
The looping effects of human kinds

IAN HACKING

My topic is at some distance from others in this book. This is not because I am a philosopher given to abstraction and high generality. Many of my examples are all too reminiscent of sensationalist popular journalism. My causal understandings are complex and shady, my cognition is controversial applied knowledge, and my culture is our culture and none other.

Culture I am addressing not a human universal but ways of classifying that became possible only in industrial bureaucracies. Today their most salient features are the result of a recent democratization of some social sciences.

Cognition The classifications that I call human kinds make sense only within a peculiar conception of knowing and finding out.

Causality Human kinds are formulated in the hope of immediate or future interventions in the lives of individual human beings. If we change the background conditions we can improve the person, if only we can understand what kind of person we are dealing with. The causal understanding (or aspiration to understand) is practical.

None the less my theme is obsessively philosophical, for it is about self-reflection. It is about how a causal understanding, if known by those who are understood, can change their character, can change the kind of people that they are. That can lead to a change in the causal understanding itself. This chapter is about feedback effects in cognition and culture, and is a contribution to the study of what I call 'making up people' (Hacking 1986).

WHAT ARE HUMAN KINDS?

'Human kinds' is such an ugly turn of phrase that, as Auguste Comte said of *sociologie*, no one else would ever want to use it. I do not intend to pick out a definite and clearly bounded class of classifications. I mean to indicate kinds of people, their behaviour, their condition, kinds of action, kinds of

temperament or tendency, kinds of emotion, and kinds of experience. I use the term 'human kinds' to emphasize kinds—the systems of classification—rather than people and their feelings. Although I intend human kinds to include kinds of behaviour, act, or temperament, it is kinds of people that concern me. That is, kinds of behaviour, act, or temperament are what I call human kinds if we take them to characterize kinds of people.

However, I do not mean any kinds of people. I choose the label 'human kinds' for its inhumane ring, and mean the kinds that are studied in the marginal, insecure, but enormously powerful human and social sciences. An operational definition of an insecure science is: a science whose leaders say they are in quest of a paradigm, or have just found a paradigm. Insecurity is consistent with immense power. Thus, to turn to a natural science, Walter Gilbert, tsar of the best-funded non-military research programme in the world, the \$300 million human genome project, responded to criticism with an article entitled 'Towards a paradigm shift in biology' (Gilbert 1991).

By human kinds I mean kinds about which we would like to have systematic, general, and accurate knowledge; classifications that could be used to formulate general truths about people; generalizations sufficiently strong that they seem like laws about people, their actions, or their sentiments. We want laws precise enough to predict what individuals will do, or how they will respond to attempts to help them or to modify their behaviour. The model is that of the natural sciences. Only one kind of causality is deemed relevant: efficient causation. One event brings about another, although the causal laws may be only probabilistic laws of tendency.

The term 'human kind' is patterned after the philosopher's 'natural kind', and so I have to make some disclaimers. It is hard to believe that a philosopher could be so mealy-mouthed about natural kinds. I have no doubt that nature has kinds which we distinguish. Some seem fairly cosmic: quarks, probably genes, possibly cystic fibrosis. Others are mundane: mud, the common cold, headlands, sunsets. The common cold is as real as cystic fibrosis, and sunsets are as real as quarks. More law-like regularities are known about mud than quarks—known to youths who play football, parents who do the family laundry, and to mud engineers on oil rig sites. The regularities about mud do not have profound consequences for theoreticians. That does not make mud any the less a natural kind of stuff. In the domain of living things, Atran's *speciemes*—trees, vines, grasses—are kinds that we find in nature; so are the species of today's systematics.

Nelson Goodman has used the happy phrase 'relevant kinds' in which he includes 'such artificial kinds as musical works, psychological experiments and types of machinery'. As far as I am concerned, natural kinds are relevant kinds that we find in nature. Are the varieties of plants and animals

that we owe to horticulturalists and stock breeders 'natural' by now? For me, plutonium is a natural kind, even though humans made it. There are many distinctions to be made among the natural kinds, including historical ones. Psycholinguists debate whether children innately distinguish the artefactual from the natural, or the mechanical from the living. On a quite different level there is undoubtedly a sense in which some kinds are more cosmic (the word is Quine's) than others. Perhaps nature and its laws are such that some kinds are more truly fundamental than others. Graceless philosophers repeat Plato's words out of context and talk of carving nature at her joints. Does nature have ultimate joints? For present purposes I am indifferent to all such questions—metaphysical, psycholinguistic, or historical. This is because they do not matter to the distinctions that I do wish to notice between human kinds and natural kinds.

Since I am so tolerant about natural kinds, should I not count human kinds among the natural kinds? For a certain convenience I shall restrict human kinds to kinds that are, at least at first sight, peculiar to people in a social setting. I do not deny that people are natural or that human societies are part of nature. For convenience, I follow the custom of calling something natural only when it is not peculiar to people in their communities. A great many types of attributes of people apply in the world at large or at least to other living beings: mass, longevity, distribution of digestive organs, the pancreatic enzymes such as amyllopsin, trypsin, and steapsin, or the structure of the genome. Many items that occur in the scientific study of human beings present no significant contrast with other kinds that we find in nature. There is a proper tension here, because one thrust of research into human kinds is to biologize them. Drunkards form a human kind; according to one school of thought, apparently favoured by the editor of *Science*, alcoholism is carried by a gene. Five years ago I copied from a doctor's office the statement 'We have learned more about this illness in the past five years than in the past five hundred years and it is now evident that alcoholism and other drug additions are truly psychosocial biogenetic diseases'. Suicide is a kind of human behaviour; it was proposed late in 1990 that it too has a genetic component. These are instances not so much of what Imre Lakatos called research programmes as of what Gerald Holton called themata. Holton gives atomism in its successive manifestations (Leucippus, Lucretius, Boyle, Dalton, and onwards) as an example of a thema. Equally old and powerful is the idea that we acquire knowledge of humanity by replacing human kinds by physiological or mechanical or neuroelectrical or biochemical ones. This is not just a tradition of research, but also represents a metaphysics. In Chapter 13 Philip Pettit discusses how we can have real causation in psychology. One solution is to make psychology, and all else that is human or social, into biology. That is, a built-in metaphysical motivation for biologizing human kinds.

There are many more tensions—some in the philosophy of the natural and some in the methodology of the biological. Yet I think that there is little difficulty in picking out characteristic human kinds. When I speak of human kinds, I mean (i) kinds that are relevant to some of us, (ii) kinds that primarily sort people, their actions, and behaviour, and (iii) kinds that are studied in the human and social sciences, i.e. kinds about which we hope to have knowledge. I add (iv) that kinds of people are paramount; I want to include kinds of human behaviour, action, tendency, etc. only when they are projected to form the idea of a kind of person. Homosexuality provides us with a perhaps all too familiar example. It is quite widely asserted that, although same-sex acts are common in most human societies, the idea of 'the homosexual' as a kind of person came into being only late in the nineteenth century as homosexual behaviour became an object of scientific scrutiny. If this were correct, then homosexual behaviour would be what I am calling here a 'human kind' only late in the nineteenth century, even though there has been plenty of pederasty, for example, at all times and places, for only at that time was this kind of behaviour taken as an indication of a kind of person.

In important personal relationships we seldom think or feel directly in terms of human kinds. In friendship, love, and animosity we care about all that is particular, unusual, intimate, and circumstantial, all that is glimpsed or shared or felt glancingly—in short, all that is caught in the nuance of the novel rather than the classifications of the scientist. One person is trusting, another gentle, a third selfish and arrogant. One, who although forgetful is responsive and enthusiastic, has a friend who is an insensitive busybody. We know a great deal about such kinds of people, but we do not profess scientific knowledge about them. We neither make surveys that count their proportions in a given population, nor subject them to factor analysis. Yet these are the kinds that matter to us—the kinds we use to organize our thoughts about our companions, friends, and loved ones, not to mention those whom we try to avoid. Since they also matter to employers, teachers, and the military, psychologists devise tests that use questions often recalling these familiar traits. The results are tabulated or summarized to form 'profiles' or 'personal inventories' that then become human kinds. They are digests of what matters in intimacy, but they acquire the abstraction of the sciences or impersonal management.

Yet human kinds are not so irrelevant to us as people. Straightforward and well-established human kinds studied in the social sciences *do* affect intensely personal concerns. If you see someone whom you love (or see yourself) as of a kind, that may change your entire set of perceptions. Human kinds usually present themselves as scientific and hence as value-free, but they have often been brought into being by judgements of good and evil. Sociology of the numerical sort began by measuring the incidence

of behaviour such as suicide. Durkheim's classic and originating work *Suicide* could draw upon 80 years of studies. Suicide was tabulated because it was a Bad Act, perhaps the very worst, beyond the possibility of repentance and even forgiveness. A body of knowledge about suicide changed beliefs about what kind of deed it was, and hence its moral evaluation: 'an attempted suicide is a cry for help'. Your attitude to a friend who attempts suicide will be different from that which your great-grandparents would have had. Suicides in novels today are not what they were at the time of young Werther or Heinrich Kleist, partly because science has made suicide into a human kind.

Human kinds are of many categories. I use the word 'category' in an old fashioned way, which is also the colloquial way. A category is a tree of classifications, or else the most general classification at the top of such a tree. Many authorities, ranging from cognitive scientists to psycholinguists, now use 'category' as a synonym for 'class' as in George Lakoff's title, *Women, fire and dangerous things: What categories show about the human mind*. Women-fire-and-dangerous-things is a class, or kind, distinguished by an Australian people, but Lakoff calls it a category. I do not. Race, gender, native language, nationality, type of employment, and age cohort are all what I call categories. The experts most versed in these categories work out of census bureaux, institutions whose modern form is coeval with quantitative social science. Indeed I willingly extend my grouping, human kinds, to include any of the kinds enumerated by the census, or at least those kinds when endowed with their social connotations. Say, to abbreviate too much, that gender is the social meaning of sex—the category of sex not being peculiar to human beings, but the category of gender being peculiar to humans in a society. I follow tradition surprisingly closely in all this. Philosophers took 'natural kind' as a term of art after J. S. Mill. As soon as he had introduced his idea of a *real Kind*, he asked whether the sexes and races were real Kinds. (He hoped not. His programme was anti-sexist and anti-racist). These two human categories, race and gender, have been obsessively discussed of late. Our thoughts about them are so redolent of ideology that I shall leave them on one side. Conclusions about human kinds are indeed relevant to those categories, but we would be misled about human kinds if we followed Mill and used race and gender as our core examples. The very relationship between science, and race or gender, is unclear. I have defined human kinds as the objects of the insecure sciences, as the kinds about which we would like to have knowledge. I took for granted that those sciences are modelled on natural science, particularly in their conception of causality. That was what Mill was talking about. However, there is a strong present prejudice against making race the object of science. A few forthright spokesmen like Michael Dummett make plain that we do not want the knowledge that we might find out. The more

familiar pusillanimous complaint is that race science is bad science. In the case of gender, many outspoken feminists claim knowledge, but reject a knowledge patterned on causal natural science. These important issues would take us aside from my main topic.

I have mentioned kinds 'with their social meaning'—an obscure phrase. To illustrate, take teen-age pregnancy. That is as determinate a classification as could be. You are teen-aged, female, pregnant, and (unwritten premise) unmarried. There is a rigorous definition, then, with succinct chronological, physiological and legal clauses. If we make 'teen-age' precise and adapt 'unmarried', then this concept can be applied in many cultures unlike our own. However, it became a relevant kind only at a certain moment in American history. After 1967 it was the subject of interminable sociological study and debate. Recently the cultural meaning of the term has switched sufficiently that a euphemism has been introduced by sociologists: early parenting. Teen-age pregnancy—the word, and also the idea with a certain set of implications—reared its ugly head in the white American suburbs of the 1960s. Early parenting connotes black urban ghettos of the 1990s. Thus far we have an idea and no knowledge, but once the idea was in motion experts arrived to determine a knowledge and to transform it. The classification 'teen-age pregnancy' or 'early parenting' is completely grounded in nature, but is a human kind—and is the subject of social science—only in a certain social context. There is a similarity to and a difference from another human kind of person—the adolescent. Adolescence cannot be fully grounded in nature. Even if we define it as beginning with first menarche/ejaculation, there is nothing in nature beyond a social context that signals its end. Anna Freud said that we owe the discovery of adolescence to psychoanalysis. Historians of developmental psychology locate its discovery elsewhere. Nevertheless there is a remarkable agreement that whatever grander social changes made adolescence possible, the adolescent exists as a kind of person thanks to the social sciences. The first major work on adolescence was the two volume treatise by G. Stanley Hall (1904), the man who is commonly called the founder of American experimental psychology. He called it *Adolescence: its psychology and its relations to physiology, anthropology, sociology, sex, crime, religion and education*. You might think that this title is exhaustive, but it is not quite. After over 1200 pages we reach a long final chapter, 'Ethnic psychology and pedagogy, or adolescent races and their treatment'. We find that one third of the human race are 'adolescents of adult size'. Even lineages which are by now regarded as 'decadent', 'often exemplify the symptom of *dementia praecox* magnified to macrobiotic proportions' (Hall 1904, Vol. II, p. 649).

Those were the bad old days, of course. To fix ideas further, I shall take two up-to-date human kinds and a recently proposed causal law that

connects them. Child abuse is a kind of human behaviour. It breaks up into several kinds, including sexual abuse, physical abuse, neglect, and, a current topic of fierce controversy in North America, sadistic cult abuse (read Satanic rituals). Child abuse is a kind that has been remarkably malleable. It has connections with cruelty to children, a classic kind of behaviour brought to the fore in Europe and America about 120 years ago. But the present classification, child abuse, began exactly 30 years ago with battered baby syndrome, took incest and sexual abuse under its wing 18 years ago, and picked up cruel ritual cult abuse 5 years ago. The recent trajectory is primarily American with European classifications following loosely in step (Hacking 1991, 1992c).

Child abuse certainly fits my rough and ready criteria for being a human kind.

1. In many quarters today, it is a highly relevant kind.
2. It is peculiar to people, even when we draw some analogies to some sorts of primate behaviour.
3. It is a kind of behaviour about which we would like to have knowledge, for example to prevent child abuse and to help abused children.
4. We have an inclination to project the kind of behaviour to the person, i.e., we think that there are child abusers, that abusive parents may be a type of parent.

We can make an even stronger statement about child abuse. The Center for Advanced Study in the Behavioral Sciences at Stanford University liked, and perhaps still likes, to use the epithet 'cutting edge' for work conducted under its auspices. An operational definition of a cutting-edge human kind would be: there is at least one professional society of experts dedicated to studying it; there are regular conferences, one of which is major and a number of which are more specialized; there is at least one recently established professional journal to which the authorities contribute (and which helps define who the authorities are). We have the International Society for the Prevention of Child Abuse and Neglect, a great many conferences, and the journal *Child Abuse and Neglect*, among others. Child abuse is a cutting-edge human kind.

Child abusers are all too common. A much rarer kind of person is the one suffering from what is now called multiple personality disorder (Hacking 1992b). These people used to be very rare indeed, and they usually suffered from two, or perhaps three or four, alternative personalities; one personality was usually amnesic for another. There has been an epidemic of multiple personalities in North America, starting in the early 1970s; the 9th International Conference on the topic was attended by 800 professionals (psychiatrists, psychologists, social workers), many of whom have case

loads of over 40 multiples a year. The face of multiplicity has changed a great deal in the past 20 years. It is now commonplace for clinicians to have patients with 25 alter personalities. This whole discourse takes place under a larger rubric of 'dissociative behaviour'. Dissociation was first named by Pierre Janet during the French wave of multiples that started in Bordeaux in 1875, but has been retrieved only recently. In the inner circles of dissociation experts, Janet is revered while Freud is cast out.

Many psychiatrists, particularly those with a medical/biochemical/neurological approach to mental illness, are dubious or even cynical about multiple personality. They argue that multiples are a cultural artefact. Now, if I had said (as so many philosophers do say) that human kinds must in some sense be indubitably 'real', and perhaps even cross-culturally cosmic, I should have been obliged to discuss this opposition. Instead, I made some disclaimers not only about the human but also about the natural. I do believe that some psychiatrists, the media, a wing of the women's movement, concern about sexual abuse of children, and much else have brought about the present prevalence of multiple personality disorder. That does not make the malady any less real. It is a condition with associated behaviour that afflicts a significant number of people who at present are crying out for help. It is a human kind, and a cutting-edge human kind to boot. There is the International Society for the Study of Multiple Personality and Dissociation. There is an annual international conference and many regional conferences. The journal *Dissociation* is about to enter its fifth year of publication.

I stated that we want knowledge about human kinds. There has been a remarkable breakthrough in thinking about multiple personality. The cause of this disorder is now known to people who work in the field. Multiple personality is the consequence of repeated trauma early in childhood, almost always involving sexual abuse. This fact is so accepted among workers in the field that many regard it as almost definitional. This causal knowledge is deeply incorporated into theories of the disorder. The various alters represent dissociated ways of coping with particular experienced trauma. This in turn has had a great impact on methods of treatment, which now focus on abreaction of the trauma through the voices of the various alters which may in time become co-conscious, collaborative, and finally integrated. Thanks to media exposure, particularly on afternoon television talk shows that appeal to lower-class women who empathize with the oppressed and the bizarre, this scientific knowledge is very widely disseminated in the USA. The details are the property of experts, but the general structure is remarkably common knowledge.

My example is sensational but serves to fix ideas. Despite its role in social rhetoric and politics of numerous stripes, child abuse was first presented and is still intended to be a 'scientific' concept. Of course, there are

demarcation disputes. Which science? Medicine, psychiatry, sociology, psychology, social work, jurisprudence, or self-help? Whatever the standpoint, there are plenty of authorities firmly convinced that there are important truths about child abuse, for example 'most abusers were abused as children'. Research and experiment should reveal them. We hope that cause and effect are relevant, that we can find predictors of future abuse, that we can explain it, that we can prevent it, and that we can determine its consequences and counteract them. For example, it is held that abusive mothers have often not bonded adequately to their children, and that premature babies in incubators are at risk of inadequate bonding. This causal hypothesis leads authorities to establish elaborate bonding rituals in maternity hospitals.

It might be thought that child abuse is such a complex concept that questions of developmental psychology or the theory of cognition could not arise. We are considering how a social organization makes and moulds an idea, not about concept acquisition in children. Quite the contrary. In Chapter 11 Lawrence Hirschfeld discusses the early stage at which American children acquire concepts of race. A parallel issue has been debated, with very practical consequences, in connection with child abuse. Many American jurisdictions introduced early training to enable children to recognize and report incipient abuse. Two years ago California rescinded these laws, on the basis of declarations by expert witnesses, based on Piagetian grounds, that children could not understand these ideas. There is now a back-backlash contesting this cognitive claim.

On the score of being scientific, a different type of issue emerges. Perhaps we fail to help children (some say) because all our endeavours assume that we are dealing with a scientific kind? This worry has been expressed in terms of the 'medicalization' of child abuse. Child abuse is not for the doctors, even if paediatricians did first sound the alert with battered baby syndrome. Thus far, the complaint is only about the type of expert, not about the very possibility of expertise. In general, the anti-experts usually claim that they are the true experts: the social workers defy the police, the psychologists confront the judiciary, etc. Multiple personality is a case of yet another type of concern about scientism. Some critics contend that there is no such thing as multiple personality disorder (I have heard it called 'the UFO of psychiatry') and that multiple behaviour results from interaction with doctors or, more recently, from sensationalist reports in the media. Nevertheless the debate is left to experts. This or that group claims to have knowledge about what really ails the troubled patients and how they could be treated better.

Thus what I call human kinds begin in the hands of scientists of various stripes. Human kinds live there for a while. A while? My example of the homosexual foreshadows something to be discussed later. People of the

kind may rise up against the experts. The known may overpower the knowers.

I have stated that we want laws precise enough to predict what individuals will do. Or we want to know how people of a kind will respond to attempts to help them or to modify their behaviour. I have stated 'we' would like all this, typically in order to help 'them'. I made these statements because that is what the social sciences have been up to since their inception. The search for human kinds that conform to psychological or social laws is inextricably intertwined with prediction and reform. These aims can be perverted, but they have generally been well-intentioned when seen from the vantage point of the reformers. Groups of experts now collaborate and say that together they are members of the 'helping professions': social workers, therapists, parole officers, policemen, judges, psychiatrists, teachers, 'Ph.D. psychologists', paediatricians. They try to distinguish kinds of people or behaviour that are deviant. They invite more theoretical and foundational studies on which to base their practical work. Sociologists and statisticians form and test law-like conjectures about people of those kinds. Such knowledge enables the front line to interfere and intervene so as to help more effectively and predictably. Or so the sciences present themselves: cynics suspect that there is no knowledge to be had, and that these forms of knowledge legitimate the use of power.

Why are my examples so unattractive? I seem to have in mind a rather shady bunch of kinds, marginal human kinds, kinds about which we claim or hope to have systematic knowledge, kinds that are, loosely, topics for actual or prospective sciences. But not real social science! I could develop the argument that what I call human kinds are at the historical root of sociology—the science of normality and deviance. Even if I am correct, should not 'human kinds' by now serve as the generic name for the classifications used in the social sciences—the *sciences humaines*, or perhaps even *Geisteswissenschaften*? What then of the classifications made in anthropology, linguistics, economics, and history? Why lay such emphasis on the sciences of deviancy, social pathology, healing, and control?

In the context of this book I shall evade the question (and the historical or archaeological response) by saying that I am choosing my own type of causal understanding to think about. I fix on a certain type of practical causality. By human kinds I mean kinds of people and their behaviour which (it is hoped) can enter into practical laws—laws that if we knew them we would use to change present conditions, and predict what would ensue. We want the right classification—the correct sorting of child abuse or teen-age pregnancy—so that confronted by abusive parents or pregnant teenagers we can embark on a course of action that will change them for the better and will prevent others from joining their ranks. We do not want

to know the 'structure' of teen-age pregnancy in the fascinating but abstract way in which we want to know the structure of kinship among a certain people, or the structure of the modal auxiliaries in their language. We want principles according to which we can interfere, intervene, help, and improve. The closest comparison within the social sciences would be with economics. The applied economists say that they want to make things better, but their kinds are not usually what I call human kinds. Most of them are at least one remove from individual people and their actions. The bank rate and the money supply depend upon what some people do, but they are not kinds of people.

I have been trying to make vivid the concept of a human kind. There is one last general point to make. Which comes first, the classification or the causal connections between kinds? There are two coarse pictures of concept formation. In one, people first make certain distinctions and then learn the properties and causal relationships between distinguished classes. In another, causal relationships are recognized between individuals, and these relationships are used to distinguish classes. I believe that my fellow philosophers are the chief sinners in cleaving to one or other of these extreme pictures. Whatever conclusion be urged about infant cognition, it is plain that in later life recognition and expectation are of a piece. Or, to put it linguistically, to acquire and use a name for any kind is, among other things, to be willing to make generalizations and form expectations about things of that kind. We should take for granted that guessing at causes goes hand in hand with increasingly precise definition.

To take two examples which are unfavourable to this theme, suicide and teen-age pregnancy have been with us always, and with many another society. Hence one might have the picture of first there being the kind of human behaviour or condition, and then the knowledge. That is not the case. The kind and the knowledge grow together. At the beginning of the nineteenth century people were still debating the noble suicide of Cato the Elder, but soon suicide was to be defined as 'a kind of madness' with numerous subkinds, all tended over by the right sort of medical man. Suicides were sorted by their conjectured causes. When we turn to child abuse, it sounds as if it were a classification of behaviour preceding any knowledge. But this is not the case. It emerged in 1961-1962 in company with a quite specific body of knowledge—paediatric X-rays (which showed unexpected healed fractures of babies' arms and legs). The technology of the rapidly declining profession of infant radiology was revived to define 'battered baby syndrome', and doctors asserted in powerful public statements that they were in control of the treatment and prevention of abusive behaviour. Cause, classification, and intervention were of a piece.

WHAT'S SO SPECIAL ABOUT HUMAN KINDS?

My phrase 'human kind' is patterned after 'natural kind'. Evidently I think that human kinds are importantly different from natural kinds. In this section I shall do three things.

1. I shall sympathetically state the idea to which I am opposed: that human kinds are, at worst, messy natural kinds.
2. I shall make plain that I am not arguing anything remotely like *either* a *Verstehen* or a constructionist position. Yes, I think that the human differs from the natural, but not because what I call human kinds are to be understood hermeneutically rather than explained by causal principles. Yes, I think that the human differs from the natural, but not because human kinds are social constructions while natural kinds are discovered in nature.
3. I shall state the difference between natural and human kinds that interests me. I do not argue that it is the only difference. Perhaps the *Verstehen* and the construction distinctions are both right, but they are not mine. They are deep. Mine is shallow.

Natural and human

The modern phrase 'natural kind' resonates with antique controversies. Does nature have kinds, or are they of our making? If nature has kinds, do those kinds themselves have natures (essences)? Whatever stance we take on these issues, another arises. Given the aspirations of those sciences that investigate human kinds, will not something be a 'real', or at any rate a useful human kind, only if it is a natural kind?

The positivist version of this idea proceeds roughly as follows. If we want to obtain knowledge about people and their behaviour, we have to make correct distinctions. Only if we sort correctly will we be able to formulate descriptive law-like statements. But that fact is not peculiar to the human sciences. In any science we must discover what the natural kinds are. That involves rigorous exploration, experimentation, conjecture, and refutation. As we hone our causal hypotheses, we sharpen our classifications, and approach closer and closer to the kinds that are found in nature. The chief difference between natural and human kinds is that the human kinds often make sense only within a certain social context. But even there we constantly strive to go behind the phenomena. Where once we had descriptive criminology, now we have genes for violence and we are working on the genetic component of suicide.

The positivist supposes that the idea of a natural kind is clear and timeless. Here is a historicist version of the view that the human must be

the natural. The idea of a natural kind (it is proposed) is not timeless but has evolved during the history of Western science. Long before the advent of the natural sciences, kinds played a major role in the development of early technological civilizations. Sowing and reaping, breeding and baking, mining and melting have all needed an ability to pick out the right kinds. The kinds of animals, vegetables, and minerals that came to be named, cultivated, and created are the very kinds that philosophers came to call natural kinds. Some features of them have been invaluable as we have learned how to alter, improve, control, or guard against nature. The different theories about these kinds, whether in Aristotle, Locke, Mill, or Hilary Putnam, are owl-of-Minerva state of the art. That is, they effectively correspond to the level of technological expertise and scientific mastery current at the time that they were proposed. Each author thought that he was giving a timeless account of universals, or sorts (Locke), or real Kinds (Mill), or kind terms (Putnam). But each obediently represented a particular state of mastery of the non-human world, so that when we read these authors, we read a précis that could have been headed 'natural kinds as we know them today'. The chief source of the differences among these canonical writings is that they represent different stages in the growth of Western knowledge. The concept 'natural kind' (by whatever name) is not impugned. We are reminded only that this idea is (like everything else) historical and evolving.

The history of human kinds will prove (continues the historicist) to be similar and indeed part of the story. We find attention to suicide, incest, cruelty to children, and even teen-age pregnancy in many places and times. Some scholars urge that demonic possession, trance states, and shamanism are 'the same kind of condition' as multiple personality disorder, perhaps even deploying distinct sites in the brain. Human kinds require a fairly specific social organization for their existence. Teen-age pregnancy cannot exist until unmarried teen-age girls form a distinct group who are not supposed to be pregnant. The idea of juvenile delinquency depends partly on the family, on views of dependency, and on how age cohorts are structured. Nevertheless, there may be some human kinds that are of more general application than others.

We have (the historicist concludes) slowly come to a correct understanding of the idea of a law of nature—we have passed from Aristotelian essences through positivist instrumentalism, and to some extent back again to universal laws of causation and symmetry. In much the same way we will come to a correct understanding of laws of human beings. We could only do so, perhaps, when our idea of law had passed from the deterministic to the probabilistic, when we had created a new type of science geared to normalcy and deviation from the norm, when (just as essences gave way to law-like natural kinds) the idea of human nature had been displaced by

the idea of normal people (Hacking 1990). The right laws about human beings have been slow in coming, and we have only just begun to come to grips with human kinds that will prove to be useful. But human kinds will in the end be a subclass of natural kinds. That will not leave things the same. The inclusion of human kinds within natural kinds will be one further step in the evolution of our causal understanding of nature.

You will have expected, from my early profession of indifference to any particular theory about natural kinds, that I do not want to conduct a stale argument with the positivist view, that all good human science is natural science, and that all good human kinds will be made into natural kinds. I take issue with the far more sensitive historicist view. It is the right view about philosophies of natural kinds, but it is wrong about the end of the story.

Understanding, construction

I am liable to be misunderstood. I shall be thought to be arguing for old theses, not for a new one. I have to make plain that whatever cleavage may result from my analysis, it is not one that has been much discussed. I do not argue for or imply either of two extremely important-sounding theses. I do not contend that the natural sciences want explanation while the human sciences demand understanding. I do not urge that human kinds are constructed while natural kinds are not.

The *Verstehen* dispute has partly to do with methodology, a subject that I abhor. There is an immense body of argument to the effect that quite distinct methods befit the natural and the human sciences, the one aiming at explanation and the other at understanding. I believe that there are some deep insights on the *Verstehen* side of the argument, but here they are irrelevant. That is because I have defined human kinds as finding their place in bodies of knowledge patterned after the efficient causation of the natural sciences. I am not about to say that human kinds are a horrible mistake—the error of striving for control rather than understanding.

We do not have the choice not to use human kinds, and human kinds (as I have defined the idea) are causal and instrumental. We are stuck with human kinds that demand causal analysis rather than *Verstehen* or meanings. They are part of what we mean by knowledge about people. It may be a pleasant romantic fantasy to think of abandoning or replacing the instrumental human sciences, but that is not possible. They are not just part of our system of knowledge; they are part of what we take knowledge to be. They are also our system of government, our way of organizing ourselves; they have become the great stabilizers of the Western post-manufacturing welfare state that thrives on service industries. The methodology of making 'studies' to detect law-like regularities and tendencies is not just our way of finding

out what's what; 'studies' generate consensus, acceptance, and intervention. The one great argument for Durkheimian functionalism is weirdly self-reflexive: although the conscious aims of the social sciences are knowledge and helping, the function served is that of preserving and adapting the status quo. This fits Douglas's (1986) 'feedback' gloss on functionalism in her lectures *How institutions think*. The more the status quo is dissatisfied with itself, the more social science studies are in demand, and the greater the reliance on their results as definitive. As questioning is put aside, stability tends to ensue.

I now turn to the other way in which I might be understood. I do not claim that human kinds are somehow constructed while natural kinds are somehow given. Here I try to take absolutely no view on the constructionist controversies that swirl around us. I cannot exactly take no notice, because I have found that the anti-constructionist ('realist', for short) says that all good human kinds are (real) natural kinds, while the social constructionist says that everything is social and so the natural is social. (In a discussion some years ago of an article of mine on child abuse, James Bogen said the former and Bruno Latour said the latter).

I take courage from the fact that the most compelling social constructionist arguments about kinds are about high class 'high tech' natural kinds. I think of Latour's first book (with Steven Woolgar), *Laboratory life: the (social) construction of a scientific fact* — the word 'social' was in the 1979 edition but deleted from the 1986 edition on the ground that everything is social. The book is about the discovery of the chemical structure of a tripeptide important to the hypothalamus, to metabolism, and to maturation. Or I think of Andy Pickering's *Constructing quarks*. These authors contend, among many other things, that it is misleading to talk of scientific discoveries. The facts in question were constructed by a microsociological process, and in an important sense did not exist before the incidents described.

My strategy is willingly to swerve to the left and side with the constructionists. Yes, facts are socially constructed, and so are the kinds about which there are facts. But within the domain of social constructions, I can still claim that there is an important difference between quarks and tripeptides on the one hand, and what I call human kinds on the other. Hearing an uproar to my right I then turn to the realists and willingly agree that multiple personality disorder and adolescence are just as real as electricity and sulphuric acid; Anna Freud claims the discovery of adolescence for psychoanalysis, and the discovery of the phenomenon of dissociation is claimed for Pierre Janet. Who am I to resist such claims to fame, except on petty points that perhaps somebody else made the discovery?

Hence for present purposes I operate as if there were no vital contradiction between realism and constructionism. Teen-age pregnancy is as 'real'

as could be, with rigorous defining characteristics. It is also aptly described as socially constructed as a human kind at a certain point in American history. Likewise, children were abused before 'child abuse'. The history of the concept in the past three decades displays social making and moulding if anything could. This example has the fortuitous advantage that some of the more vociferous social constructionists, who urge that almost anything is a social construction, say (without noticing the switch) exactly the opposite about child abuse. It is, they rightly say, a real evil that the family and the state covered up. Our discovery of the prevalence of child abuse is a powerful step forward in Western awareness, they say. I agree. Child abuse is a real evil, and it was so before being socially constructed as a human kind. Neither reality nor construction should be in question.

I do not mean to imply that no construction-realism issues are important for human kinds. They do matter, but only in a specific context. Their significance is independent of inflated all-purpose general philosophical themes. The most carefully worked-out example, i.e. what has been called the social constructionist controversy about homosexuality, has mattered deeply to the people who were classified. It was important to one party to maintain that 'the homosexual' as a 'kind of person' is a social construct, chiefly of psychiatry and jurisprudence. It was important for others to insist that some people in every era have been sexually and emotionally attracted chiefly to people of their own sex. There are endless variants on these themes. Stein (1992) (in an essay in his collection *Forms of desire*) has made the appropriate conceptual distinctions, and thereby established several ways in which essentialist and constructionist attitudes are not only compatible but also mutually supporting.

Looping

How then may natural kinds differ from what I call human kinds? I do accept, but wish to downplay, one fundamental difference. Human kinds are laden with values. Caked mud and polarized electrons may be good or bad depending on what you want to do with them, but child abuse is bad and multiple personality is a disorder to be healed.

It is the shibboleth of science that it is value-neutral. Throughout the history of the social sciences there has been a strident insistence on the distinction between fact and value. That is a give-away, for the natural sciences have seldom had to insist upon this distinction. On the contrary, elderly natural scientists regularly regret that there are not more values to be found in the natural sciences. Should we not argue that we are moving closer to the mind of God, and therefore to the Good? In social science things go differently. There is the clarion call for facts, facts, and more facts. Only with facts, and generalizations inferred therefrom, can the

social scientist serve the apparatus of our civilization. The social sciences deliver the raw facts and we, the people, are then able to make rational choices depending on the facts and our values.

There has been much cynical backbiting about the valiant claim to value neutrality. It is said that the professed knowledge serves certain interests, and so is value-laden. That is controversial, and I have little use for what has been called interest theory—the sweeping attribution of interests to all sorts of knowledge. Instead, I dwell on the less controversial observation that the classes I call human kinds are themselves laden with value. In sociology they have typically been classes of deviants, to which have been opposed normal children, normal behaviour, normal development, normal reactions, and normal feelings, and the deviations are usually bad. Of course, normal distributions in statistics have two tails, idiots on one side of normal intelligence, and geniuses on the other, with (as Francis Galton put it) mediocrity in between. Value-free? I am not implying that there need be evaluation in the causal laws about characteristic human kinds. The discoveries need serve no interest and the facts discovered may be value-free. I am drawing attention to the presuppositions of enquiries: we investigate human kinds that are loaded with values.

There is a regular attempt to strip human kinds of their moral content by biologizing or medicalizing them. Child abusers are not bad; they are sick and need help! Their crimes are not their fault. They were abused as children, and that is why they abuse their own children. We must not make pregnant teen-age girls feel guilty. The world would be a better place if there were no single parents / child abusers / suicides / multiple personalities / vagrants / prostitutes / juvenile delinquents / recidivists / bulimics / alcoholics / homosexuals / paedophiles / chronic unemployed / homeless / runaways, etc. But let us not blame them, let us medicalize them. This fits well with the metaphysical thrust that I mentioned earlier, that somehow causal connections between kinds are more intelligible if they operate at a biological rather than a psychological or social level.

I do not propose to discuss the intense moral content of human kinds. I am not interested in the moral overtones of human kinds as a way of challenging the fact-value distinction, or as a way of challenging sociology's claim to be above (or underneath) the level of evaluation. I mention it because it is relevant to another difference between the human and the natural. Human kinds are kinds that people may want to be or not to be, not in order to attain some end but because the human kinds have intrinsic moral value.

If N is a natural kind and Z is N, it makes no direct difference to Z, if it is called N. It makes no direct difference to either mud or a mud puddle to call it 'mud'. It makes no direct difference to thyrotropin-releasing hormone or to a bottle of TRH to call it TRH. Of course seeing that the Z is N,

we may do something to it in order to melt it or mould it, cook it or drown it, breed it or barter it. If there is mud on my child's T-shirt I use ordinary detergent to remove it, not the enzyme-activated product that I would use for a grass stain or blood. Because a particular liquid is a thyrotropin-releasing factor, an experimenter may see what happens if it is injected into sex-starved frogs or sleeping alligators, or given in megadoses to suicidal women (true stories all). But calling Z N, or seeing that Z is N, does not, in itself, make any difference to Z.

If H is a human kind and A is a person, then calling A H may make us treat A differently, just as calling Z N may make us do something to Z. We may reward or jail, instruct or abduct. But it also makes a difference to A to know that A is an H, precisely because there is so often a moral connotation to a human kind. Perhaps A does not want to be H! Thinking of me as an H changes how I think of me. Well, perhaps I could do things a little differently from now on. Not just to escape opprobrium (I have survived unscathed so far) but because I do not want to be that kind of person. Even if it does not make a difference to A it makes a difference to how people feel about A—how they relate to A—so that A's social ambience changes. I discuss this second-hand effect below in connection with children who cannot in any direct sense understand how they are classified and treated, for example autistic children.

It is a common theme in the theory of human action that to perform an intentional act is to do something 'under a description'. As human kinds are made and moulded, the field of descriptions changes and so do the actions that I can perform, i.e. the field of human kinds affects the field of possible intentional actions. Yet intentional action falls short of the mark. There are more possible ways to see oneself, more roles to adopt. I do not believe that multiple personalities intentionally choose their disorder, or that they are trained by their therapists. However, if this way of being were not available at the moment, hardly anyone would be that way. It is a way for troubled people to express their difficulties; the role is one of many that awaits, and some are chosen for it, often by a new way of describing their own past.

Human kinds have (what could be presented as) an even more amazing power than that of opening possibilities for future action. They enable us to redescribe our past to the extent that people can come to experience *new* pasts. A striking number of adults come to see themselves as having been abused as children. There has recently been a fashion of saying that we define ourselves by our biographies, by our personal narratives. Well, if there are new story lines, there can be new stories. To take an extreme example, some people come to see themselves as incest survivors, which in turn changes their lives and their relationships to their families. This is no mere matter of recovering forgotten trauma; it is a matter of there being new

descriptions available, connected in law-like ways to other new descriptions, explanations, and expectations. One of the more powerful words in this group of examples is 'trauma' itself, naming a relatively new kind of human experience. The word used to denote physical wounds, injuries, or lesions, but now it denotes a kind of mental event in the lives of people—the psychic wound, forgotten but ever active. We did not know that we had them until recently—or, more paradoxical but more true, they were not a possible kind of experience to have had. But surely trauma, in its present sense of psychic wound, has been a permanent fixture in human life? Only in the past century has it been a human kind, i.e. a kind of experience about which scientific knowledge is claimed. Only recently has it become a self-evident link between rape, infant seduction, shell-shock, and being held hostage by terrorists, as in Judith Herman's powerful study, *Trauma and recovery* (1992).

Thus one way in which some human kinds differ from some kinds of thing is that classifying people works on people, changes them, and can even change their past. The process does not stop there. The people of a kind themselves are changed. Hence 'we', the experts, are forced to rethink our classifications. Moreover, causal relationships between kinds are changed. Sometimes they are confirmed to the point of becoming essential definitional connections. It becomes part of the *essence* of multiple personality that it is caused by repeated childhood trauma. This is not because we have found out more about the natural disorder, but because people who see themselves as having this human disorder now find in themselves memories of trauma, often traumas of a kind that they could not even have conceptualized 20 years ago. (This can be illustrated by astonishing empirical facts, for example hundreds of people with memories of grotesque sadistic ritual cult abuse appeared in American clinics 6 years ago; much of what they remember under these descriptions they could not have thought of 12 years ago.)

To create new ways of classifying people is also to change how we can think of ourselves, to change our sense of self-worth, even how we remember our own past. This in turn generates a looping effect, because people of the kind behave differently and so are different. That is to say the kind changes, and so there is new causal knowledge to be gained and perhaps, old causal knowledge to be jettisoned.

Here I should both acknowledge labelling theory and distance myself from it. It was once argued that calling a person a juvenile delinquent (etc.), and institutionally confirming that label, made the person adopt certain stereotypical patterns of behaviour. When a youth was labelled as J, he assumed more and more of the characteristic features of J. That is a claim about labelling *individuals*. I am sure that there is some truth in it for some individuals. I go two steps further. I assert that there are changes in

individuals of that kind, which means that the kind itself becomes different (possibly confirmed in its stereotype but, as I go on to urge, quite the opposite may happen). Next, because the kind changes, there is new knowledge to be had about the kind. But that new knowledge in turn becomes part of what is to be known about members of the kind, who change again. This is what I call the looping effect for human kinds.

The greater the moral connotations of a human kind, the greater the potential for the looping effect. Although I shall not develop the theme here, we find similar effects in the relatively value-neutral kinds counted by the national census and similar government agencies. These effects have been investigated with remarkable results by a number of researchers such as Desrosières (1993). That is a piece of self-reflection in itself—the bureau that includes the French census looking at what past censuses have done to the very people who have been enumerated. Each decade the census draws up a new classification of the population, a classification that then becomes experienced as the structure of the society for the next decade or more. Similarly, Americans know that ‘Hispanic’ is an ethnic kind invented by the Bureau of the Census, with some effect on many people who now think of themselves as Hispanic and with rather more effect on their non-Hispanic neighbours, but see below in the discussion of administrative and self-ascriptive kinds. I have myself asserted, with too little argument, that the endless reports and tabulations prepared by countless British government functionaries, and so carefully scrutinized by Karl Marx, had more to do than Marx himself with the formation of class consciousness.

Responses of people to attempts to be understood or altered are different from the responses of things. This trite fact is at the core of one difference between the natural and human sciences, and it works at the level of kinds. There is a looping or feedback effect involving the introduction of classifications of people. New sorting and theorizing induces changes in self-conception and in behaviour of the people classified. Those changes demand revisions of the classification and theories, the causal connections, and the expectations. Kinds are modified, revised classifications are formed, and the classified change again, loop upon loop.

MORE KINDS

Two distinct objections arise. First, it will be objected that I choose some examples that may be favourable to the looping-effect thesis, and that even in those cases the evidence is skimpy. I cannot reply to that objection here because I require detailed observation, history, and to some extent ‘archaeology’ (in the sense of Michel Foucault). I list some of my recent homework in the references at the end of this paper.

Secondly, it will be objected that my thesis rests on special pleading, on an all too judicious choice of examples. I sympathize completely. My reply is slightly circuitous. The objection may suggest that there are really core, 'prototypical', kinds studied in the human and social sciences, and that these are different in many respects from my overly sensational and problematic examples. In my opinion there are many more types of human kinds than I have discussed—thus far I agree with the objection—but I do not think that there is any core. Therefore I shall suggest a number of types of kinds in the region of the social and human sciences. I should have liked to provide a taxonomy of these, but I do not believe that there is a structure to be had. Hence I offer only a motley collection governed by very rough headings such as second-order kind, biologized kinds, inaccessible kinds, administrative kinds, and self-ascriptive kinds. These are neither exhaustive nor mutually exclusive. I intend to diminish the appeal of any one fixed idea of what human kinds are like by drawing attention to many facets of human kinds that people tend not to think about. I want to transform the second objection from 'You have missed the most central examples of human kinds' into Wittgenstein's warning, 'You have too slender a diet of examples'. My response is to agree, and then to vary the diet.

Second-order kinds

For well over a hundred years the most powerful second-order kind used in connection with people has been normalcy. We owe to Georges Canguilhem the recognition of the normal as a key organizing concept for medicine. Michel Foucault took over the idea when he described the nineteenth-century clinic as a site that focused not on health but on normalcy. Normal-pathological cast its net far beyond the medical domain. Auguste Comte readily adapted it to the political sphere. It was given a statistician's formulation by Adolphe Quetelet, Francis Galton, and Karl Pearson (who in the 1890s renamed the Gaussian bell-shaped curve 'the normal distribution').

I call normalcy second-order for much the same reason that one might (after Kant) call existence a second-order predicate or (after Frege) call number a second-order concept. Nothing is just two (or for that matter one): there are two apples or two heroes or two sources of infection. You have to say two *what*. Likewise nothing is just normal. You have to say normal *what*: a normal child, normal idiosyncrasies, normal speech patterns, or normal development. Normalcy provides a remarkable all-purpose vehicle for characterizing new human kinds as deviations from the norm.

Typically, the human kinds that involve normalcy are defined in terms of abnormality. The *Journal of Abnormal Psychology*, founded in 1906, was once a cutting-edge organization of kinds. It was in the business of

carving out human kinds with, as it happens, a particular emphasis on multiple personality. 'Ortho', which is Greek for normal, is also for kind-forming. The American Orthopsychiatric Association was formed in 1924 by the child guidance clinicians; the *Journal of Orthopsychiatry* followed soon after. It may sound as if the object of study was the normal, but this was not the case. The aims were to recognize, classify, guide, and heal deviant children. They were to be transformed so that they could develop as normally as possible.

Normalcy is not restricted to the human. Its origin is in physiology (normal and pathological physiology), and it readily adapts to much that is biological and beyond. We can have abnormal quasi-stellar objects—even pathological ones. The adjectives are not used to indicate that the quasar is sick, but that there is something quite out of the ordinary about it which astrophysics and cosmology cannot quite understand yet.

The normal can be anywhere, but its home is human. The idea of the normal is partly responsible for the moral overtones of so many human kinds. Deep in the root of the words, the Latin 'norm' and the Greek 'ortho' bridge the fact-value distinction. Even in geometry a line normal to another, orthogonal, is at a right angle, an angle of 90° (descriptive). It is also a 'right' angle, good for carpenters and surveyors (evaluative). Orthopsychiatry is the study of the normal and abnormal development of individual children, noting how some deviate and how they can be put right. Any human kind explained in terms of deviation from the normal is partly descriptive—the kind differs from the usual. However, it is also partly evaluative: the kind differs from what is right; it is worse, or in the case of Galton's deviation from mediocrity, possibly better.

Biologized kinds

I have mentioned the thrust of human kinds towards the biological. Biological is my shorthand for biochemical, neurological, electrical, mechanical, or whatever is the preferred model of efficient causation in a given scientific community or era. This thrust is one of the more powerful themata in scientific thought. Its very success has made us swell with optimism. We have an immense confidence in its potential and plenty of proven examples. I have no quarrel with biological research programmes into human behaviour. However, I do want to note that biologizing human kinds does not thereby make them immune to looping effects.

One effect is obvious. At present we tend to hold that we are not responsible for our biological attributes, except such as we can change by regimens, namely abstinence and spiritual or physical exercises. Of course biology is not a foolproof excuse; Susan Sontag has written about how people are made to feel as morally involved in their cancers as others once were in

their tuberculosis. Then the claim is that the disease is not purely biological, but also has a psychic component. The disorders of women have been particularly ambivalent in this respect. However, by and large, biology is exculpating.

Thus alcoholism has plausibly been regarded as a moral failing. It is regarded as such by the most successful widespread programme to counteract it, namely Alcoholics Anonymous. It evolved a form of meeting patterned on both chapel and confessional, in which resort is made to a higher power 'as each individual understands that term'. The alternative view, favoured by many treatment programmes patterned after hospitalization, is biological, biochemical and even genetic. In this view the alcoholic has a disease for which he is not responsible, and is required to follow a regimen chiefly in the way in which someone with high blood pressure follows a regimen. The scientific (biological) knowledge about alcoholics produces a different kind of person. Results about this are masked because both the scientist and the moralist compete for control over all alcoholics, as a kind, and will not acknowledge that the persons under their sway tend to have projections, expectations, and (probabilistic) law-like regularities different from those of the other lot. Sometimes this comes out at a straightforward level. Thus the Alcohol Research Foundation in my city, a very powerful medical institution, claims to have identified a class of alcoholics who can return to very moderate social drinking; Alcoholics Anonymous denies that there is such a human kind.

Until recently, i.e. until the surge of self-ascriptive kinds discussed below, Alcoholics Anonymous and kindred anti-addiction groups have been anomalously moralistic. Few others have fought the demoralizing impact of biologization. We are exposed to enthusiastic programmes every day. Partly because they tend to be programmes rather than conclusions, they are involved in the looping dynamics of human kinds. Today (as I write) happens to be 13 November 1992. This morning's *New York Times* has on the front page an article headed 'Study cites biology's role in violent behavior'. It begins:

In a sharp departure from traditional criminology, the [U.S.] National Research Council has found that biological and genetic factors should be considered along with environmental factors such as poverty in efforts to understand the causes of violence.

In case we are in doubt as to the authority of the National Research Council, the next sentence reminds us that the Council is 'the research arm of the [U.S.] National Academy of Sciences'. One of the general messages is that 'instead of relying on more prisons and longer sentences, America needs more flexible more pragmatic and less ideological approaches'. After all, if the violence is partly genetic and biological, people are not usefully

put in penitentiaries and reformatories to repent and reform. Is this a 'sharp departure from traditional criminology'? What is described is in outline similar to the criminal anthropology of Cesare Lombroso and many others. It flourished a century ago; its heyday in Italy was 1875–1895. Those are Bad Guys, refuted to the point of ridicule in many a wise volume, of which Gould's (1981) *The mismeasure of man* is the best known. Yet the programme of the criminal anthropologists was parallel to that of the most recent report of the National Research Council, right down to its mixture of biology, inheritance, prison reform, and exculpation.

Violence is not a human kind according to my criteria (i)–(iv). However, criminology is a social science. Institutionally, it is descended from criminal anthropology, i.e. the first criminology departments had Lombrosian aspirations. 'Criminal', like 'suicide', has been used by professionals as a grouping of human kinds. The concluding sentence of the *New York Times* story reads:

'The most significant accomplishment of the [National Research Council] panel is the integration of biological and social science data to develop a new conceptual framework', said Klaus Miczek, a professor of psychology at Tufts University and director of the psychopharmacological laboratory.

A 'new conceptual framework' is in part a new sorting, a new taxonomy, a new array of human kinds, or a reorganization of old ones.

Reorganization is critical. Very seldom do we devise a wholly new human kind. Rather, as in all our endeavours, we build on old ones. Child abuse inherits a good deal from cruelty to children. What we do not notice is the extraordinary amount of not merely making and moulding of kinds that occurs, but also of what is best described as wandering. The wandering is partly the result of the way in which a human kind, once biologized, reacts to the way in which the people who fall under the kinds themselves react to being treated in the way that science dictates.

Inaccessible kinds

I have laid great emphasis on the ways in which people of a kind can become self-conscious about that kind. What about human kinds in which the people classified cannot take in how they are classified? Call those inaccessible kinds. Human beings who cannot understand, such as infants, provide obvious examples. There cannot be self-conscious feedback. However, there can be looping that involves a larger human unit, for example the family. I was brought up by a generation of parents who accepted, as scientific knowledge about infants, that babies must be nursed at set times, regardless of how much they might fuss and scream for more food. Current science holds that the psyches of my age cohort are irrevocably damaged.

My own children grew up at the end of an era when science taught feeding on demand, as counselled by the best-selling American paediatrician Dr. Spock. Spock's science, believed by parents, is held to have created a generation of flower children and peaceniks. We can see this series of episodes as a feedback cycle, but I shall not pursue such specious claims. Consider instead a much more localized human kind that is inaccessible to people of that kind, namely autism. Many aspects of this story will be well known to some readers.

The dictionary defines **autism** as 'abnormal self-absorption, usually affecting children, characterized by lack of response to people and actions and limited ability to communicate; children suffering from autism often do not learn to speak'.* We seem to owe the word to Bleuler's description of the self-absorption and 'separation of thought from logic and reality' in schizophrenics, an idea proposed in his profoundly influential book of 1911, *Dementia praecox oder die Gruppe der Schizophrenien*. We now apply the term primarily to children, or to adults who were autistic children and remain abnormal.

By my criteria, 'the autistic child' is a human kind. It became a cutting-edge kind in the 1970s. The *Journal of Autism and Childhood Schizophrenia* was founded in 1971, and was renamed the *Journal of Autism and Developmental Disorders* in 1979. We are strongly inclined to say that autistic children form a definite class that could, in principle, have been picked out in many populations at many times. We say this because we take it to result from a biological rather than a social deficit. In fact, autism was first characterized by Leo Kanner on the basis of children he noticed in 1938. He thought that they would previously have been called

* The *Diagnostic and statistical manual* (DSM-III(R)) of the American Psychiatric Association (1987) begins its diagnostic criteria for **Autistic Disorder** with the Note 'Consider a criterion to be met *only* if the behavior is abnormal for the person's development level'. It gives three groups of criteria, 16 in all, and requires that a person has two items from (A), one from (B), and one from (C): (A) qualitative impairment of reciprocal social interaction; (B) qualitative impairment in verbal and non-verbal communication; and in imaginative activity; (C) markedly restricted repertoire of activities and interests. For example, (A) is manifested by 'marked lack of awareness of the existence of feelings of others; no or abnormal seeking of comfort at times of distress', (B) is manifested by 'no mode of communication, such as communicative babbling, facial expression, gesture or spoken language; markedly abnormal nonverbal communication, as in the use of eye-to-eye gaze', and (C) is manifested by 'marked distress over changes in trivial aspects of the environment'. The *International classification of diseases* (ICD-10) published by the World Health Organization (1992) has somewhat different emphases but agrees on large issues: 'no prior period of unequivocally normal development', 'inadequate appreciation of socio-emotional cues', 'qualitative impairments in communication are universal', 'impaired use of variations in cadence or emphasis to reflect communicative modulation', 'restricted, repetitive, and stereotyped patterns of behaviour, interests and activities', 'attachment to unusual, typically non-soft objects'. ICD-10 mentions sleeping and eating disorders, temper tantrums, phobias, and self-injury such as wrist-biting as being common.

born-deaf or feeble-minded. He described them in print (Kanner 1943) in *The Nervous Child*, a cutting-edge journal then entering its second year of publication.

The criteria for identification, let alone theories about what autism 'is', have changed a good deal since 1938. The optimistic scientific view is that we are establishing a better and better understanding of autism, refining our definition of this natural kind of behaviour and discovering its cause and its essence. The outside observer may be less sanguine. I think that no one now doubts that many children, diagnosed as autistic, are suffering from some distinct biological (biochemical or neurological) impairment. This must, we feel, be a human kind (or several kinds) that will yield to biology! At the time of writing there is no known brain pathology, and various optimistic correlates (PET scans etc.) do not seem to replicate. We should also note that autism is regularly defined in contrast with the 'normal' development of a child, as in the DSM-III(R) definition cited in the footnote to p. 375.

Kanner reported 11 children who were 'self-absorbed' almost from birth. They adopted abnormal postures when picked up. They did not connect a part of another person's body with the person. Normal children, when annoyed by an interruption, look at the face of the intruder; Kanner's children struck out at the foreign hand or other body part that was disturbing them. The children had remarkable rote memory. They did not learn to communicate, but many echoed what other people said. There was an obsessive desire to keep everything 'the same', and every arrangement of objects or pattern of behaviour was obsessively repeated. There were serious feeding problems; whereas children with lack of affect tend to overeat when given the chance, Kanner's children ate little and stayed away from anything living, but were fascinated by objects. Their toys of choice were inanimate, or sometimes mechanical, rather than cuddly. They had a rigorous compulsion to preserve objects in 'the same' geometrical arrangements.

Kanner's children, drawn from a Johns Hopkins clinic, had very successful workaholic parents. Autism was soon taken to be an innate inability to relate to people, exacerbated by parents who were not very good at that either. In those days children at public schools in North America had their report cards graded according to their ability to 'relate to' children of their own age and to 'relate to' their teachers. Low grades in relationships had heavy loads of guilt laid on them, as I can assure you from personal experience as a 7-year-old in 1943 in the backwoods of a Canadian province a long way from the heartland of such doctrines.

Kanner came to emphasize lack of relatedness and wrote of parents who reared their children in 'emotional refrigerators'. By 1955 this was understood as the primary cause of autism: it was the parents' fault. Parents of

these abnormal children were advised to undergo years of intensive therapy. Over 20 years later Bruno Bettelheim (1967) was still urging exactly that concept of autism. Notice the moral shift. Kanner's children would once have been dismissed as stupid, feeble-minded (therefore feeble, bad), or deaf (therefore dumb, stupid). Now they are liberated. It is not their fault. The parents are emotional refrigerators and that, the whole period 1938–1967, is *bad*.

Autism moved around a good deal. Authors ceased to mention the unusual postures of infants. Feeding had virtually disappeared as a stated problem by 1955 (but see ICD-10 in 1992 (footnote to p. 375)). After that the disorder was increasingly described as 'psychobiological'. The 1968 *Diagnostic and statistical manual* (DSM-II) did not distinguish autism from a kind of schizophrenia. Here there was a certain loyalty to Bleuler, but also a strong resistance to recognizing autistic children as a distinct kind at all. Note the change in title, mentioned above, in the premier journal for autism: from *Autism and Childhood Schizophrenia* (1971) to *Autism and Developmental Disorders* (1979). That was the decade in which autism was separated from schizophrenia, for example by epidemiology: 75 per cent of autistic children are male and the onset is in early childhood; the disproportion is not nearly so great for schizophrenia and the onset is in adolescence. This is an example of the characteristic self-sealing argument we find in debates about human kinds. On the basis of our diagnoses, we find measurable (here chronological) differences between two populations; therefore our distinctions and diagnoses are sound. By 1980 the *Diagnostic and statistical manual* (DSM-III) gave a separate definition of 'infantile autism' that was nevertheless rejected by people working with these children. The definition in the 1987 DSM-III(R), referred to in the footnote to p. 375, is more acceptable but is much altered in the proposals for the next edition.

A standard survey article (Sevin *et al.* 1991) lists five fairly distinct systems for diagnosing autism. There is much emphasis on social problems, lack of play with other children, lack of imaginative play with objects, lack of empathy, and inability to perceive other people's emotions. Half the children do not develop useful speech. The clinical descriptions are rather different from those of non-parents who have to work closely with autistic children. Workers with sufficient time and a small case-load often develop close emotional bonds; the more commonly overworked and underpaid staff quickly lapse into discussions of how hard it is to 'handle' these children. We have a kind, doubtless biological, that nevertheless has been wandering. An authoritative article by Steffenburg and Gillberg (1989, p. 75) states that:

It is high time that autism be regarded as an administrative rather than specific disease label. Autism, like mental retardation, is not a disease, but an umbrella

term, covering a variety of disease entities with certain common behavioural features.

This remark can usefully contribute to the typology of human kinds; autism is an *administrative* kind about which I say a little more below.

Under what sciences should autism be investigated? One contender is cognitive science. Many readers will be familiar with the following sequence of events. Premack and Woodruff (1978) introduced criteria for saying that 'an individual has a theory of mind'. They meant 'that the individual imputes mental states to himself and others' (Premack and Woodruff 1978, p. 515). Philosophers commenting on the paper (Jonathan Bennett, Daniel Dennett, and Gilbert Harman) all referred to an idea apparently first described by Lewis (1969). Two subjects observe a state of affairs. One leaves and the state of affairs is changed; the other sees this. Does the second subject subsequently act as if the other still believes (falsely) that the old state of affairs obtains? For example children are shown a sweet package and shown that it does contain sweets. Some children leave and a plastic alligator is put in the sweet box in front of remaining children; do these expect the other children, on returning, to be surprised by the contents of the package? If so, they impute beliefs to others and have the kernel of a theory of mind.

In the early 1980s numerous experiments in developmental psychology were published to discover the point at which young children acquired a theory of mind, attributing belief systems to others (Wimmer and Perner 1983; Perner and Wimmer 1985; Perner *et al.* 1989). The definitive application to autistic children was made by Baron-Cohen *et al.* (1985). Children with Down's syndrome and autism were compared. The researchers found striking contrasts in the experimental ability to impute beliefs to others: 'our results strongly support the hypothesis that autistic children as a group fail to employ a theory of mind'. These conclusions have been corroborated a number of times by more sophisticated experiments. There turns out to be a residual class of autistic children (one in five) who do 'impute intentionality'. Children in this class tend to be better at language in general. That fits well with Paul Grice's idea, elaborated by Sperber and Wilson (1986) and by Dennett (1987), that linguistic communication demands attributions of intentions. This research has stabilized in a body of thinking represented in the papers collected by Baron-Cohen *et al.* (1991).

However, cognitive scientists do not own autism outright. From the antipodes comes a rehabilitation worker, Rosemary Crossley, who started 'facilitated communication' about 20 years ago. She had begun with cerebral palsy patients, helping them to have control over their movements. The facilitator holds the hand, shoulder, or finger of an autistic person who presses keys on a keyboard—primarily, it is said, to stop the autist from repeatedly pressing the same key (controlling the fixation on 'sameness').

The result is vastly more ability to express understanding of other people than cognitive science allows for. But was not this all the work of the facilitator choosing the keys? (The Supreme Court of Victoria ruled that it was not, siding with a cerebral palsy victim who, working with a facilitator, had communicated a desire to be deinstitutionalized.) The procedure has stood up to fairly rigorous testing to exclude overenthusiastic facilitation. The facilitator is blind to events observed by the autist and then reported by the keyboard. The method has been exported from Australia with a vengeance: for highbrow professional audiences, in the *Harvard Educational Review* (Biklen 1991); for middlebrow audiences where I live, in a five-part series run by the Canadian Broadcasting Corporation in 1991, and in more popular media. It has had a great impact on pressure and self-help activist groups such as (again where I live) the Autism Society of Canada. Not for them the theory that autistic children lack a theory of mind. They lack facilitators. There are all sorts of forces at work. For example, Crossley's star autist is taking a university degree. Autistic children are not stupid, not retarded, and not feeble-minded, but suffer from an unknown disadvantage. There is no stigma attached to autism, and so there is much urgency to have children with difficulties classified as autistic. The cognitive science approach is disliked, for if there were children who did not think that other people have minds, they themselves would thereby be inhuman. But is there not a truth of the matter? Is there not a real kind (or kinds) of children out there that in the end we will know something about? That is by no means clear to me. The looping effect works on the kind and its auxiliaries—family and remedial workers—and of course on the success stories who simply deny the no-theory-of-mind approach.

I should conclude this section with the latest radical twist. Adult autism had for long been diagnosed simply as communication impairment among adults who had been autistic as children. Adult autists were grown-up child autists who had not outgrown their difficulties. But yet another notion is now being discussed: there are adults who are apparently normal, yet suffer from an inability to talk about certain general domains of experience. These would formerly have been regarded as suffering from a psychological disorder, and perhaps have been subject to psychoanalysis to remove repression. But a current theory, developed from workers with an analytic training, holds that these adults suffer from 'specific autisms'. Thus the stigma of being psychologically disordered (crazy) is replaced by something less diminishing of the patient's stature.*

* Many thanks to Malcolm MacIver for far more work on autism than I have used here.

Administrative kinds

It was suggested that autism is an 'administrative' entity. When we reflect on the origins of the social sciences, this becomes a rather compelling concept. Obviously it fits census classifications. Naturally an administrative kind can have quite unexpected effects, as when 'Hispanic' becomes a tool of political unity. Another example is 'Lithuanian language', in part a product of emigrés in Pittsburgh and the US Census (Peterson 1986). The idea of an administrative kind equally fits many social kinds if, as I claim, the social sciences arose together with the bureaucratic imperative to distinguish, enumerate, control, and improve deviants. In the beginning and in the end the deviants would be an administrative problem. In our day the 'administrative' tag is used negatively by those who want a biological kind of which there is biological knowledge. Thus the urge to say both that autism is administrative and that there are several kinds of disorder which we shall find out about. Exactly the same thing has been said about child abuse. The idea of an administrative kind reminds us that there may be rivalry between administrators, battles for territory. Those have been very evident in the child abuse field from the beginning, and at present there is plenty of more muted dispute about who owns autism.

The idea of an administrative kind enables us to bring together a number of different types of objections to my looping thesis. Of course, it will be said, there may be looping effects on administrative kinds. The administered react to their administration! Administrative kinds probably cover a number of different natural kinds, for which there is no feedback effect, and which have real causal, perhaps biological, relationships between them. Except on the point of brevity, I will not be accused of understating the force of this objection. What I deny is that there is a sharp distinction, within the human kinds, between what is given by nature and what is administrative. I deny this in part because of characteristics that I take to be essential to the social sciences and the kinds with which they deal. Doubtless, we shall debate this. Having set the terms of a debate, I wish to conclude with a further, and very recent, feature of human kinds.

Self-ascriptive kinds

Human kinds, I claim, are the product of a particular vision of the sciences of Man. They were formed on two axes. The one is that of the natural sciences. After 1815 the moral sciences were to be patterned on the quantitative natural sciences—sciences that themselves took a notable leap forward as new types of physical phenomena were made the target of measurement. In particular, their conception of causality was made identical to that of the physical sciences, a move abetted by the positivist move-

ment from the 1820s which interpreted causation as regularity. Their other axis was bureaucratic–statistical, which allowed both the counting and tabulation of kinds of people—the analysis of statistical regularity as cause. I single out these two axes as dominant, without wishing to downplay the importance of the anti-statistical backlash, and the insistence, above all in the medico-forensic domains so important to the social sciences, that the individual, rather than the group, is the object of enquiry.

Within these two axes (and also when the third axis, individualism, is added to the display) there is knowledge and the known. ‘We’ know about ‘them’. There are plenty of looping effects, but the known are passive and do not take charge of knowledge of themselves. The second half of the twentieth century has seen the introduction of a radically new axis. Gay liberation provides the classic example.

I have mentioned one official story about homosexuality—that the homosexual as a kind of person emerges in medico-forensic discourse late in the nineteenth century, with instant dispersion. (A colleague in Montreal, an emigré Chinese psychiatrist, noted in a paper that although there were numerous stories and colourful terms in Chinese literature, there was no word meaning ‘homosexual’ until 1887 or 1888. I had to tell him that was about 2 months or one boat trip after it was confirmed in Europe.) To simplify overly much, the label ‘homosexual’ was a term in its original sites applied by the knowers to the known. However, it was quickly taken up by the known, and gay liberation was the natural upshot. One of the first features of gay liberation was gay pride and coming out of the closet. It became a moral imperative for people of the kind to identify themselves, to ascribe a chosen kind-term to themselves. That way they also became the knowers, even if not the only people authorized to have knowledge.

There are plenty of obvious relations to other categories, such as race and gender, black pride and women’s liberation. That is only the beginning. A very general process of self-ascription of kinds has arisen, which I believe will go on affecting human kinds in ways that we cannot foresee. It is no accident that the USA is in the forefront of this movement (just as post-revolutionary post-*empire* bureaucratized France was the original site of human kinds). There are two reasons. One is the far greater role of rights in American social consciousness than is found anywhere else. People of a human kind demand their rights, or people associated with that kind demand rights for members of that kind. The other is that the USA is a uniquely democratic society (with most of the properties that Plato abhorred in the *demos*) which is also predicated on freedom of speech and information flow. (Do not misunderstand me, I am not praising or envying; my own national ethos sides with Plato on such matters.)

There has been a bizarre proliferation of self-help groups of late. Their core feature has been self-ascription; their rhetoric is that of taking control

of themselves. New categories emerge. One of the most powerful has been that of the 'handicapped'. This is, like so many matters pertaining to the human, an administrative category. It groups a subclass of those who do not have 'normal' abilities in this or that respect. The label originated during the Second World War, with procedures enabling people with various kinds of disabilities to work in understaffed industries. There were many jobs that people with different disadvantages could perform perfectly well. Subsequently, interest groups arose urging the rights of people with a variety of handicaps. The old pejorative labels—cripples, dumb, retarded, feeble-minded—were replaced. People gladly took the new labels on themselves and became members of pressure groups—or else their friends or family members did it for them.

There is little end to this process of self-ascription, or even ascription and then rejection: witness the current rejection of Hispanic by some of those for whom the term was invented, and replacement by Latino and other self-avowed subgroups. I have mentioned autistic support societies which include activist groups, self-help groups for families with autistic children, and groups whose direct members are autistic individuals in several age groups. A decade ago I injudiciously made a point sharply by contrasting multiple personality and homosexuality as human kinds. There would, I said, never be any split bars for people with multiple personality disorder. Well there are now multiple personality social groups, and I am told that there is indeed a multiple personality bar in Denver (There is some New Age input into all this as well, and so the maxim is Denver today, Memphis tomorrow, Lyon next week?) Self-help groups tend to remoralize a human kind. Some are even patterned after Alcoholics Anonymous, developing their own twelve-step variations.

This is the right place to conclude a discussion introducing the looping effects of human kinds. We are experiencing a wholly new type of looping effect, when so many of the kinds claim rights to their own knowledges.

REFERENCES

- American Psychiatric Association (1987). *Diagnostic and statistical manual III* (Revised). American Psychiatric Association, Washington, DC.
- Baron-Cohen S., Leslie, A. M. and Frith, U. (1985). Does the autistic child have a 'theory of mind'? *Cognition* 21, 37–46.
- Baron-Cohen, S., Tager-Flusberg, H., Cohen, D. and Volmar, F. (ed) (1991). *Understanding other minds: perspectives from autism*. Oxford University Press.
- Bettelheim, B. (1967). *The empty fortress: infantile autism and the birth of the self*. MacMillan, London.
- Biklen, D. (1990). Communication unbound: autism and praxis. *Harvard Educational Review* 60, 291–314.
- Desrosières, A. (1993). *La Politique des grands nombres*. Découverte, Paris.

- Dennett, D. C. (1987). *The intentional stance*. MIT Press, Cambridge, MA.
- Douglas, M. (1986). *How institutions think*. Syracuse University Press.
- Gilbert, W. (1991). Towards a paradigm shift in biology. *Nature* 349, 99.
- Gould, S. J. (1981). *The mismeasure of man*, Norton, New York.
- Hacking, I. (1986). Making up people. In *Reconstructing individualism* (ed P. Heller, Sosna, M., and Wellberry, D.), pp. 222-36. Stanford University Press.
- Hacking, I. (1990). The normal state. *The taming of chance*, Chapter 19, pp. 160-9, see also pp. 178 ff. Cambridge University Press.
- Hacking, I. (1991). The making and molding of child abuse, *Critical Inquiry* 17, 235-58.
- Hacking, I. (1992a). 'Style' for historians and philosophers. *Studies in the History and Philosophy of Science* 22, 1-20.
- Hacking, I. (1992b). Multiple personality disorder and its hosts. *History of the Human Sciences* 5(2), 3-31.
- Hacking, I. (1992c). World-making by kind-making: child abuse for example. In *How classification works* (ed M. Douglas and D. Hull), pp. 180-238, Edinburgh University Press.
- Hall, G. (1904). *Adolescence. Its psychology and its relation to physiology, anthropology, sociology, sex, crime, religion and education*. Appleton, New York.
- Herman, J. L. (1992). *Trauma and recovery*, Basic Books, New York.
- Kanner, L. (1943). Autistic disturbances of affective contact. *Nervous Child* 2, 217-50.
- Lewis, D. (1969). *Convention: a philosophical study*. Harvard University Press, Cambridge, MA.
- Perner, J. and Wimmer, H. (1985). 'John thinks that Mary thinks that . . .' Attributions of second-order beliefs by 5- and 10-year old children. *Journal of Experimental Child Psychology* 9, 315-60.
- Perner, J., Leekham, S. R. and Wimmer, H. (1989). Exploration of the autistic child's theory of mind: knowledge, belief and communication. *Child Development* 60, 689-700.
- Petersen, W. (1986). Politics and the measurement of ethnicity. In *The politics of numbers* (ed W. Alonso and P. Starr, pp. 187-233. Sage, New York.
- Premack, D. and Woodruff, G. (1978). Does the chimpanzee have a theory of mind? *Behavioral and Brain Sciences* 4, 515-26.
- Sevin, J. A., Matson, J. L., Coe, D. A., Fee, V. E., and Sevin, B. M. (1991). A comparison of three commonly used autism scales. *Journal of Autism and Developmental Disorders* 21, 417-32.
- Sperber, D. and Wilson, D. (1986). *Relevance: communication and cognition*. Blackwell, Oxford.
- Steffenburg, S. and Gillberg, C. (1989). The etiology of autism. In *Diagnosis and treatment of autism* (ed C. Gillberg). Plenum, New York.
- Stein, E. (1992). The essentials of constructionism and the construction of essentialism. In *Forms of desire* (ed. E. Stein), pp. 295-325. Routledge, New York.
- Wimmer, H. and Perner, J. (1983). Beliefs about beliefs: representation and constraining function of wrong beliefs in young children's understanding of deception. *Cognition* 13, 103-28.
- World Health Organization (1992). *The ICD-10 classification of mental and behavioural disorders. Clinical descriptions and diagnostic guidelines*. World Health Organization, Geneva.