Models and mechanisms in philosophy of psychiatry
Editorial introduction

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Philosophy of psychiatry is becoming increasingly popular. One of the reasons is its scope and interdisciplinarity. It not only relates to philosophy of mind, philosophy of medicine, philosophy of science, and phenomenology, but also to ethics and social and political philosophy. A central question in the field is how mental disorders can be best conceptualized, modelled, and explained. Within cognitive neuroscience, philosophy of science, and philosophy of mind, a range of new approaches has recently been proposed to serve this end. These approaches include, among others, the new mechanist philosophy, artificial (deep) neural networks, symptom network theory, predictive processing, computational psychiatry, connectomics, and 4E-cognition. Although these accounts exhibit promising features for a modern scientific approach to psychiatry, they leave unanswered important questions regarding the theoretical and conceptual foundations of psychopathology as well as the practical limitations arising for clinical practice. This special issue sets out to address some of these questions.

The background for this special issue is the multidisciplinary workshop "Minds, Models and Mechanisms: Current Trends in Philosophy of Psychiatry" which was held at Saarland University in April 2021. Though we had to switch to an online format due to the pandemic, the discussions at the event have been extremely inspiring. It brought together experts from diverse disciplines, like clinical psychiatry, neuroscience, computational modelling, philosophy of mind and cognition,

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and philosophy of science. Joining forces, researchers from these disciplines presented their ideas on the subject. In the aftermath of the workshop, the organizers issued an open call for contributions. After a rigorous review process five papers made it into the final issue, each making an original contribution to the field.

In her paper "Mental disorder: An ability-based view" Sanja Dembic (2023) puts forward an ambitious, general theory of what mental disorders are. The central elements of her theory are (in)abilities, reason, and harm. While Dembic builds on well-known approaches of harmful dysfunctions, she aims to avoid some of the problems that these approaches have by relying on abilities rather than on functions. Abilities as well as reasons are personal level features, so Dembic's account is intelligible not just to scientists and philosophers, but also to patients and lay people as well.

In their paper "The skill of mental health" Garson Leder and Tadeusz Zawidzki (2023) put forward a related, but still different approach which also operates on the personal level. According to them, mental health is nothing over and above the ability for skilled action, viz. a metacognitive skill. Importantly, this includes the ability to self-regulate one's cognitive abilities in order to adapt to a changing environment. Accordingly, Leder and Zawidzki conceptualize mental disorders as a breakdown of this metacognitive skill.

The next two papers focus on a recently very influential approach in scientific psychiatry, namely the use of computational approaches based on machine learning and modern developments in the field of artificial intelligence. This approach comes with the aspiration or at least hope that gathering big amounts of data and analyzing them in automated ways will help psychiatrists find new regularities in patients with mental disorders. Thus, proponents suggest, computational approaches will eventually contribute to a better understanding, classification, and treatment of mental illnesses.

In their paper "Machine learning and its impact on psychiatric nosology" Georg Starke, Bernice Simone Elger, and Eva De Clercq (2023) present data from a qualitative study using semi-structured interviews with 15 German and Swiss experts in computational psychiatry. The interviews took place between April 2020 and June 2021. In the results presented here, the authors focused on the questions (i) whether computational approaches will be able to contribute to an improved nosology and (ii) whether this would be desirable. The results were mixed, showing there were optimists and sceptics with respect to both questions. The authors discuss the various reasons for this optimism and skepticism, respectively, and highlight the relevance of these for philosophical theories of mental disorders.

In his paper "Understanding as a bottleneck for the data-driven approach to psychiatric science" Barnaby Crook (2023) gives an excellent review on the role of computational approaches, machine learning, and AI within scientific psychiatry. The main point of his paper is to show that despite its powers in finding new patterns in data, machine learning neglects an important aspect of psychiatry that is indispensable if psychiatry wants to improve patients' treatment: patient

understanding. Crook argues that patient understanding, i.e. the understanding of mental disorders by those who are afflicted by them, has necessarily to be included into such approaches if they want to achieve substantial progress in the treatment of mental illnesses.

The final paper in this issue is "How does the psychiatrist know?" by Adrian Kind (2023). In this paper, Kind takes a closer look at how the diagnostic process in psychiatry can and should best be understood. In doing so, he confronts phenomenological approaches with standard clinical psychiatric examination and argues that diagnostics procedures depend on modeling mental disorders within the diagnostic procedures. He explains his model-based account in detail and argues why it is superior to the phenomenological approach.

A common theme emerging from these papers is that personal level accounts do or at least should play an indispensable role in modern psychiatry. This is true for the concept of what a mental disorder is, how mental disorders are diagnosed, how they should be investigated, and how, or to what extent, computational approaches might be utilized to improve treatments of mental illnesses. With all of this, we hope that the current collection of articles will contribute to advance the philosophy of psychiatry.

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