Grounding Psychiatry: The Bio-Medical Notion of Dysfunction

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Tempo and Mode Seminar

Outline

- Motivating the Problem
- The naturalization cascade
- Four notions of function
- Argue that functional properties are relational properties that are determined by the world together with our explanatory interests that fix some standard of assessment
- The naturalization cascade fails at the transition from biology to purely physical properties and processes
- While the normativity doesn't seem to be much of a problem for biology it becomes more problematic as the relevant standard becomes more controversial and as more rests on which standard we adopt

Some 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 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 the ‘dysfunction’ analysis 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 that here
- According to the two-stage view the ***same notion*** of ‘disorder’ in in play in both medicine and 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-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 is evolution by natural selection

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C) Disorders are thus failures of an internal mechanism to perform its 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 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 4 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 characterized as goal directed and purposive
- Seems plausible in the case of artifacts
- Seems implausible in the case of biological systems because it seems to require us to posit the existence of some 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
- For example, the hearts function is (roughly) to pump blood because pumping blood is 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 really 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
- And that matters because whether a person will receive treatment or not depends on whether they are regarded as being disordered or not

Naturalizing Functions

- The last part of the naturalization 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 God intended y to do’
  - ‘x is what enabled past tokens of y to survive and reproduce’
  - ‘x is what y contributes towards some greater system z’
- All of these seem respectable (non-normative) scientific descriptions except for the God hypothesis

Problems With Naturalizing 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 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’)

Naturalizing the ‘Should’

- One could say that ‘should’ is shorthand for ‘if x is to (survive and reproduce, perform according to the statistical norm etc) then x would need to be doing y’
- One could similarly say that ‘x is malfunctioning’ is short for ‘x isn’t doing what past tokens did in order to survive and reproduce’ (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 or standard 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
- So the naturalization project fails

Where Does the Cascade Fail? Psychiatry -> 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
- So the cascade fails at the first transition from psychiatry to medicine
- That will depend on how the mental / somatic distinction turns out – but I don’t forsee a problem here
- 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 -> 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)
- It 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 -> Physical Properties and Processes?

- The notion of function in biology didn't *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 functional), 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 didn't seem to be normative in a categorically different way from the biological notion/s
- Which isn't 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 separable from the ‘extra-scientific’ concerns about treatment (for example)
- This is why people distinguished ‘dysfunction’ from ‘harm’ right from the outset
- The problem is that the normative notion of ‘harm’ seems to resurface in the notion of ‘dysfunction’ with respect to deviation from some relevant standard

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 more controversy as to whether something really is dysfunctional or not
- So if there is controversy over whether we should treat a condition (e.g., sociopathy, addiction) then there will be controversy over whether it is dysfunctional in the relevant sense
- The hope for the naturalization cascade, however, was that there were objective facts about whether a person was dysfunctional that was a completely 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, however

Summary

- Talked about why there is such a problem (which conditions are mental disorders?) and why it matters (who should be entitled to treatment?)
- Looked at the attempt to ground psychiatry in the natural sciences by way of the ‘naturalization cascade’
- The transition from ‘mental disorder’ to ‘physical disorder’ seemed okay (though there may be some surprises lurking with the ‘mental’ / ‘neurological’ distinction)
- The transition from ‘disorder’ to ‘dysfunction’ seemed a little problematic, however.

Summary

- Despite Wakefield's thought that science has fixed on evolution by natural selection being the relevant process for fixing functions there are at least two other (biological) notions of function that could be relevant
- I argued that functions are relational properties that are jointly determined by the world and a standard of evaluation
- As such the attempt to naturalize functions and malfunctions 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