Collected conference proceedings, 2007.

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Introduction

This collection of four conference proceedings from 2007 has been reconstructed from power-point presentation hand-outs.

Sterelny had advised me that I should speak from power-point hand-outs (same as everyone else) rather than reading talks (that were also accompanied by power-point presentations), as I had done in 2006.

The last two talks are distinct – but I did give them the same title, which is unfortunate, retrospectively.

Contents

Chapter 1

Grounding psychiatry: the biomedical notion of dysfunction

Presented to tempo and mode centre for macroevolution and macroecology. Hosted by the Australian National University

Background

- The main issue: What is a mental disorder?
- The issue is typically motivated by saying that we need to identify which individuals have a condition that should entitle them to treatment
- Anti-psychiatrists have acted as a lobby group by putting pressure on the *American Psychiatric Association* to justify why certain conditions are included as mental disorders in the *Diagnostic and Statistical Manual of Mental Disorders*.

Motivating the problem

- Anti-psychiatrists maintain that mental disorder is nothing more than social and / or moral deviance
- As such, psychiatry should not be regarded as a specialist field within medicine.

- The problem of grounding psychiatry in the biological sciences and justifying certain conditions as mental disorders is largely a response to the anti-psychiatry critique and the pressure of other lobby groups

The naturalization cascade

- Fulford talks about the 'naturalization cascade' as a strategy that has been employed by theorists attempting to ground psychiatry in the natural sciences
- The general strategy is to:
- Ground psychiatry in medicine by way of 'disorder'
- Ground medicine in biology by way of 'dysfunction' component of 'disorder'
- Ground biology in the physical sciences by way of physical properties and processes that fix 'functions' and 'dysfunctions'

Psychiatry and medicine

- 'Disorder' is accepted as a stand-in for related notions like 'disease', 'disability', 'malady', 'illness' etc.
- There are issues around how we distinguish mental (psychiatric) from somatic (e.g., neurological) disorders - but I won't be concerned with this here.
- According to the two-stage view the **same notion** of 'disorder' is in play in both medicine and in psychiatry

The bio-medical notion of disorder

- The two-stage view is the most widely accepted account of bio-medical disorder
- According to the two-stage view there are two individually necessary and jointly sufficient conditions for 'disorder'
- - Malfunction

- - That results in harm to persons
- The second condition (harm) is thought to be a stand-in for the normative aspect of 'disorder' (disability, distress etc.,)
- The naturalization cascade is meant to proceed by way of the first condition: That of dysfunction

Wakefield's argument for evolutionary dysfunction

- P1) It is a conceptual truth that the bio-medical notion of disorder is that the disorder is a result of an internal dysfunction (where dysfunction is to be understood in some pre-theoretic sense)
- P2) It is a conceptual truth that there is an empirical process that fixes the functions and hence dysfunctions
- P3) Scientists have discovered that the relevant process for fixing functions and dysfunctions is evolution by natural selection
- C) Disorders are thus failures of an internal mechanism to perform it's evolutionary function

Some things to note about Wakefield's view

- He maintains that the dysfunction must be *internal* to the person
- This is in contrast to the *DSM* that allows that the relevant malfunction can be purely *behavioural*
- Reading disorder as an example
- He thinks that scientists will *discover* the relevant process for fixing functions
- He claims that they have done so already

Functions in biology

- The problem is that there are at least three different notions of function is biology and thus the third premise is controversial, to say the least
- I'll talk through four notions of 'function' before returning to the issue of which notion is relevant for bio-medicine and the issue of how to ground functions (and dysfunctions) in purely physical properties and processes
- Teleological (not really employed in biology)
- Statistical
- Evolutionary
- Hierarchical systems

Teleological

- The teleological notion of function is commonly characterised as goal directed and purposive
- It seems most plausible in the case of artefacts (e.g., Paley's Watch)
- Seems implausible in the case of biological systems because it requires us to posit the existence of an intelligent designer God
- Or (to be fairer to Aristotle) it seems implausible because it requires us to posit complex intentions and desires to systems

Statistical

- The statistical notion of function (or normality) defines the functions of a mechanism as the effects that are in line with the statistical mean
- Dysfunctions can thus be measured in standard deviations from the mean
- Has been defended for some conditions (e.g., mental retardation, hypertension)
- Seems implausible across the board, however (e.g., cancer, AIDS, Dementia)

Evolutionary

- The evolutionary notion of function takes the functional effects of mechanisms to be those that contribute towards fitness
- There are many different versions of the view and it is controversial precisely how we are supposed to cash it out
- E.g., historical versions and propensity versions; individual selection and kin selection

Hierarchical systems

- The hierarchical systems notion of function defines functions as the effects that some mechanism contributes towards a greater system
- E.g., the function of the heart is (roughly) to pump blood in virtue of pumping blood being what the heart contributes to the overall workings of the circulatory system
- Seems plausible as an account of 'function' talk in comparative anatomy and physiology

Which notion of function

- Some theorists maintain that one of the notions is primary and the others can be explained derivatively - So, for example, the truth-maker for the systemic view is facts about evolutionary processes
- Other theorists maintain that these notions genuinely are distinct
- - E.g., Godfrey-Smith 'Let no philosopher attempt to join together that which science has cast asunder'
- This matters because which notion of function we adopt may make a difference as to whether a person is appropriately regarded as having a disorder or not
- That matters because it has implications for treatment

Naturalising functions

- The last part of the naturalisation cascade was to ground the biological notion/s of function in purely physical properties and causal processes
- One say of doing this is to say 'x is the function of y' is shorthand for saying:
- - 'x is the statistical mean output of some mechanism y'
- - 'x is what an intelligent designer intended y to do'
- - 'x is what enabled past token instances of it's class to survive and reproduce such that there are y's now'
- - 'x is what y contributes towards some greater system z'
- All of these seem respectable (non-normative) scientific descriptions (except for intelligent design)

Problems with naturalising functions

- If those descriptions are accepted as an analysis of 'x is the function of y' then the problem for the bio-medical sciences is that it doesn't seem to follow that 'y *should* be doing x even though it isn't' and hence it doesn't follow that 'y *should* be doing x even though it isn't' and hence it doesn't follow that 'y is dysfunctioning because it isn't doing x'
- This is because you can't derive a normative claim about what y *should* be doing from a description of purely physical properties and processes (the is-ought gap)

Naturalising the 'should'

- One could say that 'should' is short-hand for 'if x is to (survive and reproduce, perform according to the statistical norm etc.,) then x would be doing y'
- One could similarly say that 'x is malfunctioning' is short for 'x isn't doing what past tokens did in order for them to have survived and reproduced' (and so on for the alternative notions)

- But why should x do what past tokens did? Or why should x perform according to the statistical mean?
- This analysis of 'should' isn't an analysis of function or malfunction simplicitor, it seems to be an analysis of function or malfunction relative to some standard

Natural functions as relational properties

- There are facts about physical properties and processes that determine what y would need to do in order to perform in accordance with the standard we are interested in
- Physical properties and processes alone seem insufficient to fix the relevant notion of function and malfunction, however
- Functional properties seem to be relational properties that are determined by physical properties and processes together with some norm of evaluation of process of assessment

Natural functions as relational properties

- What standard of assessment we employ seems to be determined by our explanatory interests (and with respect to those, some standards are clearly better than others)
- Our explanatory interests seem to be determined by our values, however
- As such, the notion of function and dysfunction seems to be partly normative
- This is to say that the naturalisation project fails

Where does the cascade fail? Psychiatry to Medicine?

- Some anti-psychiatrists maintain that the notion of 'disorder' in psychiatry is normative in a way that the notion of 'disorder' in medicine is not

- This is to say that they assert that the cascade fails at the first transition from psychiatry to medicine
- That will depend on how the mental / somatic distinction turns out - I don't forsee a problem, here, however
- Or at least: The psychiatric notion might seem more normative (because the relevant standard is more controversial) - But I don't think there is a categorical difference here

Where does the cascade fail? Medicine to Biology?

- It might be that the normativity comes in the transition from biology to the bio-medical sciences
- This could be because the transition from 'function' to 'dysfunction' introduces normativity (and because biologists can do without talking about dysfunction)
- This could be because which functions are relevant for the bio-medical sciences is dependent on extra-scientific concerns (such as who should receive treatment) whereas the biological notion isn't embedded in such extra-scientific concerns

Where does the cascade fail? Biology to Physical properties and processes?

- The notion of function in biology does not *seem* importantly normative
- We did manage to translate both function and dysfunction talk into descriptions of purely physical causal properties and processes
- Which properties emerged as functional did seem to depend on our explanatory interests (which provided some norm that allowed us to identify the relevant function), however
- It seems that the physical processes that are relevant to fixing the relevant notion of function emerge fairly clearly from our explanatory interests (though the problems are in the details, of course)

- As such, the bio-medical notion of function doesn't seem to be normative in a categorically different way from the biological notion/s
- Which is not to say that there can't be a difference in degree

The fact-value distinction

- The trouble is that people have attempted to define the bio-medical notion of 'disorder' in a 'scientific way' that is supposed to be be completely separate and distinct from the 'extra-scientific' concerns about treatment (for example)
- This is why people distinguished 'dysfunction' from 'harm' right at the outset
- The problem is that the normative notion of 'harm' seems to resurface in the notion of 'dysfunction' when we come to understanding what deviation from what relevant standard is relevant

Rethinking the normative non-normative distinction

- It might be that as we are unclear which standard is most relevant for our explanatory interests then there is controversy as to whether something really is dysfunctional or not
- So, if there is controversy over whether we should treat a condition (e.g., psychopathy, addiction) then there will be controversy over whether it is dysfunctional in the relevant sense
- The hope for the naturalisation cascade was that there were objective facts about whether a person was dysfunctional and that was a separate matter from whether they should be treated for the condition or not
- I don't think that the fact-value distinction will sufficiently ground which conditions are mental disorders

Summary

- I have talked about the problem of distinguishing the presence of disorder from it's absence and why it is supposed to matter (e.g., in the context of treatment)
- Looked at the attempt to ground psychiatry in the natural sciences by way of the 'naturalisation cascade'
- The transition from 'mental disorder' to 'non-mental' or 'physical' disorder did not seem particularly problematic (it may be difficult to distinguish neurological from psychiatric)
- The problem seemed to arise in the transition from 'disorder' to 'dysfunction'
- Despite Wakefield's approach being that science has discovered that evolution by natural selection is the relevant process for fixing functions and dysfunctions there are at least two other (biological) notions that may be relevant
- I tried to motivate the idea that different notions of function are relational properties that are jointly determined by the world together with our having adopted a particular standard of evaluation
- It seems the attempt to (completely) naturalise functions fails
- This doesn't seem to be a problem for biology, however, since they are clearer on their explanatory interests
- It might be that while biology is normative (in some fairly uninteresting sense) the increase in normativity from biology to medicine to psychiatry is a matter of increasing controversy over our explanatory interests / the relevant standard and that there isn't a difference in the kind of normativity that is involved

Chapter 2

The dysfunction criterion in medicine and psychiatry

Presented to the philosophy society, November 27, 2007. Hosted by the Australian National University

Introduction

- Sterelny said he would cancel this talk unless I declared that it was not my mid-term.
- I haven't given my mid-term yet, even though I've been working on my thesis with the ANU for 2 years (and 2 summers).
- My overall project is on how psychiatric classification should develop, where psychiatry is conceived of as an applied science of mental disorder
- In the first part of my thesis I look at the distinction between the presence and absence of disorder
- - How we decide what conditions to include as disorders
- I argue that the Dysfunction Criterion is unable to sort the disordered from the non-disordered - but that science can progress without it
- And then I really want to get on with other issues in psychiatric classification basically looking at how a science of mental disorder should proceed in light of the conclusions that I draw in the first part of my thesis

- Today I'm just going to be concerned with the issue of how we decide whether someone is disordered or not

Plan

- Introduce the question
- - What makes it the case that a person has a bio-medical disorder?
- Motivate the Dysfunction Criterion (DC) as the standard answer
- Talk about four broadly different accounts of what functions and dysfunctions are supposed to be
- Consider two different ways we can understand the DC:
- - As an ontological thesis (tells us the nature of disorder)
- - As a methodological thesis (tells scientists how they should model disorder)
- And I'll raise two objections for each version of the DC

Preliminaries

- 'Disorder' is commonly accepted as a stand-in for related notions such as 'illness', 'sickness', 'disease', 'disability' and so on
- There is some controversy around whether the notion of 'disorder' employed in psychiatry is the same as the notion of 'disorder' that is employed in general medicine
- The DC is intended as an account of 'disorder' as it is employed in general medicine and in psychiatry
- I'm thus going to start out assuming that the same notion is in play
- I'll make free use of examples from both psychiatry and general medicine in order to illustrate my points (as is standard in the literature)
- Even though psychiatry is the real target of my thesis
- I won't attempt to say what the difference is between mental (psychiatric) disorder and somatic (e.g., neurological) disorder

The problem

What makes it the case that a person has a disorder?

- One answer would be that a person has a mental disorder if they meet the diagnostic criteria for having a mental disorder
- There would seem to be at least three objections to this, however
- Firstly, it seems that the diagnostic criteria can get things wrong
- – Homosexuality
- – Sluggish Schizophrenia
- Secondly, a mere enumeration of disorders that are currently included in classification doesn't even purport to tell us what those disorders have in common
- Thirdly, it seems that we could discover new disorders whereas the above answer would seem to rule this out

Some intuitions

Three main intuitions

- 1) Certain symptoms / conditions are disorders if anything is
- – E.g., broken legs, HIV, cancer, depression, psychosis, mania
- 2) There is something wrong with these people
- - There is something wrong with their behaviour and / or
- – There is something wrong with their internal mechanisms that produce their behaviour
- 3) What is wrong with them is to be discovered by scientists (e.g., geneticists, neuroscientists).

Intuitions systematized into the dysfunction criterion

- The two-stage view is the most commonly accepted defence of psychiatry in the face of the anti-psychiatry critique
- According to the two-stage view there are two individually necessary and jointly sufficient conditions for bio-medical disorder
- – Harm to persons(thought to be normative)
- – Dysfunction(thought to be non-normative)
- The basic idea of the two stage view is to acknowledge a role for values (in the harm criterion) while grounding disorders in the natural sciences (by way of the DC)
- The DC is fairly much in line with our intuitions as can be seen in Wakefield's argument for a specific version of it:

Wakefield's argument for the dysfunction criterion

- P1) It is a conceptual truth of the bio-medical notion of disorder that disorder is a result of an internal dysfunction (where dysfunction is to be understood in some pre-theoretical sense)
- – (something is wrong with them)
- P2) It is a conceptual truth that there is an empirical process that fixes the functions and hence dysfunctions
- – (science will tell us both that there is something wrong and precisely what it is that is wrong)
- P3) Scientists have discovered that the relevant process for fixing functions and dysfunctions is evolution by natural selection
- C) Disorders are thus failures of an internal mechanism to perform its evolutionary function* (that results in harm to persons)
- *I will focus on this issue next

Problems with Wakefield's view

- Wakefield maintains that the relevant dysfunction must be internal to the person and this is in contrast to the DSM's view where the relevant dysfunction can be 'biological, psychological, or behavioural'
- – I'll return to this later and try and show that it doesn't matter which way we go on this
- Wakefield maintains that scientists have discovered that evolution by natural selection is the relevant process for fixing functions and dysfunctions
- Wakefield has faced substantial criticism for this part of his thesis.
- In order to motivate the DC as much as possible I'll now provide four different ways we can understand 'function' and make sure my criticisms of the DC apply to each reading of 'function'

What Fixes Functions and Dysfunctions?

- Four broadly different approaches to what fixes functions and dysfunctions:
- – Aristotelian Teleological (Megone)
- – Statistical (Boorse)
- – Evolutionary (Wakefield)
- – Systemic (Murphy)

Aristotelian Teleological (fTELOS)

- Forward looking, teleological, and purposive
- For example, watches are for keeping time and if a watch doesn't keep time then it is dysfunctioning
- What seems relevant is that the watch was designed by an agent with a certain intention
- Aristotle thought the function of a person was reason

- A common view of mental disorder is that people with mental disorders are irrational e.g., delusions

Statistical (fSTAT)

- Boorse maintains that we begin by identifying the relevant reference class by way of species / gender / age
- We then assign functions and dysfunctions on the basis of statistical mean
- Dysfunctions can thus be measured in standard deviations from the mean

Evolutionary (fEVO)

- The evolutionary notion of functions fixes functions by how much a trait contributes towards evolutionary fitness / expected reproduction
- E.g., 'the functions are whatever effects of past tokens resulted in their surviving and reproducing such that there are presently existing tokens'
- Or, on the propensity view 'the functions are whatever effects of present tokens will result in their surviving and reproducing into future generations'

Systemic (fSYST)

- According to the systemic notion of function we need to begin by specifying some relevant output of a system
- E.g., we want to explain how the circulatory system circulates blood / nutrients
- The functions of the components of the system are then fixed in virtue of the role they play in producing the relevant output
- E.g., 'the function of the heart with respect to the circulation of nutrients is to function as a pump'

Discussion

- There has been much controversy over whether these are simply different notions of function or whether one notion can be explicated such that some or all of the others can be derived from it.
- This is especially the case with systemic and evolutionary functions as people have attempted to provide a unified account of function in biology.
- This is also the case with Aristotelian teleological and evolutionary functions as people have attempted to naturalize intentionality and rationality
- At first glance these notions of function seem to be different, however (they would differ in their assignment of functions in at least some cases)
- – E.g., Millikan on how evolutionary functions can come apart from statistical functions
- If the different notions of function deliver different verdicts as to what the functions and dysfunctions are then a defender of the DC would need to commit to a particular view on what functions are relevant for psychiatry and / or medicine
- What seems crucial about the dysfunction criterion is that functions and dysfunctions are thought to be objective, empirical, and non-obvious so real science is required to discover the functions on all four accounts
- So the thought is that science will (or already has) shown that certain conditions like schizophrenia, depression, and dementia, really are disorders
- And that science will(oral ready has) shown that certain conditions like voting democrat, homosexuality, political dissent, aren't disorders
- And science will determine whether controversial conditions like sociopathy or addiction really are disorders or not

Problems With the Ontological Version of the DC

(Where dysfunction determines which individuals are disordered)

1. Functions aren't purely objective features of the world – they can only be fixed by the world relative to a norm / standard of evaluation

- I'm going to start trying to motivate this point by way of example
- It used to be thought that females (xx) were dysfunctioning males (xy)
- Then we thought that females weren't dysfunctioning after all – they were just different
- There are individuals with other sex types, however (e.g., xxx, xxy) and so on
- We regard these people to be dysfunctioning males or females
- But some people are campaigning that they aren't dysfunctioning at all, they are simply different
- One might be tempted to think that this is a case of people wanting to celebrate dysfunction
- But the issue is what entitles us to regard the variant as a dysfunctioning variant in the first place
- I'm going to try and further motivate my concern by considering a standard objection to functions and offering a qualified defence of them by providing a positive view of their common structure
- One objection to talk of 'function' and 'dysfunction' is that it seems to have a normative aspect rather than being purely descriptive
- If one says 'the function of the heart is to pump blood' then this seems to license seemingly normative claims like:

- – Hearts **should** be pumping blood
- – The heart is **supposed to** be pumping blood
- – Hearts are **meant to be** pumping blood
- – That heart isn't pumping blood so something is **wrong** with it
- In response to this concern it should be noted that we can translate these seemingly normative claims into descriptions of physical properties and causal processes
- But the correct translated description is going to differ depending on the relevant normative standard
- So instead of saying 'that heart is dysfunctioning' we could say
- – fEVO 'that heart isn't doing what past hearts did that enabled them to survive and reproduce'
- – fSYST 'that heart isn't doing what other hearts do when they contribute to the circulatory system's circulation of nutrients
- These claims seem purely descriptive but it should be noted that they only licence normative claims about what the heart 'should' be doing relative to the normative standard
- Why should hearts do what past hearts did? If you value survival and reproduction then it seems important...
- If you value death (fINV-EVO) then the function of evolution would be extinction and a functioning heart would be one that made death more probable...

Common Features: Functions as Relations Between the World and a Standard of Evaluation

- Now it seems that all the different accounts of function seem to share a common structure
- They all provide some normative standard such that one can assign functions and dysfunctions to physical properties and causal processes
- Normative standards include:

- fTELOS – agents intentions and / or norms of rationality
- fSTAT – statistical mean
- fEVO – expected reproduction
- fSYST – some relevant output of whole
- fINVEVO – expected death
- It seems that scientists could agree on the causal processes that produce and maintain the phenomena
- But it seems hard to see how any of that would tell us whether people with xxx or xxy were dysfunctioning or differently functioning – until we have identified the relevant normative standard
- And thus it seems that functions and dysfunctions aren't simply entailed from descriptions of physical properties and causal processes
- fTELOS seems to be a reasonable standard for fixing the functions of artefacts
- fSTAT seems to be a reasonable standard for fixing the subject matter of some areas of abnormal psychology
- fEVO seems to be a reasonable standard for fixing the functions of biological systems when we are interested in expected reproduction
- fSYST seems to be a reasonable standard for fixing the functions that are the subject matter of comparative anatomy and physiology (where we are not interested in how the systems came to be that way)
- We should be careful not to mistake consensus on the reasonableness of a normative standard (e.g., evolutionary biologists agreeing on f EVO as the relevant standard for evolutionary biology) for the absence of a normative standard, however
- But then the question becomes:
- – What is the relevant normative standard for psychiatry?
- None of those normative standards seem adequate for function fixing in either medicine in general or psychiatry in particular

- This is because if someone is psychiatrically or medically disordered then this has implications for whether they are entitled to treatment and whether we have some obligation to treat them
- While some defenders of the DC attempt to separate issues of dysfunction from issues of treatment this risks divorcing them such that the relevance of dysfunction for psychiatry is undermined
- This is an issue that I shall return to when I consider whether dysfunctions are best thought of as applying to states, internal effects of states, or behaviours and traits as well
- While survival seems fairly clearly relevant to medicine many more people are diagnosed with disorder than those whose survival is threatened (eczema, fear of flying in an aircraft)
- Reproduction seems even less relevant (if someone decides not to reproduce we don't consider them to be disordered!)
- Suffering / distress seems relevant though one would need to distinguish between suffering and distress that is relevant for disorder from suffering and distress which isn't
- At present, we simply don't have a good account of the relevant normative standard for psychiatry
- And this is because people seem to think (and are explicitly defending) the thesis that functions are (solely) objective features of the world that will be discovered by science
- But while science can find out what the functions and dysfunctions are once we have specified the relevant standard it is hard to see how scientists can discover either the relevant standard or functions and dysfunctions in the absence of a relevant standard
- Progress will necessarily involve us getting clearer on the relevant normative standard for medicine and for psychiatry
- So while the anti-psychiatrists seem correct that disorder has more to do with norm violation than natural properties and processes they were wrong to think that medicine was different

2. The line drawing problem shows us that the current normative standards are unable to differentiate functions from malfunctions

- I'm anticipating that people might still think that one of the previous notions of function can be explicated in such a way that it is the relevant standard for psychiatry
- So... I'm going to attempt to motivate a more sceptical objection
- I want to illustrate this with a case where people tend to have clear intuitions that there are objective facts about function so I'll focus on the heart
- While it is a fairly standard view that the function of the heart is to pump blood this is far too coarse grained
- People whose hearts aren't pumping blood aren't typically regarded as DISORDERED
- They are typically regarded as DEAD
- Medicine is about dysfunctioning LIVING people, so we need to be much more specific about how we differentiate functions from dysfunctions such that we can account for dysfunctions in LIVING people
- The 'Ejection Fraction' is the percentage of blood in the heart that the heart pumps out of the heart per pump
- I'll use this to illustrate the point though my decision to do so is arbitrary and any other relevant feature for psychiatry or medicine would have done as well
- The problem is that it seems ARBITRARY where we draw the line between the functional and the dysfunctional variants and thus it seems ARBITRARY whether we say that people with certain variants are disordered or not

Important to Note:

- This isn't just a problem for normal distributions

- The distribution could be skewed but we still face the line drawing problem
- The distribution could be peaked but we still face the line drawing problem
- There could be peaks and valleys in the curve of best fit but we still face the line drawing problem
- All that is required is variation in whatever feature we are interested in
- One might think that a different notion of function would be able to solve the line drawing problem
- I'll try and show how it seems to be a problem for the evolutionary notion of function as well – when there is variation in a trait
- What is required for fEVO is that the variation in the trait is both heritable and that the variations have different reproductive fitness
- The systemic view would face the same problem in deciding on the range of the relevant output (of where we draw the line as to how much circulation counts as functional)
- The Aristotelian teleological view faces the same problem in deciding what individuals count as rational and what individuals count as irrational in the first place
- It is hard to see what sort of standard of evaluation would be able to get around this problem of differentiating the functional variants from the dysfunctional variants in a way that is non-arbitrary (but maybe I need to think harder)
- I do think, however, that I can respond to one objection that people might have
- Functions and dysfunctions have been predicated of various things:
- – Processes,states,mechanisms
- – Effects of processes,states,mechanisms
- – Behaviours or traits

- I think that the line drawing problem is a problem for whichever way we decide to assign functions
- – How many cells die for a dysfunction in the form of a lesion?
- – How much difficulty focusing attention does one need in order for it to be dysfunctional?
- – How little serotonin counts as dysfunctional?
- – What ejection fraction is dysfunctional?
- Each of these seems to face the line drawing problem no matter which notion of function and dysfunction we adopt
- So I don't' really see how it matters whether we go with Wakefield's 'inner dysfunction' or the DSM's 'biological, psychological, or behavioural' dysfunction criterion
- Though I would need to go through each notion in function in detail to really argue for this

Maybe there Just are Some Indeterminate Cases but the Extremes are Clear Enough?

- One might be tempted to say that the extremes are fairly clearly functional and dysfunctional and it is just that there is some indeterminacy as to precisely where we draw the line
- But surely an entire population could be healthy, and conversely an entire population could be unhealthy so this won't save the DC
- The DC promised to tell us whether people were dysfunctioning or not independently of our intuition that something was wrong with certain people. The line drawing problem shows us that none of the currently accepted notions of function are able to do this, however
- We should care because the DSM and ICD view mental disorder vs the absence as being an all or none categorical difference
- If they are wrong about this then that has implications for classification (classification should be dimensional rather than categorical
- We should also care because:

Problems With the Methodological Version of the Dysfunction Criterion

1. The line drawing problem shows us that functions and dysfunctions are assumptions of models rather than something discovered by them

- The methodological version of the malfunction criterion tells scientists that they should:
- – Firstly: Model normal human psychology
- – Secondly: Model abnormal human psychology as 'breakdowns' or 'malfunctions' in the model
- Then the idea seems to be to plug in whichever notion of function and malfunction justifies our inclination to model one way or the other
- But the line drawing problem shows us that it is arbitrary which individuals get to count as 'normal' such that their causal processes / traits / mechanisms / states etc get to count as the 'functional' ones
- So the line drawing problem shows us that there is a corresponding methodological problem:
- – How do we decide whether an individual and/or a condition is to be modelled as functional or dysfunctional?
- The methodological thesis tells scientists to assume that people with a diagnosis of disorder are dysfunctional when they construct their models
- If function and dysfunction are assumptions of the models then they can't be independently discovered by them
- Thus scientists saying they have modelled the dysfunctions involved in schizophrenia (for example) doesn't show us that we are justified in regarding the differences as dysfunctional

- We need to know (in particular) whether schizophrenia is dysfunctional according to the relevant standard for psychiatry (whatever that is) where the relevant standard is meant to be decided on independent grounds

2. Appealing to 'malfunction' to justify our regarding certain individuals as disordered (or certain conditions as disorders) is circular

- So, the dysfunction criterion doesn't seem to provide any independent justification for our intuition that there is something wrong with certain states / mechanisms / effects of mechanisms / behavioural traits
- With respect to what determines who is and who is not disordered (and which conditions are and are not disordered) progress is going to come down to our getting clearer on the relevant normative standard.
- But even then the line drawing problem shows us there is no guarantee that a normative standard would be able to provide a criteria that enables us to differentiate functions from dysfunctions in a non-arbitrary way
- Scientists could agree on the natural properties and causal processes in the world, yet disagree on what functions and dysfunctions there were
- Fortunately they don't need to assume either dysfunction or function in order to describe natural properties and causal processes, however
- Though which people we are interested in in a science of psychiatry is going to be determined by our values

Back to the project

- I'm thinking that this issue might be broken down in the following way:
- 1. Motivated the dysfunction criterion for psychiatry / medicine / cognitive neuro-psychology
- 2. Showed how it is ontologically problematic
- 3. Showed how it is methodologically problematic

- 4. Maintained that while we need to get clearer on the relevant normative standard in order to differentiate disorder from non-disorder...
- Scientists can basically get on with modelling the mechanisms that produce, maintain, and alter the phenomena that is of interest to us
- nd then the idea is to show how a science of psychiatry can progress in the absence of the dysfunction criterion

Chapter 3

Malfunction and harm: Why the distinction doesn't work to ground psychiatry A

Presented to the Philosophy of Biology Graduate Student Workshop. Hosted by the Australian National University

Two problems

- What makes it the case that a condition is a disorder?
- What makes it the case that a person has a disorder?

Motivating the problem: Why should we care?

- People are involuntarily confined in institutions and / or forced to have treatment (including medication) against their will
- - The concern is that abuses of psychiatry aren't hard to come by. E.g., political dissenters in Russia were diagnosed as having 'Sluggish Schizophrenia' and psychiatrists involuntarily confined them and medicated them against their will
- - So it can't be the case that being included in a classification system and / or being considered mentally disordered by psychiatrists is enough to make a condition a mental disorder, or a person mentally disordered

- – The truth maker for 'mental disorder' should distinguish between behaviour that is disordered compared with behaviour that is simply dis-valued by society
- People receive publicly funded treatment and / or treatment that is covered under their health insurance.
- - The concern is that only people who have disorders (and not people who are simply looking to improve performance) should be entitled to third party funded treatment
- – The truth maker for 'mental disorder' should distinguish between behaviour that is disordered compared with behaviour that is simply dis-valued by the individual
- – Diagnosis of mental disorder is necessary (though not sufficient) for the insanity defence

The Critique and a Defence

- Critics of psychiatry (anti-psychiatrists) have maintained that there is little more to mental disorder than social and / or moral norm violation
- Their critique is often directed towards practices like involuntary confinement and medicating, the insanity defence, and opposition to the Parity Bill
- This critique threatens to undermine psychiatry's status as a branch of medicine
- The two-stage view is the most popular account of disorder as it promises to ground both psychiatry and medicine in non-normative facts to be discovered by geneticists / neurologists / cognitive psychologists

One Criterion of the Two-Stage View: Harm

- Harm is thought to be to do with behaviour (actions, surface manifestation)
- Harm is thought to be *normative*.
- – If someone is harmed that entails they would be better off if they weren't harmed.

- – If someone is harmed then that has implications for whether they are entitled to treatment
- – Whether someone is harmed or not varies according to the norms of their culture
- E.g., in some societies people with delusions are revered as prophets or seers or holy leaders. In some other societies people with delusions are feared and / or stigmatised
- Thus, while some behaviours are thought to be *intrinsically* harmful I think it is better to think of behaviours as *causing* harm
- We can of course worry about behaviours that seem to be invariantly harmful across all (or most) societies...

But...

- Surely not *all* behaviours that result in harm is indicative of physical and / or mental disorder
- – Political dissenters who were oppressed by their society were harmed by their political dissent – yet their political dissent isn't necessarily indicative of mental disorder
- – Homosexuals often suffer harm as a result of stigma and prejudice – but the harm is thought to be a problem with society rather than with the individual's behaviour
- So... While it would be nice if we could help everyone who is suffering / harmed surely psychiatry isn't about changing everyone's behaviour that results in harm
-

The Other Criteria of the Two-Stage View: Malfunction

- What is the difference between harms that are due to disorders compared with harms that are not due to disorders?

- Only harms that are caused by malfunction within the individual are appropriately regarded as disorders (the focus of medicine / psychiatry)
- Malfunction is thought to be independent of harm in that some malfunctions don't cause harm, or some malfunctions might even result in benefit to the person. E.g., gourmand syndrome
- Malfunction is thought to be non-normative and discoverable by the biological sciences (e.g., genetic malfunction, neurological malfunction, perhaps even cognitive malfunction)
- If we look at scientific reasoning we will see that malfunction is inferred from harm
- To use malfunction to justify why some harms are regarded as disorders would thus be circular
- I don't see that there is a way of fixing malfunctions independently from harms
- The two-stage view thus fails to ground psychiatry in non-normative facts
- I'll use the case study of Attention Deficit Disorder. This is an arbitrary decision, I could have used depression or psychosis instead...

ADD

- DSM criterion
- How do we decide where to draw the line as to what behaviour is regarded to be harmful enough for dx to be appropriate?
- - how often is 'often' etc?
- - There might be different cut-offs for different societies (e.g., ones valuing athletics vs academic decorum)
- - Should be aware of colonialism of values
- On to the 'inner malfunction' criterion for something objective to help ground dx

Mechanisms of action

- The main line of reasoning from harmful behavioural symptoms to inner malfunction is as follows:
- - P1) Stimulant medications are a successful treatment for the harmful behavioural symptoms of ADD
- - P2) Stimulant medications raise the amount of dopamine in the synaptic cleft
- – Therefore,the harmful behavioural symptoms of ADD is caused by too little dopamine in the synaptic cleft
- While the mechanisms of ADHD medication aren't fully understood the current theory is that they work by enhancing the effectiveness of dopamine by encouraging release and blocking reuptake
- This line of reasoning has also been applied to depression (too little serotonin), psychosis (too much dopamine) and so forth
- Perhaps we could get further support for this line of reasoning by independently discovering that people with the behavioural symptoms of ADD actually did have abnormally low levels of dopamine in the synaptic cleft

Dysfunction as problematic as harm

- Dysfunctional levels of dopamine was thought to be something that was discovered by science without recourse to the notion of harm
- But how are we meant to discover what amount of dopamine constitutes a dysfunction independently of the harmful effects?
- One can't cite the effectiveness of stimulant medications as giving us reason to believe that the person had an inner dysfunction as stimulant medications improve everyone's cognitive performance
- Drawing the line as to what constitutes an inner dysfunction seems every bit as problematic as drawing the line as to what constitutes harmful behaviour
- We need to draw the line because if everyone could take cognitive enhancing medication it would become a fitness trap...

So Much the Worse for the Statistical Notion?

- Maybe this is merely a problem for the statistical notion of malfunction
- Maybe (something along the lines of) Cummin's notion of a systemic function can do the work?
- Or maybe (something along the lines of) an Evolutionary notion of function can do the work?

Systemic Functions

- According to the systemic notion of function we need to begin by identifying the relevant output of some system
- – E.g., the relevant output of the circulatory system is to circulate blood / nutrients
- – E.g., the relevant output of the heart is to pump blood
- We can then assign functions to the components of the system in virtue of the contribution the components make with respect to the relevant output of the system
- – E.g., the function of the heart relative to the relevant output of the circulatory system is to pump blood
- – E.g., the function of the heart valve relative to the relevant output of the heart is to regulate blood flow

The Inadequacy of Systemic Functions

- The problem is that we need to identify the relevant output of a person before we can read off the function of part of the person
- Systemic functions are always relative to the relevant output that we specify initially
- And here the relevant output (ability to focus attention within 'normal range') is determined by our social values
- As such malfunctions are not discovered independently of the harmful behaviour. Rather, inner processes are regarded as malfunctioning precisely because we consider the behavioural effects to be harmful

Evolutionary Functions

- Evolutionary functions are thought to be fixed by effects that contribute to the fitness of individuals (relative to their environment)
- As such, we can't discover evolutionary 'genetic malfunction' or 'neurological malfunction' independently from the effects of the genetic or neurological structures in a particular environment
- As such malfunctions are not discovered independently of the harmful behaviour. Rather, they are attributed precisely because we consider the behaviour to be harmful.

Harm as Objective (Non-Normative)?

- We might think that 'decrease in evolutionary fitness' would be a nice way of making 'harm' non-normative
- In the case where the behaviour results in a decrease in evolutionary fitness across the majority of environments we might be tempted to say that the individual really is malfunctioning
- A problem is that the relevant notion of harm doesn't seem to be adequately characterized as 'survival and reproduction'. (E.g., fertility treatments for a person who is past menopause)
- 'Decrease in evolutionary fitness' doesn't tell us that we are justified in changing the individual rather than society, however
- As such, the evolutionary notion of fitness (and harm) doesn't seem to help us with the problems that we faced to start with

Conclusion

- The justification for certain conditions being regarded as mental disorders... And the justification for certain individuals being regarded as mentally disordered is meant to be that they have an inner malfunction that results in harm
- It is typically acknowledged that whether there is harm or not is determined by our values. Harm is normative in the sense that if someone is harmed then it follows that they would be better off if they weren't harmed

- It is thought that inner malfunction is independent of our values and can be discovered by geneticists and / or neurologists, however
- Inner malfunction that results in harm is supposed to justify our intervening on the individual in order to change their behaviour
- I have attempted to argue that psychiatric reasoning involves our:
- – Firstly: Identifying the individuals who are of interest to us on the basis of a notion of harm that is hard to specify...
- – Secondly: Identifying the causal basis for the harmful behaviour
- – Thirdly: Calling that a 'malfunction'
- Since malfunctions are inferred from harms malfunctions can't be used to justify our regarding the person as harmed, however
- Malfunction collapses back into the normative notion of harm and as such:
- None of these lines will help us make progress on the initial problems.

The problems

- – The truth maker for 'mental disorder' should distinguish between behaviour that is disordered compared with behaviour that is simply dis-valued by society
- – The truth maker for 'mental disorder' should distinguish between behaviour that is disordered compared with behaviour that is simply dis-valued by the individual

Chapter 4

Malfunction and harm: Why the distinction doesn't work to ground psychiatry B

Presented to the Australian Association of Philosophy conference. Hosted by the University of Auckland

Situating the Topic

- My greater project is to see how psychiatric classification can progress scientifically given their stated aims
- – Tool for researchers
- – Tool for clinicians
- The first issue that I'm concerned with is:
- – what makes it the case that a person has a psychiatric disorder?
- This will lead in to the greater project of figuring out what the basic units of a psychiatric taxonomy should be
- – Issue of natural kinds
- – Issue of different kinds of causal mechanisms (e.g., genetic, neurological, cognitive psychological, social)
- Today I'm going to focus on a problem that is located within the first issue

Preliminaries

- I'm not going to say anything today about what differentiates psychiatric disorder from non-psychiatric medical disorders, however
- So while psychiatry is my main area of interest I'm going to be considering bio-medical disorders more generally for the purposes of this talk
- This means that we can make use of examples from both psychiatry and general medicine
- 'Disorder' is a stand-in for related notions like 'disease', 'malady', 'sickness', 'pathology', 'illness', and so on

Plan

- Introduce the problem
- The anti-psychiatry critique of psychiatry
- The attempt to ground psychiatry
- The two-stage view
- Wakefield's version of the two-stage view
- Problems with the malfunction and harm distinction
- – There seem to be objective facts about whether or not an individual is harmed relative to society
- – Dysfunctions can be behavioural as well as internal
- – Fixing the relevant notion of function seems to involve our adopting a standard
- – That standard seems partly determined by our values

The Problem

- We have the intuition that certain conditions are disorders
- – Broken legs,HIV,cancer
- – Depression,mania,psychosis
- The issue is figuring out what justifies our regarding these conditions as disorders
- One answer might be that the conditions are included in a classification scheme
- The problem is that previous classification schemes included conditions like homosexuality and sluggish schizophrenia
- We want to know what underlying principle justifies our including certain conditions in a classification scheme and what justifies our excluding others

The Critique as a Motivation for the Grounding Project

- Anti-psychiatrists maintain that there is no more to mental disorder than social and / or moral norm violation
- In the face of the anti-psychiatry critique there has been an attempt to ground psychiatry in medicine
- The two-stage view is the most popular view of how the grounding should proceed
- According to the two-stage view there are two individually necessary and jointly sufficient conditions for disorder
- – Malfunction / Dysfunction (objective – to be discovered by science)
- – Harm(normative – varies across cultures)
- According to the two-stage view one can separate out matters of value from matters of fact and ground psychiatry solely by way of matters of fact

Grounding Psychiatry: The 'Naturalization Cascade'

- Mental Disorder is a certain kind of Physical Disorder
- - Psychiatry ('Mental Disorder', 'Mental Illness')
- - Disorder = Dysfunction + Harm* (Medicine ('Disorder', 'Illness', 'Disability' Malady' etc))
- Functions and Malfunctions = Physical Properties and Processes
- - Biology ('Function', 'Malfunction')
- - Physics (Physical Properties and Processes)
- More needs to be said about the malfunction and harm distinction
- I'm going to focus on Wakefield's particular version of the two-stage view because he is clearer than most and because he has been the most vocal advocate
- I'll offer a reconstruction of his main argument for his particular version as a way into his view. This will help me illustrate some of the problems

Wakefield's Version of the Two-Stage View

* P1) It is a conceptual truth of the bio-medical notion of disorder that disorder is a result of an internal dysfunction that results in harm to persons (where dysfunction is to be understood in some pre-theoretical sense)
* P2) It is a conceptual truth that there is an empirical process that fixes the functions and hence dysfunctions
* P3) Scientists have discovered that the relevant process for fixing functions and dysfunctions is evolution by natural selection
* C) Disorders are thus failures of an internal mechanism to perform its evolutionary function (that results in harm to persons)

Malfunction and Harm

* The idea is that malfunction is internal to the person and it is objective (to be discovered by science)
* And that harm is a feature of behaviour and / or the effects of behaviour and is normative (to be determined by our social and / or moral values)
* And that intuitively these can come apart:
* Harm without malfunction
* – Never being taught how to read vs reading disorder
* Malfunction without harm
* – Gourmand lesion

Malfunction and Harm

* The notion of harm is meant to be a stand-in for the normative aspect of disorder
* Not much has been said about it other than that it is to persons, that it is a feature of behaviour, that it is determined by our social and / or moral values, and that it is normative (not objective)
* Still, those do seem to be a number of substantive claims
* The focus has been on characterizing dysfunction as being to internal parts of
* This is because the grounding project is supposed to proceed by way of dysfunction persons, and objective (non-normative)

Harm

* One might have a number of concerns with the way that harm has been characterized. In particular we might wonder:
* – Is there an objective aspect to whether an individual and / or society is harmed?
* There can be objective facts about what certain societies do and do not value.
* This can be the subject matter of scientific investigation (e.g., sociology, psychology).

* There could thus be facts about whether an individuals behaviour is harmful in relation to the values of society.
* So, for example, there could be a fact that a person with Gourmand lesion is helped rather than harmed (relative to a society that values gourmets) and that a person who can't read is harmed (relative to a society that values reading)

Dysfunction

* I now want to turn to problems with the dysfunction criterion as the majority of the debate has focused on this aspect
* Wakefield maintains that dysfunctions need to be internal to the person
* That scientists have discovered that evolution by natural selection is the
* That there are objective facts about functions and malfunctions that are determined by science quite independently of our values
* I want to dispute these three claims relevant process for fixing functions and dysfunctions

Why Do Functions and Dysfunctions Have to be Internal?

* Functions and dysfunctions have been predicated of various things:
* – Processes,states,mechanisms
* – Effects of processes, states, mechanisms
* – Behaviours or traits
* Inner Inner Outer
* Process State
* Mechanism
* Output
* Effect Trait
* Behaviour

What Fixes Functions and Dysfunctions?

* There are at least four broadly different accounts of function fixing:
* – Aristotelian Teleological (Megone) – Statistical (Boorse)
* – Evolutionary (Wakefield)
* – Systemic (Murphy)

Aristotelian Teleological (fTELOS)

* Forward looking, teleological, and purposive
* For example, watches are for keeping time and if a watch doesn't keep time then it is dysfunctioning
* What seems relevant is that the watch was designed by an agent with a certain intention
* Aristotle thought the function of a person was reason
* A common view of mental disorder is that people with mental disorders are irrational e.g., delusions

Statistical (fSTAT)

* Boorse maintains that we begin by identifying the relevant reference class by way of species / gender / age
* We then assign functions and dysfunctions on the basis of statistical mean
* Dysfunctions can thus be measured in standard deviations from the mean

Evolutionary (fEVO)

* The evolutionary notion of functions fixes functions by how much a trait contributes towards evolutionary fitness / expected reproduction
* E.g., 'the functions are whatever effects of past tokens resulted in their surviving and reproducing such that there are presently existing tokens'

* Or, on the propensity view 'the functions are whatever effects of present tokens will result in their surviving and reproducing into future generations'

Systemic (*f*SYST)

* According to the systemic notion of function we need to begin by specifying some relevant output of a system
* – E.g., we want to explain how the circulatory system circulates blood / nutrients
* The functions of the components of the system are then fixed in virtue of the role they play in producing the relevant output
* – E.g., 'the function of the heart with respect to the circulation of nutrients is to function as a pump'
* There has been much controversy over whether these are simply different notions of function or whether one notion can be explicated such that some or all of the others can be derived from it.
* This is especially the case with systemic and evolutionary functions as people have attempted to provide a unified account of function in biology.
* This is also the case with Aristotelian teleological and evolutionary functions as people have attempted to naturalize intentionality and rationality
* At first glance these notions of function seem to be different, however (they would differ in their assignment of functions in at least some cases)
* – E.g., Millikan on how evolutionary functions can come apart from statistical functions
* If the different notions of function deliver different verdicts as to what the functions and dysfunctions are then a defender of the dysfunction criterion would need to commit to a particular view on what functions are relevant for psychiatry and / or medicine

Common Features: Functions as Relations Between the World and a Standard of Evaluation

* Now it seems that all the different accounts of function seem to share a common structure
* They all provide some standard such that one can assign functions and dysfunctions to physical properties and causal processes relative to the standard
* Standards include:
* fTELOS – agents intentions and / or norms of rationality
* fSTAT – statistical mean
* fEVO – expected reproduction
* fSYST – some relevant output of whole
* If we have a seemingly normative claim such as 'that heart should be pumping blood' then we can translate that into a description of purely physical properties and processes
* – fEVO 'that heart isn't doing what past hearts did that enabled them to survive and reproduce'
* – fSYST 'that heart isn't doing what other hearts do when they contribute to the circulatory system's circulation of nutrients
* These claims are purely descriptive
* But there is no entailment from a completed description of physical properties and processes to what the heart should be doing – in the absence of some standard of evaluation
* Why should hearts do what past hearts did? If you value survival and reproduction then the evolutionary standard fixes the function as doing what past hearts did...
* If you value death, however, then the inverse evolutionary standard fixes the function of evolution as extinction and a functioning heart would be one that made death more probable...

Is it Really Normative?

* There can of course be facts about what norms are or are not endorsed by a given society

* There can of course also be facts about what norms a given society should or should not adopt – relative to some interest or other
* There might similarly be facts about what standard is relevant for psychiatry – given its aims
* If we ask what psychiatry's aims should be (or what norms it should adopt in a way that divorces the 'should' from a standard) then that seems normative, however
* It is far from obvious that any of the previous standards are the appropriate standard for fixing the subject matter of psychiatry given its aims
* The aims (once again) were to
* – Provide a list of conditions that is useful to researchers
* – Provide a list of conditions that is useful to clinicians
* While there might be facts about what conditions are readily identifiable and treatable the question of whether we 'should' treat it or whether an individual should be helped seems (at least partially) determined by our values

Conclusion

* Basically what I've tried to do is carve a middle way between those who maintain
* – There is no more to mental disorder than certain kinds of social and / or moral norm violation
* And those who maintain
* – Science will determine who is and who isn't disordered
* While some theorists think that science will discover what conditions really are disorders or not I think that can't do all the work
* We equally need to get clearer on the relevant standard for psychiatry and for medicine
* Physical properties and causal processes in the absence of a standard is insufficient to fix what conditions are and are not disordered