

The Logic of Schizophrenia

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Abstract

Schizophrenic and OCD delusions are discriminated by egosyntonicity in the literature; however this does not properly distinguish anorexia nervosa (AN). By considering modal logic and grammar, we bring lucidity to the taxonomy of such experiences.

Psychiatry separates obsessions (egodystonic) and delusions (egosyntonic), graded by degree of insight (Eisen et al. 2001; Vandereycken 2006). Conditions such as OCD and schizophrenia additionally clearly differ in the grammatical mood of the delusions, which gives insight into the grouping of such experiences.

Background

Some languages separate the indicative and conditional. Sentences in the indicative mood without conditionals can be justified by reference to the world.

Introduction

Delusions in psychosis may be backed up by hallucinations—one hears voices and believes that an angel is giving counsel. One can see how distorted senses would feed delusional thoughts about the state of the world.

But it is impossible to hallucinate a conditional, to back it up by distorted senses; for example “if I step on the treated lawn I will get cancer”

Examples

- “If I eat peanut butter, I will be morally contaminated” (AN) - a delusion in the conditional.
- “I am not thin” (AN) - a delusion in the indicative
- “There is something in my wall and it intends to hurt me and my family” - a delusion in the indicative

- “If I don’t wash my hands I will kill grandma” (OCD) - a delusion in the conditional
- “There are superior people who can survive on air, without eating” (AN, not typical) - note the modal “can”

Commentary

Notably, though anorexia is egosyntonic and OCD egodystonic, they overlap in that they are dominated by delusional *conditionals*. This matches the psychiatric literature: OCD is the closest cousin to AN (Zamboni et al. 1993; Serpell et al. 2002; Watson et al. 2019).

Sensory Aspects of AN

A belief pathognomonic of anorexia nervosa, “I am not thin,” (indicative), accompanies distorted proprioception (Beckmann et al. 2021; Guardia et al. 2010) that seems to be a scar effect of the illness. In this way, the typical presentation of AN is distinct from typical OCD; the persistence of this particular delusion (or overvalued idea) is signal.

References

- Beckmann, Nina, Patricia Baumann, Stephan Herpertz, Jörg Trojan, and Martin Diers. 2021. “How the Unconscious Mind Controls Body Movements: Body Schema Distortion in Anorexia Nervosa.” *International Journal of Eating Disorders* 54 (4): 578–86. <https://doi.org/https://doi.org/10.1002/eat.23451>.
- Eisen, Jane L., Katharine A. Phillips, Douglas Beer, Katharine D. Atala, Steven A. Rasumussen, and Lee Baer. 2001. “Brown Assessment of Beliefs Scale.” https://www.veale.co.uk/wp-content/uploads/2010/11/BABS_revised_501.pdf.
- Guardia, Dewi, Gilles Lafargue, Pierre Thomas, Vincent Dodin, Olivier Cottencin, and Marion Luyat. 2010. “Anticipation of Body-Scaled Action Is Modified in Anorexia Nervosa.” *Neuropsychologia* 48 (13): 3961–66. <https://doi.org/https://doi.org/10.1016/j.neuropsychologia.2010.09.004>.
- Serpell, Lucy, Alison Livingstone, Marc Neiderman, and Bryan Lask. 2002. “Anorexia Nervosa: Obsessive–Compulsive Disorder, Obsessive–Compulsive Personality Disorder, or Neither?” *Clinical Psychology Review* 22 (5): 647–69. [https://doi.org/https://doi.org/10.1016/S0272-7358\(01\)00112-X](https://doi.org/https://doi.org/10.1016/S0272-7358(01)00112-X).
- Vandereycken, Walter. 2006. “Denial of Illness in Anorexia Nervosa—a Conceptual Review: Part 1 Diagnostic Significance and Assessment.” *European Eating Disorders Review* 14 (5): 341–51. <https://doi.org/https://doi.org/10.1002/erv.721>.
- Watson, Hunna J., Zeynep Yilmaz, Laura M. Thornton, Christopher Hübel, Jonathan R. I. Coleman, Hélène A. Gaspar, Julien Bryois, et al. 2019.

- “Genome-Wide Association Study Identifies Eight Risk Loci and Implicates Metabo-Psychiatric Origins for Anorexia Nervosa.” *Nature Genetics* 51 (8): 1207–14. <https://doi.org/10.1038/s41588-019-0439-2>.
- Zamboni, R., V. Larach, M. Poblete, R. Mancini, H. Mancini, V. Charlin, F. Parr, C. Carvajal, and R. Gallardo. 1993. “Dorsomedial Thalamotomy as a Treatment for Terminal Anorexia: A Report of Two Cases.” In *Advances in Stereotactic and Functional Neurosurgery 10*, edited by Björn A. Meyerson, Giovanni Broggi, Jose Martin-Rodriguez, Christoph Ostertag, and Marc Sindou, 34–35. Vienna: Springer Vienna.