

Grounding psychiatry: The bio-medical notion  
of malfunction

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## **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 in 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 way 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 foresee 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 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 its 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