

# Chapter One

## INTRODUCTION: DEPTH PSYCHOLOGY AND THE PROBLEM OF SCIENCE

### SCIENCE AND THE CORROSION OF TRADITION

*The problem of the relation between psychoanalysis and science is rooted in the way science has changed our understanding of our relation with the rest of nature. It can be understood only when viewed in the context of this change. In the past, human beings believed they stood apart in some fundamental way from nature. Modern science has undermined this dualist belief. The most important consequence of the decline of dualism has been the decline of faith in tradition and received wisdom and a corresponding increase in a critical attitude towards these things. In psychoanalysis and depth psychology this is reflected in the questioning of personal assumptions, prejudices, and convictions. The aim of this is to achieve a deepened level of personal emotional autonomy. Emotional autonomy is characterized by the capacity to live fruitfully by conditional values, that is, by values and aims that are always open to reexamination, rather than being dependent upon the idea of unconditional imperatives that are assumed to be inherently beyond question. The questioning of the scientific credentials of psychoanalysis in recent times has been motivated, in large part, by an unconscious wish to return to a more unconditional world and thereby to lessen the demands of autonomy. Its underlying aim is to argue that a scientific culture does not in fact impose this ethic of autonomy on us.*

Until at least relatively recent times, most human beings believed there was an essential difference between what went on in

their own minds and what went on in the rest of nature. In particular, they thought themselves to be motivated in some way clearly distinct from other animals. If they were asked to clarify that distinction, they would have been likely to say that human beings had the capacity to reason and the capacity to make moral judgements of right and wrong whereas other creatures lacked these capacities. Human beings had a reasoning soul, linking them to something divine, to something, that is, above and beyond the principles governing the rest of nature. Other creatures did not have such a soul.

There is no doubt how prevalent this view once was. All the most influential shapers of European moral thought endorsed it. From Plato and Aristotle in the ancient world, through to Descartes and Kant in more modern times, this view of the human animal has been the governing one, the official view, as it were. When Descartes claims that reason is "the only thing which makes us men and distinguishes us from the animals," he is speaking for this predominant tradition.<sup>1</sup>

In the last two hundred years or so, as we all know, this ancient consensus has broken down. The dualism that drew a clear distinction between human beings and the rest of nature has lost its governing role in Western thought. It has been displaced, of course, by the rise of modern science.

Whatever else it may be besides, modern science is the story of human beings pulling things apart to study more closely how they work. Driven by this impulse of curiosity, the sciences have taught us more and more about the role of necessity in events. More precisely, they have taught us how to describe ever more accurately the conditions behind events.<sup>2</sup> That is to say, they have taught us to describe events ever more carefully within the context of other events, rather than having to regard things as disconnected and therefore mysterious. Drawing ever wider and more intricate connections between things, the sciences have inevitably changed our sense of our own relation with nature. As we have learned ever more accurately to describe the conditions behind our experiences, we have seen ourselves drawn ever more deeply into nature. The idea that there is some fundamental disjunction between ourselves and nature has seemed ever more implausible.

Certain episodes in the history of the sciences have become familiar symbols of this deepening understanding of the conditions of nature, and of the deepening implication of human beings within nature. In the sixteenth and seventeenth centuries Copernicus and his successors showed there is nothing privileged about our physical home. It is only one of probably countless similar dependent stellar

systems. In the nineteenth century Darwin made plain there is nothing privileged about our organic nature either. We are just another branch on the tree of life. We fight for a place in the sun along with the other creatures. We have been made what we are by the long history of that fight, and in sickness and in health we are shaped still by the demands of organic competition. Seventeenth-century cosmology and nineteenth-century evolutionary theory are universally regarded as the two unequivocal success stories of science.

The conditional narratives of science like these have, however, been achieved at a particular price. It is not just that they have undermined the idea that human beings have a “free,” that is, a detached, unconditioned will guiding their thoughts and actions. When all is said and done this is a highly abstract idea and the general decline of belief in it has probably changed the behavior and experience of human beings little, if at all. The real, tangible price exacted by the sciences is to be found elsewhere. It is to be found in their relentlessly corrosive effect on the power of *received wisdom*. What the narratives of science have so greatly weakened, in other words, is the power of custom and tradition. This is the most important practical consequence of the fading of dualism, of the fading of the idea that there is some fundamental separation between human beings and the rest of nature.

It is not just this or that particular custom or tradition that has been undermined by science. Faith in tradition as such has been undermined.<sup>3</sup> Five hundred years ago, almost any idea that had the authority of long tradition on its side became by virtue of that fact more acceptable. Even a hundred years ago tradition could confer authority on an idea. What has changed is that now no idea—certainly no idea that aspires to scientific credibility—can successfully defend itself against criticism by resorting to the authority of tradition. From a historical perspective this amounts to a fundamental shift in human attitudes. For the first time in history, perhaps, we now feel under a positive obligation to question what is traditional, old and sacred. Science, in other words, has generated a new kind of ethical imperative: we must not be governed by tradition; instead, we must govern ourselves.

The divisions within ourselves created by this new obligation are deeper than we generally realize. In one way or another, we are all now at war with what we have inherited. And this is true not just of the larger historical traditions but also of the private customs and habits we have each personally inherited from family and home. Because this internal war of the spirit causes us so many stresses and

strains, older, more dualist ways of thinking about the world retain a continuing, though unconscious, appeal for us. To go back to a world where the critical spirit of science was excluded from our most personal valuations and experiences would be to go back to a world of significantly greater certainty, greater trust in precedent, and hence less intense inner conflict. The appeal of such a prospect is reflected in the widespread attempts in modern intellectual life to draw limits and boundaries for science. The arguments we have seen in recent times questioning the scientific status of psychoanalysis are one important part of this. One way or another, all these arguments about psychoanalysis and science have attempted to withdraw science from the personal life and confine it to the areas it occupied before Freud put pen to paper.

The debates in contemporary life about just where the legitimate boundaries of science are to be drawn are symptomatic of the fact that we are torn in our attitude towards science. We want the power that science promises. But in an inarticulate way we are anxious about losing what little remains of our traditions. We fear to lose these remains because it is from our traditions and customs that we take our sense of identity, our sense of who we are. Tradition gives us a sense of belonging in some particular place and, more important, to some particular community. This sense of belonging appears to be a vital part of human self-esteem and self-assurance. Perhaps this is because it is by adhering to traditions and customs that we have always preserved ourselves from the potential chaos of divergent inclinations within us, and prevented it from leading to paralysis. The less tradition there is to adhere to, the more we have to organize this potential chaos in a conscious and deliberate way ourselves. This organizing of potential chaos is the characteristic burden of modern life.

What we do not know is how far we can carry this process of sloughing off tradition. Historically, human beings have never been able to live in a creative way without traditions and it is not clear to what extent they can dispense with them without losing the power to be creative. The pressure which everyone is conscious of in modern life to make decisions for the shorter term only, at the expense of longer term objectives, is a reflection of the disappearance of larger, overarching traditions. This raises the possibility that as a culture, because of science, we may already face an erosion in our deeper creative capacity. If we do go on replacing what remains of our unexamined customs with scientific truth we cannot be sure what will become of our creative humanity, of our sense of self-worth, of our

sense of duty towards ourselves and towards others.<sup>4</sup> As we leave ever further behind a culture in which we were sure we were something special, we don't know how much of our sense of what it means to be human may yet have to be sacrificed.

It is questions like these and the fears that go with them that animate contemporary arguments about what science is and what its legitimate boundaries are. And they also animate the controversies over psychoanalysis. Freud carries the scientific spirit of inquiry into the realm of our most personal customs and traditions. In general, these are the customs we acquire as we interact with our immediate family as we grow up. Freud found a way of asking questions about these customs, and the conditions behind them, that is unmatched in its penetration. Some of the answers he made to his own questions are mistaken. Some of the answers later psychoanalysts and others have made to his questions have also been mistaken. But the questions themselves have proven so illuminating that we cannot now avoid asking them. Their very power, however, provokes the unconscious anxiety that they may rob us of what is left of our customs and the sense of identity we get from these customs. Fundamentally, it is this underlying anxiety that has made the controversies over psychoanalysis so intense, and often so unforgiving.<sup>5</sup>

The focal point for these controversies has been the question of the precise relationship between psychoanalysis and the rest of science. This should not surprise us. After all, if it could be shown that psychoanalysis was at variance with the tenets of science, this would invalidate, or at least seriously undermine, the challenge it poses to our personal customs. Most significant of all, it would mean that the spirit of science actually did not impose an obligation to question how our characters are shaped by personal experiences and early identifications. A deep, unconscious wish would thereby be satisfied: the wish that we can have a culture based on science, without the final threat to our sense of who we are.

The controversies we have seen over the scientific status of psychoanalysis are, therefore, ultimately about science itself, rather than psychoanalysis as such. They are about our hopes and fears from science and the divisions within us between the wish to push science to its limits and the wish to confine science for fear it undermines us. Properly understood, the arguments in recent times about the scientific status of psychoanalysis are only the most recent and overt manifestation of a conflict that has been brewing for a number of centuries. From at least the time of Copernicus, science has generated a conflict between a sense of obligation to truth and a

sense of obligation to tradition. To understand the modern arguments about psychoanalysis we have to bear in mind this wider historical context.

The conflict provoked with tradition by the rise of modern science is revealed most clearly in the attempts by philosophers after Copernicus to define science and trace its limits. Some of the most influential of modern philosophers, like Descartes and Kant for instance, sought to reconcile science with tradition by doing this. They tried to show that actually there is not a conflict between them. This is the psychological key to understanding their work and it is the key to understanding their influence: they tried to defuse a gathering crisis no one knew how to confront.

For Descartes in the seventeenth century the way to reconcile science and tradition was to make as unequivocal as possible the ancient distinction between mind and matter. Descartes conceives science as the mind's knowledge of matter, its knowledge of what it sees looking out through the windows of the soul onto the world. Presenting the problem as one of how we can know this world with certainty, he then argues that this knowledge actually depends upon the traditional certainties of faith in God. Without this faith, he insists, we could never trust our knowledge.<sup>6</sup> The unspoken argument in all this is that if science depends upon the traditions of faith, it obviously cannot be a threat to them.

For Kant, working a century and a half after Descartes, the way to address the conflict between tradition and knowledge was to argue that science is founded upon a series of highly intricate intellectual categories. These, he argued, are sealed off from the categories upon which rest morality and faith. According to this view, science is not a threat to faith, because science and faith inhabit entirely different intellectual worlds.<sup>7</sup>

Descartes and Kant did help to allay the unarticulated anxieties generated by the rise of modern science, for a time. But what they did not do was to help the development of a serious science of the human psyche. On the contrary, they argued, in effect, that such a science would be a contradiction in terms. According to their way of looking at the world, natural science simply cannot tell us anything essential about human volition and the traditions and customs that condition it. This viewpoint, implicit in Descartes, becomes explicit in Kant.<sup>8</sup>

A science of human volition finally did emerge, however, at the end of the nineteenth century, with Nietzsche and with Freud. Inevitably, it proceeds from presuppositions that are radically divergent

from those of the two great dualist philosophers. This is precisely why it is the ideas of Descartes and Kant that are still used, in a received form, to try to invalidate that science. We shall consider this a little more closely in the pages ahead.

Of course, there have been philosophers of a different intellectual temperament, philosophers like Hume, for instance, in the eighteenth century, or like Schopenhauer and Kierkegaard, in the nineteenth. Writers like these accept that the development of science does indeed entail the loss of ancient and fundamental assumptions about the nature of human beings and the human mind. In the view of thinkers such as these, we have to accept that human reason is not in fact "complete and entire," as Descartes maintains that it is.<sup>9</sup> "Nature will always maintain her rights, and prevail in the end over any abstract reasoning whatsoever," as Hume puts it in a powerful assertion of the monist position.<sup>10</sup> The implication is that the human soul is not immune from critical scientific scrutiny. On the contrary, just like everything else in nature, the processes of human thought and feeling are conditioned, and therefore must in principle be amenable to scientific exploration.

Such a realization, for a man of Schopenhauer's temperament, seems to offer only the despair of a world driven by a godless "will." If we are just the plaything of our natural passions, he concludes, the best thing is to live with as few passions as possible.<sup>11</sup> For others, like Kierkegaard, the only way to save a sense of what is sacred in man from being swept into the contingencies of nature is to uncouple the concept of the soul from rational argument altogether. For such a thinker, the soul can be saved now only at the price of a severance of the dialogue with science.<sup>12</sup> This is the position of existentialism which, of course, in one form or another has had a major impact on the thought of the last hundred years.

Hume, Schopenhauer, and Kierkegaard are very diverse thinkers. Even in their diversity, however, they are each closer to the spirit of modern depth psychology than are Descartes and Kant. They are so, because none of them pretends that there is not a profound conflict between science and the traditions of faith and morality. They square up to this conflict, while the dualists try to talk around it.

Nevertheless, perhaps their somewhat pessimistic reactions to the development of science are premature. Certainly, science is in the process of a major assault on all our received notions of what it means to be human, just as it has already revised all our received notions about material and organic nature. We know that science is in that sense clearing the ground. What we do not yet know is whether

we are going to be able to build something genuinely robust and fruitful on that cleared ground. Just possibly, however, out of this painful collision between knowledge and faith, there might yet emerge a new, healthier understanding of what it means to be human. Perhaps the soul can after all survive in a scientific world, perhaps even find new kinds of strength in it.

#### SCIENCE AND THE SELF

*Before Freud the sciences were esoteric, in that each science studied experiences that were accessible only to men who became specialists in that science. Freud changed this by making everyday, personal experiences which everyone shares for the first time the subject of science. He thus drew into science the problems of the self, of identity, of the soul. This has drawn the criticism of those who believe that the soul is a valid notion but one that has no place in science. It has drawn also the criticism of those who believe that the notion of the soul is a relic of a prescientific age and is in the process of being abolished by science. However, whichever of these two positions they adopt, the modern critics of depth psychology all revert to conceptions of science that reached maturity before the twentieth century. That is to say, they take their models of science from a time when the problems of the soul and the problems of science were still clearly separated out one from another. They deny, in other words, that the form of science itself may undergo evolution so as to include the soul.*

Science has been slowly changing our perspective on ourselves for many centuries. Until the nineteenth century, however, it was doing so in a way that was rather remote from the everyday concerns of most people. Freud changed this. He brought science home. Before him, the sciences were all more or less esoteric. They studied conditions behind experiences that were familiar only to very restricted groups of men who were practiced in those experiences. For instance, in the early seventeenth century Kepler wrestled to work out the mathematical formulas that describe the periods of the planets. As he did so, only a handful of men were familiar with the dimensions of the problem to be solved. To this day, the great majority of

us can only take on trust that it has been solved. In the nineteenth century, Darwin spent years trying to satisfy himself that competition really could account for divergent evolution. Again, only a relatively small group of people have ever been sufficiently familiar with the data to judge how well his theory actually works.

Freud developed a science that is not at all like this. He considered experiences that are familiar to everyone, experiences that do not require special skill or special instruments; they require only that one be human. He made science personal in a way it had not been before. Copernicus and Kepler, and Newton, and Darwin all made human beings reexamine the way they think about the world. Freud made them reexamine the way they feel about themselves. This is the most important reason psychoanalysis seems so anomalous among the sciences. Generally, it is the methods of psychoanalysis that are criticized as unscientific. Whole libraries have been written on how these methods fail to live up to the standards of science. But, ultimately, this is not the thing that makes it anomalous. The thing is that it studies experiences that are familiar to everyone, and not just to a community of specialists. The apparatus of the physical sciences and their esoteric reasoning are necessary to make possible remote and unusual regions of experience. In psychoanalysis these things are simply absent. Many of the familiar connotations we have come to associate with science—like the laboratory, the technical instrumentation, the sophisticated mathematics—never make an appearance in psychoanalysis.

A further problem that people encounter when they are asked to think of psychoanalysis as a science is that although the experiences psychoanalysis explains are familiar to everyone, the account it offers of the conditions behind those experiences is in many ways esoteric and difficult. Freud writes with great clarity, but his ideas are not as accessible as they can seem at first sight. The key ideas of psychological defense and displacement, for instance, are intricate, they have many ramifications, and they are not easy to understand properly. They require a significant degree of thought and learning. Freud thus explains intimate and familiar experiences with unfamiliar and demanding ideas. It is not comfortable to have one's most personal experiences treated in this way and this is a further reason why there is always a receptive audience for the claim that to proceed in this way is not scientific.<sup>13</sup>

Of all the sciences, psychoanalysis is the one that explores that region of experience that is most familiar of all—it is so familiar it does not even have an agreed name. We can refer to it as the "I," as

Freud often does. We can call it “the soul,” as Freud also does.<sup>14</sup> More simply, we can call it the region of the self. There is no perfect word to cover this region of the most intimate and familiar of everyday human experiences, which everyone shares.<sup>15</sup>

Studying the dynamics of this self, depth psychology views human beings wholly within nature, but wishes at the same time to do proper justice to the essential strangeness of human beings. This is a difficult intellectual position to maintain because it tends to draw the accusation either that one is hanging on to outmoded dualist notions—something that the soul, because of its long religious associations, can readily be portrayed as being—or, that one is naively applying science in an inappropriate way to human complexities.

These, in fact, are just the two directions from which Freud’s claims to science have always been criticized. They are criticized, first, by those who believe that the principles of science we have learned from the study of nature in the past are paramount. Critics who take this view maintain that these scientific principles must not be compromised by what they see as Freud’s misguided and premature efforts to accommodate the peculiarities of human beings within the sphere of science. They are criticized, second, by those who believe that faithfulness to the peculiarities of the human condition is the essential thing. These critics maintain that Freud is guilty essentially of a contradiction in terms in trying to describe those peculiarities within a framework that calls itself natural science. The first criticism can be regarded as positivist, the second as existentialist. Positivism maintains, in effect, that the soul is a fiction; it is something that will be replaced eventually by more scientific notions. Existentialism maintains, in contrast, that the soul has its own inalienable rights with which science simply has nothing to do. Both viewpoints, however, lead in practice to much the same result: the complex pathways of internal human conflict are effectively excluded from rational inquiry and investigation.

Psychoanalysis is precisely an inquiry into the conditions of internal human conflict. Specifically, it is an inquiry into what, for want of a better metaphor, is often called the “child” within the self. In psychoanalytic work, we are exploring the implications of Nietzsche’s dictum that *within nature, man is the child as such*.<sup>16</sup> This is the way we give expression to the exceptional place of the human animal in nature, while emphasizing that it is not exempt from nature.

It is important to underline at the outset one thing that the child within the self is not. It is not the historical or biological child of human infancy. The child within the self is, therefore, not to be

found in the memories of infancy. This mistake is the single most prevalent error in the critical literature on psychoanalysis, where repeatedly we find the unconscious misconstrued as forgotten childhood memory.<sup>17</sup>

The child within the self is a metaphorical expression for the inherently divided or fissured nature of human intention. Even into adulthood we are like children because we are torn perpetually between the need to find security and the need to grow. When we speak of the child within the self we speak of this perpetual suspension between the need for the security of custom, and the need to explore the limits of custom and to make something new. The child within is an expression of the intrinsically ambivalent nature of all our wishes along their entire length. Our wishes are always divided, always fissured, always equivocal.

In psychoanalytic science we consider human action and experience insofar as it is conditioned by this inherent fissuring in our intentions. We seek to make the self less afraid of its own ambiguities, and more able to take responsibility for governing them. The aim is to make the self stronger, more creative, less resentful, less dependent on fictitious certainties, and less addicted to the experience of suffering.

We are all nevertheless a little afraid, and some of us are significantly afraid, that we do not have the strength to bear responsibility for our own internal divisions and ambiguities. This is the underlying anxiety that science in general provokes in us. And it is the underlying anxiety that psychoanalysis in particular provokes in us. There are, therefore, powerful forces in each one of us at the personal level, and also in our culture as a whole, working against the scientific uncovering of our divisions and ambiguities.

As we have noted, the predominant intellectual tradition in Western thought has emphasized the separation of mind and nature, and has argued against the possibility of understanding our most personal experiences through the careful study of our intentions. In contemporary thought, this dualist tradition in philosophy continues to act in this way—that is, it functions as a defense against the anxiety of science. The long legacy of dualism continues even at this late stage to make respectable the wish to keep the searching, critical spirit of scientific inquiry away from ourselves. It serves to make respectable the wish to keep hidden the divisions within the self and thus avoid the difficult responsibility of being self-governing.

It does so through the old assumptions it helps to maintain about the relation between science and human life. These assumptions

were shaped originally by the philosophers after the Copernican revolution who tried to make sense of the emergence of modern science against the backdrop of traditional faith. The most influential of these philosophers, like Descartes and Kant, regarded it as axiomatic that science could not encompass human wishing and acting, at least not the essence of these things. To such thinkers it appeared to be self-evident that human volition belonged to the region of faith and morals, not to scientific investigation. Unconsciously, therefore, they conceived science in such a way that it fitted into this dualist framework. They portrayed science as something that can tell us about the world, but will not ask questions about our values and morality. These old assumptions about science are still quietly prevalent in many areas of modern thought and feeling. And it is precisely these old assumptions about science that have been drawn on by contemporary critics to question the scientific credentials of psychoanalysis and depth psychology.<sup>18</sup>

All those who question the scientific status of psychoanalysis point in support of their argument to versions of science that reached maturity before the twentieth century—above all, physics and evolutionary theory. The significance of these sciences in the context of the argument about psychoanalysis is that they do not tell us anything about our own wishing and acting and our everyday decisions and problems. In other words, they do not infringe the dualist principle of separating the study of what is human from the study of nature. Those who question the scientific status of depth psychology say, in effect, that these forms of science offer us authoritative models that we can use to judge anything else that claims scientific status. Obviously, if the criteria for science are drawn up in this way, depth psychology must fail the test. What we see here is how dualist assumptions condition contemporary intellectual debate, not in an explicit way, where they are open to criticism, but in an unconscious, covert way, where they evade criticism.

The important critical literature on psychoanalysis over the past thirty years or so can be understood only in this light. I have in mind here in particular the critiques of analysis such as those of Karl Popper in *Conjectures & Refutations* (1972), Frank Sulloway in *Freud: Biologist of the Mind* (1979), Adolf Grünbaum in *The Foundations of Psychoanalysis* (1984) and *Validation in the Clinical Theory of Psychoanalysis* (1993), and Richard Webster in *Why Freud Was Wrong* (1995). This literature draws on one or other variant of the old dualist perspective to try to invalidate the rational exploration of our fissured intentions. All of these writers profess to

know how a scientific psychology is to be defined, and all define it in such a way that the ambiguities in human intention are immunized from its exploration. Each of these writers defines scientific psychology in such a way that the problem addressed by psychoanalysis disappears from view. Each examines psychoanalysis as if the problem of psychic conflict and human ambivalence, the problem that defines it, did not enter into it. In place of an examination of this problem, we are given arguments about how science must not deviate from its past forms. For Popper and Grünbaum, this means psychoanalysis must be an application of the principles of physics. For Sulloway and Webster, it means it must be an application of the principles of evolutionary biology.

By undermining the certainties maintained by tradition and custom, science as a whole has increased the demands on each one of us to find our own equilibrium and balance. The weaker tradition and custom are, the less we can fall back upon them to organize life. These critical writers speak to our hunger for an escape from these demands imposed by a scientific culture. Their work expresses a nostalgic wish to return to a world before we stumbled into the labyrinth of the self, a world where more certainties were permitted.<sup>19</sup> Their work reflects a fundamental lack of faith in the human self. They are saying, not overtly but by implication, that if we do proceed with science and explore ourselves as we have explored other parts of nature, then we will cease to function creatively. We do not have, they say, the resources to live by self-governance. So we must hold on to those external imperatives that still remain to us from custom and tradition. This is the fear which, unconsciously, they express.

#### THE METAPHORS OF SCIENCE

*The human sciences have always looked to the successful physical sciences for guidance as to how to proceed. Positivists of the eighteenth and nineteenth centuries looked to Newton and later to Darwin as sources of precedent for human science. Modern-day positivist critics of psychoanalysis differ from their predecessors in that they use the arguments of old sciences not to see how it is possible to achieve new knowledge, but to try to invalidate knowledge we have already acquired. We might call this attitude "scientific monotheism." It is*

*characterized by the elevation of a single template for science as the only legitimate form that may be adopted. In contrast to these positivist critics, Freud never allows any single scientific analogy to dominate his thinking. He never allows himself to become the prisoner of any single scientific metaphor.*

The sciences of human motivation, like depth psychology, history, economics, social science, and so on, study the choices human beings make in life and, no less important, the feelings they have about those choices and the evaluations they put upon them. This distinguishes them from the physical sciences and from physical medicine. For these sciences of human motivation there has always been the difficulty of deciding what is the best way to describe the conditions behind human choices, because it is not self-evident just what that best way is.

There has always been a tendency for those who have faced this difficulty to look to the earlier physical sciences for guidance, since these sciences have been so successful. Instinctively, everyone feels that the older sciences of nature must contain the proper precedents for a successful science of the human.

In certain quarters, for instance, there has long been the hope that some way can be found of translating the form of Newtonian science into a basis for a successful human science. There have been perennial attempts to make human science "exact" science, especially for instance in economics, where there is scope for a lot of quantification. But this approach has never yielded anything like a unifying, "Newtonian" theory of human behavior. This failure exasperated, notably, J. S. Mill. He described the human sciences of his own day as "abandoned to the uncertainties of vague and popular discussion," and as representing a "blot on the face of science."<sup>20</sup> If we can account so successfully for the motion of the sun and the stars, he felt, surely we can find a way to account for ourselves just as precisely.

The hope of a human science modeled on physical science is still with us. One only has to look at the criticisms of psychoanalysis made by philosophers like Popper and Grünbaum. Positivists like these want to see the conditions of human experience described not in the way Freud describes them but in the way physicists describe the conditions of matter.

The Darwinian revolution provoked analogous hopes to those raised by the scientific revolutions of the seventeenth century. If Darwinian theory can explain something as difficult as evolution, the ar-

gument goes, then surely some elaboration of it must be capable of explaining human experience and action. This was the hope of the Social Darwinists of the nineteenth century. It is still the ostensible hope of critics of psychoanalysis like Sulloway and Webster. The substance of their criticism is the same as that of Popper and Grünbaum: The form of the narrative that psychoanalysis develops is the wrong form. For Popper and Grünbaum, Freud fails because his propositions are not like those of Newton and Einstein. For Sulloway and Webster, he fails because his propositions are not like those of Darwin.

Ostensibly, all these critics want to draw psychoanalysis in a direction that is more like older sciences. The real point of their criticisms, however, although they are careful to deny this, is that psychoanalysis fails because it cannot be drawn in this direction. Whatever they may claim to the contrary about wishing to improve psychoanalysis, or rescue it, their real aim is to invalidate it as it stands in Freud's work, and in that of his successors.

The arguments of these critics have received a lot of attention in recent times. This is not because they stand up to serious examination, or because they lead anywhere new, but because they manage to criticize Freud while at the same time appearing to be respectable from a scientific point of view. Newton, Einstein, and Darwin were all great scientists, and are universally revered. So, the argument runs, how could psychoanalysis fail to become more scientific by following them more closely?

The rhetoric here is powerful, but the reasoning is flawed. The flaw is that science does not develop by repeating its history. Newton, Einstein, and Darwin were all great scientists. One indication of that greatness is that each changed the form of science in his own field. No one would suggest that Darwin or Einstein would have been better scientists had they produced results more like those of Newton. This, however, is the obvious corollary of the suggestion that psychoanalysis itself should be modeled on the work of one of these earlier scientists.

The fact is that none of these other scientists is a particularly useful guide in the science of the human unconscious because, as it happens, they were not interested in the human unconscious. This point is so obvious one would think it hardly worth making. But the perennial calls for "Einsteinian" and "Darwinian" improvements to psychoanalysis show the truth is otherwise.

Essentially, and again unconsciously, the idea of improving psychoanalysis by making it conform to older sciences appeals precisely because it is impossible to fulfill. By imposing an impossible demand

on psychoanalysis, a demand that apparently has the authority of science behind it, the prospect is raised of an escape from psychoanalysis altogether. More precisely, the prospect is raised of an escape from the quintessentially modern burden of emotional self-governance. The unconscious appeal of the positivist critics of psychoanalysis is that of an appeal for a return to a time when our frame of reference for the self was not yet a conditional one, as in the time of Newton, and in the time of Darwin. The implication of their work is that science does not after all impose an ethic of autonomy on us.

The traditional weakness of positivism was that it always expected the sciences of the future to look too much like the sciences of the past. We simply do not know what forms science may yet manifest in the future. If we did, we would possess knowledge and not still be in search of it. Nevertheless, the argument of positivism that we should look to older models of science to develop newer ones like psychology should not in itself be dismissed. Setting up older sciences as authorities by which newer sciences are to be judged is a mistake, but using older sciences as guides and precedents to help us to work creatively in newer sciences is not. When we try to describe human beings in a scientific way it is often helpful to look to the precedents offered by other sciences. Everything hinges, however, on doing this in an appropriate manner.

We use the other sciences as a source of ideas for human science not because we expect the latter eventually to mimic the former, but for an altogether different reason. We have reached now the point in history where we have begun to understand that our investigations into nature have always been, unconsciously, an exploration of ourselves, strange as this may sound. Originally, we thought the sciences gave us objective statements about the world, that is to say, statements about the world as it would be independent of any human agent acting upon it. Now, we know that what the sciences actually give us is statements about our own relation with the world, and about our own capacities in the world. The sciences tell us how the world looks to the human eye and how it feels to the human hand. No matter how sophisticated they become that is all they tell us. "Know yourself is the whole of science," notes Nietzsche. "Only at the end of knowledge of all things will man have come to know himself. Because things are only the limits of man."<sup>21</sup> The history of science is the history of man's search for the limits of his own capacities. It is the history of his discovery of what he can do with the world and what the world can mean to an animal constituted with his particular purposes. The important thing is that

natural science is actually a human story, even though we usually forget to think of it in these terms.

What we also too readily forget is that all the sciences began by projecting familiar experience onto more remote and esoteric experiences. Science develops by assuming that the unfamiliar is like the familiar, and then seeing how far this assumption has to be modified. The sciences of the physical world developed by progressively refining analogies originally taken from more everyday events. The sophistication of modern science conceals this origin but the essentially metaphorical and anthropomorphic nature of all scientific knowledge has to be remembered.<sup>22</sup> It is because of this anthropomorphic quality of our knowledge of the natural world that, in developing human science, we are quite justified in borrowing back analogies from the physical sciences, provided that we do not forget that they are analogies. This is the way in which the natural sciences do indeed offer us precedents for the human sciences.

The most important anticipation of the way Freud borrows back scientific analogies can be found in the work of Goethe. Goethe points out that the terms we use in the physical sciences reflect a fundamental, though concealed, anthropomorphism. As he remarks, "Man never grasps how anthropomorphic he is."<sup>23</sup> This insight was not unique to Goethe but he was ahead of his contemporaries in perceiving the possibility of reappropriating the terms of the physical sciences as metaphors for human behavior. His most significant experiment here is his novel *Elective Affinities*, dating from 1809. *Elective Affinities* tells how the relations between a husband and wife are altered by the arrival in their household of two acquaintances. Erotic and destructive energies between the couple are released and recombine together in new forms as they form attachments with the new arrivals. Near the beginning of the book the characters compare what is happening between them to the dissolution and recombination of chemical compounds—hence the title *Elective Affinities*. The details of the novel do not matter here. What is important is the insight underlying it. Goethe himself makes explicit what this is: "In the doctrines of nature we very often use ethical similes in order to bring closer something that is far distant from the circle of human knowledge. Therefore, in a moral case, I wanted to return a chemical simile to its spiritual origin. All the more so, since there is assuredly only one nature everywhere. And through even the realms of cheerful free reason the tracks of a more somber, passionate necessity ineluctably run."<sup>24</sup>

Goethe is not suggesting here that the study of human activity can be made into a branch of physical science. He is saying something more subtle: that the development of knowledge everywhere depends upon the use of analogies and metaphors, and that the physical sciences now offer us a new source of analogies for describing what happens between human beings, a rival source to that traditionally offered by religious teaching and the morality that goes with it.

And it is just in accordance with this insight that Freud proceeds. No one has more effectively employed the other sciences as sources of metaphors for psychology than did he. It does not follow, however, as our clumsy modern positivists imagine, that he aspired to be a Newton or a Darwin of the mind, in any literal sense.

Freud is highly eclectic in his use of analogies from the sciences. He takes one up and then he drops it again, depending on how useful he finds it for illustrating any particular point.<sup>25</sup> There are, of course, Darwinian analogies throughout his work. For instance, he views the mind as an organic entity, and as an entity that is shaped by its evolution. If one searches hard, there are even a few Newtonian (or rather, Galilean) analogies. In chapter seven of *The Interpretation of Dreams*, he draws an analogy between mental mechanisms and the structure of a telescope, the suggestion being that wishes are bent and distorted through the levels of the unconscious just as light beams are refracted by a series of lenses.<sup>26</sup> It must be remembered, however, that some of his most significant analogies—for instance, the censor of dreams or, for himself, the archaeologist—do not come from the realms of physics or biology.

There are few pages in Freud's writing where he does not go to pains to show us what he is thinking of by an apt image which is easy to visualize in the imagination. Often, these images have physiological connotations. But his ability to describe clearly what are frequently very difficult abstract ideas should not be confused with an adherence to any simplistic conception of science. Freud was describing new truths about the psyche. To do that, he had no choice but to create new metaphors.<sup>27</sup>

What sets Freud apart from the positivist critics of the scientific form of psychoanalysis is that he does not become the prisoner of any particular scientific metaphor. It is he who uses the metaphor, not the metaphor which uses him. For Popper, for Grünbaum, for Sulloway, for Webster, in contrast, it is the metaphor which rules. For them, the objection to psychoanalysis is that it does not make the science of the self obedient to any single scientific metaphor.

In the science of the mind, however, as in every science, there is a point at which every analogy breaks down. As a source of analogy, no scientific precedent ever lasts us quite as long as we would like. If Freud had a genius for anything, it was for knowing the point at which every analogy and metaphor must be replaced by another. He notes, "In psychology we can describe things only with the help of analogies. There is nothing unusual in this, it is the same elsewhere. But we have to keep changing these analogies, because none lasts us long enough."<sup>28</sup> The positivist critics of the scientific form of psychoanalysis do not understand this. They want to make us dependent upon a single source of analogy, whether physics or Darwinism.

When we try to describe the intricate problems of the human self in a rational way, excessive dependence on one analogy, or on one restricted group of analogies, leaves us only with an unnecessary handicap. Of course, it may allow us to purchase the look of scientific rigor and respectability. This is not, however, what we need. What we need is to retain intellectual freedom of movement so as to overcome the ever new ways we contrive of concealing our conflicts and anxieties from ourselves. Investing the expressions of old sciences with an ideal status and saying that our investigations must follow their form only, and no other, is one way that helps to rationalize such concealment. It gives us the appearance of endorsing science while at the same time allowing us to sidestep the creative responsibility science imposes on us to examine the way we live.

## SCIENCE AND CONSENSUS

*Science depends upon the exercise of the individual conscience in the face of received wisdom and consensually endorsed assumptions. This is exemplified in psychoanalysis itself when it is properly practiced. The positivist critics of psychoanalysis misrepresent scientific truth as being decided by consensus. At the same time, they misrepresent psychoanalysis as a process closed from external checks in which the analyst is free to impose an interpretation of history onto his patient. These distortions are motivated by the wish to deny that the ethic of autonomy, which is the ethic of psychoanalysis, is intimately connected with the rise of a scientific culture.*

Science is the most respected and feared of modern ideas. Indeed, it is the only universally respected and feared of modern ideas. We respect it because we want the power science promises. We fear it because we fear its corrosive effect on our customs and sense of identity. The philosophers of science like Popper and Grünbaum, who have criticized the scientific form of psychoanalysis, tap into and exaggerate these rather ambivalent feelings we all have in some measure about science.<sup>29</sup> These positivist critics endow science with an authority greater than it should be given, while at the same time making every effort to confine science to the regions it has occupied in the past. This exaggeration of the authority of science, together with the anxious wish to confine it, reflects a discomfort with the ethical imperative that goes with science, which is that of being able to take a critical attitude towards authority while at the same time taking a critical attitude towards one's own motives.

In a scientific culture, to be fully human we have continually to be willing to question our customs and habits so as to understand more clearly what may be destructive and inhibiting in them. We each have to try to master the customs we have inherited and try to develop them in as fruitful a way as we can. We have to find a fruitful way of maintaining the often very difficult balance between criticism of custom and preservation of it. More frequently than we would like, this balance breaks down and it degenerates into anxious enslavement to fruitless habits, along with despairing, self-punitive attempts to escape from them. As a therapy, the task of psychoanalysis is to help to restore this balance where it has been lost. It does this by strengthening within the individual the sense of uniqueness of the self and the duty to be true to this uniqueness.

In a scientific culture, those who are not comfortable with this personal ethos have a vested interest in denying its intimate connection with science. The wish to deny the scientific element in the talking cure comes from the wish to deny that this difficult ethic of autonomy, which is the heart of the talking cure, goes hand in hand with science. The positivist critics of analysis obscure this link by presenting a distorted picture both of science in general and of psychoanalysis in particular.

These critics distort science in general by exaggerating the part played in it by consensus and agreement. At the same time, they underplay the extent to which an essential condition of truth, in any field of science, is the readiness continually to question consensus. Consistent with this view of science, they portray the main concern of the analyst as being that of achieving the patient's agreement with