

Towards a scientific nosology of psychiatric disorder

Kelly Alexandra Roe

2006

Presented to the Philosophical Society of the Australian National University

Introduction

What I'm hoping to do in this talk is to provide an introduction to some issues in the philosophy of psychiatry in order to motivate and help clarify the scope of my thesis. Philosophy of psychiatry is a fairly broad topic and there are a number of different aspects that one could write a thesis on. I'll start by saying a bit about what I'm not going to talk about and then I'll get on to some of the issues that I want to investigate in more depth in my thesis. Firstly, I'm not going to talk about issues of autonomy or issues of moral or legal responsibility for one's actions. I'm also not going to talk about the nature of evil, or the extensive literature that has accumulated on psychodynamic theories of functioning and disorder. Lastly I'm not going to talk about what it is like to be mentally ill in the sense of reading case studies to grasp the phenomenology of it all.

What I do wish to focus on is a cluster of issues in psychiatric nosology. More in particular I want to focus on what makes a good taxonomy a good taxonomy and more in particular how psychiatry can progress as a science with respect to the development of a more adequate classification system. Such a project is part of the philosophy of science and related areas in the empirical philosophy of mind. As a science of the mind psychiatry needs to develop in line with the cognitive neuro- sciences and thus philosophical work that has been done on integrating these two disciplines will be relevant to my thesis project.

Part of what I want to do in my thesis is thus to consider how the genetic, neurological, cognitive, behavioural, social, and environmental facts relate to one another. I'm hoping to develop a philosophical framework for an integrative approach to the science of psychiatry where facts from each of those levels could well turn out to be relevant for psychiatric nosology and models of different kinds of disorder may well need to incorporate facts from more than one of those levels.

Dominic Murphy in his book '*Psychiatry in the scientific image*' has recently stated that in order to progress as a science psychiatry needs to move beyond purely behavioural symptoms and look to the cognitive neurosciences for the causal mechanisms that sustain the behavioural symptoms of psychiatric disorder. I agree with him in this, but I think that not all such causal

mechanisms are internal to the agent. While Murphy does consider the rule of social causal mechanisms I think that there is a lot more work to be done on this.

A rough outline of what I want to get through today is as follows: Firstly, I'm going to start by introducing the two main systems of classification; the ICD index and the DSM IV. Then I'll consider the purpose of psychiatric nosology so we are better able to assess whether a system is adequate. The last issue I want to consider is the different kinds of categories that mental disorders could turn out to be and some implications of our finding out that a kind of mental disorder is mostly this or that kind of category and in particular whether social causal mechanisms can result in categories that are viable for scientific investigation

Two Psychiatric Nosologies: The ICD and the DSM

There are two main nosologies or systems of classification of mental disorders. One of these is the *International Classification of Diseases Index*, otherwise known as the ICD. The ICD was developed by the World Health Organization for the purpose of compiling statistics on the prevalence of a variety of medical causes of death. As such psychiatric disorders comprise one section and the other sections are constituted by a variety of other medical conditions that are not regarded as psychiatric. The current edition of the ICD index is the ICD-10, or the 10th edition.

The other main classification system is the *Diagnostic and Statistical Manual of Mental Disorders*, otherwise known as the DSM. The DSM was developed by the American Psychiatric Association and it focuses solely on classifying psychiatric disorders. As such it is more specific than the ICD index and it contains more kinds of categories. There have been a number of editions and text revisions in which adjustments are made. The current edition of the DSM is the DSM-IV-TR, or the text revision version of the fourth edition. The DSM states three main aims: Firstly, to compile statistics on the prevalence of different kinds of disorder. Secondly, to facilitate research on mental disorder. Thirdly, to facilitate communication between clinicians. I shall return to how these aims interrelate shortly.

While the use of the DSM as a system of classification was largely restricted to the United States of America initially, its use has increased around the world such that the majority of clinician's now provide DSM diagnostic codes when

they are classifying individuals. The development of translation manuals that allow clinician's to translate a diagnostic category and code for a mental disorder from one system of classification into another has assisted with this. In the United States of America I'm fairly sure that both ICD and DSM codes are required for health insurance purposes.

Identifying Psychiatric Disorders

Diagnosis of mental disorder seems to consist of (as least) two interrelated components. Firstly there is the issue of how we identify whether or not an individual is mentally disordered, and secondly there is the issue of how we identify what particular kind of mental disorder they have. I shall address both of these in turn. With respect to the first issue of identifying mental disorder in general we can distinguish two further related problems. The first is how to distinguish a disorder from a 'problem in living', The second is the issue of how to distinguish mental or psychiatric disorders from non-mental, neurological disorders, or general medical conditions.

With respect to the first issue the DSM provides a global assessment of functioning (or GAF) scale that is meant to capture the extent of the disability, disorder, dysfunction, or distress. Without significant impairment in functioning a clinician should not diagnose an individual as having a mental disorder even if they meet diagnostic criteria for a particular kind of mental disorder. The GAF scale reflects the notion that the DSM is primarily concerned with providing a tool to enable clinician's to make diagnostic decisions. The DSM also lists the following features that clinician's are supposed to use to assess whether an individual has a mental disorder: statistical infrequency, violation of norms, personal distress, disability or dysfunction, and unexpectedness. With respect to unexpectedness Davison and Neale (p.6) maintain that, for example, 'an anxiety disorder is diagnosed when anxiety is unexpected and out of proportion to the situation, as when a person who is well off worries constantly about his financial situation'. The DSM takes this list to not only be a way of identifying individuals on whom to intervene, however, it takes it as an attempted definition of the nature of mental disorder, though it is acknowledged that current definitions are inadequate to capture the phenomenon that is of interest.

The most influential definition of disorder is probably Wakefield's 'Harmful Dysfunction' (HD) analysis of the concept of disorder as it is employed in psychiatry, medicine, and common sense. Wakefield maintains that there are two individually necessary and jointly sufficient conditions for someone hav-

ing a disease, disorder, or illness. The first condition is that there is an inner malfunction and the second condition is that the effects of the inner malfunction are harmful to the person and / or to society. Wakefield maintains that a clinician is justified in classifying an individual as mentally disordered when a clinician believes that their harmful behaviour is the result of inner malfunction. Wakefield's account is controversial, however. While he takes the notion of malfunction to be determined by facts about biological function as talked about by theorists such as Millikan and Neander, other theorists have denied that there are facts about the person that determine that an individual has a disorder. Instead, they maintain that the relevant notion of malfunction is dependent on our value judgements that the individual's behaviour is in violation of norms of society. Even if we grant that there is more to disorder than social norms another point of controversy is over whether disorders must be due to inner malfunction as opposed to outer malfunction, or problems relating to their society or environment. These are issues that I shall return to in a later section.

With respect to the second issue of distinguishing psychiatric disorders from neurological disorders at a first pass mental disorders might be thought of as disorders of cognitive processes, such as thinking, emotion, or desire. Current classification regards cortical blindness as neurological rather than psychiatric, however. This move seems to be in line with our common-sense intuitions though it is in tension with our intuition that mental disorders are disorders of cognitive processes as vision would be a paradigmatically cognitive or mental process. Indeed, other visual disturbances such as hysterical blindness and hallucinations are typically regarded as psychiatric rather than neurological. The concept of mental that is employed in both common sense and in current nosology thus seems to be under-inclusive. Current nosology might also be thought of as over-inclusive, however. For instance, the essential feature of Tourette's is tics but there wouldn't seem to be anything particularly mental or cognitive about a motor disturbance. Perhaps Tourette's really has an essentially cognitive component that is neglected by current nosology, or perhaps Tourette's is not appropriately classified as a mental disorder and current nosology is over-inclusive with respect to this case. It might be that the distinction between neurological and psychiatric conditions is nothing more than a historical relic of the type of intervention once thought appropriate where psychiatric disorders are treated by therapy and neurological disorders are treated by physical intervention. It might be the case that there is no principled distinction to be made between the subject matter of neuroscience or the sciences of disorders of the mind and the subject matter of psychiatry.

The ICD and the DSM are similar in the way that they distinguish between different kinds of disorders even though there are differences in the kinds of disorders that are provided by each classification system. They both provide clusters of behavioural symptoms, or cognitive symptoms identifiable by verbal behaviour. When an individual has significant impairment in their functioning and they meet enough of the behavioural symptoms then the person may be regarded as having that particular kind of mental disorder. While some of the kinds of disorder have essential symptoms the majority do not, rather the person only need exhibit a certain number of symptoms. There are also exclusion criteria such that when an individual meets diagnostic criteria for more than one kind of disorder one diagnosis may take priority and exclude the other. There are other exclusion criteria as well, such as that the behaviour isn't caused by a general medical condition or the effects of a substance or toxin, or that the behaviour isn't performed solely as a matter of political protest or religious conviction.

Ian Hacking maintains that even more important than the DSM definition of mental disorder and kinds of mental disorder the accompanying casebook that provides case studies of people who are prototypical instances of someone both being mentally disordered and meeting a certain diagnostic category. Clinical judgement may thus be thought to consist largely of experience with a variety of more or less prototypical cases so that a clinician's judgement falls in line with the judgement of other health professionals.

The Purpose of Psychiatric Nosology

The ICD classification system was developed so that statistics of the prevalence of the conditions that are leading causes of deaths could be compiled. The DSM states three related objectives in a nosology for psychiatric disorders, however. The first objective is to provide a system that facilitates research on psychiatric disorder. The majority of research takes the diagnostic categories provided by the DSM as the basic unit of research analysis. When people search for a genetic basis, the structural or functional neurological abnormalities, the efficacy of medication or therapy, the cross-cultural variation, or the course of illness, the DSM criteria is used to identify the individuals with the disorder that is the subject of research. While it is important to distinguish clearly between the nature of disorder on the one hand and how we go about identifying individuals with the disorder on the other, the two are clearly related in the sense that we need to identify individuals in order to commence investigation into the generalisations and predictions

that we can make about them as a group and our findings about individuals in the group could lead to subsequent revisions of the diagnostic categories.

The relevant notion here is the notion of construct validity. The DSM provides a list of constructs, or kinds of disorder. A construct is thought to be valid when there are scientific generalisations and predictions that can be made about an individual on the basis of identifying the individual as an instance of the category picked out by the construct. As such, constructs can be more or less valid depending on whether they support more or less generalisations and predictions. The notion of a category that is in play here seems to be in line with Boyd's homeostatic property cluster theory of kinds where we note that there are observable properties (in this case behavioural symptoms) that are found to be clustered together in nature. Because these properties are found to be clustered together we can form a construct of the category and we can make fairly accurate generalisations from the presence of some properties, or symptoms, to the likely presence of some other properties, or symptoms. When we observe some of those properties, or symptoms we can also make fairly accurate predictions such as response to treatment or the future course of illness, for example. The homeostatic property cluster view might only be one way in which we could get projectability, however.

The DSM states that its third aim is to provide a classification system that facilitates communication between clinicians. Prior to the development of the DSM and ICD index there were a proliferation of nosologies that were very theory dependent on which variety of psychodynamic theory the theorist subscribed to. Part of the motivation from moving from a classification of inner causes to a classification of behavioural symptoms was that regardless of theoretical orientation clinician's could agree as to whether an individual exhibited this or that symptom. As the diagnostic categories are built out of behavioural symptoms this also allowed clinician's to agree as to what diagnosis a patient should have, regardless of the clinician's theoretical orientation. The issue here is thus one of inter-rater reliability. When a behavioural symptom or a diagnostic category has good inter-rater reliability then different clinician's would attribute the same symptoms and diagnostic category to the same individual. Both construct validity and inter-rater reliability would seem to be required in order for compilation of statistics on prevalence rates to be meaningful.

These two aims of facilitating research and promoting communication between clinicians might be thought to map onto two different aims of providing a nosology that is scientifically fruitful with respect to generalisation and prediction and providing a nosology that is useful for clinicians with respect

to identifying which individuals are requiring intervention. The DSM takes these aims to be complimentary and indeed they do seem to be related. One would hope that nosology is useful with respect to identifying what kind of disorder an individual actually has, for example, and one would also hope that a scientific nosology would provide information as to what kinds of interventions are likely to be effective. It might turn out to be the case that these aims diverge, however. While purely behavioural symptoms might be most useful with respect to identifying the individuals who require intervention purely behavioural symptoms might be less than optimal with respect to enabling us to identify the underlying causal mechanisms that provide information as to the optimal points of intervention.

While the GAF scale seems practically important in that it is focused on whether intervention is called for it is not a consideration that should guide scientific study on causal mechanisms and intervention points relevant to it. One issue that I want to deal with is what nosological categories would have to be like in order for a scientific nosology to be possible. I'll now turn to considering some of the different kinds of categories that mental disorders could turn out to be.

Kinds of Categories: Part One

Essential Kinds are thought to be categories that share the same intrinsic, or non- relational essential properties. Paradigmatic examples include water and gold where in order to count as an instance of water the instance must have the property of being H₂O and in order to count as an instance of gold the instance must have the property of being atomic number 79. The intrinsic properties are thought to be constitutive of kind membership. Mental disorders could turn out to be essential kinds if it was found that they had a very specific biochemical basis, for example.

Biological Kinds. Are thought to categories that share the same relational, extrinsic essential properties of historical lines of descent. Paradigmatic examples include elms and tigers. There is controversy over whether natural kinds are required to have intrinsic essential properties such that biological kinds don't count as natural kinds; or whether biological kinds are natural kinds and thus natural kinds may have extrinsic, relational essences; or whether membership of a lineage is an internal property to the species as a whole and thus biological kinds are intrinsic essential kinds and thus natural kinds after all. I shan't get caught up in this debate, however. Whether biological kinds are properly thought of as natural kinds or not it seems that

they form something of a natural category.

The notion of a natural category is tied up with the notions of generalisability, projectability, and predictive leverage. Natural categories may be thought of as something along the lines of what Boyd calls a homeostatic property cluster. The notion here is that certain properties are found to be clustered together in nature. If we see some properties then we can infer the presence of other properties and thus homeostatic property clusters support scientific generalisations and predictions. We would seem to identify instances of a natural category on the basis of these observable properties. The category of birds, for example, includes such properties as flight and feathers where these properties are superficial properties rather than properties at a lower level of analysis such as genetic. This view seems to be very much in line with the way the DSM provides behavioural symptoms as relatively superficial observable properties that enable clinicians to identify individuals as having a certain kind of disorder. The majority of diagnoses also do not have essential symptoms and thus members of diagnostic categories exhibit family resemblances of symptoms. A feature of the property cluster view is that different instances have slightly different features and they may be more or less prototypical, for example, not all birds can fly.

While the DSM provides a nosology where clinicians identify mental disorder on the basis of behavioural symptoms it would seem to be a separate issue whether mental disorders are constituted or defined by the behavioural symptoms as **Behavioural Kinds**, however. If one takes the behavioural symptoms to be definitional or constitutive then there could plausibly be borderline cases where it is indeterminate whether the individual is in fact a member of the kind or not. It would seem, however, that the main reason why it is that certain properties are to be found clustered together in nature is because they share some underlying causal mechanism that are responsible for the properties homeostasis. It is because the causal mechanism is found in the different instances that we are able to make scientific generalisations and predictions. It could also turn out that the same set of behavioural symptoms could be generated in two quite different ways. If we found this to be the case then it would seem better to conclude that there are two distinct kinds of disorders where different interventions are required.

Thus, while we might typically identify or come to believe that instances are members of a certain category on the basis of superficial, observable properties, taxonomy is often revised as we come to define categories on the basis of the underlying causal mechanisms that are necessary for category membership. This is because causal mechanisms seem to be what leads to

the properties homeostasis and the more homeostatic a property cluster the more those properties are able to support generalisations and predictions. While Boyd's view focused on internal generative mechanisms it is unclear whether a principled distinction between internal and external generative mechanisms can be sustained. If one views a species as an individual, for example, then lineage would be an internal property to the species. Boyd's homeostatic property cluster view, or something like it, can thus be thought of as consistent with both the essentialist and relational view of categories.

Wakefield attempts to draw a principled distinction between the 'right' and 'wrong' kind of causes for mental disorder. He maintains that when the harmful behaviours are due to inner malfunction the individual is mentally disordered and when the harmful behaviours are the result of external causal mechanisms the harmful behaviours are not indicative of mental disorder and are instead best thought of as a non-pathological problem in living. It would seem that whether mental disorders are constituted by social causal mechanisms would be an empirical matter rather than one to be settled on intuitive grounds or by stipulation, however. Wakefield is especially focused on the notion of neurological and / or cognitive malfunction which he characterises along the lines of a hardware / software distinction and while he doesn't mention it I don't think he would be opposed to adding genetic malfunction to the mix (supposing that it makes sense to talk of genetic malfunction or kinds of genetic disorder). This way of thinking about inner malfunction seems very much in line with cognitive neuropsychology and it might be the case that the kinds of psychiatric disorder are derived as malfunctions of the causal mechanisms that is identified, at least in part, by cognitive neuroscientists. **Neurological kinds** would seem to be fairly straightforwardly thought of as biological kinds. Some theorists have attempted to analyse **Psychological kinds** as another variety of biological kinds where mental or cognitive states such as belief and desire are the kind of state they are in virtue of what the mechanisms that support the state have evolved to do.

Sometimes theorists (like Wakefield) appeal to current functions instead of evolutionary functions where the effects of a current function are responsible for the mechanism being prevalent in current populations. Treating mental kinds as biological kinds is controversial, however. The natural categories or kinds would seem to be those of normal functions. Psychiatric kinds are breakdowns of normal symptoms and the breakdowns may be unified only by being breakdowns of a specific mechanism. There would thus seem to be an open ended class of ways things could go wrong. Attempting to list them all with respect to behavioural symptoms is thus bound to get unwieldy and more progress might be made by looking at different ways that

normally functioning systems can break down. I now want to turn to some of the external mechanisms that might be relevant for mental disorder and I'll consider several different varieties of socially constructed kinds.

Kinds of Categories: Part Two

Artefacts like pens and chairs are paradigmatic examples of **Socially Constructed Kinds**. Instances of the category pens count as members of the category in virtue of having the historical relational property of being designed by an agent for a certain function. As such agents designing them for a certain function is necessary and sufficient for or constitutive of category membership. Because they are designed by agents for a certain function pens exhibit a cluster of superficial properties in common. Those properties may enable us to identify instances as instances of the category. If we found something that shared the superficial properties with pens but it grew on a tree or materialised out of a swamp then because it was not designed by an agent with the relevant intention it would not count as a pen, however. While pens are dependent on us for their initial existence once the instances have been brought into being then it is a mind independent fact that the instances are in fact members of the category. Even if we lost our concept of a pen or we no longer used pens to perform their function the instances that still exist would continue to exist as members of the category.

Some other socially constructed kinds aren't dependent on the intentions or mental states of agents so much as their social practices. Something might count as a doormat, for example, not because it was designed with that intention in mind, but instead because it is currently being used to perform that function. If we accept this reading of what it is to count as a doormat then it would follow that if we were to stop using the object as a doormat that it would cease to be a member of that kind. There isn't a science of pens or doorknobs. While we might be able to make generalisations such as that pens usually have ink and that doormats tend to be sturdy or obstructive it would seem that there are significantly less generalisations and predictions available to us than there is with either chemical or biological kinds.

I now want to turn to another sort of socially constructed kind that is clearly more relevant to psychiatric disorder. The notion of a **Looping Kind** was initially introduced by Hacking and it has subsequently been picked up on by other authors such as Griffiths, Mallon, and Murphy. In order to describe the features of looping kinds I need to draw a further distinction between what I shall call explicit looping kinds and implicit looping kinds.

Explicit looping kinds are kinds that are constituted by our social practices. While artefacts like pens are mind independent in the sense that they continue to be pens in the absence of our social practices around them, looping kinds are thought to be causally rather than definitionally or constitutively dependent on our social practices. Our social practices cause them to come into being as instances of the category and if our social practices change then this can cause them to go out of being as instances of the category. It is easiest to see this by way of example. Members of Parliament and Licensed Dog Owners are examples of explicit looping kinds. We have social practices around parliament and the election of members of parliament, for example, and in virtue of those social practices individuals come to be Members of Parliament. Unlike pens explicit looping kinds aren't independent of our social practices because if we alter our social practices so that there isn't a parliament then the individuals would cease to be members of the category Members of Parliament.

Individuals that are Members of Parliament have properties in common such that they may be identified as Members of Parliament. We are able to make generalisations and predictions about Members of Parliament with respect to the properties they exhibit or are likely to exhibit and ways in which they are likely to behave. When the individuals are no longer members of the category Members of Parliament then they lose the properties that they had in virtue of their category membership, however, and we can no longer make such generalisations and predictions about them. These looping kinds are explicit in the sense that we are aware that the categories are dependent on our social practices. We know that there wouldn't be any Members of Parliament if we altered our social practices in certain ways. This doesn't stop us being able to make generalisations and predictions about Members of Parliament, however. It also doesn't stop the special science of politics from taking them seriously as a category.

Implicit looping kinds are similar to explicit looping kinds except that in this instance we aren't explicitly aware that the instances of the category are instances of the category because of our social practices and instead we regard the category as being a natural (or biological) kind. Hacking maintains that in this case if we were to become aware of their status as a looping kind then it would be inevitable that our social practices would change and this would have the result that the instances would no longer be members of the category. Our awareness and subsequent change in our social practices would also result in an alteration to the properties that the individuals shared as members of the category and thus the generalisations and predictions that were made about individuals in virtue of their category membership would

no longer obtain.

Once again, it is probably best to convey this phenomena by way of example. Examples of implicit looping kinds include categories such as demonic possession and being possessed by a wild pig. The notion is that when we believed in these concepts then our belief in them and our social practices around them results in opening up new ways of behaving that are stereotypic of the category. If we take a person to be a member of the category or if they take themselves to be a member of the category then this may cause them to behave in ways that are stereotypic of the category. Members of the category are thus able to be identified as members of the category in virtue of sharing certain stereotypical properties in common. What is supposed to be distinctive about these categories, however, is that they cannot survive our realisation that they refer to looping kinds. The notion is that once we become aware that the properties are due to our social practices then we cease believing in them and we inevitably alter our social practices so that the individuals no longer display those common features.

This phenomena is probably best conveyed by way of Ian Hacking's characterisation of Multiple Personality Disorder which he takes to be an 'all too perfect illustration of the feedback effect' in implicit looping kinds:

We tend to behave in ways that are expected of us, especially by authority figures – doctors, for example. Some physicians had multiples among their patients in the 1840's, but their picture of the disorder was very different from the one that is common in the 1990's. The doctors' vision was different because the patients were different; but the patients were different because the doctors' expectations were different. That is an example of a very general phenomenon: the looping effect of human kinds. People classified in a certain way tend to conform to or grow into the ways that they are described; but they also evolve in their own ways, so that the classifications and descriptions have to be constantly revised. (Hacking, 1995, p. 21).

Hacking thus maintains that in the case of implicit looping kinds there is a tension in that possession of the concept and our social practises around this are the mechanism that both stabilises and destabilises the property cluster. With respect to the stabilising function he considers that individuals symptoms are shaped because when the clinician applies the concept to the patient this results in the clinician having either implicit or explicit expectations of the symptoms they expect to find in the patient. This changes the way that the clinician relates to the patient and is thought to lead to

the patient exhibiting the symptoms they are expected to exhibit. Another way this can happen is if the clients apply the concept to themselves and thus come to exhibit symptoms that they believe to be stereotypic features of the category. In this way the concept and our social practices stabilise the symptoms that the patient exhibits as they come to behave in ways that are consistent with the stereotype.

Hacking also considers how our social practices can have a destabilising effect, however. He traces how the stereotypical features of Multiple Personality Disorder have evolved through time. Hacking tells a complex story of destabilisation and he draws on a variety of factors including political and theoretical, which lead to our beliefs about the concept evolving and the symptoms evolving in response to this. Some examples he has of this effect in the case of MPD include how many alters are thought to be typical (one or several or over one hundred); whether there is one or two way amnesia; how long it takes to switch between alters; and reports of abuse. It thus seems that the change seems mostly to be a function of a change in the theoretical views of clinicians. This led to a subsequent change in how they related to their clients and what kinds of symptoms they expected to see. Hacking seems to regard implicit looping kinds as having some homeostasis but the homeostasis is less stable than other kinds of socially constructed and natural kinds in that awareness of their status as looping kinds will result in the dissolution of the category.

Implications of Implicit Looping Kinds for a Scientific Nosology.

In these cases because it is implicit that we are dealing with a looping kind we are unaware of the impact of categorisation, our social practices, our expectations, our ways of interacting with the person, and so forth. If we come to believe that a certain kind of mental disorder is a looping kind then it seems that one of three things could happen: Firstly, it could turn out to be the case as an empirical matter of fact our change in belief does not result in a change in our social practices. While Hacking thinks the relevant social practices are ones that invariably would change if we became aware that the category was a looping kind surely it could be possible that the social practices that are sustaining the phenomena could be resistant to change possibly because they have other beneficial effects. It is unclear whether Hacking would consider this to be an example of an implicit looping kind because it was implicit even though awareness did not result in its

dissolution or whether Hacking would consider this to be an example of an explicit looping kind because it does not dissolve in the face of our awareness even though the so called explicit looping kind was implicit for a time.

Secondly, it could turn out to be the case that as an empirical matter of fact that if we came to believe the category was looping and we changed the relevant social practices the stereotypical behavioural features remain. In this case we seem to be left having to conclude that the category wasn't a looping kind after all. While it could still be socially constructed in the sense that artefacts similarly rely on us for their initial existence the phenomenon wouldn't seem to be dependent on our social practices and thus it would not be an implicit looping kind on Hacking's account. The third thing that could happen would be that our awareness of the category as an implicit looping kind could cause the stereotypic features to shift. If we found that a particular kind of mental disorder was an implicit looping kind this isn't to say that all instances of the category are suddenly cured of all symptoms of psychopathology, however. It is just to say that they won't display features of psychopathology that were stereotypic of the looping kind. They may well go on to display stereotypic features of another psychiatric kind, for example. Social constructionists about Multiple Personality Disorder often say that there is no such category as Multiple Personality Disorder there is only Borderline Personality Disorder that has been worked up into Multiple Personality Disorder in response to our social practices around the concept. The notion here seems to be that if we refuse to participate in those social practices the patients will display stereotypic features of Borderline Personality Disorder instead.

What is unclear, however, is whether this would be so because the clinician's expect them to come to display the stereotypical features of Borderline Personality Disorder or whether this is in response to some other mechanism. If clinicians came to believe that there was no such category as Borderline Personality Disorder then would the individuals continue to behave in a way consistent with a diagnosis of Borderline Personality Disorder or would their behavioural symptoms shift so that they met criteria for another diagnostic category? While Multiple Personality Disorder is often one of the favourite categories of those who maintain that we need to look at social causal mechanisms it is unclear whether other, more paradigmatically biological psychiatric kinds could turn out to be looping kinds or to have a looping kind feature to their behavioural symptoms. It could turn out to be the case that mental disorder more generally has a significant looping kind component. If this was found to be the case then this would seem to have significant implications for both the project of how we identify mental disorders and the

project of how we develop a scientific classification of them.

One implication is that focusing solely on behavioural symptoms might be counter-productive. Each subsequent edition of the DSM is praised for making scientific progress with respect to providing categories that better support generalisations and predictions. If the properties relevant for generalisation and prediction are purely behavioural symptoms and if the behavioural symptoms evolve over time in response to the classification system and a new round of expectations by clinician's then it would seem that the DSM approach will be limited insofar as the property cluster is unstable. The DSM may not only describe current symptomatology but it also may have a causal role to play with respect to future symptom development. One consequence of this might be that the DSM and ICD aren't necessarily converging on constructs that are more valid than the old constructs; rather each edition might recover some of the construct validity that the old one had by adequately capturing present symptoms that may, at least partly, have been evoked in response to previous systems of classification. Construct validity on the basis of generalisations and predictions on the basis of behavioural symptoms may be of limited value with respect to a scientific nosology.

If we identify kinds of mental disorders according to causal mechanisms rather than behavioural symptomatology, however, then this enables us to say that the behavioural symptomatology of a particular kind of disorder can evolve over time. This latter approach also allows that there could be considerable cross-cultural variation in the behavioural symptoms of individuals who have the same kind of mental disorder. While the DSM saw purely behavioural symptoms as progress from the causal mechanisms offered by the psychodynamic theorists cognitive neuropsychology would seem to have good prospects for grounding the next stage of scientific development from observational properties towards a scientific nosology of the causal mechanisms that produce psychiatric disorders. It seems plausible to me that more valid constructs may require us to incorporate causes from multiple levels of analysis. While there will be more to social causes than the looping effects that Hacking deals with the looping kind effect is interesting with respect to the relationship between social cognitive and behavioural facts. If we consider that the cognitive facts are represented within the brains of individuals it seems that whether the cause is inner or outer may be a function of how far back in the causal chain we look.