Chapter Four

MADNESS: BIOLOGICAL OR CONSTRUCTED?

I now turn to a quite different field of conflict, also couched in terms of construction. Mental illness provides the most pressing example.

It is easy to be skeptical about many of the entries in contemporary diagnostic manuals. How about Intermittent Explosive Disorder? Certainly, some people fly off the handle all too easily, but do they suffer from a mental illness, IED? Or is this just some construct concocted by psychiatrists? We suspect that IED has to do with medicalizing disagreeable patterns of behavior. It is easily argued that IED is not a diagnosis but a disciplinary device. If someone said that Intermittent Explosive Disorder is a social construct, I might wince at the overuse of social-construct talk, but would understand roughly what was meant.

Other mental illnesses are what I call transient. I do not mean that they last only for a time in the life of an individual. I mean that they show up only at some times and some places, for reasons which we can only suppose are connected with the culture of those times and places. The classic example is hysteria in late-nineteenth-century France. There is multiple personality in recent America. There is anorexia—of which young women can die—which is quite local in its history; at present it is more virulent in Argentina than anywhere else. It is all too tempting to call these social constructs.

Here I will not discuss transient mental illnesses, which I examine, in a very different way, in my book *Mad Travelers* (Hacking 1998a), nor will I discuss the disciplinary diagnoses such as Intermittent Explosive Disorder. Instead, I will examine illnesses such as schizophrenia and conditions such as mental retardation. These, it will be said, contrast strongly with anorexia, in that they have been with the human race in

most places and times. There are no mental retardation epidemics in Argentina, even if the various words used to describe the condition, such as "feeble minded," were used only at a specific time and place and very strongly reflect social attitudes and institutional practices. The name "schizophrenia" was invented only in 1908. So what? These are "real" illnesses or conditions. And yet, and yet, there is a minority that will say that these disorders—and not just our ideas about them—are social constructs. Very often arguments are expressly put as: *X* is real—No, *X* is constructed.

It is not only the "constructed" that confuses us here, but also the "real." Hilary Putnam (1994, 452) hit the nail on the head, when he wrote about a "common philosophical error of supposing that 'reality' must refer to a single super thing, instead of looking at the ways in which we endlessly renegotiate—and are *forced* to renegotiate—our notion of reality as our language and our life develops." One of the reasons that we become confused in debates about whether an illness is real or not is that we fail to attend carefully enough to the grammar of the word itself (cf. J. L. Austin 1962, 72; Hacking 1983, 47; 1995, 11). But in the special context of mental illness we have, for the past two centuries, been constantly renegotiating our notion of reality.

"Social construct" and "real" do seem terribly at odds with each other. Part of the tension between the "real" and the "constructed" results from interaction between the two, between, say, child abuse, which is real enough, and the idea of child abuse, which is "constructed." But that is not all. We can also confuse more complex types of interactions, which make some people think of antique dualisms between mind and body. These come out most clearly when we turn to the very habitus of mind and body, psychopathology. Most present-day research scientists take schizophrenia to be at bottom a biochemical or neurological or genetic disorder (perhaps all three). A minority of critics think that in important ways the disease has been socially constructed. I do not want to take sides, but to create a space in which both ideas can be developed without too much immediate confrontation—and without much social-construction talk either.

What difficult terrain we enter! One of the reasons that I dislike talk of social construction is that it is like a miasma, a curling mist within which hover will-o'-the-wisps luring us to destruction. Yet such talk will no more go away than will our penchant for talking about reality. There are deep-seated needs for both ideas. Nothing I could say would

discourage anyone from talking either about reality or social construction. Hilary Putnam, just quoted, said something very useful, but it is not going to change the way that even those who read him talk about reality. So instead I shall suggest some other ways to think about questions posed by the ideas of social construction—and reality. There are many difficult questions to address, so it is good to start with something relatively easy to follow.

CHILDREN

The distinction between objects and ideas is vague but should by now be easy enough, even if there are many subdistinctions of some subtlety. Yet this basic distinction conceals a very difficult issue. The trouble is that ideas often *interact* with states, conditions, behavior, actions, and individuals. Recall Philippe Ariès's well-known *Centuries of Childhood.* In the wake of that book, childhood has been called a social construct. Some people mean that the idea of childhood (and all that implies) has been constructed. Others mean that a certain state of a person, or even a period in the life of a human being, an actual span of time, has been constructed. Some thinkers may even mean that children, as they exist today, are constructed. States, conditions, stages of development, and children themselves are worldly objects, not ideas.

Thus it may be contended that children now—take two small individuals named Sam and Charlie-boy—are different from children at some other time, because the idea of childhood—the matrix of childhood—is different now. It may be argued that the state in which Sam and Charlie find themselves now is different from what it was for their ancestors, or even their mothers, Jane and Rachel, when they were very young. Conversely, the idea of childhood may have changed from what it was long ago, if children now are different from children then.

To use a less grand example than the whole of childhood, there has been a historical succession of ideas: fidgety, hyperactive, attention deficit, and Attention Deficit Hyperactivity Disorder.[1] Perhaps the children to which these terms have been applied over the course of this century are themselves different. Perhaps children diagnosed with ADHD are different from the children once called fidgety—in part because of the theories held about them, and the remedies that have been put in place around their bad habits. Conversely, it may be that the resulting changes

in the children have contributed to the evolution of ideas about problem children. That is an example of interaction.

I want to focus not on the children but on the classification, those *kinds* of children, fidgety, hyperactive, attention-deficient. They are *interactive kinds.* I do not mean that hyperactive children, the individuals, are "interactive." Obviously hyperactive children, like any other children, interact with innumerable people and things in innumerable ways. "Interactive" is a new concept that applies not to people but to classifications, to kinds, to the kinds that can influence what is classified. And because kinds can interact with what is classified, the classification itself may be modified or replaced.

I do not necessarily mean that hyperactive children, as individuals, on their own, become aware of how they are classified, and thus react to the classification. Of course they may, but the interaction occurs in the larger matrix of institutions and practices surrounding this classification. There was a time when children described as hyperactive were placed in "stim-free" classrooms: classrooms in which stimuli were minimized, so that the children would have no occasion for excess activity. Desks were far apart. The walls had no decoration. The windows were curtained. The teacher wore a plain black dress with no ornaments. The walls were designed for minimum noise reflection. The classification *hyperactive* did not interact with the children simply because the individual children heard the word and changed accordingly. It interacted with those who were so described in institutions and practices that were predicated upon classifying children as hyperactive.

INTERACTIVE KINDS

There is a big difference between quarks and children. Children are conscious, self-conscious, very aware of their social environment, less articulate than many adults, perhaps, but, in a word, aware. People, including children, are agents, they act, as the philosophers say, under descriptions. The courses of action they choose, and indeed their ways of being, are by no means independent of the available descriptions under which they may act. Likewise, we experience ourselves in the world as being persons of various kinds. To repeat a quotation from the start of Chapter 1, it is said that "the experiences of being female or of having a disability are socially constructed" (Asche and Fine 1988, 5–6). That

means, in part, that we are affected by the ways in which being female or having a disability are conceived, described, ordained by ourselves and the network of milieus in which we live.

Here I am concerned with kinds of people, their behavior, and their experiences involving action, awareness, agency, and self-awareness. The awareness may be personal, but more commonly is an awareness shared and developed within a group of people, embedded in practices and institutions to which they are assigned in virtue of the way in which they are classified.

We are especially concerned with classifications that, when known by people or by those around them, and put to work in institutions, change the ways in which individuals experience themselves—and may even lead people to evolve their feelings and behavior in part because they are so classified. Such kinds (of people and their behavior) are interactive kinds. This ugly phrase has the merit of recalling actors, agency and action. The *inter* may suggest the way in which the classification and the individual classified may interact, the way in which the actors may become self-aware as being of a kind, if only because of being treated or institutionalized as of that kind, and so experiencing themselves in that way.

INDIFFERENT KINDS

The word "kind" was first used as a free-standing noun in the philosophy of the sciences by William Whewell and John Stuart Mill, some 160 years ago. Here I use it to draw attention to the principle of classification, the kind itself, which interacts with those classified. And vice-versa, of course, it is people who interact with the classification.

There can be strong interactions. What was known about people of a kind may become false because people of that kind have changed in virtue of how they have been classified, what they believe about themselves, or because of how they have been treated as so classified. There is a looping effect.

I have not defined "interactive kind," but only pointed. Kinds that are the subject of intense scientific scrutiny are of special interest. There is a constant drive in the social and psychological sciences to emulate the natural sciences, and to produce true natural kinds of people. This is evidently true for basic research on pathologies such as schizophrenia and autism, but it is also, at present, equally true for some but only some

investigators who study homosexuality (the search for the homosexual gene) or violent crime (is that an innate and heritable propensity?). There is a picture of an object to be searched out, the right kind, the kind that is true to nature, a fixed target if only we can get there. But perhaps it is a moving target, just because of the looping effect of human kinds? That is, new knowledge about "the criminal" or "the homosexual" becomes known to the people classified, changes the way these individuals behave, and loops back to force changes in the classifications and knowledge about them.

The notion of an interactive kind is fuzzy but not useless. Plenty of classifications differ fundamentally from any of the human kinds just mentioned. Quarks are not aware. A few of them may be affected by what people do to them in accelerators. Our knowledge about quarks affects quarks, but not because they become aware of what we know, and act accordingly. What name shall we give to classifications like that? Too much philosophy has been built into the epithet "natural kind." All I want is a contrast to interactive kinds. *Indifferent* will do. The classification "quark" is indifferent in the sense that calling a quark a quark makes no difference to the quark.

Indifferent does not imply passive. The classification *plutonium* is indifferent, but plutonium is singularly nonpassive. It kills. It exists only because human beings have created it. (That is not quite true: it was once thought that transuranic evolution had never, in nature, got to plutonium; in fact natural plutonium has been identified). Plutonium has a quite extraordinary relationship with people. They made it, and it kills them. But plutonium does not interact with the idea of plutonium, in virtue of being aware that it is called plutonium, or experiencing existence in plutonium institutions like reactors, bombs, and storage tanks. So I call it indifferent.

Microbes, not individually but as a class, may well interact with the way in which we intervene in the life of microbes. We try to kill bad microbes with penicillin derivatives. We cultivate good ones such as the acidophilus and bifidus we grow to make yogurt. In evolutionary terms, it is very good for these benevolent organisms that we like yogurt, and cultivate them. But some of the malevolent ones do pretty well too. Disease microbes that we try to kill may as a class, a species, respond to our murderous onslaught. They mutate. There is some evidence for what is called directed mutation. Under environmental stress, such as lack of edible food (lactates) that can be ingested by the microbes in a

culture, the microbes mutate in a nonrandom, species-beneficial way so that they can feed. Maybe that is how disease microbes so quickly become resistant to our poisons.

Long ago Mary Douglas (1986, 100-102) saw the drift of where I was going when she read a draft of my essay (1986).[2] Do not microbes adapt themselves to us, quickly evolving strains that resist our antibacterial medications? Is there not a looping effect between the microbe and our knowledge? My simple-minded reply is that microbes do not do all these things because, either individually or collectively, they are aware of what we are doing to them. The classification *microbe* is indifferent, not interactive, although we are certainly not indifferent to microbes, and they do interact with us. But not because they know what they are doing.

NATURAL KINDS

When philosophers talk about natural kinds, they take the indifference—in my technical sense—of natural kinds for granted. That is to be expected. At the end of this chapter I shall make heavy use of the natural-kind philosophy and semantics that we owe to Hilary Putnam and Saul Kripke. Their innovative ideas were, in one respect, very conservative. They are part of a tradition that reaches back into the industrial revolution, when William Whewell and John Stuart Mill put the idea of natural kinds into philosophical circulation. At that time, more than ever before in human history, the distinctions between humans and nature, minds and matter, took a distinctive turn. The earth became covered by active machines, made by and tended by people, but running more or less on their own, thoroughly active and somewhat autonomous. In the seventeenth century, mechanical watches and an automatic clock on the spire at Strasbourg had moved philosophers to flights of fancy. But those devices *did* nothing. They were semantic; they were signifiers; they told us the time. In the early nineteenth century, the steam engine at the pit head, the steam locomotive, the spinning jenny accomplished unimaginable feats.[3]

Nature, despite the way that Romantics were fascinated by the sublime and the wild, continued to be thought of as passive, at least in the laboratory. Nature was acted on by us, and now by our creatures, the machines. Hence the concept of the natural kind came into currency, as

something indifferent. The things classified by the natural-kind terms favored in philosophical writing are not aware of how they are classified, and do not interact with their classifications. The canonical examples have been: water, sulphur, horse, tiger, lemon, multiple sclerosis, heat and the color yellow. What an indifferent bunch! None is aware that it is so classified. Of course people and horses interact. Black Beauty and Flicka were (fictional) horses that attended to the humans who loved them, who in turn attended to the horses they loved. In denying that *horse* is an interactive kind, I am not denying that people and horses interact. I am saying that horses are no different for being classified as horses. Indeed it will make a difference, in law and to a Shetland pony, whether ponies are classified as horses: but not because the ponies know the law.

Continua

More iconoclastic thinkers than the philosophers of natural kinds will argue that there is a continuum between indifferent kinds and interactive kinds. I sympathize, but suspect that there is less of a continuum than a lot of fuzzy edges. Or perhaps a number of different continua. What about Bruno Latour's (1993) conception of *actants,* or Kathryn Addelson's (forthcoming) notion of *participants?* What about Andrew Pickering's (1995a) attribution of agency to the material world of the laboratory and beyond, a world that resists us and to which we adapt? These ways of thinking will become increasingly popular in the future.

What about cyborgs? When the word "Cyborg" was first introduced (with a capital letter *C*) by two polymaths, Manfred Clynes and Nathan Kline (1960/1996), they meant a biological feedback mechanism that was not self-aware, attached potentially to human beings who were self-aware, and who thanks to the Cyborg would be more free to engage in thinking, exploring.[4] Cyborgs were planned to be truly indifferent kinds of things, attached to things of an interactive kind. Science fiction modified the word so that cyborgs became self-aware machine-human compounds. These are interactive. The distinction between the interactive and the indifferent holds up surprisingly well for cyborgs, both real and fictional ones. (Hacking 1998c). But I do not count on that situation continuing. George Dyson (1997) may persuade us that we are in the midst of a wholly new stage of evolution, in which artificial intelligence

becomes intelligent, in which machines are beginning to participate in evolution itself. Perhaps we will become aware of the ways in which machines are classifying us.

I am not yet obliged to answer questions that arise from this new movement of posthumanism. They are not pressing here, because in none of these questions is there enough of awareness to incline us to talk of interactive kinds. There is feedback, for sure, but not feedback in which self-conscious knowledge plays much of a role. For the purposes of this chapter, devoted to serious mental illnesses that are in our midst right now, we have no need to be futurists. When we get to the future, we will renegotiate our concepts as best we may, in ways that we cannot predict.

Natural and Social Sciences

Although I shall not develop the theme here, I do suggest that a cardinal difference between the traditional natural and social sciences is that the classifications employed in the natural sciences are indifferent kinds, while those employed in the social sciences are mostly interactive kinds. The targets of the natural sciences are stationary. Because of looping effects, the targets of the social sciences are on the move. This is a quite different ground of distinction than others that have been proposed. It has long been insisted that human sciences should not employ methods of the natural sciences, aiming at explanation and prediction, but should try to understand the human agents; *Verstehen* is the watchword in German. That doctrine is intended to replace the largely positivist social sciences of today by human sciences, with different aims and methods. My proposed distinction has nothing to do with that position. The *Verstehen* that enters my story is in the ways in which self-aware people who are the objects of the social sciences may understand how they are classified and rethink themselves accordingly.

PSYCHOPATHOLOGIES

A far more interesting issue is, what happens if something is both an interactive kind and an indifferent kind? Psychopathology furnishes obvious candidates. I do not want to insist on any one psychopathology, but will mention a range of cases. Each of them is to some extent a

dreadful mystery, a veritable pit of human ignorance: mental retardation, childhood autism, schizophrenia. It is true that childhood autism was diagnosed only in 1943, and that schizophrenia was named only in 1908, but there is a widespread conviction that these disorders are here to stay, and were with us long before they were named.

There are competing theses about these three examples. One type of thesis tends, speaking very loosely, to the constructionist camp. The other type tends, once again speaking loosely, to the biological camp. In the constructionist camp, these disorders are interactive kinds of illness. In the biological camp, they are thought of as indifferent kinds. Here is a very sharp instance of the fundamental tension between the "real" and the "constructed." I am attempting to address the felt tension with a less tired set of opposites.

We need to make room, especially in the case of our most serious psychopathologies, for both the constructionist and the biologist. That is not to say that I favor one or the other, only that I want spaces in which each can work, without interfering too much with the positive parts of the other's research programs. I shall begin by stating the constructionist attitude to three severe mental disorders.

Biolooping

First, a warning. We have contrasted indifferent and interactive kinds: conscious human beings may interact with interactive kinds of which they are aware. There is a substantially different phenomenon. It too may properly be called interaction, and I want at first to keep it quite separate from the looping effects that I have been discussing.[5]

Everyone knows that our physical states affect our sense of well-being. Many of us believe that our mental states may have some effect on our physical condition. We can learn how to control our nervous tension, or our heartbeat, by a mixture of mental and physical exercises. More crudely, when we think we are ill (or healing) we may become ill (or heal). Changes in our ideas may change our physiological states. Yoga is the technique that spans mind and body most conclusively, and serves as the model for notions of biofeedback. This phenomenon, which is well established but not understood, is distinct from the looping effect of interactive kinds. For lack of better nametags I shall call the mind/body effect *biolooping,* by analogy with biofeedback. The other is *clas-*

sificatory looping. I need the distinction because of course, in particular cases, both types of looping may be at work, and indeed mutually reinforce each other.

Biofeedback usually means a rather conscious control of organic processes, the way in which the master of yoga brings the heart to a virtual standstill. I wish to take in a larger canvas. Oncologists were startled when a team of researchers made a dramatic statistical observation about breast cancer. The prognosis for breast cancer patients who participated in support groups and who had a somewhat optimistic attitude to their illness was, in one large sample, dramatically better than the rate for patients who were resigned, depressed, and who did not work at achieving a better mood. We are talking a (claimed) difference of eighteen months of life added, on average, by mood. (Or is this a selection effect? The positive attitude might be the consequence of having a less virulent tumor in the first place.) This is not because of any mutual awareness between the tumor and the victim. It is true that some psychological approaches to cancer encourage the patient to visualize, become closely in touch with, the tumor, and sense how it reacts to being thought about. Who knows, that might be biofeedback, strictly understood, if it worked. Present studies show no more than that a positive mood and lifestyle are correlated with a better chance of healing or remission. This is not the conscious biofeedback of the yoga master, but it can be called biolooping.

Closer to mental illness, serotonin levels are now correlated with depressive states. An experimental study—not just statistical analysis—is possible. Take a class of patients diagnosed with depression, who improve under purely behavioral treatment. There is no chemical intervention whatever, only a type of psychobehavioral therapy. Results indicate that the serotonin levels of those who improve under such treatment are close to the levels in nondepressive patients, whereas before treatment serotonin was depleted. Once again, for convenience, I shall call this biolooping.

There is every reason to suppose that biolooping and classificatory looping could both be at work in some psychopathologies—and, who knows, in much of ordinary life as well. But first let me focus on classificatory looping. I briefly sketch both the constructionist and the biological attitudes to three terrible mental problems. I start with constructionist visions of each, and then pass to biological ones.

The Feeble Mind

On the construction side we have, for example, *Inventing the Feeble Mind* (Trent 1994), a book that shows how the seemingly inevitable classification, "retarded child," overlaps with and has evolved from a host of earlier labels: ill-balanced, idiots, imbeciles, morons, feeble-minded, mental deficients, moral imbeciles, subnormals, retardates. Each of these classifications has had its moment of glory. The populations singled out overlap markedly. Each label was thought of as a classification or subclassification that improved on previous ones. Each classification has been associated with a regimen of treatment, schooling, exclusion, or inclusion. Each has surely affected the experience both of those so classified and of their families, their schoolmates, their teachers. At various times in our history each classification has been an interactive kind. At the time that each classification was in use, it seemed somewhat inevitable, a perfectly natural way to classify children with various sorts of deficit. Yet when we see the parade of ungainly labels, we quickly realize that these classifications are highly contingent. Each reflects the medical and social attitude of a particular epoch. They could have been otherwise. Chapter 1 stated a background condition (0) for social constructionism: In the present state of affairs, *X* is taken for granted; *X* appears to be inevitable. (0) is well and truly satisfied here. Mental retardation seems like an inevitable concept with which to describe some human beings, but in fact it was an idea waiting for a social-construction thesis to happen to it.

What grade of social constructionism do we reach? Irony and reformism, certainly, but also unmasking: the idea of mental retardation (and all those other names just listed) being part of an ideology whose extra-theoretical function (Mannheim) was to control difficult children, divert them away from schools or school buses into institutions or regimens of treatment. And the retarded have fought back. Every public school in California is required to integrate a certain number of "special education" children into every classroom. This is a splendid example of ideas operating within an extended matrix. One very helpful accident for special education programs was the fact that President John F. Kennedy had a retarded sister, so he set in motion, long ago, federal programs that have ended up as special education in California.

California's programs provide a wonderful illustration of how inter-

active kinds work. First, the classification has become embedded in a complex matrix of institutions and practices wherein a certain number of children, designated in a certain way, must be assigned to every class, although they are also removed from the class for more individualized tuition. The regular teachers complain bitterly that the result is class disruption; the specially educated know how they are classified; they develop not only individual but collective new patterns of behavior. One can make a strong prediction that not only will the procedures be modified, but also the ways in which these children are classified will be modified because of the new kinds of behavior that have emerged.

These looping patterns also show up in the past. Those changes in terminology referring to retarded children were not the result of a better classification of individuals as pure beings-in-themselves, but reclassification of individuals in the light of how those individuals had altered, in the light of a previous classification and because of the theories, practices, and institutions associated with that classification. One regular refrain in the history of mental retardation is the claim that now we are getting to understand things—as if it were the same thing being understood all along.[6]

Schizophrenia

Or take schizophrenia. Here we have for example *Schizophrenia: A Scientific Delusion?* by Mary Boyle (1990) who, in her preface, avows that she is a social constructionist. Her subject is seemingly less amenable to such treatment than that of mental retardation. Instead of a string of sad and inapt labels for the people classified, moral imbeciles and all the rest, we have only a few neologisms made from Latin or Greek, *schizophrenia* and its precursor *dementia praecox*, and then classifications that no one today has ever heard of, such as *hebephrenia.* Once Eugen Bleuler had given us the name in the first decade of the twentieth century, it stuck.

As Boyle herself says, she concentrates not on schizophrenics but on those who diagnose schizophrenia. She recounts the history of this "kind" of patient. She notes stark mutations in the concept of schizophrenia. She claims that clinicians are often benignly unaware of them. She argues that the introduction, definition, and characterization of this theoretical notion fails to satisfy criteria of adequacy set out by C. G. Hempel, that most careful of logical empiricists. (And tells us, interest-

ingly, how some attempted and influential definitions were devised to deal with points made by Hempel himself.) She argues that psychiatrists, patients, families, welfare agencies, all "need" the idea of schizophrenia. Her conclusion, stated baldly, is that schizophrenia is a construct. Attempts to identify its etiology by neurochemistry are doomed. Schizophrenia is not a kind of disease. The motley of impaired individuals that at different times, and in different ways, have been handily lumped together as schizophrenics are not of a kind.

Schizophrenia, in short, is a scientific delusion. According to my grades of commitment, Boyle is at least a rebellious constructionist about schizophrenia. She wants to unmask and disintegrate. R. D. Laing and other leaders of the anti-psychiatry movement of a quarter-century ago were revolutionary. They were out there in the streets, the clinics, and the wards, trying to destroy and replace this very category of disease.

We need not embrace anti-psychiatry to realize that the classification as schizophrenic, and current attitudes to and treatments of schizophrenics, are matters of which the patients, for all their periodic deficits of logic and sense of reality, are intensely aware. More of them are more aware now than they used to be. This is because of the continually developing arsenal of psychotropic drugs that is already able to bring some semblance of ordinary life to more than half of those patients diagnosed with severe schizophrenia.

The medications make it easier for someone who is afflicted by such a mental illness to think of it as something "other," a thing, almost an agent that acts upon one. One's stupid, or gross, unfeeling, or simply crazy actions can then be blamed on the illness which has become an evil agent. Darin Weinberg (1997), accepting that "constructionist studies demonstrate the profound relevance of social processes to the emergence and assessment of mental disorders in various organizational settings," argues that "mental disorders, once assembled as meaningful objects of discourse and practice . . . exercise their own causal influence" on those who, in a social setting, suffer from the disorder. That would be yet another kind of looping effect.

Classification as schizophrenic affects the sensibilities of those classified in many ways. One of the reasons for the changing symptom profile of schizophrenia is, I suspect, that it is a moving target. There are certain rather widespread phenomena that often lead to the diagnosis of schizophrenia—auditory hallucinations, for example. But even the ways in which people diagnosed as schizophrenic describe these delusive

hearings have changed, and the content of the hallucinations has changed. Moreover, the role of hallucinations in the diagnosis of schizophrenia is itself mobile. The founding fathers, Emil Kraepelin and Eugen Bleuler, emphasized above all flat affect, and held that many mental illnesses are accompanied by hallucinations. Just before World War II, Kurt Schneider, intending to operationalize the concept, produced a list of some 12 First Rank Symptoms with auditory hallucinations top of the list. When First Rank Symptoms ruled the diagnostic yard, a lot more people became schizophrenic than would ever have made it in the wards of the Burghölzli hospital during Bleuler's reign.

I conjecture a remarkable looping effect here. Bleuler allowed fairly free expression of auditory hallucinations. They were not important; there were other aspects of one's life to come to grips with. He took hallucinations in stride and paid little heed to them. Hallucinations became ordinary, not to be worried about, neither to be the voice of God to be proud of, nor something to hide from the doctor. Hallucinations became so freely available, unproblematic, that schizophrenics said they had them. So Schneider made them almost a sine qua non of schizophrenia, and yes, they were, at that time. But then as schizophrenia passed from being a disorder that was somewhat in fashion to a diagnosis not wanted any more, flat affect came back, and hallucinations, in the most recent diagnostic manuals, are no longer key. The schizophrenic, as a kind of person, is a moving target, and the classification is an interactive kind.

Childhood Autism

My third example, childhood autism, bridges my first two. The name "autism" was invented by Bleuler to describe a characteristic family of symptoms in the group of schizophrenias. Adult patients lost the usual sense of social relationships, they became withdrawn, gave inappropriate responses, a phenomenon deeply disturbing to family and friends. Then the word "autism" was applied to some children previously regarded as feeble-minded, or even deaf-and-dumb. This was the result of Leo Kanner's many years of study of a quite small number of children. He published it in 1943. At that time the prevailing view, influenced by the (brief!) dominance of psychoanalysis in American psychiatry, was that the autistic child had a "refrigerator mother," one who could not express emotion to the child. This doctrine has by and large passed.

Similar if subtler notions do persist in some schools of psychoanalysis, for example, that of Jacques Lacan, in which childhood autism is still connected with problematic relations between mother and child at a critical stage of maturation.

Cognitive science now rules some roosts. Since autistic children have many linguistic and other deficits, theories of cognition may be invoked. A recent fashion has been to argue that the autistic child lacks a "theory of mind." A single ingenious experiment originally suggested by philosophers has spawned an experimental industry.[7] That is often the case in psychology, where new experimental ideas are as rare and as hard to invent as deep mathematical proofs or truly new magic tricks. But as with retardation and schizophrenia, there continues to be a substantial iconoclastic literature urging that autism is not something people just have, and that autism is no single disorder. Thus we read sentences like this: "Mental retardation is not something you have, like blue eyes or a bad heart" (AAMR 1992, 9). "Autism is the 'way people are' rather than 'a thing people have' " (Donellan and Leary 1995, 46).

Autism may seem problematic for my idea of an interactive kind. Autistic children by definition have severe problems of communication. So how can the classification interact with the children? Part of the answer is that they are in their own ways aware, conscious, reflective, and, in the experience of those who work with autistic children, very good at manipulating other people, despite their problems of lack of affect and rapport. But the example brings out that by interaction I do not mean only the self-conscious reaction of a single individual to how she is classified. I mean the consequences of being so classified for the whole class of individuals and other people with whom they are intimately connected. The autistic family, as we might call it—a family with an autistic child—was severely influenced, and some would say damaged, by the doctrine of the refrigerator mother. The subsequent changes in the family contributed to a rethinking of what childhood autism is—not because one found out more about it, but because the behavior itself changed. Most of the behaviors described by Kanner seem not to exist any more.

Indifferent versus Interactive

There is, then, not only a strong pull towards a constructionist attitude to many mental disorders, but also a great interest in what the classifi-

cations do to the individuals classified. One of the defects of social-construction talk is that it suggests a one-way street: society (or some fragment of it) constructs the disorder (and that is a bad thing, because the disorder does not really exist as described, or would not really exist unless so described). By introducing the idea of an interactive kind, I want to make plain that we have a two-way street, or rather a labyrinth of interlocking alleys.

There is obviously another side to this story. There is a deep-seated conviction that retarded children, schizophrenics, and autistic people suffer from one or more fundamental neurological or biochemical problems which will, in the future, be identified. It is not claimed that every person now diagnosed will have the same problem. In the case of schizophrenia, some researchers conjecture that there are at least two distinct disorders, one of which declares itself in late adolescence and is genetic, and another of which may not be inherited. No one maintains that mental retardation is a single disorder, but many believe that specific types of retardation have clear biological causes, to the extent that we can say these disorders simply are biological in nature.

Autism is instructive. There was a debate long ago between the anti-psychiatrist, Thomas Szasz, and Robert Spitzer, who as editor of the Diagnostic and Statistical Manuals has directed American psychiatric nosology since 1974. Szasz argued that MDs should treat only what they know to be diseases. Psychiatrists treat troubled people, but cannot identify any genuine medical conditions, so they should leave the treatment to healers, shamans, priests, counselors. Psychiatry is not a branch of medicine. Spitzer replied: what about childhood autism? We know it *must* be neurological in nature, but we have no idea what the neurology is, so we treat it symptomatically, as psychologists. Is it wrong for us as doctors to try to help autistic children just because we do not yet know the neurology?[8] He took this to be a knockdown argument.

We need not argue that nearly all children diagnosed with autism today have exactly one and the same biological disorder. We need only hold possible that there are a few (possibly just one) basic fundamental biological disorders that produce the symptoms currently classified as autistic. Imagine, however, that there is just one such pathology, call it *P,* and that in reasonable time, we discover what *P* is. A great discovery is reported: "Autism is *P.*" Optimists will say that we won't have to wait long. As this book goes to press in July 1998, the International Molecular

Genetic Study of Autism Consortium has just announced the first major linkage of autism to a region on a certain chromosome (IGMAC 1998).

There is a question as to what kind of entity *P* will prove to be. Imagine that in the future it is established that a certain set of genetic markers indicates an inherited biological mechanism producing a certain neurological deficit accompanied by biochemical imbalance. Is the pathology genetic, neurological, or biochemical? It is of no moment, to the present discussion, what sort of thing *P* is. Different hypotheses going the rounds involve a range of genetic, neurological, and biochemical conjectures. Medical science has not properly come to grips with how to classify pathologies which originate in different locations on a gene, work through interaction, produce a family of neurological (or whatever) deficits. There is handwaving in which such a pathology would be called a "biotype." For purposes of the present discussion, I leave the categorization of such conjectured pathologies to future medical science, which will have to negotiate the ways in which they are to be described. Let us posit that there is a pathology *P,* no matter how it will be identified.

By hypothesis the pathology *P* will be an indifferent kind. The neurogeno-biochemical state *P* is not aware of what we find out. It is not affected simply by the fact that we have found out about it, although of course our new knowledge may, with luck, enable us to intervene and either prevent or ameliorate the pathology. In more traditional jargon, *P* would be a natural kind.

The Bio/Psycho Choice

How can a kind be both interactive and indifferent? My difficulty must be distinguished from two others that are more familiar. Both are of immediate practical importance. First, the issue of *bio/psycho choice.* This is a question of treatment. Even though one may be firmly convinced that a disorder is biological in character, one may realize that the best way to treat it, at present, is psychologically. Classic figures reached this conclusion. Freud never gave up his biological, indeed mechanical, picture of the human mind and its discontents. Every neurosis was biological at bottom. But one could not treat the disorders biologically, and a psychological therapy was needed.

Bleuler is the better example, dedicating himself not to neurotic Vi-

ennese but to psychotic Swiss. He was totally committed to the organic basis of mental illness, yet selflessly dedicated to establishing personal and social relationships with schizophrenic patients. At a certain stage in his career, he lived with them night and day; visitors to the Burghölzli were amazed at the ways in which profoundly psychotic patients were able to live in consequence of Blueler's care. He believed in organic psychiatry, but practiced dynamic psychiatry. It helped them heal.[9]

Bleuler opted for psychological treatment, and might well have chosen it even if there were more effective biological treatments available in his day. This is a familiar matter of choice for every psychiatrist. Chemical treatment of the mentally ill is now very much cheaper than psychological treatment. So the pressure for chemical treatment is great, quite aside from the profits that venture capitalists and pharmaceutical companies stand to gain. In ideal circumstances, the bio/psycho choice today is a choice of emphasis rather than rigidity. In the case of depression, some physicians favor writing a prescription for a Prozac-style chemical, and merely monitoring usage. Others favor, for a few patients, purely psychological treatment. Most sensitive practitioners would like to be able to combine the two, using chemicals to ameliorate the worst symptoms, but working on the life issues that provoke unhappiness in the patient. That may be a happy outcome of the problem of bio/psycho choice, but it is a luxury for most clinicians in public service, for they do not have the time for intense psychological care of many clients.

An altogether different type of issue concerns causation. Some mental illnesses are widely believed to result from a basic neurological or biochemical abnormality, typically inherited. It is also thought that they are triggered by some event, possibly organic or possibly social, or possibly socio-organic ("stress"). This is not an exclusively late-twentieth-century view, but one long established in the annals of mental illness. The great neurologist Jean-Martin Charcot was sure that most mental illnesses, including hysteria and epilepsy, were inherited, but especially in the case of hysteria were triggered by life events. There was an ancient formula for expressing the idea: the distinction between predisposing and occasioning causes. Present speculations about the causation of severe mental illnesses such as schizophrenia fit perfectly into that old-fashioned mold: a bio-neuro-genetic predisposing cause, and some occasioning cause, a life problem, an accident, or whatever.

These remarks are an aside, to ward off a confusion I have encoun-

tered. The present chapter has nothing to do with bio/psycho choice or the predisposing/occasioning model. Both of course are relevant to the feeling that many kinds of mental illness are interactive kinds, and yet are also indifferent kinds. The clinician who takes a psychological approach may seem to regard an illness as interactive; one who takes a biological (e.g. chemical) approach does seem to regard it as indifferent. If you subscribe to the predisposing/occasioning model of a mental illness, the predisposing cause may be biological, indifferent, while the occasioning cause may be social, interactive. In both these cases, a tension is apparent, one of great importance in each case. But I am worrying at a different source of tension, more of a logical dilemma than a medical or clinical one.

A DILEMMA

Suppose that childhood autism is at bottom a biological pathology *P,* namely what has traditionally been called a "natural" kind and what I here call an indifferent kind. What then happens to the claim that childhood autism is an interactive kind? That is, a kind in which the humans classified may indeed change through looping effects, because of the ways in which the people classified react to being so classified? How can it be an interactive kind and also an indifferent kind?

This is one way in which to address an issue that troubles many cautious people, the idea that something can apparently be both socially constructed and yet "real." This is quite distinct from my clumsy attempt to argue that child abuse is both socially constructed and real. For there we can make a trifling distinction. The idea of child abuse (and the entire surrounding matrix) is socially constructed, while child abuse is real. Here we want to say both that childhood autism *is* (is identical to) a certain biological pathology *P,* and so is a "natural" kind or an indifferent kind. At the same time, we want to say that childhood autism is an interactive kind, interacting with autistic children, evolving and changing as the children change.

The pathology *P* causes havoc in the behavior, life, and emotions of conscious, judging, moral, aware, somewhat autonomous human beings, namely autistic children. But pathology *P* is, by hypothesis, not what it is in virtue of anything conscious, self-aware. The greater the role of fundamental genetics, of molecular identification in the pathol-

ogy *P,* the more people say that human genome is the place to look, then the more obvious it will seem that we are in the realm of indifferent, "natural" kinds.

Semantic Resolution

At this juncture, philosophers may like to think of childhood autism and the postulated pathology *P* in terms of the theories of reference advocated by Hilary Putnam (1975) and Saul Kripke (1980). The term "autism" is what they would call a natural-kind-term, analogous to the multiple sclerosis that Putnam long used as an example (even before working out his theory on the meaning of "meaning.")[10] If there is in fact exactly one definite biological pathology *P* underlying a broad class of autistic children, then the reference of the name "childhood autism" is *P.* Under this hypothesis, the name "childhood autism" is, in Kripke's terms, a rigid designator of a natural kind, namely the pathology *P.* In my terms, the pathology *P* is an indifferent kind, and "childhood autism" is the name of that kind.

Our difficulty then seems merely verbal. Yes, if there is precisely one neuropathology *P* underlying what we now call autism, then, in Kripke-Putnam semantics, the kind-term "childhood autism" rigidly designates that pathology. Shall we say that when Kanner coined the name "childhood autism," it referred to pathology *P*? Some would give him what Putnam calls the "benefit of the dubbed"—yes, he referred to *P,* even though he (like ourselves) had not the remotest idea what childhood autism really is, namely *P.*

Putnam's theory of meaning presents meaning as a vector, or ordered tuple. This vector is in most ways like a dictionary entry: part of speech, category, down through stereotype, but ending in an item no dictionary, or anything else, can ever present: the extension of the term being defined. That is, the class of things falling under the term, the class of things to which the term applies. In our example, the final entry in the meaning of "meaning" vector for "autism" is the pathology *P,* or perhaps all instances of the pathology *P.*

We can perfectly well keep Putnam's machinery, but suppose that in the Putnam-style meaning of "autism" (and of a great many other words) we put an enriched stereotype of childhood autism, the current idea of

childhood autism, accompanied by definite examples and descriptions of prototypical autistic children. So-called definitions of mental disorders commonly proceed by giving clinical examples prototypes. We need not now concern ourselves with details. In the vector for the meaning of "childhood autism" we should include both the current idea of autism—prototypes, theories, hypotheses, therapies, attitudes, the lot—and the reference, if there is one, namely the pathology *P.*

Now for the bottom line. Someone writes a paper titled "The Social Construction of Childhood Autism." The author could perfectly well maintain (a) there is probably a definite unknown neuropathology *P* that is the cause of prototypical and most other examples of what we now call childhood autism; (b) the idea of childhood autism is a social construct that interacts not only with therapists and psychiatrists in their treatments, but also interacts with autistic children themselves, who find the current mode of being autistic a way for themselves to be.

In this case we have several values for the *X* in the social construction of *X* = childhood autism: (a) the idea of childhood autism, and what that involves; (b) autistic children, actual human beings, whose way of being is in part constructed. But not (c) the neuropathology *P,* which, exhypothesi, we are treating as an indifferent kind, and which Putnam would call a natural kind. A follower of Kripke might call *P* the essence of autism. For us, the interest would be not in the semantics but the dynamics. How would the discovery of *P* affect how autistic children and their families conceive of themselves; how would it affect their behavior? What would be the looping affect on the stereotype of autistic children? Which children, formerly classified as autistic, would now be excluded, and what would that do to them?

What if there is no pathology *P,* or no P_1, P_2, and P_3? Childhood autism continues to be a good example. One author, who describes herself as a "recovered autistic," distinguishes "autism subtypes" and writes that "The subtypes are on a continuum that merges together" (Grandin n.d.). At one end of the continuum we have Kanner-Asperger Type (high-functioning). Kanner is the physician who gave us child autism. At the other is "Regressive/Epileptic Type (Often Low Functioning) (Late-onset children often lose speech between 18 months to three years old)." Anyone who reads even slightly nonorthodox accounts of autism may well suppose we do not have a linear continuum at all, but an extremely dense manifold of problems, and perhaps not even a set of pathologies.

Or some set of sets of neuropathologies, and a lot of developmental history required to produce any individual case.

Any such scenario makes the Kripke-Putnam semantics seem somewhat irrelevant. I imagine that with the constant thrust towards the biologization and indeed genetization of mental disorders, we shall find that the case I have to some extent imagined is in fact the norm. Semanticists may derive interesting formulations for the new situation. Students of semantics who dislike Kripke's approach will say, if we cannot use a rigid designation for childhood autism, and yet childhood autism is an important concept, why do we need a rigid designation for the meaning of multiple sclerosis either?

My position here is rather curious. I have already made amply plain that I do not, myself, favor the language of social construction. I am discussing it in connection with psychopathologies because many deeply committed critics of psychiatric establishments find social-construction talk helpful. It enables them to begin with a critique of practices about which they are deeply skeptical. I respect their concerns, and have, I hope, represented them fairly, if cautiously. On the other hand, I also respect the biological program of research into the most troubling of psychiatric disorders. That creates a dilemma.

I have suggested a semantic way for a philosopher to make peace with the dilemma. Some would say that it is more than that—it is a tidy resolution of the dilemma. But not only am I ambivalent, or worse, about social construction; I am also ambivalent about the use of rigid designation in connection with disease and disorder. Some of these qualms were well stated quite a long time ago by Avishai Margalit (1979). He wrote when enthusiasm for the Putnam-Kripke approach was at its peak. He argued that even in the case of quite well understood afflictions, such as multiple sclerosis, there are many problems about taking the model very strictly.

Even if Margalit's criticisms are compelling, semantical theories like those of Kripke and Putnam are not rendered useless. They are tools. A screwdriver is not the worse for being a bad hammer. Semantical theories are not literally correct descriptions of natural language. They are artificial ways of construing natural languages for this or that purpose. I do think that these philosophical theories are wonderfully suitable for diverse purposes.[11] In the present case, putting a theory of reference alongside social construction shows how to diminish a felt dilemma. If this approach helps, then it does a real service, for it enables us to move

on to more significant issues, to what I call the dynamics, rather than the semantics, of classification.

For the Study of Dynamics, Not Semantics

In the end, the "real vs construction" tension turns out to be a relatively minor technical matter. How to devise a plausible semantics for a problematic class of kind terms? Terms for interactive kinds apply to human beings and their behavior. They interact with the people classified by them. They are kind-terms that exhibit a looping effect, that is, that have to be revised because the people classified in a certain way change in response to being classified. On the other hand, some of these interactive kinds may pick out genuine causal properties, biological kinds, which, like all indifferent kinds, are unaffected, as kinds, by what we know about them. The semantics of Kripke and Putnam can be used to give a formal gloss to this phenomenon.

Far more decisive than semantics is the dynamics of interactive kinds. The vast bulk of constructionist writing has examined the dynamics of this or that classification and the human beings that are classified by it. Studies of Authorship, Brotherhood, the Child Viewer of Television, and Danger have, in their various ways, been concerned with just that: the social construction of the idea of *X,* of *X,* of the experience of being *X,* and so on, and how these interact with each other. Is there anything to say in general about such dynamics, over and above particular and idiosyncratic examples? How does the making and molding of an interactive kind, be it child abuse or autism, help to make up people? How do people make themselves up, as they act in ways that conform to, or stay away from, powerful classifications?

For a compelling example, take biolooping. A person undertakes a certain regimen of behavioral modification, intended to diminish the symptoms and feelings of depression. Numerous kinds of behavior are reinforced, all of which run counter to the classification *depressed.* The patient starts to live in this new way. If the behavior modification works, then even our psychiatric understanding of depression changes. Yet simultaneously, by living in this way, adopting certain types of behavior, a certain chemical condition of the brain, thought to be correlated with depression, is alleviated. We have a dynamics working at the level of classification and at the level of biolooping.

Semantics intrigues the logician, but the dynamics of classification is where the action is. If we begin to move among cyborgs, or to become cyborgs, biolooping will become a common fact of everyday life. Classificatory looping will continue alongside it until, perhaps, the two become one in a world that no one can foresee.