradition*, Princeton: Van Nostrand Co., 1958.

in psychoanalysis were likewise Jews in varying degrees of rebellion against orthodoxy. Bakan argues that while they consciously rejected religion, they nevertheless borrowed heavily from mystical traditions which were widely influential in the milieu in which they grew up.

The goal of Hassidism was self-actualization, self-fulfillment by direct contact with the Divine. It therefore had much in common with various forms of radical Christianity like Methodist "enthusiasm" or Baptist "revivalism" which also became widely influential in the nineteenth century. Like them it was a mass movement which gained much of its strength by being opposed to traditional orthodox religion. From the seventeenth century onward Rabbinical Judaism was on the defensive throughout Central Europe. It had taught that only by living up to the minutiae of the Law could the Jews as a people expect to be favored by God, that in return for their obedience and fulfillment of His commands, God had entered into a covenant to reward them and to treat them as His Chosen People.

However, the Jews suffered from continuous persecution culminating in pogroms from the seventeenth century on. How could the average Jew believe that by living up to the Law, he was going to be favored by God? He had apparently tried it without success. The orthodox answer, then as in the time of Job, was of course that he must have failed in some respect to live up to the Law or he would not have been so punished by God. So the more the Jews suffered, the greater was the traditionalist religious pressure to live up more exactly than ever to the many requirements of Jewish Law.

Mysticism represented a revolt against such Rabbinical "legaism." It argued that salvation for the Jews as a people was not likely to come about by increasing conformity to the Law. Rather individuals could be fulfilled and the group "saved" by direct contact with the Divine here and now. Such contact was characterized by joy and release rather than by the more traditional suffering and repentance. A few great rabbis—the Baale Shem—became noted for their miraculous healing powers, their ability to release individuals from the burden of suffering, rather than for their detailed knowledge of the Talmud

as in orthodox Judaism. Mass enthusiasm swept religious meetings. Emotional release replaced the hard, cold, rational legalism of orthodoxy. False Messiahs appeared—Sabbatai Zevi and Jacob Frank—who promised to lead the Jews immediately into a better life, and who even went so far as to argue that sinning was a good thing since it would help bring about the millennium sooner.

The goal of psychoanalysis is practically identical with that of Jewish mysticism—to release and fulfill the individual by contact with emotional, irrational forces. Freud's image of man is of one hemmed in by conflicts and anxieties arising primarily out of the thwarting of natural impulses by society. The central problem of neurosis is the need for freedom, for release from guilt, from an oppressive superego representing the demands that society makes on the individual.

For example, a common cause of mental disturbance is the Oedipus complex according to psychoanalysis. What in its simplest terms is the Oedipus complex? It is an *inevitable* tragedy which arises in the development of the impulse-life of man from being born into society, or more particularly into a family. Every little boy is fated to fall in love with his mother, to hate his father, to feel guilty, to suffer—because he is a human individual born into a matrix of other individuals. He must obtain release from the tragedy of social existence, and psychoanalysis is the instrument for obtaining release just as mysticism became the instrument for obtaining release from the oppressive social responsibilities of Jewish orthodoxy.

In other words, Freud and the Jewish leaders of psychoanalysis saw man's central problem in terms of his need for self-fulfillment as over against the oppressive forces of social obligation because this was the central issue in the cultural milieu in which they grew up. For them the crippling pressures of the group, of traditional Jewish orthodoxy, were very real and obvious. Probably only in Calvinistic Puritan circles have they ever been so great elsewhere.

Two often-noted peculiarities of traditional psychoanalytic practice appear to have arisen at least in part from the way man's central problem was conceived. The

first is the obvious fact that psychoanalysis has never had much success among psychopaths or among working-class people. The neurotic problems of psychopathy and of many lower class people often arise from the *absence of well-defined moral standards.* So a therapeutic movement which sees the central problem of neurosis as oppression by excessive moral demands is not apt to be of much help to such people. Psychoanalysis has just never been comfortable with the problem of providing people with a consistent set of values, even when "moral education" is what is obviously needed. It still works best for those who factually do need release from an oppressively moral upbringing.

A second "peculiarity" of psychoanalytic practice is that it has traditionally refused to have anything to do with the welfare of any one else in the patient's milieu. That is, the therapist's relationship to his patient is much like the defense lawyer's relationship to his client. He does not try to represent the interests of his patient and society at one and the same time. In fact he gains much of his power to help the individual by openly allying himself with the patient, as over against the demands of society. Since many psychoanalysts are also physicians, this idea fits in well with medical ethics which state that the doctor should do everything for the welfare of his patient. But there is an important difference between physical and mental illness, which psychoanalysts have been slow to recognize. In curing physical disease a physician ordinarily does not have to worry whether his remedy will harm anyone else. Medicine may cost money but giving it to one person does not make another person sick. Yet such problems do arise in mental illness since it is such an interpersonal affair. For instance, in the course of psychoanalysis a man may come to realize what he needs is release from his wife, a divorce. The wife may be upset by this, in fact she now may become "ill," and may even want to talk to her husband's analyst about the problem. He may well refuse to see her on the grounds that getting involved in her problems may make it more difficult for him to help her husband. If she needs help she should get her own analyst. The patient's family is not the analyst's respon-

sibility, and if he is a doctor, he may feel that medical ethics justify his point of view: he must do everything he can for his patient's welfare, even if it may by some mischance harm someone else.

I am not now, of course, accusing the whole psychiatric profession of being socially irresponsible. I know as individuals that they do often consider their social obligations. I know too that modern analysts like Spiegel argue that the whole family may need treatment to help any member of it really successfully. What I am saying is that the major emphasis of the psychoanalytic tradition in psychiatry is on the welfare of the individual and that it has real difficulties in the area of moral education and of social responsibilities. The reason lies at least partly in the fact that psychoanalysis originated as an individualistic revolt against the oppressive orthodoxy of legalistic Judaism.

But it is not only the aims of psychoanalysis and Jewish mysticism which are parallel, as Bakan has pointed out. The techniques they employ are also very similar. Jewish religious scholarship has always been noted for its exegesis on the text. Rabbis were trained in complex interpretations and reinterpretations of the details of Jewish Law. What Jewish mysticism did was to adopt the same detailed textual approach but in a less rational, less logical, looser or metaphorical manner. Abraham Abulafia had recommended a technique which he called "skipping and jumping" in dealing with the text as early as the thirteenth century. Caballistic writings over the succeeding centuries provided a body of magical, emotional lore which served as a constant contrast to the "cold" legalism of Jewish orthodoxy. Jewish mysticism drew on such sources and on the direct inspiration of its chief writers to produce the *Zohar*, a book of allegorical reinterpretations of religious traditions which was for the Jewish mystic what the *Talmud* was for the orthodox Jew.

The *Zohar* is a work of imagination not of reason. Its key technique is allusion and metaphor as opposed to logic and close reasoning. The psychoanalysts employed the same technique and called it "free association." Furthermore they had a traditional basis for using free asso-

ciation to understand man, since according to Bakan, the *Zohar* suggests that man may be conceived as a text (or Torah) requiring exegesis and more particularly in Hassidism, the holiness of the Zadik (or religious leader) was to be understood as a kind of living Torah. In other words in psychoanalysis as in Jewish mysticism it was the technique of employing the imagination, of interpreting free association, dreams and metaphors which would serve to release man from the bonds of traditionalism, of oppressively rational, moral obligations.

And what exactly was it that was revealed by the technique of free association that proved so therapeutic to man? It is here that one of the most striking parallels with the tradition of Jewish mysticism appears. Freud was openly a rationalist. He felt that knowledge of the unconscious irrational forces in human nature ultimately gives man control over them. But it is knowledge of a very special sort that heals. It is *sexual* knowledge. It is precisely at this point that Freud stands at the very center of the Jewish mystical tradition. In Hebrew the word for "knowing" (*yada*) can have a sexual connotation as is illustrated by the English translation of the verse "and Adam knew Eve his wife"; that is to say, he "knew" her sexually. As the story of Adam and Eve further illustrates, in Biblical tradition, "knowledge" (eating of the fruit of the tree) is intimately associated with sexual knowledge: "And the eyes of them both were opened, and they knew that they were naked." The ceremony of Bar Mitzvah, observed for Jewish boys at puberty, apparently celebrates the fact that only when he has achieved full sexuality (i.e., genital maturity) can he overcome the ignorance and the impulsiveness of childhood.

While sexual associations to knowledge had been present in all Jewish traditions, they were most highly developed in the *Zohar*. In fact the *Zohar* recasts much of Jewish religious tradition in sexual terms. For example, Israel is conceived as the female part of God, the Holy Shekinah, which is cast aside and then redeemed by God in a mystical union described in sexual terms. In short the sexual image is all-pervasive. Real knowledge, real understanding of the world must *ultimately* be sexual.

Freud and the orthodox analysts adopted this viewpoint rigidly. They insisted that all attempts to understand man and his conflicts in other terms such as Jung's religious archetypes, Adler's drive for power, or Rank's birth trauma were necessarily superficial and misleading. At its most fundamental level life must be interpreted in sexual terms just as the *Zohar* had demonstrated.

There is more, much more, to Bakan's analysis of the connections between psychoanalysis and Jewish mysticism. Freud saw the sexual instincts in a sense as the root of all evil. The young infant was born with powerful drives which, if he were only strong enough, would lead him to commit every crime in the calendar—incest, rape, murder, etc. In the mystical tradition the source of all evil is the Devil, and by entering into a pact with him one can gain control over the occult forces which are his to command. To the non-Jewish world, this idea is best represented in Goethe's *Faust*, a work much influenced by Jewish caballistic writings.

There is evidence that Freud felt in his psychoanalytic work that he was entering into a pact with the Devil, that by exploring the underworld of the mind he could gain control over the evil forces within it. There is also considerable evidence that he suffered from a "Messiah complex," that he feared to enter Rome where the Jewish Messiah was traditionally supposed to be proclaimed, that he at least unconsciously thought of himself as founding a new religious movement which would replace the outworn traditions of orthodoxy. But enough of Bakan's case has been presented to make the main point. Psychoanalysis was religious in its origin, a secular outgrowth of the Jewish mystical tradition in its continuing struggle with Mosaic orthodoxy.

It should by now be much easier to understand why psychoanalysis has had such a great appeal for American intellectuals. It fitted in readily with their spirit of revolt against Christian orthodoxy, with the nineteenth century spirit of romantic individualism which was concerned with fulfillment rather than one's duty to social institutions, to the state or to the Church. Its insistence on the evil in man's nature, and in particular on the sexual root of that evil, suited the New England tempera-

ment well which had been shaped by a similar Puritan emphasis. In fact, to hear Anna Freud speak of the criminal tendencies of the one and two-year old is to be reminded inevitably of Calvinistic sermons on infant damnation.

Echoes of Calvinism can also be found in Freud's thoroughgoing determinism, and his insistence on the inevitability of certain emotional conflicts like the Oedipus complex. After all, for people schooled to believe in Predestination or even more, in the complete absence of chance in the universe because God controls everything, it takes no great stretch of the imagination to accept scientific determinism. In science Nature simply replaces God in making everything inevitable.

But above all, psychoanalysis could succeed among intellectuals where traditional religion failed because it was presented as science, not religion, in an increasingly secular age. That is, it provided many of the values which religion had traditionally provided, but did so without consciously posing as religion. If the intellectuals who so enthusiastically espouse psychoanalysis knew that they were suporting an honorable off-shoot of religious mysticism, they might be considerably less enthusiastic about it. It is because it is not religious but scientific that they can let themselves believe in it.

Is it then my purpose in calling attention to the religious roots of psychoanalysis to discredit it in their eyes, to destroy their faith? Certainly not, although there is no doubt that we have laid open an issue which was a matter of grave concern to the founders of psychoanalysis. Freud reports how disturbed he was that psychoanalysis seemed to be largely a Jewish movement in its early days, and how his eagerness to include Gentiles led him to support Jung for the presidency of the International Psychoanalytical Association even when it was already becoming clear that Jung differed with him on a number of basic issues. Despite Freud's efforts, the leading psychoanalysts both in Europe and the United States were for a long time nearly all Jews.

The fact is not at all surprising if Bakan's thesis is correct that psychoanalysis drew many of its key traditions from Jewish mystical religion. But why then did

they not admit it? Why did Freud not explicitly acknowledge his indebtedness to earlier traditions? There are several possible explanations. To begin with it should not be overlooked that many psychoanalysts may not have realized that they were drawing on Jewish religious traditions in exactly the same sense that many secularized Protestants may not realize their view of life is strongly colored by their religious background. They were secularized Jews and had every reason to reject consciously anything that had to do with religion. But even if they had realized their indebtedness (and Bakan feels that Freud might well have recognized it), there was every reason for them to conceal the Jewish origins of psychoanalysis.

Freud was convinced that he was practicing a scientific technique which produced objective knowledge about human behavior. To admit that there was anything Jewish or religious about it would be to undermine its scientific status, to admit the possibility of bias. Worst of all, to admit to Jewish origins would be to open psychoanalysis to the tide of vicious anti-Semitism which was sweeping Central Europe in Freud's day. After all neither then *nor even now* was it as harmless to speak of a Jewish school of psychoanalysis as it was to speak, for example, of Scotch realists or American functionalists.

Finally for many Jews the emotional excesses of the mystical tradition, particularly since they had a distinctly sexual flavor at times, were a very discreditable part of Jewish history and, if anything, only served to provide some factual basis for the anti-Semitic tales circulating in Europe at the time. It would certainly not help a new "science" either to be associated with mysticism, with occultism, with cabala, and every form of obscurantism. So psychoanalysis had every reason not to want to talk about its Jewish origins even if it had understood them. To speak of them even today is to run some risk of bringing a "taint" on psychoanalysis by association.

But my intent has been quite different. It is to show that psychoanalysis was successful in part because of its religious roots, because it has continued to serve man's needs in the way that religions have always served them. To demonstrate this thesis requires much more than an

historical analysis. After all one can admit that a movement was religious in origin, just as natural science developed out of radical Protestantism, without implying that it *continues* to be religious in any way. Suppose psychoanalysis did draw some of its ideas and practices from Jewish mysticism. So what? Has it not become increasingly scientific and perhaps even abandoned many of these ideas? Psychoanalytic practice has certainly been modified in America despite the resistance of the more orthodox Freudians. In fact the psychoanalytic viewpoint has gradually pervaded the entire psychiatric profession, but in the process it is gradually undergoing some changes. Many new ideas are afloat, at least in the most advanced medical centers, but they highlight even more sharply how psychoanalysis functioned as a religious movement by showing how the same religious needs can be met in slightly different ways. Let me illustrate.

As we have seen, psychoanalysis, because of its individualistic, mystical origins, tended to see man's main problem as centering in his need for release and fulfillment as over against oppressive moral obligations. The psychoanalyst was tacitly the patient's ally in his struggle for fufillment. At least one modern variant of psychoanalysis no longer regards this problem as central by any means for all neurotics. Instead the patient's key problem is not the need for release but the need for love. He must learn that somebody cares for him, somebody respects him as an individual whatever he may do or whatever he may have done. The therapist is still his ally but not necessarily in his struggle for release from crippling moral demands. Therapeutic skill lies in the ability to convince a neurotic or psychotic that the therapist really does care for him. Neurosis, according to this view, in large part develops because the person feels he can no longer trust people, because he suspects everybody. Needless to say in such an atmosphere of distrust and suspicion, the therapist cannot get away with *pretending* he cares. He must genuinely be able to respect his patient if his efforts at cure are to be successful. It takes very little reflection to see that, stripped of its accidental historical opposition to orthodoxy, the concern of psychoanalysis for the individual has developed into the tradi-

tional mystic's concern for "that of God in every man," as Quakers would phrase it.

The orthodox analytic emphasis on the central importance of sex has also undergone changes. There are probably fewer and fewer analysts who act in their daily practice on the assumption that only the sexual image has genuine healing power, although many of them still continue to write up their cases in terms of Freudian sexual metaphysics. I know of one individual whose analysis significantly turned on images from James Joyce, another whose cure centered in a verse from the thirteenth chapter of I Corinthians ("For now we see through a glass, darkly; but then face to face: Now I know in part; but then shall I know even as also I am known"). But again Freud's instinct seems to have been correct when he refused to yield to those who insisted that sexuality was not of central importance but a *mere* metaphor for something else. For him the sexual nature of man was far more than a mere metaphor in the ordinary sense of the term. It represented *power*—above all the power to heal. Modern psychoanalysts, while they may reject the sexual image as necessary, all accept the idea that whatever imagery the patient uses, it must have power, the same kind of power for him that the sexual image had for Freud. It is here that psychoanalysis, both orthodox and modern, reveals most clearly its mystical character.

What the religious mystic has testified to throughout the ages and in all forms of religion is his direct emotional experience of something, above all a power, *beyond himself*. The "something" he has usually called God and has sought to describe his experience in terms of whatever religious imagery is readily available to him in terms of his time and culture. But always he protests at having to find words to describe his experience. Words, images always seem to distort it for him, though he must find some way of expressing the inexpressible. For Freud and others in contact with the Jewish mystical tradition, the sexual image succeeded in conveying the power of the inexpressible. For others the image may be different. But that does not mean that the image is trivial or unimportant, a mere intellectualization. No, it must carry the emotional impact of contact with a power be-

yond the self—a power called by some the life principle or libido, by others a positive growth force, by religious mystics, God.

Every neurotic suffers from a feeling of inadequacy: something has happened to him which is beyond his control. He cannot cope with it. In the course of his analysis he may suffer a long time in confusion, despair and helplessness, but at some pooint if he is to get well, something begins to happen to him which he experiences emotionally as "outside self." He can do things now that he could not do before. He does not know exactly what has happened and may attribute his new found powers to the influence of the analyst or some new discovery about himself, but the central inescapable fact of his *experience* is that he did not do it himself—that some power outside himself moved him. To speak of a "power not ourselves that heals" is at least in mystical religious terms to speak of God. The fact that the power was described in sexual terms by early psychoanalysis appears more and more to have been an accident of its Jewish mystical origins.

Other modern developments in psychiatry point in the same direction. They have tended to separate out what was peculiar to the problems of Jewish mysticism in Freud's time from what is universally characteristic of religious mysticism as it attempts to respond to the human condition in all times and places. For example, there are psychiatrists like Spiegel who have overcome the limitations of working with an individual quite apart from the effect of his "cure" on others. They do not see society or the family as so oppressive as those breaking away from Jewish or Christian orthodoxy did. They do not think that it is possible to consider the health of an individual apart from the health of those around him. They even argue that the family should be treated along with the individual. In all these developments the traditional religious concern for group as well as individual welfare has begun to creep back into psychiatric practice.

Or to consider just one more example, orthodox Freudians were pessimistic about human nature. They believed in a form of "infant damnation" and like the Puritans at times appeared to feel that the best that man could hope

for in this "vale of tears" was stoic indifference. When Freudianism came to America, it tended to get more optimistic, to be influenced by the American pragmatic belief in the possibility of a much better world—so much so in fact that many European analysts have been very much disturbed by the easy optimism of some American analysts. Cultural relativity has been particularly suspect because it seems to argue that people are neurotic simply because they are brought up incorrectly. After all, other cultures rear their children differently and in such a way as to avoid many of the problems that beset our children when they grow up. All that is needed is proper child care. Similarly what the therapist has to do is to "retrain" the patient who has been brought up incorrectly.

Psychoanalysts originally took a much more serious view of the "existential" difficulties in which every man found himself and which no amount of proper child-rearing could wish away. It can be argued, as Tillich has, that in a certain sense they were more religious in this respect than their American colleagues, many of whom succumbed to the typical American notion that man can do anything for himself if he only has the proper knowledge. But the real point I want to make is that modern psychology appears to be moving away both from Freud's easy pessimism or the relativist's easy optimisim about the nature of man. Rather it regards man as neither basically good nor basically evil, but as having great *potentialities* both for good and evil. Existential difficulties are neither minimized nor exaggerated. They are accepted as part of life in exactly the same sense that man's capacity to transcend them (*not* remove them) is accepted. This development too appears to be more characteristic of the general mystical point of view than of the peculiar Freudian one. Of the Quaker mystic at least it has always been characteristic that he has recognized the seriousness of man's existential limitations—his all too human failings—at the same time as he has struggled for and occassionally found the Divine spark in every man, even himself.

But perhaps I am overdoing it, overstraining myself to find analogies between mystical religion and psychoanalysis. So far psychoanalysis has been shown to have been

religious both in its origins and further developments. But the skeptic may still ask, so what? After all just because a movement functions in some respects like a religion, does that mean that it is really religious?[2] By this kind of reasoning couldn't almost anything be made to appear religious? To answer such questions requires a definition of what religion "really" is. But there are many definitions of religion. Which is the best one? Unfortunately I am not a theologian and therefore not even in a position to know what the best alternatives are. So I will have to content myself with a general definition recognizing fully that in so doing I may simply be revealing my own religious background.

In its most general sense religion has to do with the transcendental, with a power beyond man and this world which is usually called God. Religion commonly functions in three spheres of life—intellectual, social, and personal. It gives intellectual meaning to existence through theology which attempts to provide answers to such ultimate questions as why people are born, where they go when they die, how the world got started, etc. In the social sphere, religion has to do with ethics, with the moral principles governing the right conduct of men toward each other and with the sanctions (punishments or rewards in this life or hereafter) which follow when men do the right or wrong things. Finally in the personal sphere, religion or God has been invoked to explain unusual experiences which seem beyond the normal. In particular it has been associated with healing. All great religions have dealt with all three of these areas of life to a greater or lesser degree. For example, the New Testament deals extensively with intellectual matters, with the meaning of existence, as in the Gospel of John,

[2] Hiltner states explicitly that "psychoanalysis and religion are not of the same order" largely because psychoanalysis is not a "conscious" Church openly believing in God. While he is certainly correct, he is in danger of defining away one of the most important religious movements of our time, at least among intellectuals. It was Freud himself, as Tillich points out, who sparked the revolt against consciousness in philosophy. What more fitting though ironic climax to Freud's career could there be than the creation of an *unconscious* religion, a "Church" functioning like one in most respects except in the recognition that it is one?

with ethical questions as in the Sermon on the Mount and Paul's letters, and with the miraculous healing powers of Jesus.

Throughout its history Christianity has sometimes emphasized one or another aspect of religion. In the last hundred years for instance I think a case could be made for the fact that there has been a progressive shift in emphasis within Protestantism. A hundred years or more ago it was the theological aspect of religion that excited Christians the most. In fact they got so worked up over theological issues that Protestant Christianity split up into a number of different sects representing apparently irreconcilable theological doctrines. Today it is difficult for Christians of different denominations to work up much enthusiasm over theological disputes. The point of central interest has shifted. Around the turn of the twentieth century ethical questions assumed paramount importance. Christians became primarily interested in the social gospel—in proper working conditions, prohibition, international peace or, in more recent times, racial discrimination. Ethics became the royal road to the discovery of God as theology had been earlier. In fact I recall a common definition of God as being "a Power not ourselves that makes for righteousness." Christianity both supported and was supported by the hope of a better world here on earth in the near future. But two World Wars, a depression, the tyranny of Fascism and Communism, the relative failure of the United Nations, the invention of atomic techniques for destroying mankind have all tended to discourage somewhat the search for God in the social order, in man's relationship to man. If He is really making for righteousness, He appears to be pretty slow about it. As a result the ethical emphasis in Christianity is losing some of the enormous appeal it had once, although it is still strong among many Church leaders brought up in an earlier day.

Some Christian leaders like Tillich and Niebuhr have revived interest in basic theological questions—in new analyses of the meaning of existence in Christian terms. There is another alternative: to find God in the "healing power of the analytic." It is for this reason above all that I would classify psychoanalysis as a religious movement.

To some extent it provides man with a theology, with a view of the nature of existence. Freud had quite a lot to say about the ultimate nature of things, although many contemporary analysts would regard them more as his personal philosophy than as anything essential to psychoanalysis as a therapeutic technique. Psychoanalysis also has had something to say about ethics, about man's relationship to man, particularly in the hands of such neo-Freudians as Erich Fromm, who has specifically tried to work out what the implications for ethics are of Freudian assumptions about the nature of man. For many people the appeal of neo-Freudian ethics lay precisely in the fact that it seemed to be based on solid scientific facts rather than on religious assumptions about the nature of man. However, what has often been stated as fact turns out on closer examination to be simply value assumptions more or less unconsciously carried over from the particular religious background of the author. It is more nearly the dominant view among modern psychoanalysts that their therapeutic technique is ethically "neutral" in the sense that it is valuable for a person whatever his ethical standards may be. In this sense it is nearer the mystical tradition in that it does not concern itself with particular ethical problems but rather with the basic attitudes that lie behind man's relationship to man, with the "changed heart."

But whatever its theological or ethical implications may be, psychoanalysis is above all a continuing testimony to a "power not ourselves that heals." As such it has particular though usually unconscious religious appeal for intellectuals offended by the "antique" theology of the Christian Church and increasingly disillusioned about the ethical potentialities of Christianity. Viewed in this light, psychoanalysis, as a secular religious movement, fulfilled an historic religious function which the Church was not fulfilling, and probably was able to do it better because it was openly anti-religious.

So much for my argument. Let us suppose for the moment that there is some truth in it, at least in its essentials. What does it mean so far as the Christian Church is concerned? What challenge does it present? It should stimulate some new thinking on at least two

major points—one, the conception of the minister's role and the other, Church doctrine.

There is little doubt that Protestant ministers are less important in the community today than they have been at various times in the past. It is not that they are not busy, highly useful members of the community who are highly regarded. It is just that they are less important. The reason appears in sociopsychological terms to be that they have less of the charisma that goes with power. In the genuinely religious community of the past, the minister was God's representative who above all knew something about or even exerted some control over what was going to happen to a man after he died. He fulfilled at least to a limited extent the role of a gatekeeper—in this instance to the after-life. But as theology declined in importance and was replaced by ethics as the focus of interest, the after-life became less and less important. It was *this* life that counted and so far as this life was concerned the minister became just one of a number of people who had ideas about how it ought to be lived. At the same time the power he used to have as a gatekeeper over life and death shifted to a considerable extent to a new profession—that of the physician who controlled the knowledge and skill which could at least keep a person alive. In a generation when the next world was of primary importance, the man who could keep you in this one (the doctor) was not so important but he became much more so as man's interest shifted to this life. But if our analysis has been correct, the doctor-psychiatrist should have even more of the charisma of power that formerly belonged to the minister. For he not only inherits some of the control over life and death of the physician (after all neurosis can lead to psychosomatic disorder and death), he is also closely connected with the one manifestation of God's power that many men appear most willing to accept today—*namely the power to heal* rather than to transform the social order or to give certainty about the meaning of life.

The traditional healing functions of religion have never been much practiced by the Protestant ministry, although of course whole sects like Christian Science have developed around the attempt to exercise them. It is also

true that there has been a growing interest in pastoral counseling in the Protestant Church, though I doubt if much of it has been conceived at the level which I am discussing here. Instead it has been introduced as a social service like the many others the modern Church provides (from sewing circles to basketball courts). Am I therefore suggesting that ministers should get training in the religious significance of therapy, rather than just in its techniques? Lest the answer appear too simply to be "yes," since any attempt to recapture lost charisma may seem like a good thing, let me push the question further. Are ministers willing to undergo the three to seven years required for a psychoanalysis? It is my firm conviction supported not only by the experience of psychoanalysts but by the whole tradition of religious mysticism, that only by such prolonged self-examination can a man begin to understand and work easily with the healing powers he must be prepared to represent. Mystics—Jesus himself in the wilderness—have spent years in preparation, years in which they have searched sensitively for the leadings of the Divine Spirit. Are Protestant ministers willing to "go and do likewise"? Are they for that matter willing to become mystics, to seek within themselves that which is behind and beyond the particular creeds and formulas of their Church? Or would it be the better part of wisdom for the Church to attempt to help psychiatrists understand a little better what they are doing in religious terms? Certainly few psychiatrists would now regard their mission in life as in any sense religious or would regard the healing power they deal with as in any sense a testimony to the power of God. Or would it be better to leave them alone, to let them go on representing religion unconsciously? Fortunately my task is only to raise such questions, not to answer them.

It has also been my contention that psychoanalysis has fulfilled a religious function for many intellectuals in a way which the Christian Church has conspicuously failed to do. Why? The superficial answer already given is that psychoanalysis succeeded where religion failed because it was a secular scientific movement which could avoid the stigma of organized religion. But this only pushes the question further back. Why was there a

stigma attached to organized religion? Here I must openly admit that my answer appears to be dictated by my own religious background, but to me it is a compelling one. The Church lost out because it became insensitive to the revelations of God and stuck stubbornly to former revelations, ideas, and images which have lost much of their meaning for thinking people. To the mystic the Church is a human institution, like a museum, full of artifacts which were infinitely meaningful and valuable to the people who made them. They may even be esthetically pleasing now, but still no longer fulfill their original function. Creeds, doctrines, rituals must be created anew in each generation and in each individual's heart. God reveals himself progressively, but the Church as an institution is necessarily conservative, tending to preserve earlier revelations long after they have outlived their usefulness.

To the mystic it is no shock at all to read Freud's analysis of the Christian communion service, to discover that eating the body of Christ manages to symbolize both love and hate for a father-figure. Nor is he in the least disturbed by psychoanalytic interpretations of religion as projections of family conflicts or infantile frustration. He believes that religious images are always attempts to express the inexpressible and it is only natural that man should draw on his most profound psychological experiences in order to clothe the inexpressible with the meaning it deserves. As Tillich puts it, "every being chooses the symbols for the Divine according to what he himself is. . . . If we use the father image in order to symbolize our ultimate concern, then the ultimate concern is not the father image."

Let me push the argument one step further. Whiting and Child have discovered that those cultures around the world which discipline young children severely for sexual activity also tend to explain disease in sexual terms. Jews and Puritans were strict about sexuality in children. They should therefore be more likely to invent and approve of the sexual theories of disease which characterize psychoanalysis. Would it have shocked Freud to discover that his theory of neurosis was very likely determined by his own upbringing? It very well

might have because he thought of his libido theory as a scientific fact rather than as a projection of his own childhood experience. He would have been shocked for the very same reason that many Christians were shocked when he pointed out the childhood basis of many of their religious beliefs and institutions. For he believed in the reality—in the ultimate truth of his image just as they did in theirs. And in a sense he and they were both right. The sexual image was and is "true" and compelling for many people—in fact the *only* way in which the inexpressible can be meaningfully expressed for them. The same is true of the traditional images of the Christian Church for many people.

The only mistake, according to the mystic, is to worship the image, to regard any revelation as final. Like the scientist he knows that what is true today will be untrue or at least very differently true tomorrow. The Protestant Church on the whole has been opposed to iconography, to the worship of visual symbols of religious ideas, but it has been less opposed to worship of the ideas themselves, of *verbal* attempts to represent ultimate reality. Could it give up some of its reverence for formulas and seek more and more sensitively for new ones that speak *for God* to the condition of our times? Can it institutionalize progressive revelation without weakening its very foundations? I am not enough of a Church historian —perhaps not even enough of a Christian—to know.

But the success of psychoanalysis as a lay religious movement squarely confronts the Church with just such an issue. Growing out of a religious mystical tradition, psychoanalysis has managed to find new ways of interpreting existence, of interpreting man's relationship to man, and above all of testifying to the healing powers of what would have been called God in any other generation. These new insights have been profoundly meaningful to many thinking people. Can the Church learn a lesson from this development? Can it go and do likewise? Can it absorb enough of the mystical approach to religion to respond more sensitively and flexibly to the revelations of God in our time?

It would be unfair to conclude without recognizing that the Christian Church has, of course, already reacted

to the challenge of psychoanalysis. Though it is certainly presumptuous for me even to try to give an account of its response, which by now is quite extensive, I think one can easily distinguish the development of two main currents of thought, once the shock and anger of Freud's open attacks on religion were overcome. The first has been dominated by the liberal Christian's primary concern with ethics, with moral and social perfection. He has seemed to argue as follows, if I may oversimplify to the point of caricature, just to make the position clear: Psychoanalysis is obviously a "good thing" because it helps man overcome his neuroses and move toward perfection, both in terms of inner adjustment and outer relations to others. Freud's anti-religious sentiments are "unfortunate" but his basic assumptions, if properly stated, are not anti-religious at all, but in fact turn out to be very similar to liberal Christianity. Christianity also is a "good thing" because it helps people. So Christianity and psychoanalysis should get together and help one another bring about a better world. Easily recognizable in all this is the typically American optimistic emphasis on the possibility of progress and on the nonessential character of theoretical differences so long as they lead to the same practical consequences.

The second current of thought centers around Paul Tillich, who argues that psychoanalysis makes a far more fundamental contribution to Christianity than a mere therapeutic "bag of tricks" which is useful to the Protestant minister in his work. Tillich believes, correctly in my opinion, that psychoanalysis has helped man realize the "existential" predicament—the meaninglessness, the loneliness of existence with which man is confronted when he wakes from the state of "dreaming innocence" of childhood to realize his own finitude, his own limitations. Freud certainly belonged with many of his European philosophical contemporaries in the emphasis he put on the "existentialist question." He explained with obvious pleasure how man's pride had received three great shocks—first, from the Copernican discovery that the earth was not the center of the universe, second, from the Darwinian discovery that man was not especially created without antecedents, and third, from the

psychoanalytic discovery that man was not even master in his own household but was controlled by forces beyond his knowledge.

To Tillich, recognition of man's existential limitations is the root of Christianity because implicit in the notion of imperfection is *some* idea of perfection (essence) from which man has fallen away or is "estranged." Christianity represents the faith that the estrangement can be healed, that some "solution" (i.e., salvation) beyond essence and existence is possible. Obviously Freud did not go beyond the first step of stressing man's existential limitations, but in so doing he has contributed greatly to helping man see the *necessity* for a religious—even a Christian—solution to the problem of existence. Recognizable in Tillich is an emphasis both on the healing and "meaning-giving" functions of religion as opposed to the ethical function stressed in the other Christian reaction to psychoanalysis.

Neither of these currents of thought has understood psychoanalysis as a *religious* movement, although Tillich has come much closer to doing so than American liberal Protestantism. For Tillich has sensed that American optimism about the infinite plasticity of human nature tended to destroy an essential point in Freud's understanding of man. American psychoanalysis, like American liberal Christianity, tended to regard all man's troubles (sins or neuroses) as being due to ignorance—to improper upbringing. Both groups could then unite in supporting a Mental Health movement which would remove trouble in the world by instructing parents and teachers how to treat children and by providing better counselling services for those who needed help. Both groups could agree that Freud's insistence on dark innate forces in human nature, on the inevitability of emotional conflict in human life (witness the universality of the Oedipus complex), on the tragedy of existence, was not an essential part of psychoanalysis but simply a product of his personal pessimism. After all, nothing is inevitable: it all depends on how a person is brought up!

The odd thing about such a "cultural" reinterpretation of Freud is that it denies what is most religious (and probably most "healing") about psychoanalysis and not

only for the reason that Tillich gives. Freud saw man's problems as arising far more from the conditions of existence than from improper upbringing, as Tillich correctly points out, but he also felt that the answer to man's problems lay in a very special kind of emotional experience of a sexual nature. Earlier I have argued that this experience which is felt as arising from beyond the self is really a testimony to a healing power which is called God by Christians and which was put in terms of sexual symbolism by Freud because he drew on the tradition of the *Zohar* which so described God and religious experiences.

Cultural relativists and liberal Christians alike have joined in insisting that the specifically sexual nature of Freud's insight was a "mere" culturally determined metaphor, not recognizing that, as Tillich puts it, "the symbol participates in the reality that is symbolized," that the metaphor is and was a living testimony to the reality of the power behind it. So both liberal Christians and the cultural school of psychoanalysts fail to recognize two key religious elements in Freudian psychoanalysis—its insistence on the existential predicament, on the inevitability of anxiety, *and* its testimony to the healing power of something which is beyond man. Tillich understands the first element, but not the second, perhaps because he is more of a rational theologian than an "experiencing" mystic.

He certainly understands religious mysticism and states, just as a psychoanalyst would, that the experience "cannot be forced" by the desire for self-salvation. "It must be given." Almost any patient can testify to the truth of this statement so far as recovery in psychoanalysis is concerned. He feels that something has "happened" to him and that if he and the analyst have brought it about, they have done so only indirectly and were not able to force the issue. Renewal, rebirth, salvation, whatever it is called, is *directly experienced* but certainly cannot be produced by an act of will.

Tillich may have missed the religious significance of the mystical healing experience in psychoanalysis because mysticism tends to blur the severity of "the estrangement of ordinary existence" which is for him the starting point

of Christian theology. It also tends to shade over into naturalistic mysticism (pantheism, etc.) which does not sufficiently recognize the enormous gap between the infinite and the finite, between essence and existence. But is it necessary either in terms of Christian theology or ordinary experience to understand the gap in *negative* terms, in terms of deprivation, loneliness, meaninglessness? The true mystic it seems to me experiences the gap in *positive* terms, in terms of affirmation, joy, wonder, belonging, supra-existential *meaningfulness*. Certainly these experiences have been reported very commonly by religious mystics and by patients recovering in psychoanalysis.

In other words, they experience the gap in terms of "accentuation of the positive" rather than in terms of "elimination of the negative" as Tillich and the existentialists do. Is this an important difference? I think it is, but here I am really venturing into theology where others are much better equipped to speak than I am. All I wish really to emphasize is that psychoanalysis is more profoundly religious in its implications than liberal Christians have realized when they have tried to explain away as due to culture its religious essentials—namely Freud's existentialism and his insistence on the healing power of a primarily sexual experience. It is even more religious than Tillich has realized because he failed to appreciate the testimony it gives to a direct, mystical experience of a "Power beyond ourselves that heals."

One final comment. Christianity was itself initially a response of mystical, individualistic elements within Judaism to the Pharisaic orthodoxy of the times. If Goodenough's evidence is to be believed, it was spread all over the Mediterranean world by Hellenized Jews; by Jews like Paul who were in contact with Greek mysticism and rationality. Are we witnessing a similar development today? Has the Christian Church become so petrified, so insensitive to the needs of our times, that a new religious movement has again arisen out of Judaism, opposed to orthodoxy and spread by secularized Jews? Certainly psychoanalysis has all of these characteristics. It is essentially individualistic, mystical, and opposed to religious orthodoxy. It originated in Judaism and it has been spread by

Jews who had lost their faith by contact once again with the spirit of Greek rationalism as represented in modern science. Would it not be the supreme irony of history if God had again chosen his People to produce a new religious revolt against orthodoxy, only this time of Christian making? It is an interesting question, but time and the response of the Christian Church alone can give the answer.

7

The Psychodynamics of Creative Physical Scientists*

If psychoanalysis provides one taproot of the present mode of inquiry, modern physical science supplies another. Why have physicists, chemists, and biologists struggled so hard and so persistently to take Nature apart and see what makes her tick? This chapter attempts to find an answer by returning to the technique of earlier chapters—i.e., the analysis of protocols of individual scientists. But the trail here leads back as in other chapters to the cultural matrix—to the implicit values which shaped the life styles of these men. Just as Judaism left its imprint on psychoanalysis, radical Christianity contributed greatly to the characteristics of modern physical science. In both cases neither the parent culture nor the offspring has acknowledged the relationship. Quite the contrary, there has been much mutual recrimination. The battle between traditional Christianity and modern physical science is well known, that between rabbinical Judaism and psychoanalysis is less well known. Will it surprise and perhaps even please the opponents in these battles to learn at this late date that they have as much in common as parent and child?

The persistent curiosity of the creative physical scientist presents a challenge to psychologists interested in human motivation. Why is it that some men spend their entire lives in an unceasing effort to penetrate the secrets of the universe? Certainly they must have brains and a good store of scientific knowledge to draw on, but so do many

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people in our day and age. Why are a few called to intense devotion to such a task? What turns them first to natural science? Is it a single common factor or several factors operating differently on different individuals? The path of least resistance is to believe that a series of "fortunate accidents," different for each case, turns a man toward science, but the psychologist is after all a scientist too; he is not likely to rest content until he has exhausted all possibilities of finding a common explanation for a common effect—namely, creative scientific curiosity.

And by now the psychologist has conducted a quite impressive number of investigations into the characteristics of physical scientists. They have, furthermore, been nearly all summarized in one place, in the report of a Research Conference on the Identification of Creative Scientific Talent held at the University of Utah in 1955 (20). It is worth reviewing them briefly here to show the variety and extent of the research that is already available to anyone wanting to study the motivation of physical scientists. Knapp (6, 7, 23), with a variety of collaborators, has conducted studies on the collegiate origins of American scientists, on the characteristics of scientists in Thorndike's ratings of eminent men, and on the differences between science and nonscience concentrators in college in terms of various background variables, the Blacky and Thematic Apperception Tests. Stein (18) and his associates have been studying intensively for some time the differences between creative and noncreative industrial chemists as reflected in a considerable variety of personality tests, the whole battery taking two days to administer. Cattell and Drevdahl (2) have compared factor scores on objective personality tests of physicists who are teachers, administrators, or researchers with the scores made either by the general public or by a college population on the same tests. McClelland (10) has presented a content analysis of the answer keys of the Strong Vocational Interest Blank showing how physical scientists differ in their interests from men in general. Data of a unique kind have been summarized by Terman (22), who followed the careers of a large number of intellectually gifted children for 30 years after he first identified them around the age of 10. Among his subjects he found 51 individuals who

later went into basic research in one of the physical sciences. These he has compared with engineers, medical-biological scientists, those who majored in physical or biological sciences as undergraduates but who did not pursue them in life, social scientists, a group who majored in the humanities, and lawyers. The uniqueness of Terman's data lies in the fact that it is not retrospective, but consists of actual measurements taken at different periods in the individuals' lives so that, for example, the peculiar characteristics of the future physical scientist can be singled out as they appear as early as age 10. Finally, Roe (12, 13, 14) has made case studies of scientists which are especially valuable because her subjects were more eminent than any of the other scientists studied and because she investigated their life histories more intensively and completely than anyone has heretofore. She has published extensive summaries of the life history material, and performance data on Ability, Rorschach, and Thematic Apperception Tests. While this list of investigations is not complete, it covers the major contributions of motivational import to the Utah conference, although there were also a number of less formal observations on the behavior of scientists presented by various participants in the conference. So anyone searching for the basic motivations for the physical scientist has a lot of material to draw on. Perhaps the facts are all there and all that needs to be done is that they be put in the proper order and the correct inferences drawn from them.

It was this hope which led me to agree to prepare this paper. As a participant in the Utah conference, I felt that the picture of the creative physical scientist, which was emerging from these data, was fairly clear, yet no agreement was then reached as to his basic motivations. Perhaps a systematic study of the data now for its motivational implications will provide an hypothesis or two which can be tested by further research. Let us see if it will. What are the characteristics of physical scientists that have been repeatedly confirmed in these various studies? Before listing them, it is well to be clear at the beginning just whom we are describing. Obviously the studies just mentioned used as subjects very different orders of "scientists"—all the way from those who had

won the Nobel Prize to undergraduate majors in science. So it will be difficult, if not dangerous, to make generalizations that apply to all groups with equal force. But one way of minimizing the difficulty is to try to select only those characteristics which are so striking that they apply (with variations of course) to all scientifically-oriented subjects but in greater degree to those who are more creative or more eminent. Another way of minimizing the danger of too-sweeping generalizations is to focus on experimental physical science—in particular on physics and chemistry. Theoretical physics and mathematics shade off in one direction from such a focus and the biological sciences in another so that any statements made need not apply as fully to scientists in these areas. With such guidelines in mind, the following generalizations appear to summarize fairly well the characteristics of physical scientists as they have been uncovered by investigations up to the present.

1. *Men are more likely than women to be creative scientists.* There are no women among Anne Roe's eminent scientists, and very few in *American Men of Science.* No fact is more obvious than the differential yield for science of the two sexes, though it is saved from being trivial only by the further fact that women have not flocked to experimental physical science in increasing numbers as opportunities for higher education for women have been more nearly equalized. In other words, it does not appear to be a social factor—lack of opportunity for women in science—but rather a personality factor—lack of interest in physical science among women—which accounts for the small number of female physical scientists.

2. *Experimental physical scientists come from a background of radical Protestantism more often than would be expected by chance, but are not themselves religious.* Historically, modern science developed in close association with Puritanism. Merton (11) has described the "point-to-point correlation" between "the principles of Puritanism and the attributes, goals, and results of science" and shown that the original membership of the Royal Society of London was disproportionately Puritan in background in 1663. Knapp and Goodrich (6) found

that American scientists were graduated disproportionately more often from small Protestant colleges (between World Wars I and II), particularly during the period in college history when it was breaking away from religious orthodoxy. Roe's eminent scientists (14) included more individuals than would be expected from radical Protestant backgrounds (e.g., Quaker, Mormon), although her frequencies are not large enough to be very reliable. She further found that her scientists were not personally religious, a fact supported in the report of Terman's scientists that they were less interested in religion than any of his other groups of comparable intellectual status (22, p. 53). In other words, the scientists appear to come more often from a radical (thoroughgoing or strict) Protestant background and to reject it for science as a "way of life."

3. *Scientists avoid interpersonal contact.* They are less gregarious, more autonomous, prefer working with things to working with people. Evidence for this generalization comes from many sources. McClelland reports (10) that of the 90 items which consistently differentiated scientists from nonscientists on the Strong Vocational Interest Blank, 47 could be classified as having to do with avoiding interpersonal contact. For example, scientists prefer being a light-house tender to being a head-waiter, gardening to house-to-house canvassing, dealing with things to dealing with people. They would dislike significantly more than men-in-general being a lawyer, a politician, a reporter, a social worker, or a traveling salesman. They also dislike dramatics, public speaking, interviewing prospects in selling, or bargaining. Cattell and Drevdahl (2) report very similar findings also based on objective personality tests. Their research physicists are significantly high on Factor A (schizothymia) and Factor Q2 (self-sufficiency) as contrasted with a college group or with other professional groups. The items which make up these factors are very similar to the ones just mentioned (3). Furthermore, the unsociability of scientists appears as early as age 10 according to Terman's data. He found his future scientists rated lowest in sociability score based on a play and games test at age 10 (22, p. 11). Finally, significantly more of Stein's crea-

tive chemists are either high or low in *n* Affiliation (82%) as compared with his uncreative chemists (48%), when *n* Affiliation is measured by coding TAT's according to the technique developed initially by Shipley and Veroff (17).[1] Clinical data suggest that being either high or low on *n* Affiliation leads a person to avoid interpersonal contact, in the first instance because the person is "super-sensitive" to others and in the second because he simply is not interested in others. What leads to normal gregariousness is the moderate amount of *n* Affiliation which characterized over half of Stein's uncreative chemists, and less than one-fifth of his creative ones. Outstanding scientists are anything but normally gregarious. They like being self-sufficient and like being alone probably because people and human relations seem both difficult and uninteresting to them.

4. *Creative scientists are unusually hardworking to the extent of appearing almost obsessed with their work.* Roe in reporting on her eminent scientists remarks that the *one* characteristic all of them seemed to have had without exception is an intense devotion to their work (see 8). There was never a question of putting in so many hours a day, a week or a year. Instead they worked nights, weekends, holidays, all the time. In fact she wondered how they ever found time to be with their wives and families. Terman also reports (22, p. 32) that his physical scientists stated more often than any others that their work itself gave them the greatest satisfaction in life. A motive which is known to produce hard striving under certain conditions is *n* Achievement. Perhaps scientists are as a group especially high in the need for Achievement as I have predicted elsewhere (10). It gives me considerable satisfaction to report that the data do not support such a logical inference. My apparently quixotic pleasure derives from the fact that my own extensive work on *n* Achievement may have led some of my critics and friends alike to assume that I believe *n* Achievement is the root cause or motive force behind *all* energetic, successful behavior, or in simpler terms that all achievement is produced by a high *n* Achievement. If this were so—if overt behavior bore a one-to-one relationship to inner motivational determinants—it

would obviously be more parsimonious to do without the concept of motivation altogether. So it actually underlines the need for a construct of motivation to discover a case where high achievement must be attributed to some motive other than *n* Achievement, as it is usually measured in fantasy.

The facts are not as extensive as they ought to be, but so far as they go they do not point to *n* Achievement as being a crucial factor in the persistent striving of scientists. Comparable figures exist for stories told to two pictures from the Murray TAT: card #1 (Boy with the violin) and card #7 (the "father-son" picture). Out of 64 stories told to the two pictures by 32 normal college students, 51% contained achievement imagery, whereas only 28% of the stories told by Stein's 45 industrial chemists contained achievement imagery, and 47% of the stories told by 39 of Roe's eminent scientists contained achievement imagery. A further analysis of the full *n* Achievement scores for Stein's chemists (based on TAT cards #1, #2, #6, #7 and two specially designed cards) demonstrates that the more creative ones average *lower* than the less creative ones, but are significantly more often in the middle of the *n* Achievement score distribution.[2] Apparently only a *moderate* amount of *n* Achievement favors success in industrial chemistry. The reason may be that too high *n* Achievement leads to considerable frustration in research because positive results are not obtained often enough and with sufficient regularity to please the person with high *n* Achievement whereas very low *n* Achievement may simply lead to laziness. There is also the hint that while scientists in general are lower than the normal college population in *n* Achievement, the especially productive eminent scientists are somewhat higher than their colleagues. Still even the eminent ones do not exceed the normal college population in *n* Achievement, and the explanation of their high achievement must be sought in some other motivational system.

5. *Scientists avoid and are disturbed by complex human emotions, perhaps particularly by interpersonal aggression.* By its very nature science as an occupation glorifies objectivity, dispassionateness, or the impersonal

search for truth. While personal biases and feelings have sometimes crept into scientific work, ideally they have no place in it. For most scientists avoidance of human emotion is far more than simply an ideal as far as their profession is concerned; it runs as a theme through much of their thinking in other areas of life. Knapp in particular found that science majors tell TAT stories significantly low in dramatic salience, in aggression, guilt or vindication, and in the tendency to bring the plot to a clear and decisive conclusion (7, p. 211). Teevan (21) reporting on the same subjects found them the lowest on all variables on the Blacky Test, technically indicating that science majors are least disturbed of all students in psychosexual development, but suggesting more probably that they are unable to enter into the spirit of the test which involves identifying with a little black dog. Instead they simply give bland, unemotional, objective responses which are hard to score for any disturbance. These findings might be discounted, since they deal only with undergraduate science majors, except that Roe reports very similar results based on the TAT's of her eminent scientists. She notes "the attitude they manifest with regard to family relations is rather an unusual one. Its chief aspect is of independence of parents, usually without conflict over it . . . a similar independence of other personal relations is generally noticeable. But here, particularly with respect to sexual relations, there is a strong tendency to evade an emotional situation, to give it distance in some way. . . . In most of the stories where aggression is clearly apparent, it is relegated to a fairly distant past, and as a rule the aggressor suffers severely for it" (12, p. 203). Actually one of the most striking things about the way the eminent scientists reacted to the TAT is their marked dislike for the task. The test requires a response to a number of dramatic human situations and the scientists reacted by trying more or less strenously to avoid responding at all in the usual manner. They found it extremely difficult to empathize with the characters pictured and to tell a dramatic story as they had been instructed to do. Instead they tended to block, to analyze various portions of the picture, to consider various possibilities of action, and to be unable to decide on any

one of them. The following initial reaction of one physicist to the first card (Boy with a violin) is typical: "That is most objectionable. We will carry out an analysis. I have all sorts of blocks because people are so unreasonable it always makes great difficulty for me." [3]

Veroff *et al.* (23), have also found in a factor analysis of Thorndike's ratings of eminent men that the scientists differ from the others chiefly in being significantly lower on *Choler* (Anger, Dominance, and Liking for Conflict). To oversimplify a little by way of summary: *scientists react emotionally to human emotions, and try to avoid them.*

6. *Physical scientists like music and dislike art and poetry.* On the Strong Vocational Interest Blank they say more than others that they would dislike being a poet or decorating a room with flowers, and that they like symphony concerts. Terman reports that a liking for art is least common in his physical science groups (22, p. 15) and that the interest in music among the physical science research group rises throughout life until it is highest of all by age 40. The attitude toward modern art is perhaps best expressed by the response of one physicist to a TAT picture when he said: "It's confusing enough to win a prize!"

7. *Physical scientists are intensely masculine.* On all interest and attitude scales that differentiate between men and women, physical scientists score very high on masculinity. For example, Terman found (22) that 64% of his physical science research group scored above the standard score of 50 on masculinity for the Strong Vocational Interest Blank. Only the engineers and those whose undergraduate major was science scored higher, whereas lawyers, social scientists and those majoring in the humanities were much lower. In general his scientists show a liking for nature and for outdoor sports when they are young, and for working with things rather than with people—all of which are typically male as contrasted with female interests.

Another aspect of their masculinity appears as a positive image of the father figure in the TAT stories combined with little or no rebellion or guilt over rebellion in the father-son relationship. Though difficulty is often

presented in the mother-son relationship, Roe's eminent scientists portray the father as a benign and understanding influence. The following comments from stories to TAT card #7 are typical: "father though is an understanding person and definitely makes a reconciliation"; "his father gave him wise counsel and took a less serious view of the situation." It is perhaps significant that while about one-half of Roe's cases pictured the father in this way, none or at the most one, of Stein's uncreative chemists gave a similar response. While the relationship to the father seems to be respectful, it is also somewhat distant as Terman's figures show. His research scientists reported little oversolicitousness from their fathers and also the *least* amount of affection and understanding between father and son (22, p. 29). Oddly enough the science majors who did not continue in a scientific occupation reported the *most* affection between father and son, a fact to which we must return later since in practically all other respects these two groups are very similar.

It is perhaps also worth reporting under this heading that Stein's creative chemists show more *n* Achievement (mean = .91) in response to TAT card #7—the father-son picture—than do the uncreative chemists (mean = .61). The less creative chemists on the other hand show markedly more *n* Achievement to TAT card #2—the farm scene—where their mean *n* Achievement score is 1.09 as contrasted to the −.05 mean score for the more creative chemists. To put the same result in a different fashion 56% of the more creative as contrasted with 22% of the less creative chemists gave more *n* Achievement to card #7 than to card #2 ($X^2 = 3.97$, $p. < .05$).

Since the figures in card #7 are male and in card #2 predominantly female, apparently *n* Achievement in more creative chemists is cued off by male figures, and in less creative chemists by female figures.

8. *Physical scientists develop a strong interest in analysis, in the structure of things, early in life.* One of the most striking things about the case histories of scientists is the earliness with which their scientific interest appears. It is not just mathematicians—who are often child prodigies—but all kinds of natural scientists who typically develop a strong scientific interest between the ages of

5 and 10. Terman's figures show that his future scientists had a scientific interest by the age of 10 that was easily recognized as dominant by the boys themselves, by their teachers, and by their parents (22, pp. 9-10).

That the nature of this interest is analytic is almost self-evident from the goal of physical science, which in the words of one of Roe's theoretical physicists is to discover the "connections of things" and to get at the "inner secrets of the world." That is, it is the scientist's job to take apart the real world as we perceive it and to discover what lies behind it, to work out the microstructure of reality.

Again what is required of them in their profession has been enthusiastically adopted by them in their entire attitude toward life. For example, Terman's physical science research group is highest in its interest in photography as an avocation, and photography is the method *par excellence* by which one "freezes" the flux of reality so that one can get a good look at its structure. As has already been suggested above, the task of telling stories to TAT cards was found to be particularly baffling by Roe's eminent scientists. The difficulty arises not only from a desire to avoid talking about human emotions but also from their obsessive concern with analysis or with what is "really" a *correct* interpretation of the pictures. The following comments are typical:

> "My wife says my most maddening trait is my unwillingness to guess." "You want some fiction this time? I'm utterly sunk on doing anything in fiction. You have found one of the blocks in my mental processes. It's virtually impossible to associate a tale of fiction with this. That's a process I've never attempted—to tell a story about an imaginary thing." (The examiner asked if he has ever told stories to his children.) "They were the ones I had learned. I don't ever remember telling them stories that I created. It would have to be something associated with the acoustics of the violin rather than the boy" (referring to TAT card #1). "The youth certainly is meditating about the violin, possibly even dreaming that some day he will be able to make a violin that will be as good as the old Stradivarius; he is in deep meditation. What is this and what are the characteristics that make the violin outstanding? By a process of trial and error he finds that it is just the breaking down of the glue in the joints

that makes it better than others and he sees that he can probably make one as good and by checking his results he probably makes one as good."

Note that he here hardly succeeds in telling a story at all but finally ends up with wondering how the violin is constructed. The intense concern with what is "really there" in the pictures is illustrated by these comments:

"I keep wondering whether the chin rest is on the right side or not, trying to figure out if he is left-handed."
"And the young man's ambition will push him along. The young man also needs a hair-cut."

They simply cannot let themselves go, in telling a tale of dramatic action, but are constantly brought up short by details that seem to require analysis and which do not fit into the story that has been started. Consequently it is not so surprising to discover that physical scientists are also conspicuously high in their tendency to make responses based on details in the Rorschach ink blot test and on the white background rather than the blot itself (15). It is the unusual which catches their attention and demands analysis. Furthermore, they are significantly low in their tendency to attribute movement to the static ink blots (15), again showing their preference for analysis, for "freezing" reality and trying to get at its structure, rather than for synthesis, for going beyond the blot and interpreting it as a person interested in dramatic action would.

So much for the facts in the case. There are others, such as that eminent scientists appear to be more often first born (12), but these appear to be the main facts from which the psychodynamics of the creative physical scientist must be inferred. It is time to stop, as the authors of mystery stories often do, and present a challenge to the reader. You have all the facts in your possession. All the clues have been presented. Now what is the solution? What motivational complex will account best for all the facts? Or are there several equally probable explanations? Or is there as yet not enough information to suggest a solution? Unfortunately the psychologist, unlike the mystery story writer, does not really know if there is a solution. He can only try to construct a hypothesis which

fits the known facts and then try to check it with further observations. And this is what I, as one psychologist, attempted to do, although before going on to explain what I did, I should like to seriously challenge the reader to try it himself—to try to find an explanation which will fit all eight of these generalizations. It is not so easy as it may appear, as I proceed to do it.

To begin with, a psychologist interested in psychodynamics assumes that certain conditions are necessary but not sufficient for the making of a scientist. Chief among these are, of course, a high level of intelligence and opportunity for contact with scientific knowledge through a formal system of education. Granted these preconditions, why is it that some boys develop a strong scientific interest and others do not? The fact that the interest develops so strongly early in life suggests that the key to the problem may lie in the family because it is the main educational influence at this period in life. In thinking of family relationships as a source of motivation, one is of course immediately reminded of Freud's insistence on the central role of the Oedipus complex. What could have happened to the little boy to turn him so strongly to the male role and away from contacts with people? The answer in terms of the "passing" of the Oedipus complex is simple. The future scientist is simply a boy who resolves his guilt over love of his mother and hatred of his father by early and complete identification with his father, probably in the phallic period. Such an explanation does a pretty good job of accounting for the facts just enumerated. It explains the strong masculine identification and the fact that scientists are more often men than women because women are not troubled by the Oedipus complex. It could easily account for the avoidance of people, the dislike of human emotions, and the distaste for art and poetry—all because they are connected with the acute anxiety aroused by the boy's first important interpersonal relationship with his mother. That is, in psychoanalytic terms, one can assume that for the first three or four years of his life the future scientist like most boys develops an intense love relationship with his mother which produces acute anxiety arising simultaneously from the fear of the strength of his own im-

pulses, from guilt over hatred of the loved father, and from fear of retaliation by the father. Normally a boy is supposed to defend himself against his anxiety by repression and identification with the father. The future scientist differs in that he adopts the defense slightly earlier—in the phallic rather than the genital period—so that all his "symptoms" are more extreme than those of a normal boy. He is particularly marked by the tendency to avoid any cue associated with interpersonal relationships which may rearouse the original anxiety. So the scientist dislikes interpersonal contacts, human emotion, and even art and poetry which frequently deal with human emotions. Finally he is analytic and hard-working because his sexual drive has been repressed earlier than usual and finds its substitute outlets in intellectual curiosity or more specifically in "looking" and seeking to "penetrate the secrets of nature" which in classical psychoanalytic terms are pregenital, especially phallic, sexual activities. Freud traced Leonardo da Vinci's compelling scientific curiosity to the same libidinal source. In other words the scientist does not mature fully as far as the sexual instinct is concerned because of the early passing of the Oedipus complex, but instead he continues to find a good deal of his sexual satisfaction in phallic activities. He remains fixated somewhat at the level of "looking and knowing," as Kubie has indirectly suggested (8). In short, scientific drive and curiosity derive their energy from a slight perversion of the sexual instinct. And it is a fact as Anne Roe reports (14) that young scientists are typically not very interested in girls, date for the first time late in college, and thereafter appear to show a rather low level of heterosexual drive.

If such an explanation is to be considered seriously, it has at least three consequences which ought to show up in the behavior of the scientists if it is properly examined. First, they ought to be particularly shocked and upset by TAT card #13 which suggests the "primal scene" (a seminude woman on a bed, and a man in the foreground at the door of the room with head bowed). Certainly the scene evokes the intense analytic attitude characteristic of Roe's eminent scientists toward all the TAT pictures. For example a theoretical physicist tells the following story:

"It doesn't look as if any crime had been committed, although I suppose that's a possibility, and yet this man looks as if he saw something very shocking which presumably he was responsible for. What could those books have to do with it? One of them might be a Bible but there would not be two Bibles. . . . well, what's going to happen? He's going away but I am very much puzzled about this gesture of grief or regret or whatever it is. There must be some explanation which I don't get."

It would not take very much clinical imagination to interpret this story as confirming the hypothesis. The scientist does not reveal the identity of the male figure in the picture. It may be himself. It may be his father. Either he or his father may have committed an act of sexual aggression (a crime?) against the mother and he is not sure whether he is sorry or not. The religious overtone may reinforce the fact that this is a moral situation, involving above all the commandment to "Honor thy father and mother." It could be regarded as particularly significant that the key response evoked by the obvious sexual content of the scene is one of "looking." "This man looks as though he saw something very shocking which presumably he was responsible for"—a sentence which sums up rather neatly the hypothesis under examination, namely, that the scientist is somehow continuing to look for some sexual secret in which he is personally involved.

A single story unfortunately cannot confirm a generalization, especially when it is subject to alternative interpretations. All that can be said with a fair degree of scientific caution about the reaction of the eminent scientists to this picture is that they see the woman significantly less often ($p < .05$) as the man's wife (13% of the cases) as contrasted with the uncreative chemists (60% of the cases). Perhaps they are repressing the "wife-mother" association because of its anxiety-provoking qualities for them or perhaps they are just finding another way of playing down the emotional quality of the scene, as they repeatedly attempt to do through analysis: "The bed isn't big enough" for a seduction scene. "There's no weapon for murder." "He might be sorry." "She can't be sick or her breasts wouldn't be

bare." "He seems remarkably well groomed if they've just had a night of it."

A second consequence of the hypothesis is that scientists should defensively see their mothers as rejecting them. In other words, if they feel intense guilt over their love for their mother, a common method of defense against such impulses would be to see the mother as not loving but rejecting them. The evidence here is more clearcut. On TAT card #6 (the mother-son picture), 90% of the eminent scientists see the mother and son as going their separate ways versus 20% or at the most 30% of the uncreative chemists. The difference is significant at less than the 5% level, although the frequencies are very small. An ironic tale from a theoretical physicist sums up the way the relationship is pictured best: (He had a) "dear kind old mother who was extremely religious . . . he decided there was a much more straightforward interpretation of the world to believe than these old wives' tales. . . . One day his mother took him to task for his view. . . . They had come to the parting of the ways. . . . It grieved him . . . but he couldn't be stifled by her clucking care." The key elements in the story are that the mother is trying to stifle him, that her solicitousness is unwelcome and tied up with religion, and that he had to get away from her and did successfully. Among the uncreative chemists even in the two or three stories where the mother and son parted, the son had to move away from home not because he wanted to but because of force of circumstances. The frequencies are small, and it is therefore especially important to discover that in Terman's data the scientists report in general low admiration for the mother, little rebelliousness toward her, and little effort by her to resist their efforts at independence (22, p. 28).

The general picture is one of distance between mother and son rather than rebellion and conflict. Insofar as the physical science research group is concerned, the same distance appears between father and son so that it may simply reflect the general tendency already noted many times of scientists to report themselves as self-sufficient.

So far as the first two consequences of the Oedipal explanation of the scientist's motivation are concerned,

the evidence is unfortunately not clearcut either way. The most one could say is that it can be interpreted as confirming the hypothesis, but that one would certainly want more precise checks in the future. The third consequence is of even more key importance than the first two. It is that somewhere, somehow, the scientist must reveal to the inquiring investigator a very much hidden and disguised attraction to the mother or the mother figure. Obviously on the surface they show no such attraction and in fact the hypothesis predicts that they would not, because of their great anxiety over it. But is there no method available to the psychologist for penetrating behind the more or less conscious negative attitude toward the mother to the unconscious or more primitive positive one? Unless such a strong attachment to the mother can be actually demonstrated, the hypothesis remains only indirectly confirmed by circumstantial evidence. After all, the key assumption is that scientists are fleeing from their mothers into masculinity because they love them so much and fear the consequences. Is there no way to demonstrate their secret love?

A research project[4] was designed by one of my students, Ellen Greenberger, to get directly at the problem. She took as her cue the historical fact noted previously that Protestantism was associated with the rise of science. Another characteristic of Protestantism, as contrasted with Catholicism, was the disappearance of female figures from religious imagery. Christ, the Male Mediator, became all-important for Protestants, whereas for Catholics the Virgin Mary and other female saints have played an increasingly important religious role. What became of the female, "mother" image in Protestantism? In half-seriousness theologians suggested at the time that "she" had entered the parish house, that, since the Protestant clergy was not celibate, it did not have the same need as the Catholic priesthood for dwelling on women in fantasy. As true as this may have been as far as the clergy was concerned, it scarcely explains why the image of the Virgin Mary grew so in importance for the average Catholic who *was* married and remained neglected by the average Protestant. One possible explanation is that nature became a vivid mother-substitute image for the

Protestant, thus displacing and serving the same psychological functions as the image of Mary, Mother of God, for Catholics like Leonardo da Vinci, whose portrayal of Her is interpreted by Freud as revealing his secret attachment to his mother. Certainly Protestants, including the tough-minded Calvin, wrote lyrical appreciations of the beauties of nature which can readily be associated with a female, or mother image. In fact their descriptions of nature—its fruitfulness, bounty, and beauty—are remarkably reminiscent of the paeans of praise directed toward nature by one of the best known scientists of all time, the Roman materialist Lucretius. In psychodynamic terms what may have happened to Lucretius and to boys reared in the radical Protestant tradition is that the *early* passing of the Oedipus complex diverted the repressed sexual impulse toward a mother substitute—namely, Nature. Consequently, the passion that they feel for nature, for being in it, and for investigating it, is ultimately a sexual passion which originates when they substitute nature for mother as an object of devotion. Certainly the substitution is an easy one not only for those reared in the Protestant tradition, since the metaphor of "Mother Nature" is very common and appears to be based on the association in the Western mind of life-giving, creative properties with both mother and nature.

So Greenberger reasoned that perhaps scientists could be lured into revealing their primitive yearnings for mother indirectly and in a nonthreatening way by asking them what metaphors they felt are most suitable for describing nature. She predicted in accordance with the hypothesis that they would prefer metaphors describing nature in positive feminine terms, thus revealing that their lifelong intense concern with nature might at its root derive from its female connotations, from its capacity to serve in some degree as a mother substitute in fantasy.

She therefore constructed a test containing 59 different descriptions of nature to which subjects were asked to respond by marking how well the phrases described nature, on a scale from −2 (very poor) to a +2 (very good). No neutral or zero judgment was permitted

because she felt that scientists might well respond to such a literary type of task by refusing to make judgments wherever possible. The descriptions included both positive and negative male and female images for nature, symbolic representations of a sexual relationship to nature, metaphors suggestive of pre-Oedipal experiences and maternal tenderness, and general abstract images of both a positive and negative character. She predicted that scientists would prefer over control subjects descriptions picturing nature in positive female terms, descriptions suggesting a sexual relationship to nature (predominantly phallic) and possibly descriptions of nature in pre-Oedipal terms.

The test was administered to two sets of contrasting groups for cross-validation purposes. The first set consisted of 17 college freshmen, nine of whom were intending to major in science and whose mathematical aptitude scores exceeded their verbal aptitude scores by 100 points. The other eight freshmen were a fairly miscellaneous group intending to major in either the social sciences or the humanities (largely the former) and whose verbal aptitude score exceeded their mathematical aptitude score by at least a few points. The second set consisted of 37 graduate students and young instructors at a Midwestern university, 13 of whom were physicists, 10 chemists, and 12 language students and teachers (largely in the field of English). The average liking for the various nature metaphors was computed and correlations run among the various groups of subjects to determine whether the science groups agreed sufficiently with each other to enable one to think in terms of a stable preference by scientists for particular metaphors. The rank order based on the average liking for the 59 descriptions by the freshman science group correlated +.57 with the combined rank order made by the physicists and chemists. The physics and chemistry rank orders intercorrelated +.61, whereas they intercorrelated with the language group rank order on the average +.48. Finally the freshman nonscience group showed a preference for the metaphors which correlated only +.34 with the graduate language group, indicating there was less consistency between the nonscience groups than among the

scientists. One reason for this probably lies in the fact that the freshman nonscience group was composed largely of people oriented toward the social sciences whereas the graduate nonscience group was oriented toward languages and the humanities. Since the primary concern is to discover how scientists differ from the "generalized other" rather than from social scientists or language teachers as such, the preference scores for the two nonscience groups were combined and each of the two science groups (college freshmen and graduate physicists and chemists combined) was compared with the same standard. Table 1 presents the results in terms of the rank orders of the differences in preferences by the two science groups as compared with the combined nonscience group. For example, Item #49 ("A pillar of strength and virility") showed the largest difference in the direction of greater preference by the freshman scientist group over the nonscience group. It also tied for 5th and 6th place (out of 59) in the size of preference shown it by the graduate science group over the nonscience group. Included in this portion of the Table are only those metaphors which ranked in the top 10 for one of the two science groups as contrasted with the control, and in the top 18 for the other. In the lower half of the table have been listed the descriptions of nature least preferred by the scientists (or most preferred by the nonscientists). For example, Item #35 ("The desolations of many generations") was relatively much less preferred by both the science groups than by the nonscience group.

Table 1 shows that there is considerable agreement in the preferences of the two science groups. The metaphors liked by one group are also liked or not liked by the other. Over two-thirds of the descriptions above the median in preference by one science group were also above the median in preference in the other science group. The agreement is highly significant ($\chi^2 = 8.36$, $p < .01$). Considering only the descriptions which both science groups most accept or reject we arrive at three main conclusions:

(1) Scientists prefer metaphors describing nature in idealized human (male or female) terms. There are

TABLE 1

Rank Orders of Metaphors for Nature Most and Least Preferred by Scientists Over Non-Scientists

Item	College freshmen	Graduate students and instructors	
#49	1	5.5	A pillar of strength and virility
#12	2	11	A perfect woman nobly planned
#59	5	7	The nurse, the guide, the guardian of my heart and soul
#46	10	4	A grand and inspiring father
#39	3.5	12.5	Lady of silences
#18	15.5	1	A banquet of delights
#27	11	8	A stern and loveless master
#7	7	14.5	Glens of brightness
#42	6	17	A vineyard to be reaped for pleasure
#5	18	5.5	Something certain and infinite
#45	8	18.5	Fairest among women
#35	57.5	58	The desolations of many generations
#15	57.5	55.5	A tyrant despite her lovely face
#40	56	57	A great cave that encompasses us and swallows us up like atoms
#34	53	47	A spring whose waters will not do our bidding
#57	51	49.5	A Titan waiting terribly to break forth
#41	50	49.5	An arrogant master which likes to rule and dominate

eleven such metaphors on the test (counting "Lady of silences" which is somewhat less definitely positive than the other 10), and 9 of these appeared in the top half of the scientists' preferences in each of the two groups ($\chi^2 = 5.79$, $p < .05$). Or, to put it in another way, the average rank of the 11 positive human images was significantly higher than for the remaining items, being 13.1 for the college freshemen scientists and 15.6 for the graduate physicists and chemists ($p < .002$ in both samples, by the Mann-Whitney U test). Most of the images rank very high in both groups as Table 1 illustrates (Items #49, #12, #59, #46, #39, #45).

(2) Scientists reject images of nature as threatening. Five of the seven items so classified (#35, #15, #40, #57, and #41) appear at the bottom of Table 1, and the average rank for all seven items was 49.1 in each of the two science groups, which is significantly below the average rank for the remaining items ($p < .002$ in both samples, by the Mann-Whitney U test).

(3) There is little or no support for the hypothesis the experiment was conducted to test that nature represents for scientists either a sexualized or pre-Oedipal mother image. It is true that positive female images are more preferred by the scientists but so are positive male images, and there is almost no evidence that scientists see nature as having any symbolic sexual connotations. Unfortunately, the data do not permit a clean rejection of the hypothesis which they were collected to test. They can still be interpreted as consistent with the hypothesis as follows. It may be argued that the male images for nature are liked by the scientists because they arouse subjective feelings of male potency (e.g., "A pillar of strength and virility," "A grand and inspiring father," "A stern and loveless master"). In support of this point, the three male images not so highly preferred by the scientists ("A thing of manly power and beauty," "A young boy's first hero," "Symbol of manhood") are perhaps not so evocative of male potency, but represent nature as a male *thing* or symbol. The positive female images preferred, on the other hand, are all clearly of nature as an object and three are suggestively pre-Oedipal in nature ("Lady of silences," "Glens of brightness," "A banquet

of delights"). Could it be that nature serves as a cue which reminds them simultaneously of their own male potency and of a female object for that potency? Oddly enough, the one female image which is ranked way below the other four positive ones in both science groups is the one description in the test which uses the word mother ("The mother of us all"). Could this be because the direct reference to "mother" arouses the anxiety which the test is seeking to get around by less direct allusions to mother? Finally, the six phallic images are not particularly preferred one way or the other by the science groups, but there is a striking exception in each case. For the freshman group one phallic image, #42 ("A vineyard to be reaped for pleasure") actually showed the sixth largest preference over the control group, whereas in the graduate science group #47 another phallic image ("A mystic thing to meet and fuse with") ranked second in order of preference over the control group. Could it be that the highly symbolic, "oral" character of the phallic image for the younger boys has given way to a more realistic sexual image of mystic union for the older more experienced men? It may further be argued that the other phallic images are none of them so directly suggestive of the sexual act as these two (e.g., "A dizzy rapture," "A place for daring and boldness," "Beauty, burning with flames of ecstacy," "Wild flesh").

But proper scientific caution must brand all such speculations as strictly *ad hoc*. The fact is that the images used are all so suggestive that no matter how the results had come out, they could, by special pleading of this kind, have been made to support the hypothesis. Here, as always in scientific research, one must make a judgment as to whether the data confirm the hypothesis sufficiently to make it worth further investigation or infirm it to the extent that it is more profitable to think of alternative hypotheses. In the present instance it is my judgment that the reasoning necessary to support the sexual explanation of the scientists' interest in nature is sufficiently tortuous to render the explanation highly unlikely and to suggest that alternative hypotheses should be entertained. Nevertheless, the data and their possible interpre-

tation in terms of the original hypothesis have been spelled out in detail so that others who judge differently may pursue it further if they feel my judgment is incorrect.

So again, as in any good detective story, we are back where we started. A plausible explanation of the facts has turned out to be inadequate on a particular point. Once again let me challenge the reader—who may not have liked all this Freudian "nonsense" anyway—to have another try. After all, the Metaphor Test has yielded some new facts.

Let us begin there. In a way it is quite remarkable that scientists prefer to conceive of nature in positive *human* terms. It is especially surprising because there are at least ten abstract descriptions of nature in the list which are not particularly positive or negative and not expressed in human terms at all, which one might have supposed in advance that objective scientists would have liked, when forced to make a choice. Of all these only one ("Something certain and infinite") appears high on the list of those preferred by the two science groups over the control group. Why should the scientist pass by such safe "neutral" images and show definite preferences for conceiving nature in idealized human terms? One possible explanation is that early in life scientists have had difficulty in their relationships with people (since we know they consistently avoid people) and have found in nature a symbolic substitute for the idealized people they could not find in real life. The hypothesis is actually a restatement of the sexual one in a more generalized form. That is, the sexual hypothesis assumed that a particular sexual conflict of the boy led him to find in nature a substitute for his mother whom he had renounced in life, whereas the more general hypothesis is that the sexual problem is not necessarily the central one in his relationship to people, since there is no special evidence that nature is conceived in feminine sexualized terms.

If the scientist's difficulty in human relations does not lie in the sexual sphere, where does it lie? Maybe it is different for each scientist. Need we assume more than that each scientist has had some particular kind of trauma in his interpersonal relations early in life which has

turned him away from people toward nature? Perhaps not, but such a pluralistic explanation runs squarely into two facts: that men are more likely to suffer these traumas than women and that boys brought up in a radical Protestant background are more likely to suffer them than other boys. If it was strictly a matter of miscellaneous traumas, why should they not occur as often in one population group as another?

Putting the question thus suggests another possibility. There is another problem peculiar to the male sex, and perhaps particularly peculiar to males in radical Protestant households—and that is the problem of aggression. A key characteristic of radical Protestantism is its emphasis on asceticism, on the necessity for curbing impulses early in life. "Give the devil a little finger and he'll take the whole hand" was the maxim in terms of which many such parents operated. They identified the devil with sex in any of its forms, with aggression, and with general willfulness or disobedience. According to well-known facts (4), severe frustration of all such impulses should produce strong instigation to aggression in children. Yet direct expression of aggression was one of the impulses most severely controlled in such families. So a common motive conflict should often arise in such families between the strong impulse to aggression and an equally strong fear of expressing it. The problem should be even more acute and more prevalent among boys than girls, since for boys controlling aggression is commonly much more of a problem because of their innately greater strength and destructive power. A common solution to such a conflict is to convert the aggressive impulses into a more socially acceptable form, such as arguing or participating in strenuous physical activity. Still another common solution dramatized by the authors of *The Authoritarian Personality* (1) is for the boy to identify with his strict father and to behave aggressively to persons beneath him who are younger or less powerful. But in the case of the future scientist, another solution appears to have been adopted. He simply "goes out of the field" and attempts to avoid interpersonal contacts, since they are the most likely to cue off the impulse to aggression and the anxiety over expressing it. It is a fact that

scientists are low on aggressive themes in the TAT, and when they are faced by a problem in aggression they typically solve it by minimizing or attempting to avoid it altogether. There is very little guilt in their TAT stories because there has been very little expressed aggression to be guilty about. In fact, one might almost say that the only time a scientist can manage to express aggression is when he is morally indignant. For then, and perhaps only then, are his moral values, which normally frustrate his expression of aggression, in actual support of his aggressive impulses. It is difficult to be very precise in such matters, but it is a fact that scientists can get involved in some extremely heated scientific controversies, especially when they suspect that moral values of the scientific code (e.g., honesty, full publicity) have been transgressed.

Usually, however, as was pointed out above, scientists in their personal lives are upset by human emotion, perhaps particularly by aggression, so that their withdrawal from people can be viewed as a mode of defense against their conflicts over aggression. Their avoidance extends even to their own parents (see above) and to art and poetry which contain many cues that might arouse their aggression-anxiety. What then normally becomes of their impulse to aggression if it does not express itself, as it does for most people, in the area of human relationships? To some extent it may be simply decreased in intensity because situations are avoided which cue it off, but what is left may be sublimated into an attack on nature. It is certainly part of the folklore of science that it represents an attempt to *conquer* nature, to dominate it and bring it under man's control. Social theorists have noted that the view that man could be more powerful than nature is by no means a common one in history. In fact, the usual belief among the peoples of the world, even today, is that nature is much more powerful than man (witness floods, droughts, earthquakes, etc.) and that man must somehow placate the gods who control nature. It does not seem too farfetched to assume that it took an unusual psychodynamic situation to create in some men the apparently irrational belief that they could conquer nature. The blocked aggressive needs of a few scientists, diverted

toward nature, may well have fulfilled such an important historic function.

At a more personal level, we have noted that the scientist is intensely analytic in his approach to experience. His response is to freeze the flux of reality, to ask, What is it?, to take experience apart and see what makes it tick. It is no mere metaphor to say that analysis represents a form of aggression. To take something apart is to destroy it in a very real sense. Of course the creative scientist attempts to put reality back together again on his own terms, but even he would admit that the model he constructs of reality is a poor substitute for the richness of human experience.

But why are scientists so intensely masculine? How can this fact be fitted under the hypothesis that they have adopted a unique method of handling aggression-anxiety? Earlier we pointed out that one of the common methods of handling the aggression problem was for the boy to identify with the aggressor (usually the father) because he gets some gratification in behaving in a similar powerful fashion. The same mechanism may be operating in the case of the scientist, but there is evidence that it does not follow its normal course. According to Terman's data (22, p. 29), the physical science research group reports least understanding and affection from their fathers while the undergraduate science majors report the most understanding and affection from their fathers. In other words, the research group, like the nonresearch group, takes the initial step in dealing with the aggression problem of strongly identifying with the male role. After all, the male is the image of power and aggressiveness. But the next step of behaving aggressively like a powerful male is further discouraged by a distant, unaffectionate real father in the research group and promoted by an understanding father in the nonresearch group.[5]

Direct confirmation of the hypothesis appears in the fact that the nonresearch group maintains a high interest in outdoor sports (22, p. 15, p. 26), whereas the research group has a low interest in sports. That is, while the scientists are definitely masculine, they do not express their masculinity in the aggressiveness of outdoor

sports as more "normal" males do, but may satisfy it more indirectly through scientific analysis.

So the new hypothesis is basically that the scientists work so hard and love their work so much not to satisfy unfulfilled sexual needs but aggressive ones. Such a notion has the further advantage that there is no consistent evidence in the literature for sexual difficulties among scientists. That is, one might reasonably expect that if they have so much anxiety over their sexual love of their mothers, more of them would never have married, like Leonardo de Vinci, or at least would have shown a history of homosexual or other perverse sexual outlets. But such is not the case. Scientists as a group appear to be heterosexually normal, although somewhat delayed in their approach to women probably because of their general avoidance of interpersonal contacts. But the same problem remains that started the investigation into what appeared to be a plausible explanation of scientific curiosity in terms of a repressed sexual drive. What *direct* evidence is there that scientists are satisfying aggressive urges in their interest in nature? Unfortunately, the Nature Metaphor Test was constructed so that it contained no images at all of man as conquering nature. One would certainly have to predict in terms of the new hypothesis that scientists would prefer such metaphors. However, the test did contain a number of the reverse type of metaphor in which nature is depicted as threatening to man. Most of them appear in the bottom of Table 1, and the scientist rejected them more than any other type of metaphor. In other words, the one thing he rejects most compared with the nonscientist is the notion that nature threatens him. It is certainly not unreasonable to assume that this is because he thinks he is capable of dominating or "threatening" nature, although unfortunately there might be other reasons why scientists would not see nature as threatening. Still the finding makes the hypothesis a little more probable and encourages one to explore it further.

One slight bit of evidence in its favor is the fact that Stein's creative chemists averaged higher in *n* Power[6] (mean = 4.05, SD = 3.14) than his uncreative chemists

(mean = 2.74, SD = 2.50, difference = 1.31, $t = 1.52$, $p < .15$). Unfortunately the really crucial comparison between scientists and non-scientists cannot be made with these data.

But there are still some important loose ends. Why should research scientists like music so much? Why should they conceive of nature in terms of idealized human figures, rather than, for example, in terms of adversaries to be conquered? Why the interest in "fusing" with nature or "reaping it for pleasure"? There is certainly a hint here of a relationship to nature which is more than a conquering, dominating one. It is almost as if the scientists felt themselves "one with nature" or conceived of it as a pleasurable extension of their fantasy life. One of the characteristics of music is that it is an "objectless" form of art. It seems to come from everywhere and the person as he listens can, so to speak, "melt" into the environment or lose his sense of being in a particular time or place. It is interesting to note in this connection that Fisher and Cleveland report (5) that scientists alone among their successful professional groups have low body boundaries as measured in the Rorschach, indicating that they maintain a more "open" relationship to the environment and do not conceive of their bodies as having a hard protective shell which separates them from the world. They do not develop as much as most people do a percept of themselves as distinct individuals interacting with other distinct individuals. Instead, the environment appears to remain as a "part of themselves" long after most people have withdrawn themselves more distinctly out of the environment. So music may appeal to scientists because it promotes a feeling of "oneness" with the environment. Up to now we have stressed the negative reason for scientists being interested in nature. They turn to it because interpersonal relations have proved so frustrating and anxiety-provoking. But there appears to be a positive attachment to nature, too, which in a certain sense they simply fail to outgrow in order to enter into more conventional human relationships.

Confirmation of this tendency may be found in a new approach to the Rorschach developed by Paul Stern (19). Taking his cue from European existentialist psy-

chologists, he has developed a method of coding the responses to the Rorschach which yields an Index of Existential Pathology. The Index has five dimensions: (Primitivity of Object Choice, Alienation from the Environment, Dissolution, Primitivity of Object Relations, and Spatiality); the first of these dimensions is by all odds the most important, accounting for between 45% and 60% of the total score. In general, responses are coded under the heading of Primitivity of Object Choice if they suggest primitive percepts of people—in other words, humanlike figures, primitive or young humans, and monsters. Examples of responses which would be included under this heading are: witches, a statue, Chinese image, leprechaun, two elfish characters, gnomes, Pan, Dionysius, cherubs, Gargantua the ape. Stern's method of analysis was applied to the Rorschachs from 31 of Roe's eminent scientists[7] and the results compared with two other populations as shown in Table 2. The com-

TABLE 2

Frequencies and Percentages of Eminent Scientists, Normal and Neurotic College Students who are High, Middle, and Low on an Index of Existential Pathology (IEP)

	Normal college students		Eminent scientists		Neurotic college students	
Low IEP (2.0–3.9)	11	(50%)	6	(19.4%)	0	(0%)
Moderate IEP (4.0–5.9)	8	(36%)	19	(61.2%)	12	(37.5%)
High IEP (6.0–11.0)	3	(14%)	6	(19.4%)	20	(62.5%)
Total	22		31		32	

χ^2, normals *vs.* scientists = 5.46 ($df = 2$), $p < .07$.
χ^2, normals *vs.* scientists, low *vs.* moderate categories = 5.35 ($df = 1$), $p < .05$.
χ^2, scientists *vs.* neurotics = 14.87 ($df = 2$), $p < .01$.

parison groups are by no means ideal, consisting of a group of normal and a group of neurotic college students all much younger than the scientists in question, but the

differences are so striking and meaningful that it seems unlikely that correction for age differences would wipe them out. The neurotics are clearly differentiated from the normals, which was Stern's primary interest, but the scientists fall neatly in between. Sixty-one per cent of them could be classified as displaying a moderate amount of Existential Pathology as compared with only around a third of the normal subjects. Furthermore, their deviation from normal is located exclusively in the "Primitivity of Object Choice" dimension since their means are comparable to the means for the normal group on the other four dimensions. Here is one authentic case where "genius is next to insanity." The scientists are a little more primitive in their percepts of people than the normals, but by no means so much as the neurotics. In Stern's terms, the scientist's preferred method of seeing people has not developed to the normal human adult level. They still live to a moderate degree in the world of witches, gnomes, fairies, and ogres—a rather surprising fact if one is used to thinking of scientists as the most objective, dispassionate, and realistic of men. But it may be the very childlike quality of their imagery which enables the best of them to be creative in imagining new ways in which the world can be understood in abstract terms. Stein discovered in a relaxed moment in an interview with one of his creative chemists that "he sees atoms and molecules moving around like friends of his and he works with them as friends" (18). It is apparently only in off-moments and through subtle psychological tests that one discovers the childlike imagery of scientists, but it is undoubtedly present and may well be an important factor in their creativity.

Why do they remain childlike in perceiving humans? Why does nature appear like an extension of themselves? Again we may turn to the asceticism of many of their parents for an answer. Impulses denied expression in real life, if they are urgent enough and the person is intelligent enough, may work themselves out in childish fancies that give a great deal of pleasure. In other words, we need only assume that the young scientist has enjoyed his fantasy life as a means of expressing blocked impulses to discover a reason why he continues to pursue

such "immature" fantasies when he is confronted by anxiety in adult interpersonal relations. So his interest in nature represents not only a flight from people and a turning of aggression into new channels, it also permits him to continue indulging childlike fantasies originally developed out of a frustrated impulse life. His goal may ultimately be power—dominion over nature—but the means to the goal—the continued pursuit of childhood fantasies in which nature is a kind of extension of the self—is in itself pleasurable. It is my guess that among the "pioneer" scientists, pleasure in imaginative play is the more important determinant of scientific interest, and that for the "colonizing" scientists who build on the explorations of the pioneers, pleasure in the conquest of nature is the more important determinant.

Many questions remain unanswered. It would be particularly interesting to know why withdrawal as contrasted with other defenses is the method of handling aggression adopted by the people who later become scientists. Two possibilities seem worth further consideration. First, Roe found (14) that many of her eminent scientists had had a serious illness when young, and being in bed for a long time out of normal contact with normal human relations and masculine pursuits should certainly provide the opportunity for development of a rich fantasy life and for the discovery that withdrawal may solve many problems. Second, I have pointed out in another place (10) that one of the paradoxes of history is that radical Protestantism produced not only more than its share of scientists but also more than its share of business entrepreneurs. The paradox arises from the fact that on nearly all tests like the Strong Vocational Interest Blank, scientists and businessmen are diametrically opposed in their interests and attitudes toward life. How could two such negatively correlated character types have been produced by the same family type? The answer may lie in the typical mode of adjustment adopted by the two groups—the scientists *withdrawing from* and the businessman typically *entering into* the field of human relationships. Rosen and D'Andrade (16) have demonstrated that the parents of boys with a high need for Achievement, which predisposes individuals to business

entrepreneurship (9), set high standards for their sons but also show a good deal of warmth in praising them for their efforts at achievement. We also know that scientists report that they are distant from both parents and therefore in all likelihood did not receive the parental warmth and support that future entrepreneurs get. It may not be pushing credulity too far to infer that warmth should encourage boys to enter into interpersonal relationships whereas coldness should discourage them. So while the future scientist and the future entrepreneur may both have been exposed to high standards, the former, being treated indifferently by his parents, tends to retreat from people, while the latter, being encouraged by his parents, moves out more confidently into the world of adult human relationships. Similarly, high standards plus coldness make frustration and aggression the chief problem for the scientist, while high standards plus warmth make achievement the chief concern of the entrepreneur.

Many facts appear to be falling into place, but it is time for the analytic side of the scientist to show itself and to remind us that many of these supposed interrelationships have not been firmly established by any means. Fantasy is fun, but it must also be checked and disciplined. After all, the scientist's fancy differs only a little from the normal and very much more from the neurotic in poor touch with reality.

What has been accomplished? The psychologist is unique among scientists in that in the end he can turn and examine his own science-making. If I have succeeded in displaying both the "play" and disciplinary "aggressive" interests of the typical scientist in this paper, I will have managed to illustrate with my own work the main points that I have been trying to make. Yet caution must have the last word. Halfway through our investigations, we thought we had a good explanation of the psychodynamics of the scientist. It certainly sounded reasonable. But further checking showed that it was hardly tenable. We have now ended with a new hypothesis. Further research will undoubtedly show that it is defective in some ways. So the truth the scientist seeks always just eludes his grasp, and he must gain his satisfaction from his faith that in unravelling the secrets of the universe, his

attempt to untie the first knot may make it easier to untie the second.

Notes

[1] I am grateful to Professor Stein for lending me TAT's on 45 of his industrial chemists to code for *n* Affiliation and also *n* Achievement and *n* Power. Scores for *n* Affiliation were based on stories told to TAT cards 2, 6, 13 MF, the blank card, and one specially constructed showing two men in a laboratory sitting with a woman in a laboratory coat. Four of the 22 more creative chemists scored in the middle range of *n* Affiliation scores (5 to 9) as compared with 12 of the 23 less creative chemists ($\chi^2 = 5.61$, $p < .05$).

[2] Thirteen of the 22 more creative chemists have scores in the middle *n* Achievement range (0 to +4) as compared with 5 of the 23 less creative chemists ($\chi^2 = 6.5$, $p < .02$).

[3] I am much indebted to Dr. Roe for lending me the TAT's of some of the scientists in her group from which this and subsequent observations are drawn.

[4] We are both much indebted to Professor Robert H. Knapp for suggesting the technique used (the Metaphor Test) and many of the ideas it was designed to study.

[5] It is particularly interesting that scientists portray fathers as understanding in fantasy, but report their own fathers to have been distant and unaffectionate. It is as if they have interiorized the positive male image but are somehow blocked at the level of *behaving* like a normally aggressive male by ambivalent feelings toward their own fathers, by incomplete identification with him because of his distance, or by other sources of aggression-anxiety mentioned earlier.

[6] Based on stories to TAT cards #7, #13MF, #17BM, the blank card, and two laboratory scenes especially constructed by Stein.

[7] I am much indebted to Dr. Stern for coding the protocols according to his new system.

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8

The Harlequin Complex*

Women do not very often become creative physicists or chemists. Why not? Is it because they are reared to be interested in people rather than things? Are the roots of consciousness different for women than for men, just as we have seen them to be different for Germans, for Americans, for traditional Jews, or for Protestant Christians? This chapter represents a preliminary foray into the rather unexplored territory of feminine motivations. What I have done is to pick up a single apparent difference between men and women—namely in their attitude toward death—and to pursue its meaning in the history of the West clear through to the roots of schizophrenia in women. It should be stated at the outset that the chapter is an imaginative tour de force, *an adventure into the unknown that I enjoyed more than anything else included in the book. But even in my wildest flights of fancy, I trust that my loyalty to the scientific tradition of Professor Hull is still discernible. I intend to keep checking up on the ideas expressed here by the kind of patient empirical investigation which is the keystone of modern science and which by its nature corrects the excesses of the imagination. This is only the beginning of a psychology of women, not the end.*

Death to modern man is the ultimate catastrophe. To philosophers like Bergson it is the source of man's uniqueness and also his dismay because man alone among the animals realizes that he is going to die. He can understand infinity, but must learn to live with the hard fact of his own finiteness. To theologians like Kierkegaard, the acceptance of death and mastery of the anxiety it

creates are the beginnings of religion. To psychoanalysts, death represents the castration fear—the old man with the scythe. To the man in the street, at least in twentieth-century America, it is something to avoid thinking about so far as possible, to push under the rug, to deny with phrases like "passed on" or with elaborate rituals symbolic of immortality. At best people manage to face the inevitable end with stoic indifference as Freud recommended, yet even the stoics confess in moments of honesty, *Timor mortis conturbat me,* in the words of the medieval hymn that men have muttered to themselves ever since the beginning of time.

In view of the widespread fear of death, it is surprising to come across a person, usually a woman, who not only does not fear death but actually appears to be looking forward to it with a sense of excitement. The possibility both thrills and attracts her at the same time that it frightens her. Yet often the thrill seems as strong as the fear, in much the same way that it is for a person who is about to make a ski jump or a very high dive. Such reactions to death do exist, particularly among women, and they challenge the curiosity of the psychologist interested in how people actually react as opposed to how they are supposed to react according to philosophy, religion or psychoanalysis.

The positive or at least ambivalent attitude toward death has of course been often noted by psychiatrists. Bromberg and Schilder (1933, 1936) in their survey of attitudes toward death report a number of positive meanings that it had for various individuals, such as "an equivalent for the final sexual union with the ideal mate" and "the final narcissistic perfection which grants eternal and unchallenged importance to the individual" (1936, p. 3). For them death is like a blank screen on which the life instincts create the images that satisfy them. Thus even negative connotations of death, as in the expectation of eternal punishment in hell fire, serve to gratify urges existing in life to punish oneself for misbehavior. On the other hand, "fear of death is the fear of loss of something positive," of the life instincts themselves. Therefore fear of death is more basic or reality-oriented than attraction to death which involves merely

gratifying impulses in fantasy life, not denying such impulses altogether forever. Nevertheless, we cannot dismiss the attraction to death as of secondary importance, as "mere" fantasy. It plays an extremely important role in the lives of some individuals. The role may be different in women from what it is in men. The interpretation given by psychoanalysts may be far too simple and may itself be a product of our century in which the death instinct has been repressed and fear of death has been considered primary. The whole subject needs careful exploration.

Let us begin with a simple modern tale which has roots in the history of Western culture going back at least a thousand and perhaps twenty-five hundred years or more. It is told by Agatha Christie, the detective story writer, under the title, *The Mysterious Mr. Quin* (1930). The central character she has created is a certain Mr. Harley Quin who keeps appearing and disappearing in connection with various deaths or murders that are unraveled for the reader in the classic manner of detective story fiction. It is not altogether clear who Mr. Quin is at first because he appears to possess certain magical powers although he is a recognizable English gentleman. However in the last story he finally appears as death himself, a charming yet sometimes invisible and mysterious lover. What finally reveals him in his true colors is the momentary abandonment of a lovely woman by her husband for a pretty young girl. A famous Russian ballet dancer has settled down in England and given up her dancing for her husband who, as he grows older, develops into a middle-aged bourgeois type who characteristically becomes infatuated with a local village girl. The unhappy wife through a series of accidents decides to dance again as Columbine in a locally produced ballet and her partner, dressed as Harlequin, is none other than the mysterious Mr. Harley Quin. Later in the evening she is found beautiful in her death at the bottom of a pit at the end of a lane, sometimes called Harlequin's Lane or Lover's Lane, but not before she had been seen by at least one person walking down the lane with her Harlequin lover of the ballet. As she herself had said earlier, "No lover ever satisfies one, for all lovers are mortal. And Harle-

quin is only a myth, an invisible presence—unless his name is Death." This story will serve to introduce us to the theme of death as a lover, as a mysterious dark figure who comes and takes a woman away to her death, a theme which, with all its variations, we will call the Harlequin complex and which is at least as old as the Greek story of Hades coming up out of hell to take Persephone away to the Underworld.

But why associate Harlequin with death? At first glance the notion seems a little far-fetched since standard reference works describe Harlequin merely as the lover of Columbine in pantomime or in ballet who typically wears a multicolored suit and a black mask, and who in earlier days in the classic Italian *commedia dell'arte* was noted for his acrobatic tricks and practical jokes performed with the aid of his magic wooden bat or slapstick. Certainly he has always been a lover, whether as a comic seducer of the servant girl, Columbina, or as her romantic partner in an etherealized love story in ballet, but apparently only his mask suggests mystery or any connection with death. In recent standard reference works, the connection with death is not explicitly mentioned. For example, Niklaus (1956) in reviewing Harlequin's later history on the stage beginning in 1585 says little or nothing about his origin in the underworld, although she is admittedly puzzled and a little shocked at the feral hairy mask that he wore in the late sixteenth- and early seventeenth-centuries. (See the reproduction in Niklaus, 1956, between pages 16-17.) She decides that he is the descendant of certain Italian, and ultimately Roman clowns and satyrs, representing somehow "the enigmatic personification of the life force" (1956, p. 24). Yet the connection with death is clear even in the period she reviews. Watteau's famous painting shows a sinister, black-masked Harlequin making love to a somewhat frightened, genteel Columbine (reproduced in Niklaus, 1956, p. 81). Harlequin pantomimes regularly consisted of "dark" scenes and serio-comic love scenes in which Harlequin pursues Columbine despite obstacles placed in his way by her father or guardian or suitor Pantaloon (Niklaus, 1956, p. 141). In the "dark" scenes Harlequin is definitely connected with such stark underworld figures

as Dr. Faustus, Pluto, sorcerers, etc. For example in England in 1723 at Lincoln's Inn Fields John Rich staged *Harlequin Necromancer and Dr. Faustus* in which the opening scene of the farce deals with the contract Harlequin signs with Pluto, the king of the underworld, for all the "Whores of the Universe" in exchange for a demon's power (Niklaus, 1956, p. 153). The association of death, seduction, and demonic power is unmistakable in most of these "dark" scenes. The idea occurred even in the most slapstick Italian *commedia dell'arte*, in which Arlecchino plays the part of the doltish, acrobatic servant. For example, in one episode where he is the "go-between" for two unfortunately separated lovers he tells each one that the other has died of a broken heart. As a result, each of them nearly commits suicide to join his departed love. (See the scripts in Leydi, 1958.) Although much disguised by his burlesque comic manner, Harlequin is still somehow the agent of love and death.

The reason for the "dark" scenes and Harlequin's connection with death is made obvious in an excellent but little-known book by Driesen (1904), in which he demonstrates fairly conclusively that "the comic Harlequin is no other than the old French devil Herlequin" (1904, p. 18). Despite Driesen's book, later authorities have apparently continued to be misled by the fact that the first Harlequin play for which we have the manuscript was given by an Italian troupe from Bergamo in Paris in 1585. From this they conclude that Harlequin was of Italian origin, despite the fact that there was no Arlecchino tradition going back earlier in Italy[2] and the fact that there was a Herlequin tradition going back at least six hundred years in France. Furthermore, the evidence is that the French readily identified the supposedly Italian creation as their own well-known demon. Henry IV and Madame de Sevigné referred to him by his French name, Harlequin, when he first appeared on the stage in Paris, not by the version of his name used by the Italian players themselves, Arlecchino, in which the "H" is dropped because it is not used in Italian (Driesen, 1904, p. 15). Finally, Driesen demonstrates that the word Harlequin appears in a French manuscript written in Latin in 1514 long before the Italian players staged

their drama in 1585. He argues that the well-known old French demon Herlequin got his name spelled Harlequin in Paris because the local dialect pronounced Herle as Harle. Then the visiting Italian players converted his name to Arlecchino in their language.

Who, then, was Herlequin in medieval French tradition? Actually, he was not initially a single individual, but a family. The first reference appears in an eleventh-century manuscript written by Ordericus Vitalis, the Norman historian. He tells a dramatic story in which a priest who is returning home late at night by moonlight is suddenly confronted by an army of dead condemned souls wandering restlessly through the night making a tremendous noise. He sees coffins carried past him on which dwarfs with big heads are seated; a bloody martyr being repeatedly stabbed by a devil; women riding on sidesaddles containing glowing hot nails so that when they bounce up and down in the storm, they are stabbed and burned for their misdeeds in life; then masses of clerics and soldiers, all suffering and sighing from the kingdom of the dead. The monk realizes that he is seeing what he has often heard about—the Herlequin family ("Haec sine dubio familia Herlechini est"). The term obviously refers to an army of dead condemned souls (Driesen, 1904, pp. 24 ff.).

Later in a play by Adan de le Hale written in 1262, Harlequin is represented as a single person, as a king of the spirit world who sends his lusty representative, Croquesots ("fool-biter"), to woo the fairy Morgue who returns his love despite the protests of her friends (Driesen, 1904, pp. 40 ff.). It is at least suggestive that her name is Morgue, which in French refers to an arrogant or set face, also applied to faces of dead people, and eventually to the place where dead people are put—the morgue—as in English. Does Harlequin's love mean death, even here?

Driesen also makes much of the fact that Harlequin's representative in Adan de le Hale's play asks the fairies how they like his hairy face ("Hurepiaus"), from which Driesen concludes that he is wearing a devil's mask. For the term *Hure* was regularly applied to men with heavy beards, to animals, and to devils (Driesen, 1904, p. 58).

This may give us a clue to the origin of the form of the name Harlequin which has come down to us, though it is not mentioned by either Driesen or the etymological dictionaries. For the words "herle" and "harle" also mean hair in Old English. In other words, Harlequin's name may have been derived from the hairy devil's mask he wore. The importance of this demonic mask is further underlined by the fact that in the religious theatre of medieval France, the entrance to hell on the stage was a giant devil's head called *chape de Herlequin*, or Harlequin's cap or hood (Driesen, 1904, p. 72).[3] It is an interesting bit of cultural history to learn how the bestial devil's masks of the early Harlequin became the grotesque devil's face as entrance to hell on the stage and still later the simple black curtain in the front part of the stage which was called "manteau de Harlequin" right up to the twentieth century in the French theatre, but to explain it in full would carry us far from our main theme.

More directly relevant is the story in verse by the thirteenth-century Norman poet Bourdet of how the sinful old woman Luque took to her bed dying and begged "Hellequin" to come get her because she wanted to marry him.[4] She didn't give a damn for her husband, but wanted a big wedding feast on her death bed. Harlequin (Hellequin) was delighted and led three thousand devils out of hell with him to the festivities. They found the poor old woman, took her soul up in the air, tried to get her into the church, failed, and so took her to hell. Here Harlequin appears as a comic, lusty devil clearly associated with death and sexuality for women (Driesen, 1904, pp. 93 ff.). In the fourteenth century, Harlequin figures were prominent in wild street carnivals and masquerades in France, particularly in the institution of "charivari" (chivaree) which has persisted in somewhat attenuated form right up to the present day. It involves a rowdy gang that makes a lot of noise and plays practical jokes on the night of a wedding, outside the house where the bridal pair are spending their first night together. Nowadays the chivaree tradition is reduced to tying some tin cans or ribbons to the "get-away car," accompanying it with horn blowing and playing a few tricks on the bridal couple, but originally the revelry was more boisterous and

the chief reveler was often the man in the devil's mask, Harlequin. Again the connection of Harlequin with deviltry and sexuality is clear.

If further evidence is needed, it is provided by the story of the first Harlequin play, for which the manuscript still exists as performed in 1585. In it, Harlequin makes a descent into hell to save "Mother" Cardine, madam of a famous bordello in Paris at the time, who had recently died and who according to the play was carried off to hell and married to Cerberus (Driesen, 1904, pp. 158 ff.). Harlequin succeeds in getting her out of hell because he charms everyone with his acrobatic tricks and good humor—first Charon into ferrying him across the River Styx and then Pluto, himself, who offers Harlequin a job as his chief hangman or anything else he wants. In a slightly later version of the story, Harlequin particularly charms Pluto's wife Persephone, who promptly makes love to him. He responds in kind, saying in effect, "I'm your boy from now on, doll." [5] Harlequin asks for Cardine as his reward and while Pluto is furious at having to give her up he finally agrees since, being a god, he cannot go back on his word. On his way out with his booty, Harlequin boasts to Charon that he has tricked his master and all the devils under his sceptre, that his name is Harlequin, from which "you can see that the devils don't know any more than I do." [6] His connection with seduction, illicit love, and death was thus firmly established and continued, though with diminishing emphasis, in the "dark" scenes of the harlequinades in subsequent centuries. Driesen's argument is that a group of traveling Italian players, probably Ganassa's troupe, became acquainted with the Harlequin tradition in France and decided to please their French audiences by staging it, but modified it so as to include considerably more of the clownish tricks from the Italian *zanni* tradition, probably originally at the wedding of Margaret de Valois to the King of Navarre in 1572 (Driesen, 1904, p. 231).[7] By this time his characteristics were well established—his name, which meant devil to the French audience; his multicolored suit, which was originally a skin with patches sewed on to show he was a devil; his "bestial" hairy mask, which even had small

horns to leave no doubt of his devilish connection; his character as a "bad" but lusty lover and seducer, and his extraordinary tricks and acrobatics which derived in large part from the Italian tradition, though they were consistent with the notion that he was a demon. As Driesen sums it up, "Allerdings ist der Harlekin der Teufel" (1904, p. 189). In every respect Harlequin was the devil.

The idea of death as a lover has not always been represented by the Harlequin image, of course. It is far too universal a theme in human existence to appear always in the identical mytho-poetic form. The best known version of the story for the Western world occurs in classical Greek mythology. In the *Homeric Hymn to Demeter*, her daughter Persephone is pictured as playing happily with friends in a meadow, when she suddenly sees a beautiful narcissus in flower, the perfume of which is so overpowering that it shakes the earth, the sky and the sea. She reaches for it, but discovers too late that it is a trap, for the earth opens up and she is grabbed by Hades, Prince of the underworld of the dead,[8] and taken away to his underground kingdom. Demeter searches for and mourns her lost daughter and finally in anger refuses to rejoin the other Gods on Olympus or to allow the earth to bear fruit until she sees her daughter again. Alarmed at the possibility that the race of men may die of hunger, Zeus intercedes with his brother Hades who allows Persephone to return to her mother, but only for part of the year: before she leaves he gives her some pomegranate seed to prevent her from leaving him forever, since whoever eats food in the kingdom of the dead must return. Two facts about this story are of particular interest to us here—one psychological, the other historical. What is important psychologically is that Persephone appears to be somewhat ambivalent about her deathly lover, the Prince of the Underworld. She is both attracted by something overpoweringly pleasant (the narcissus) and yet undone (snatched and carried away complaining to the Underworld) in reaching for it. Eating the pomegranate in the Underworld also has its double aspect: she eats it apparently willingly at the time but later complains to her mother that he made her eat it against her will. Furthermore Hades is not pictured as a cruel rapist,

but rather as a gay, if crafty, seducer while Persephone is described as "prudent" or "good." One can hardly avoid the conclusion that she feels some attraction to her dark lover while protesting like the good girl she is that she was seduced in spite of herself. Here again the Prince of the Underworld appears as he does in the Harlequin myths both as a figure of terror who takes women away to their deaths and as a gay seducer.

The historical fact is that the *Homeric Hymn to Demeter* also describes the origins of the famous Eleusinian mysteries which were consecrated to two goddesses, Demeter and her daughter Persephone. Unfortunately the cult guarded its secrets too well and we know little about them today, despite the fact that they were known to thousands of people who were initiated into the rites annually for nearly 2000 years. What were they hiding with such zeal that the Athenians nearly killed their favorite young hero of the moment, Alcibiades, for mimicking the mysteries too openly at a drunken party? We can never know for certain, but Jane Harrison (1922) has made some very shrewd guesses based on analogous, and better known, rituals for women. The *Hymn* itself provides the main theme: deprivation-enhancement. The rape of Persephone deprives a mother of her daughter, and most of the story is about Demeter's greatly enhanced need to nurture someone (she even tries to adopt another baby for a while). This theme was also represented (1) in the reference in the *Hymn* to the barrenness of the earth during the Winter followed by its greatly increased fertility in the Spring (after Persephone returns), (2) in the purification rites for participants in the Mysteries (self-denial to enhance holiness), (3) in the ritual lowering of pigs' flesh into the earth to let it rot before hauling it up again to spread on the fields to enhance fertility, (4) in the darkness of the central part of the ceremony punctuated at a critical moment by a great flash of light (still part of Greek orthodox ritual during Easter ceremonies). To put the theme in slightly different words: what the Eleusinian mysteries celebrated was the nearly universal idea that one must deprive oneself to develop a stronger appetite, surrender or go down in order to come up, give of oneself in order to get, *die*

to live—an idea which sums up the unique role of women particularly well. Whether in giving birth to a baby, nursing it, looking after a husband, or participating in the sexual act itself, a woman can be thought of as yielding or giving or surrendering herself in order to gain satisfaction. The odd thing about the mysteries to our male-dominated culture is that both in the *Hymn* and so far as one can tell in the ritual itself, the male figure is present but rather shadowy. He is, like Hades, simply a *means* to an end, a projection of a woman's need, the agent who enables her to learn her most fundamental lesson—that she must die or be taken "down under" in order to live fully. The Mysteries acted out this theme both literally[9] and symbolically and initially largely for women (Harrison, 1922, p. 151). Later they were infiltrated or replaced by the male-oriented cults of Dionysius and Orpheus in which the shadowy male figure became the key actor in the drama, but that is another story in itself.

At any rate by the time Harlequin appears on the historical scene, he is clearly the central character, not the woman who sees him as a means of learning the central lesson of her life. But why connect him with the Hades-Persephone story at all? There are two reasons—one historical, the other psychological. On historical grounds it is a fact, as noted above, that the Harlequin plays regularly contained scenes involving Hades and Persephone. Somebody saw a connection. The hypothesis of historical continuity, over a thousand years of folk tradition, seems on the face of it highly improbable, although one fascinating clue to such a tradition exists. Driesen (1904, p. 239) quotes from a letter by William of Auvergne, Bishop of Paris (died in 1248), which states that the common people in Spain believe that any man under the protection of Ceres, Goddess of Agriculture, cannot be harmed by the ghostly army of *Harlequins*. In other words, in Spanish folk tradition Ceres (Demeter) was still able to protect one from the "devil," now identified as "Harlequins," not Hades or Pluto as in the classical Greek myth. Could Harlequin somehow be the historical survival of Hades?

The psychological explanation of continuity seems

more probable. In every generation, and to some extent in every woman, the image of dying to live or more concretely of death as a lover recurs. The particular form in which the theme is expressed in song and story will vary, but it obviously will draw on well-known treatments of a similar theme in the past as well as new experiences. Thus the revival of interest in Greek and Roman mythology in the Renaissance made the ancient tales familiar once again so that both author and audience could understand and appreciate the Hades-Persephone version of the universal theme in a harlequinade. As the author of the *Homeric Hymn to Demeter* so aptly puts it in introducing Hades to the reader, he is πολυώνυμος, "worshipped under many names."

Shakespeare gives him no name at all. Romeo simply says when he enters the tomb, where Juliet is lying:

> . . . Ah, dear Juliet
> Why art thou yet so fair? Shall I believe
> That unsubstantial Death is amorous,
> And that the lean, abhorréd monster keeps
> Thee here in dark to be his paramour?"

For others death or Hades became Dr. Faustus or Mephistopheles. Over and over again the theme has been played out in different guises, often without any knowledge on the part of authors or readers that they are recreating an ancient or universal story. Thus Agatha Christie wrote in answer to a question as to where she got the idea for her Mr. Quin stories. "The gradual growth of Harlequin into a symbol of both love and death is, I think, entirely my own idea." Here is one mystery that the mistress of detective fiction failed to penetrate! We may well believe her in the literal sense that she did not know of the antiquity of her theme. However as herself a woman, and one much concerned with death in her writing, and as a product of Western culture exposed to classic mythology and harlequinades in many forms, it is not surprising that she recreated the classic drama of Hades and Persephone, which in its universal form we have been calling the Harlequin complex.

Several other cultural "images" with a strong hold on

public feeling can be connected to the Harlequin theme, though less certainly. One of the most fascinating is the bullfight. Certainly the matador looks and acts like Harlequin. He wears a "suit of lights" and a hat that could readily pass for a traditional Harlequin costume (see illustration facing p. 121 in Niklaus, 1956). Furthermore he performs the same kind of acrobatic tricks that Harlequin does, including the final play with his sword or dagger at the end. Finally and above all the matador represents death, the inevitable end that awaits even the strongest expression of the life force (the bull).

But if the matador is acting out the part of Harlequin or Hades, where is Persephone, and what is the bull? If the interpretation is correct, the matador should be fighting the bull to win a fair lady (Persephone). The modern bull fight retains only one small bit of evidence that it ever had such a meaning—namely the *brindis*, or ceremonial dedication of the bull to an important personage in the audience, made by the matador at the beginning of the *tercio* before he moves in to the kill. Unfortunately for our thesis the personage is usually a man, though on occasion it may be a woman. However, the bullfight in its Spanish form is nearly a thousand years old, and for most of that time, or up until 1700-1750, the matador was a member of the gentry who fought a bull on horseback with a lance, to win the favor of a lady, in the tradition of courtly chivalry.[10] For example, D. F. S. de A., evidently a member of the Spanish nobility, in writing a history of the bullfight in 1873 bemoans the fact that men fight bulls "nowadays" for money rather than for the respectful love of a woman, whereas in former times they risked their lives in exchange for the admiring glance of their beloved. He also complains that the women aren't what they used to be. Nowadays they are frightened by the slightest movement of the bull's head whereas in the "good old days" they were on hand, and ready, with the bravery and calm proper to heroines, to award the prize or withdraw their favor from their idol (1873, p. 47).[11] In short, the bullfight traditionally did involve the theme of the struggle of a man for a woman's affection and admiration. What happened was that the idea tended to be obscured when the "lower orders" took

over fighting the bull, since now the matador often fought on behalf of his patron, a member of the gentry, whose place he was taking.

If our reasoning is correct and the matador was originally Hades fighting for his love, Persephone (the Death-as-a-lover theme), who is he fighting? Traditionally there is only one possible answer: the bull is Demeter, the life force, who represented for the Greeks the source of everything living—both plants and animals. She was earth, the patroness of man in this world of the living, as Hades was the host of man in the underworld of the dead. It is hard to see how a female goddess got turned into a very male bull, but it is known that some kind of a bullfight or dance was connected with the worship of Demeter-Persephone ("παρα ταῖς θεαῖς") at Eleusis (Harrison, 1922, p. 147) and also that in Spanish folk dances, at least as they have survived in Mexico, the woman playfully assumes the part of the bull in running at her romantic partner's kerchief.[12]

We must be satisfied for the moment with the psychological parallels: the bullfight certainly dramatizes the struggle of Death (the matador) with Life (the bull in all his power and strength) for the love of a lady. What is extraordinary in cross-cultural perspective is the arrogance of the Spaniard in identifying with Death, the killer and destroyer of the strongest life urge, but as Paz puts it in speaking at least for Mexican culture, "Death is present in our fiestas, our games, our loves and our thoughts. To die and to kill are ideas that rarely leave us. We are seduced by death." Life is "death without end"—*Muerte sin fin* (Paz, 1959).

More recently Harlequin had appeared in the United States as a seducer of women in the once popular image of the hypnotist Svengali, or more importantly today as the dark, mysterious, foreign psychoanalyst. As Bakan points out (1958, pp. 187 ff.), Freud more or less explicitly, though only half seriously, allied himself with the devil, with the dark irrational forces in man's nature, with the "underworld" of the psyche. Furthermore, he and other psychoanalysts played out the Harlequin image in two other important particulars. They carried out their treatment with their patients, in the beginning usually

women, stretched out on a couch as if ready for sexual intercourse and also as if dead on a bier, and the treatment involved a specifically sexual relationship between the woman and her "hidden" male analyst (transference). While the "death" and "seduction" aspects of psychoanalytic treatment were muted and treated only symbolically, much of the force of the popular image of psychoanalysts as dark foreign "devils," and perhaps even of the treatment itself, may have come from its recreation of the eternal Harlequin theme, of a woman being sexually seduced by death.

One final example, this time from Hollywood. The Western film is to American culture what the bullfight was to Spanish culture—a mirror of some of its profoundest impulses. And Hollywood has recently (1961) put Harlequin in cowboy dress and dramatized the age-old theme with suitably Freudian overtones in a movie called *The Last Sunset*. The key figure is a cowboy, O'Malley, a gay seducer with a demonic temper. The Harlequin image is underlined by a number of facts: he dresses in black, often wears a mask (but over the lower half of his face, in true cowboy style), carries a derringer as his magic weapon instead of a slapstick and generally looks and acts Mephistophelian; he recites poetry and handles animals in a way which makes his association with the spirit world clear; he is a seducer of women—in fact announces to the husband of the heroine that he intends to seduce her; he is a charming yet fearful figure capable both of great tenderness and violent rages in which he kills; he attracts particularly young girls searching for the ideal "dark" lover—in this case fatally a young girl whom he discovers too late is his own daughter. So in the end he can safely go on being the "demon" lover only by dying and returning to the spirit world, from whence he came.[13]

So he is then doubly associated with death—as a killer himself and as someone whose own death is the climax of the movie—a death which ennobles and purifies his love for his daughter and her mother, since he deliberately chooses to die, or to "live on" in the hearts of the women he loves as a spirit lover, in other words as Harlequin. It is a mark of the influence of psychoanalytic

thinking on art in our day that Harlequin—the illicit, good-bad lover—is here clearly identified as the father.

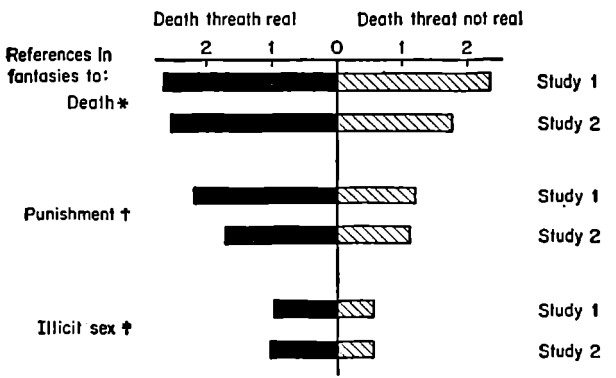
But it is time to move out of the world of myth and culture history and into the world of modern empirical science. What our explorations have demonstrated is that the notion of death as both attractive and repellant, as a lusty but evil seducer of women, is by no means of recent origin, at least in the West. It is an important enough human experience to be well represented in myth and story, most commonly in the form which we have called the Harlequin complex. But if it is a common experience, then women who are dying should have two opposite but related fantasies—negative ones like the "dark" scenes in the harlequinades representing hell, horror and punishment for being bad, and more positive ones like the scenes in which Harlequin is chasing Columbine in a tale of seduction and illicit love. Such an hypothesis is specific enough to be checked by the methods of modern empirical psychological science. And Greenberger (1961) put it to the test very simply by collecting fantasies from women who were dying of cancer and comparing them with those of similar women hospitalized for minor illnesses. Since the findings of the first study were promising, she cross-checked them on another group of severely ill women to make certain the results were not due to cancer as such, but to the imminence of death.

Her procedure in all cases was to arrange through the hospital authorities to give some "tests" to women who were in bed in hospitals for various reasons. They were middle aged (average age around 45), largely lower class (since these were public hospitals), more often Catholic than Protestant, and had been in the hospital about a week on the average. Every attempt was made to maximize the differences between two groups of women in each of the two studies on the extent to which they were under sentence of death so to speak and to minimize the differences between them on everything else (age, religion, social class, length of stay in the hospital, etc.). That is, the cancer patients knew they had cancer, which is generally accepted as a fatal disease, and half of them were tested just before an operation. On the other hand

the control patients were hospitalized largely for minor surgical operations and were all tested postoperatively. In the second study it was difficult to find other diseases which are accepted as so fatal as cancer but the severely ill women (most of them with critical heart conditions) certainly must have been more aware at some level of the imminent possibility of death than their matched controls who were in the hospital for minor illnesses.

The major test given of interest here was a version of

Figure 1. Average frequency of selected themes in the fantasies of women who are and are not faced with imminent death (After Greenberger, 1961)



* Stories coded without knowledge of which women had told them.

† Some of the pictures used in Study 2 were different from those used in Study 1, so that the over-all frequencies of various themes need not be the same in both studies.

‡ Differences in both studies significant around $p < .05$ or better.

the Thematic Apperception Test in which the person is asked to tell imaginative stories to pictures. While most of the women protested that they were not very good at telling stories, they were all able to do so after some encouragement, and normally the critically ill women in particular were only too glad for some form of pleasant social interaction. The stories they told turned out to be quite different in the two key respects in which we are

interested, as shown in Figure 1. That is, the women for whom death was a real possibility thought *almost twice as often* about punishment and illicit sex as the women who were about to go home from the hospital after a minor illness. Interestingly enough the critically ill women did not repress thoughts of death: They spoke of it at least as often and possibly more often than women who were not so sick. Though Americans may deny the reality of death in public, these women at least did not (or were not able to) force it from their thinking.

But what were the stories like that were coded as containing themes of punishment or illicit sex? Obviously these women had a fairly low level of education and could not produce full-blown harlequinades on the spot, but in their own words they expressed the same ideas clearly enough. For example, one said:

> "Her husband could have come home on a drunk, beat her, threw her on the bed. . . . She had a boyfriend. . . . Her husband didn't care for that."

The fact that someone is beaten for what she has done is scored for *punishment;* the further fact that a married woman has a boyfriend is scored for *illicit sex.* Shades of the sinful old witch Luque who on her death bed didn't give a damn for her husband but called for Harlequin! Other types of illicit sex included unwanted pregnancy, seduction or abduction, "affairs" out of wedlock, adultery, etc. Here is an almost perfect statement of the rape of Persephone as told by a dying woman in the 20th century, who had almost certainly not read the story as it was first recorded 2500 or more years ago:

> "That man is there to take her away on his horse and she doesn't want to go. That's her mother. She doesn't want her to go."

Who is the man who wants to take her away? From the orthodox psychoanalytic point of view[14] he is obviously the incestuous love object, i.e., the father—the unlawful sexual partner. Perhaps some slight support for such an inference may be drawn from the fact that in both studies the difference in number of references to illicit sexual activity between the more and less critically ill women was greater for those who had no current

sexual partner (because they were single, widowed, or divorced) than for those who had a husband. In other words those who were dying who had husbands may have had less reason to refer back to the original love object—the father—since he had been replaced by another. But this evidence is at best quite indirect and open to other interpretations. So Greenberger (1961) tried another method of trying to track down the identity of the illicit lover. She reasoned that while the women would be unlikely to label him as a father or father-like figure, perhaps their longing for intimacy with the father would show up in more generalized references to *reunions* with him or even with the mother. The expectation was not borne out. The average number of references to reunion with parents was not significantly higher among the critically ill women than among other similar women who were not so sick.

There is little empirical support here for the psychoanalytic hypothesis that the illicit love partner is the father with whom reunion is sought. Perhaps the test of the hypothesis is not adequate, but it is difficult to think of one that would be better. In a sense, psychoanalysis does not need further evidence—the fact that a woman under such conditions thinks about an illicit sexual relationship with a man is enough: the man ought to be the father, from the theoretical point of view. But it is certainly more in line with scientific caution to regard his identity as unproved. So let us stick closer to the empirical findings and refer to him as Harlequin—the unknown seducer about whom women who are about to die dream more often than women who are in a hospital for a minor illness.

But a sceptic might interrupt at this point and ask whether we are not being too romantic—reading too much into a simple association between death and love which might characterize men as well as women and which might mean no more than that a human being about to die is likely to think of the pleasures of the flesh of which death is about to deprive him or her. Such an explanation is appealing in its simplicity but unfortunately it is not well supported by some other facts. Greenberger (1961) tried to check directly to see if there was an increase in narcissism (self-indulgence and

gazing at one's self-image in a mirror present in one of the pictures) in women who were about to die, but could find no evidence for it. The increase she found was specific to sexual activity—illicit sexual activity at that—and furthermore it was by no means described as pleasurable most of the time.

That still leaves the question open of what men might feel under similar circumstances. Might they not see death as an illicit sexual attraction for a woman—the mother? Unfortunately, Greenberger's study has not yet been carried out with men, but there is both cultural and empirical evidence that death has a different meaning for them. It is true that the image exists in myth and story of "La belle dame sans merci" who is waiting to take men away at their death, but she is hardly a seductive or thrilling figure the way Harlequin is for women. In fact she fits rather well with those images of death as a castrating figure which are in such common use in our male-oriented culture—e.g., the old man with the scythe who cuts people down.

A rather simple direct test of the hypothesis that men and women view death differently was carried out by asking random samples of 40 male and 38 female college students to rank order the following metaphors in terms of their appropriateness for describing death:

An understanding doctor
A gay seducer
A grinning butcher
A last adventure
A threatening father
A misty abyss
The end of a song

No significant differences appeared in the rankings by men and by women except for one metaphor—namely, "a gay seducer," the Harlequin image. It was not particularly popular with either sex, but significantly more women (66%) than men (40%) ranked it in the upper half of the distribution of ranks ($\chi^2 = 5.15$, $p < .05$). Even consciously women can see the possibility of death as a lover more easily than men can.[15] The one other point of interest in the results concerned the metaphor which was supposed to be preferred more by men—namely, "a grinning butcher." While there was no over-

all significant difference in the preferences for it between the sexes, seven out of 40 men (18%) put it in first place as *most* appropriate, compared with only one out of 38 women (3%). In short while the data are not extensive or by themselves enough to close the issue, they do lend support to the hypothesis that the association between death and illicit sexuality, discovered by Greenberger (1961), may be considered more characteristic of women than men. While the sceptic's doubts cannot be put wholly to rest, perhaps his alternative simpler explanation seems sufficiently questionable to permit us to follow the Harlequin theme to its conclusion.

To return to the stories told by critically ill women in Greenberger's study, what is the meaning of the increased number of references to punishment? Is the punishment and guilt over illicit sexual activity? Sometimes, but not always. For example, in the story quoted above the husband comes home and beats his wife for having a boyfriend. Here the woman gets directly punished for her illicit sexual activities. But actually the scoring categories are discrete. That is, references to guilt and punishment may have nothing to do with sex at all, e.g., "He's done something wrong and is being chastised" or "He killed her, and he looks regretful." All that one can legitimately conclude is that impending death increases the frequency with which women think about guilt and punishment, not over any particular type of wrongdoing, but over wrongdoing in general. In the more vivid imagery of the Middle Ages, they think more about hell, about the place or condition that symbolizes sin and punishment. Oddly enough, the Harlequin stories are similarly vague about who gets punished for what. The "dark" scenes take place in hell—there are plenty of demons about and references to condemned souls, but it is not always clear that the women who get taken there, like Luque or "Mother" Cardine, have to stay there or even get punished very much for their sins. The background is hell, the world of punishment, but as in these stories, the punishment does not always fall on the guilty lover, on the woman who may have betrayed her husband for Harlequin, or who may have been a prostitute in real life. It is as if the punishment and guilt have been displaced.

The themes are there all right—one cannot talk about devils and hell without suggesting punishment and guilt —but they are not openly and directly described as consequences of illicit sexual activities.

On the other hand, the very fact that the sexual activity is illicit suggests that something is wrong that might imply guilt or punishment. In a sense, all references to illicit sex might also have been scored under punishment by inference, but it seemed safer to stick to what the women actually said in their stories and to score for punishment only when they mentioned it. The point can be made clearer by an illustration. Here is a part of a story told by a woman dying of cancer:

> (Picture of couple embracing)—"I first thought it looks like he is enticing her, if he is a 'he,' but I don't like the theme of enticement. He is imparting some kind of message—a very special message. It has such an ethereal quality. He's telling—assuring her, that something is all right, but I'll be damned if I know what. What could it be? It looks like a romantic scene, but I'm trying to steer away from a romantic scene. This is a tough one. There is a third person concerned. I think maybe I will get back to romance. The third person is concerned, an illegitimate child that belongs to them. It was put in a home and lost to them for years, and finally they traced it, and it means a lot to them."

This is a pure case of what we mean by the Harlequin theme—the mysterious enticing stranger whose embrace represents illegitimate sexual union. With his special message of an ethereal quality, it is not hard to imagine that he is somehow connected with the death that is approaching this woman. But note that there is no guilt or punishment directly connected with the illegitimate child. Society might regard such a child as a "punishment," but for this woman the child is actually a reward —"it means a lot to them." But the same woman fills her other stories with guilt and punishment. For example, in the story just prior to the one already quoted, she says:

> (Man and half-naked woman on bed)—"Oh, your people are sad! I am not going to say he murdered her. He tried to, but he didn't. He's perfectly scared realizing he came darn near it. Mmm. We'll have a very common, ordinary story. He thinks she has someone she likes better. Just the same

old jealous fancy. He finds out later he was all wrong. He feels like shooting himself, but he doesn't."

Again the Harlequin theme. She might have betrayed him. But now both punishment and guilt are mentioned. He tries to murder her and then feels like shooting himself. But even here the retribution is not wholly appropriate: she didn't actually betray him and he feels guilty, not she. So just as in the harlequinades the stories of critically ill women more frequently center in two themes—one involving punishment and guilt, and the other illicit sexual pursuits. The two themes are not explicitly connected—in the sense that punishment and guilt are for illicit sexual activities—although, of course, it would not take much subtlety to infer that they are in fact implicitly connected. But there is no reason to be subtle. Let us stick instead to the simple factual conclusion that imminent death in women gives rise to associations of punishment and illicit sexual activities.

Having established such an empirical relationship, we can now turn it around and ask the diagnostic question. Does it follow that women whose fantasies are filled with references to punishment, guilt, and "illicit sex" are concerned about death? Such an inference is, of course, not logically permissible, but psychologically it may make good sense. At least in a number of other instances it has been found that, having established that a given state of the organism gives rise to characteristic fantasies, one can then make use of those fantasies to infer the state of the organism which normally gives rise to them. Since hungry subjects produce more fantasies about food shortages and means of getting food (Atkinson and McClelland, 1948), one can infer how hungry a person is from how often he writes about such things. Or even, more usefully, it has been found that experimental achievement pressure increases the number of story themes dealing with doing something well, so that the number of such themes appearing in the record of someone not under achievement pressure can be considered diagnostic of his concern for achievement (McClelland, *et al.*, 1953). So there is ample precedent for suggesting that the Harlequin complex—a concern with punishment and illicit sexuality in women—might be diagnostic of

the state of the organism that produced it—namely, concern with impending death. But how can such an inference be checked empirically?

Again a return to the late Middle Ages when Harlequin was so popular may be of help. It was also a time when the fear of witches was very widespread. Zilboorg's *History of Medical Psychology* gives a graphic account (1941, pp. 144 ff.) of the persecution of witches in Western Europe, which reached its height in the sixteenth century under the influence of the "witches' hammer," the *Malleus Maleficarum*, a treatise on witchcraft prepared by two priests to help people identify and punish witches. The characteristics of a witch were as follows: she was dangerous and could injure or even cause the death of another person with her magical powers; she was a sinner who had renounced God and was in league with the devil and his cohorts, with whom she had sexual relations; and, finally, she could not be cured but had to be killed to get the devil out of her. The point of interest to us here is that there was ample opportunity for the association of the three ideas with which we are concerned—namely, punishment, illicit sexuality, and death. The witches that were caught confessed: (1) that they were concerned with punishment, that is, with punishing others for real or alleged mistreatment of them and with their own punishment in hell for misbehavior, and (2) that they had sexual relations with devils. They were also obviously concerned about death in at least two important senses: they had "died" psychically when they left the world of reality, the Christian world, and joined up with the underworld of demons; and since burnings and hangings for witchcraft were common and well publicized, they must have had a realistic basis for expecting their actual physical death. In fact, one can even argue that the confessions themselves, filled as they are with tortured versions of the Harlequin complex, are the fantasies of women confronted with imminent death, since they knew that was the most probable outcome of the proceedings against them.

But Zilboorg adds a further and highly significant fact. Many of these women were certainly mentally ill, suffering from what psychiatrists would nowadays call schizo-

phrenia. In fact, if a woman started behaving in a peculiar way, showing the lack of touch with reality that schizophrenics usually show, she was very apt to be identified as a witch. But why? What gave people the idea that these peculiar women were witches in league with the devil? Probably there were many reasons, but one of them may well have been the content of the incoherent talk of such women. Both then and now, it contains a high frequency of references to illicit sexuality, and to crimes and eternal damnation. Since these are the key elements in the Harlequin complex, might we infer, using the logic suggested above, that schizophrenic women have a heightened concern with death? The hypothesis is an exciting one, though at first glance it may seem like a rather farfetched and certainly overly simple explanation of the complex symptomatology of schizophrenia. What arguments can be produced in its favor? First of all, in the sixteenth century, before the medical conception of mental illness was developed, men obviously thought that schizophrenic women (i.e., witches) were dead spiritually and should be put to death physically. They had died to the world of everyday reality, to the world of Christianity, and had gone off with spirits and demons in another world (like Luque in Bourdet's poem). In a certain very literal sense, their diagnosis was correct because schizophrenics behave as if they have left this life. The later medical conception of schizophrenia as an illness, much like a physical disease, tended to discount the talk and behavior of schizophrenics as "mere ravings" of no use in diagnosing what was wrong. That is, the mind was simply regarded as disordered, much as the stomach might be disordered, and the peculiar speech and behavior, like a stomach-ache, just showed the doctors that something was wrong without telling him exactly what it was. But if we go back to the premedical diagnosis, it may provide a clue as to what is wrong. Perhaps schizophrenic women are dead psychically, though their bodies go on living. Perhaps Harlequin has come and taken their souls to hell so that they are dead to this world, as medieval opinion had it.

In the second place, the by now well-studied *withdrawal* reaction of schizophrenics supports the notion

that they are acting as if they are dead to the social world, the normal world of human intercourse. In a recent review of empirical research studies on schizophrenia, Maher concludes (1964) "that schizophrenics appear consistently inferior—compared with normals—on tasks in which the stimuli are representative of human social interactions; where the stimulus material is of a nonpersonal kind, this inferiority is less consistent." In other words, they react normally to simple tests of sensory acuity or conditioning, but as the experiment itself requires more and more social interaction, or contains stimuli signifying human or interpersonal situations, the patient performs less and less well than a normal subject. He is socially withdrawn, or dead to the human world.

Finally, to return to the content of fantasies from schizophrenic women, it often does contain the increased number of references to illicit sexuality and punishment which, if our whole line of reasoning is correct, should be diagnostic of a concern with death. In other words, they not only behave as if they were dead, they have the fantasies they should be having if they were dying. Unfortunately, the definitive study has not as yet been carried out which would demonstrate that the fantasies of schizophrenic women in fact contain more signs of the Harlequin complex than fantasies produced by control subjects. So we must be satisfied for the time being with evidence from clinical investigations. Let us look at an actual case, selected to tell the Harlequin story in some detail, but by no means atypical among female schizophrenics.

French and Kasanin (1941) have summarized the case of a young female schizophrenic which is particularly useful for our purpose because she recovered and was able to give a fairly full account of her experiences. Most schizophrenics remain socially dead and are relatively uneducated anyway (see Hollingshead and Redlich, 1953) so that they cannot tell us very well what goes on. It is only those who return to social living who bring back the strange tales of what they experienced. The young woman in question was 24, a nurse, the youngest of eight children of Italian parents who had been originally Catholic

but were converted to Protestantism. She had a fairly normal childhood, "was well adjusted in school, was quite a leader and loved to play and take care of little children. She was a hard worker, had an excellent scholastic record and graduated from high school at eighteen." After this, she went on to become a very successful nurse. However, she was "brought up in a very rigid family discipline. . . . The patient was never allowed to go out with boys until she was twenty-two. Even then she had to be in by ten o'clock, and the mother interviewed every man she met. The patient was given a choice of a career or marriage. Inasmuch as she was interested in a career, the parents insisted that she have nothing to do with men" (French and Kasanin, 1941, p. 356).

Her real difficulties began "with an intimacy with her brother's friend, Tracy, who made urgent sexual advances to her. As she later confessed, she had refused intercourse with him only because she was menstruating, but had yielded to tongue kissing and probably to fellatio, which was very disgusting to her. Then she developed cankers in her mouth, became disgusted by everything she ate, and was sure she had syphilis." From then on, she was more and more disturbed, confused, unable to make decisions, depressed, suicidal, and paranoid. "She said that the police had tried to flirt with her and that she had been shut in a room with a policeman so that she would be compromised. When they tried to give her a sedative, she said they were giving her poison. . . . She called on God and announced that she was a sinner. She also mentioned the name of her brother's friend and said that she had been intimate with him" (French and Kasanin, 1941, p. 357). She grew steadily worse and was diagnosed a catatonic schizophrenic in a stuporous state with little chance of quick recovery.

"On admission to the State Hospital, the patient was mute and untidy. She grimaced, gesticulated, and mumbled to herself unintelligibly. At times she was overtalkative. For a long time she wandered about the ward, dirty, unresponsive, with a vacant, dull expression." In other words, she presented the classic picture of the schizophrenic withdrawal reaction, and she would undoubtedly have been classified as a witch in the sixteenth century,

particularly if it had been clear to others what was going on in her mind at the time. For in a retrospective account, she recalled:

> "I went through what I thought was positive hell. I believed myself to have been dead many years. I thought I had been so wicked on earth that I was not allowed to live on it any more and that only the good people were allowed to enjoy its luxuries. . . . to be really dead was my only craving. . . . if only I could have ended everything for myself" (French and Kasanin, 1941, p. 358).

Her experiences in hell were agonizing. She imagined that the doctors or visitors hated her, that she was kidnapped and taken to Italy, transformed into a snake, condemned by all for her sins. She even found the equivalent of Pluto, "I thought when my case was read that I was at a trial. I thought the superintendent of the hospital was a judge and that the people could not get out of the hospital. They were being suffocated. The world had stopped" (French and Kasanin, 1941, p. 360).

She also realized that though she was dead, people were trying to get in touch with her. "I heard my friends' and relatives' voices. They all wanted me to return home. I could hear them pleading with me. . . . I wanted to talk to her, but as I believed myself to have been dead I couldn't bring myself to do so . . . when my father came, I did not want him near me . . . because I had been dead. . . . The hydro was like a morgue to me. I felt they were reviving people who were dead" (French and Kasanin, 1941, p. 359).

Eventually people did get through to her. She rediscovered her identity, proving to her own satisfaction by certain scars on her body that she was really herself and not dead. However, her main improvement seemed to revolve around working through her sexual relationship with Tracy, which she went over and over in her mind endlessly. "Tracy always got awfully excited when he loved me. . . . I think he was in love with me. I think he liked me a lot, but he has other girls. He never talked seriously of marriage. He told me I was the woman, but I don't think he meant it. . . . he did many other things which were repulsive to me" (French and Kasanin, 1941,

p. 359). Clearly he was the evil seducer who had betrayed her into an illicit sexual relationship. The sexual desire he aroused in her apparently led her to fantasy that she was transformed into a snake. "The hairs of my head were each one changing separately into a snake. I, myself, was going to be a huge one. These thoughts sent shivers through me. It was horror again" (French and Kasanin, 1941, p. 358). Her illicit impulses horrified her. She was being devoured by her sexuality, symbolized by the snake. Yet she further imagined that the snake needed to be fed on a proper diet, and this came to symbolize her own cure. She eventually recovered from the attraction and guilt in her relationship to Tracy, and satisfied her sexual desires by falling in love and marrying another man: the snake (her sexuality) was fed on a proper diet.

What is so interesting about this case history is that it reads like a retelling in the dramatic language of schizophrenia of the classic Harlequin story. A demon lover seduces a woman into an illicit sexual relationship. He represents death, and she goes to hell, which is the world of eternal damnation and punishment for sin. Thus it is that Mother Cardine, queen of the prostitutes, of illicit sexuality, goes to hell and is condemned to live with Cerberus, the monstrous lover. But the story sometimes has a happy ending. Another lover comes and rescues her. He is Harlequin, too, in the sense that he is familiar with the underworld of wrongful sexuality, but he also belongs to the world of the living. He is clever and funny and doesn't take such a serious view of this world. We may assume that he and Columbine or Cardine live happily ever after just as our schizophrenic patient does with the new found and less horrifying lover who becomes her husband. Not always does the half-bad, half-good lover come to rescue the woman from real death or the living death of schizophrenia. And in a sense he cannot come at all to women who are dying of cancer, particularly those who do not have living husbands to replace the dark mysterious figure who is taking them away forever. Yet, in a sense, the deathly lover is better than none at all. He apparently provides some of the thrill that women feel at the approach of death—a

thrill which in normal women is compounded out of illicit attraction and fear of the consequences.

Among schizophrenic women, the thrill has passed over into the experience itself, into a kind of living death. The attractive force is too strong, and at the same time too sinful and horrifying to be coped with in any of the normal ways. The patient dies to the human world and gives herself up completely to the grip of the Harlequin complex. Like our schizophrenic patient, she is out of this world, in hell, where a cosmic battle goes on between her overpowering love for her seducer and her feelings of being sinful, guilty, and in need of punishment. Or to rephrase the struggle in terms of the drama of the Eleusinian mysteries she has "gone down," but is unable to "come up" for a variety of possible reasons: yielding has become a fearful thing, not the prelude to a fuller life. That is, the demon lover is in a sense the projection of her need to yield in order to fulfill herself. So he exerts a powerful attractive force. Yet at the same time he appears dangerous because he represents a sexuality that may be considered wrong or more seriously a surrender of consciousness or the self that may appear to threaten the central core of her being. In normal women the conflict is fairly readily resolved; they fall in love and learn more or less successfully how to fulfill themselves by only seeming to die in order to nurture and to create—less rather than more successfully in twentieth-century America where women too often try to pattern their lives after the male model which is quite different.

In schizophrenic women the conflict is too great; they get stopped in learning the lesson. Perhaps a better understanding of their dilemma can help resolve it. A Swiss existentialist psychiatrist, Boss, has described a case, for example, in which a female schizophrenic found her way out of the grip of the Harlequin complex essentially because the therapist helped her through a rebirth process so that she could "come up" again out of the pit. She was a gifted artist and supplied him with vivid drawings of the "personages" in the Harlequin drama (though he did not so identify them)—namely the dark Mephistophelian seducer (Hades) and the disapproving elderly woman (Demeter). She began to recover when she

played the role of a baby herself and what was more important began to draw pictures of beautiful, happy babies: symbols both of her own rebirth and of her revived capacity to nurture (she had been a highly intellectual, modern career woman).

So the thrill that many normal women feel at the possibility of death turns out to be a clue to a more profound understanding of feminine psychology—the small part of the iceberg that is visible above the water. For death stands for the demon lover—the symbol of a woman's own life urge which is expressed paradoxically in the thought of yielding or dying. He appears in many guises. We have called him Harlequin, which was his name in the Western world for a millennium. But whatever he is called, he has seduced many Columbines, both on the stage and in real life; he comes to comfort middle-aged women who tire of their husbands and to thrill older women nearing death when no mortal lover can take his place; and he has trapped many a wretched woman into a terrifying death while she is yet alive, a state which modern science has labeled schizophrenia.

Notes

[1] This is one of a series of reports of research on the diagnostic significance of variations in fantasy conducted at Harvard University under a grant to David C. McClelland by the National Institute of Mental Health. I am deeply indebted to Ellen Greenberger, who carried out the empirical research reported and who has discussed many of the ideas in the paper with me over a period of years.

[2] For example, Andrea Perucci wrote in 1699:

"Nascono, delle vallate bergamasche, delle genti semplicissime e ridicole, e chi le ha praticate in conversazioni non può negare che non siano graziosissime nelle sciocchezze, ed invero par che la natura le abbia fatte apposta per far ridere."

or Renato Simoni in 1932:

"Dai monti di Bergamo discese, appunto, Arlecchino, alla piana, e girò per il mondo." (Quoted in Leydi, 1958, p. 199).

It is amazing how often Harlequin's origin is attributed to the valley of Bergamo, Driesen's careful research and its citation in the Eleventh Edition of the Encyclopaedia Britannica notwithstanding. Some of Arlecchino's clownish characteristics in the *commedia dell'arte* did "descend from the Bergamese mountains" to the plains, but not his name, or his essential mythic

character. Dante's Alichino (Inferno, Canto 21 and 22), a demon to whom the Italian form of the word is sometimes traced, is the single known instance of the use of a similar name in Italian until early in the 17th century, when the Italian players had borrowed it from French tradition according to Driesen (1904). Dante of course could have gotten his term from the Latin form "Allequinus" used by Etienne de Bourbon in France toward the end of the 13th century shortly before Dante wrote the Divine Comedy, an hypothesis strengthened by the fact that the name was not used by other Italian authors subsequently (Driesen, 1904, p. 63, pp. 190 ff.).

[8] "Die Struwelfratze des Hölleneingangs, das Teufelsgesicht als Wahrzeichen der Höllenbewohner, ist nichts anderes als die vergrösserte Struwelfratze des Herlekin Narrenbeisser, des lustigen Teufels Adans de le Hale, ist nichts anderes als die vergrösserte Teufelsgrimasse der Herlekins des Etienne de Bourbon. Oder um es allgemein festzustellen:

"Der Hölleneingang stellt einen riesigen Herlekinkopf dar.

"Dieser Herlekinkopf führt selbstverständlich die beiden Name, die uns für den Begriff 'Herlekinkopf' vertraut sind: 'Struwelfratze' (hure) und 'Herlekinkappe' (chape de herlequin)" (Driesen, 1904, pp. 72-73).

[9] "In der fünften Nacht vor St. Peter,
Die man 'Winter unter dem Fels' nennt,
Legte sich Luque, die Verfluchte, zu Bett.
Und sobald der Tod ihr nahe kam,
Und sie die Gesundheit nicht mehr erlangen konnte,
Liess sie es Helekin wissen,
Entbietet ihm, er möge sich
Ihrer erinnern und sie holen kommen,
Sie wolle von ihm geheiratet sein:
Sie gäbe nichts, keinen Kuhwanst,
Auf ihren Ehemann Boutecareste;"
(German translation of the Old French text, from Driesen, 1904, p. 94).

[10] "Et Proserpine encor me fit l'amour;
et moi ie fis un tour
En iurant fort, morbieu Madamiselle,
Jamais n'ai veu une femme plus belle;
Je tirai ma scarcelle,
Disant 'M'amie ore suis ton mignon'" (Driesen, 1904, p. 258).

[11] "As-tu veu un larron
Plus subtil que ie suis, qui ay trompé ton maistre,
Toy et tous les demõs, qui sont dessous son septre:
Harlequin ie m'appelle, en qui or tu peux voir
Que les diables n'ont pas plus que moy de scauoir"

Harlequin's speech to Charon, on his way out of hell with the prostitute Cardine (Driesen, 1904, p. 254).

[7] For certainly Ganassa's troupe was presenting Arlecchino by 1574 in Spain. According to a Spanish historian, Don Casiano Pellicer, writing from documents on file in the Madrid library in 1804: "El mismo año de 1574 había en Madrid una compañia de Comediantes italianos, cuya cabeza y autor era Alberto Ganassa. Representaban comedias italianas, mímicas por la mayor parte, y bufonescas, de asuntos triviales y populares. Introducian en ellas las personas del Arlequino, del Pantalone, del Dotore" (Driesen, 1904, p. 229).

[8] He is usually described in Greek as πολυδέγμων, translated by Lang as "the host of many guests," which is accurate enough, though the meaning of the adjective doesn't get through to the English reader immediately, partly because he doesn't associate Hades with death as directly as a Greek would have. A paraphrase is better in English: "Death, who receives so many hospitably." The point is that Hades or death neither here nor elsewhere in the *Hymn* appears as the "grim reaper" of modern mythology. See the later discussion of Persephone's ambivalence about her seducer.

[9] "Un autre aspect de ce culte était funéraire, et le 'Dieu et la Déesse' en étaient les objets" (Humbert, 1951, p. 31).

[10] D. F. S. de A. for example describes bullfights in former times as follows: ". . . come favorite diversion de la nobleza, señalándose en la liza de los toros por su valentia, distreza y agilidad, muchisimos caballeros que eran los que cautivaban el corazon de las damas más principales" (1873, p. 55).

[11] El amor respetuoso para con las damas, en contraposicion al mezquino que hoy se tributa al oro ó á la afeminacion por los mas petulantes jóvenes, era correspondido en los que más arrojo, serenidad y fortuna demostraban en los campos de batalla, en los desafios con los moros, ó en la liza de toros, bien que los galanes correspondian con el desprecio de su vida en cambio de captarse una mirada benévola de aquellas á quienes rendian su corazon. . . . Qué cambio incomprensible en los descendientes de aquellas heróicas matrones. . . . En el dia las damas de alto coturno y de bajo escarpin se asustan del movimento del testud de un toro; entónces presenciaban, con el valor y la calma proprios de heroinas, aquellos rudos combates del hombre con el hombre ó con las fieras, dispuestas siempre á dar el premio ó retirar su cariño al ídolo de sus esperanzas, según su noble ó menguado proceder" (D. F. S. de A., 1873, p. 47).

[12] Cf., for example, "El Torito," part of the "Fiesta Veracruzana" in the repertoire of the Ballet Folklorico of Mexico in 1962.

[13] For a more sophisticated treatment of the same theme in the art film form see *Last Year at Marienbad.*

[14] Freud touches on many of the themes related to the Harlequin complex in two papers (1913, 1923), but as always he treats them from the male standpoint, which prevents him from reaching a clear understanding of the nature of death as it appears to women. The meaning of death to men is quite another topic deserving separate analysis and research.

[15] Unfortunately the interpretation is not so straightforward as one could wish because if the term "seducer" is considered male, no metaphor in the list is clearly female. Thus the men may not really have been given a chance to express a preference for a metaphor picturing death as an illicit female lover, e.g., as "a dangerous enchantress." This possibility does not completely undermine the interpretation of the finding given in the text because the term "seducer," like "lover," is somewhat ambiguous as to gender, but certainly one would wish for further evidence on the point.

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