

## Correspondence

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### Letter to the Editor

#### Robustness is the kind of coherence that matters: a comment on Kendler (2015)

In Kendler (2015), the reality of psychiatric disorders is defended based on the coherence theory of truth. The starting point is the issue of realism *v.* instrumentalism: Should we regard mental disorders as entities that exist in some mind-independent way (realism), or are they constructs that are useful for prediction and practical purposes, but do not exist independently of our theories and models (instrumentalism)? Instead of subscribing to either of these options, Kendler (2015) steers towards a middle way, arguing that the reality of psychiatric disorders comes in degrees and is determined by coherence. His proposal for psychopathology is to reject the correspondence theory of truth, according to which statements are true if and only if they accurately describe the mind-independent reality, and to adopt the less ambitious coherence theory of truth, where the criterion for truth is coherence with other statements.

I agree that coherence is important for psychopathology, but I argue that abandoning the correspondence theory in favor of the coherence theory of truth is highly problematic. First of all, in contrast to what Kendler suggests, the coherence theory of truth does not provide a solution to the pessimistic induction problem (i.e. the problem that most successful theories of the past have turned out to be false). Many scientific theories of the past have been coherent, but have nevertheless been completely replaced (Thagard, 2007). This also applies to psychopathology: psychiatric disorders, such as female hysteria, also had a degree of coherence with the scientific theories of their day, but turned out not to be real.

Second, in Kendler's account, psychopathology becomes disconnected from the rest of science, as he argues that in the natural sciences the correspondence theory of truth holds, while in psychopathology truth should be understood in terms of coherence (Kendler, 2015, p. 1117). This would also imply that, unlike in other fields of science, categories in psychopathology need not necessarily reflect objective features of reality, as the coherence theory of truth does not require any correspondence with reality.

Third, the view that the reality of mental disorders comes in degrees and is determined by coherence

leads to a strange picture of scientific discovery and progress. One implication of Kendler's account is that major depressive disorder (MDD) was much less real 50 years ago than it is now, since it was less interwoven with our knowledge base and scientific findings. However, it is more plausible that MDD has not become more real, but we can now be more confident that we are dealing with a real phenomenon. The goal of empirical science is to discover and explain phenomena, not to create them.

Thus, the coherence theory as presented by Kendler (1) does not solve the problem of pessimistic induction; (2) makes psychopathology disconnected from the natural sciences and less (ontologically) ambitious; and (3) implies that past depressions were less real than current ones.

The alternative that I propose in order to avoid these outcomes is to rethink the role of coherence. It should not be seen as a *criterion* for truth or reality, but as one source of evidence. If we take coherence to result in evidence and justification for the reality of the phenomena studied, we avoid the uncomfortable outcome that science makes things (more) real or true. Then we can accept that the ultimate criterion for truth in all of science is correspondence with the mind-independent reality.

Importantly, with this approach we can also give a plausible answer to worries of pessimistic induction. If there are multiple independent and converging sources of evidence for an entity, it is highly unlikely that all those independent ways will turn out to be mistaken, and thus we can be fairly confident in the reality of that entity. In philosophy of science, this type of coherence is called 'robustness' (Soler *et al.* 2012; Eronen 2015). Entities for which there has been highly robust evidence have persisted throughout several scientific revolutions – prominent examples include electrons, organs, and neurons. In contrast, entities that have been replaced, such as phlogiston or female hysteria, were not supported by robust evidence. Thus, robustness is a matter of degree, and when a high degree of robustness is reached, we can be perfectly justified in believing in the reality of the entities involved. Thus, evaluating whether psychopathological categories are robust to a high or low degree should be a crucial topic for future research.

This also provides a new perspective to Kendler's (2009) theory of 'epistemic iteration' of psychiatric disorders: One reason why successive iterations can lead to progress is that they result in more and more robust categories. However, it is crucial to note that highly

robust categories are not more real than less robust ones; high robustness just makes it more likely that we are dealing with a real phenomenon.

In sum, in order to bring the science of psychopathology further we should treat coherence as a source of evidence, not as a criterion, and embrace degrees of evidence and justification instead degrees of reality. Theories of truth and the pessimistic induction argument have little relevance for current psychopathology. The form of coherence that is most important in this context is robustness: If psychopathological categories are highly robust in the sense of being backed by converging evidence from independent sources, scientists can be confident in their reality, without revising their views about truth.

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### Declaration of Interest

None

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