EUJAP'S SPECIAL ISSUE "THE BOUNDS OF RATIONALITY" EDITORS' INTRODUCTION

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> *We have arranged for ourselves a world in which we can live - by the postulating of bodies, lines, surfaces, causes and effects, motion and rest, form and content: without these articles of faith no one could manage to live at present! But for all that they are still unproved. Life is no argument; error might be among the conditions of life (italics added) (Nietzsche 1882/1974; aphorism #121, Book III).*

We thought it appropriate for a philosophical reflection on the concept of rationality and irrationality to start out with this excerpt from Nietzsche's The Gay Science (1882). The idea that error may be an intrinsic part of life—surely a Baconian echo—appears particularly useful to zoom in on all the difficulties that arise whenever we focus on the boundaries surrounding rationality. In our everyday experience of the world, as well as of ourselves and our minds, our capacity for rational judgment proves staggeringly unsuccessful in carving out a stable dominion for itself. We delude ourselves to be rational even when we employ apparently solid *a posteriori* arguments. Confabulation is part and parcel of our mental life: it comes in the form of the explanations that we provide to ourselves and others for actions or thoughts that we are unable to authentically understand (Hirstein 2009).

Why are human behavior and thoughts so mysterious? How far does the domain of reason—to say it in a Kantian fashion—stretch? To answer these questions we should first admit that our rational capacities, along with their corresponding neural systems, are far from being encapsulated and entrenched. Rather, as Pessoa convincingly argues (2013, 2018), emotional processing appears to be deeply integrated with perception, cognition, motivation, and action. This implies that abilities that have traditionally been characterized as rational—such as evidence gathering and executive functioning—result from the cooperation of cognitive and affective components at different levels.

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Pessoa's work does justice to an intuition that many philosophers and psychiatrists have thoroughly explored over the years. Jervis, for instance, discusses the mysterious and yet inescapable influence of "emotional impulses in the formation of judgments and the production of apparently neutral and objective statements" (Jervis 1989, 17). Freud, in his early studies on hysteria (1895), was similarly interested in the notion of ideas being colored by affect and expressed this point in quantitative terms by talking about "quotas of affect" variously attaching themselves to thoughts. As will become clearer in this special issue, these questions surrounding rationality and its boundaries have deep philosophical and clinical implications, especially once we apply them to the realm of psychopathology.

The Bounds of Rationality

> *Any reasonable person, and therefore, I hope, any rationalist, knows quite well that reason plays a very modest role in human life. (Karl Popper, 1984)*

This special issue focuses on the controversial boundary between rationality and irrationality and on its multiple connections with psychopathology. Exploring such a boundary along with its complexities has become increasingly common over the past few decades. Indeed, the topic has garnered significant attention both in psychology and in philosophy of psychiatry, with a number of researchers exploring the idea that rational and irrational states may be seen as importantly continuous.

On the one hand, the empirical work conducted by Gigerenzer & Selten (2002) and Kahneman & Tversky (1992)—among many others—has convincingly established the bounded nature of our rational capacities. Far from being exact, dispassionate, and impartial, our way of knowing the world and ourselves turns out to be rife with biases, imperfections, and blind spots. On the other hand, the theoretical work developed by Bortolotti and colleagues (see, e.g. Bortolotti 2010) on irrational beliefs, delusions, and illusions has brought to the fore some unexpected benefits of these states, as well as their close proximity with ordinary cognition. Looking at these two research strands, one may get the impression that the boundary between rational and irrational is growing thinner by the day. What was once squarely categorized in the realm of rationality—e.g. beliefs, decision-making—now appears to be tainted with irrational features. By contrast, what was taken to be paradigmatically irrational—such as delusions—is now seen as exhibiting some epistemic and psychological benefits (Bortolotti 2020). Where does this leave us?

The fact that researchers in psychology and philosophy have rightfully uncovered such a strong continuity between rationality and irrationality should not make us overlook the importance that the distinction bears on practical and clinical matters. This divergent perspective stems from substantial differences among disciplines. Psychiatry, as a branch of medicine, aims at understanding pathological states in order to devise more effective forms of treatment and intervention. Its goals are inherently pragmatic and its focus lies on the analysis and management of individual symptoms of suffering (along with their social consequences). It is therefore unsurprising that within psychiatry mental disorders in general, and delusions in particular, are still often characterized in terms of breakdowns of reason (epistemic irrationality) or as failures to act according to rational norms (practical or agential irrationality). The diagnostic manuals issued by the American Psychiatric Association provide a paradigmatic example of this tendency. In the DSM-IV-TR (APA 2000) delusions were still characterized in terms of their falsehood (i.e. as "false beliefs"), whereas in the most recent version (DSM 5; APA 2013) the falsehood requirement has been dropped in favor of a characterization that emphasizes epistemic irrationality (i.e. "fixed beliefs that are not amenable to change in light of conflicting evidence"). Although these characterizations undoubtedly map onto canonical definitions of beliefs and rationality, they seem to overlook the complexity surrounding the empirical and philosophical challenges mentioned above.

This tension between different fields of inquiry shows that the nature of the rational-irrational boundary would greatly benefit from further investigation, especially considering its clinical ramifications. Our hope is that philosophical reflections may clear up some terminological and conceptual misunderstandings. In this respect, one source of confusion stems from characterizing delusions solely in terms of reasoning mistakes. Although there is convincing evidence about some distortions of reasoning being more prominent in delusional populations (see, for instance, Dudley et al. 2015 on the "jumping to conclusions" bias), such distortions fail to fully account for the complex nature of delusion. As Jaspers already noted (1913), clinically relevant delusions go well beyond distorted, mistaken, or unduly stubborn judgments. If we labeled all our incorrigible judgments as delusions, it would follow that we could not harbor firm or even unshakable beliefs without qualifying them as delusional. However, drawing the line between irrational and delusional beliefs has proved more difficult than expected. As we mention above, the work conducted by Bortolotti and colleagues shows that several non-delusional beliefs that we routinely entertain are inadequately supported by evidence, or fail to follow epistemic norms of rationality.

These considerations raise two further points: delusions appear to be fully integrated in a continuum of experience; and delusional manifestations are the outcome of a subjective inner journey (Rossi Monti 2008). Focusing on the latter, we cannot fail to notice the strong emotional and motivational component that lies at the roots of delusional onset and maintenance. As the psychoanalytic tradition has already proposed, delusions may represent a powerful defense mechanism that succeeds in alienating an individual from reality (Freud 1949; Nacht and Racamier 1958). From a psychodynamic perspective, delusions thus represent an attempt to solve internal conflicts, or to (provisionally) liberate oneself from traumas and unconscious fears. More precisely, they may be seen as the result of a compromise that emerges from a series of conflicts between the ego and the outside world (Bollea and Mayer 1968, 25). In this sense, the recent work on epistemic and non-epistemic benefits of delusional beliefs (Bortolotti 2015, 2020) may be seen as a promising uptake of this classic motivational idea.

To sum up, according to the phenomenological tradition initiated by Jaspers (1913), delusions should be seen as the expression of a subjective projection that directly indicates a distorted relationship between an individual and the world. From this perspective, delusions qualify as a pathological form of being in the world. Therefore, the content of the delusional belief—even more than its form—acquires great importance in a clinical setting as it may provide clinicians with valuable information about the patient's relationship with the world, along with her thoughts and affects. According to the psychoanalytic tradition, the individual's beliefs about the world and others are distorted for defensive purposes. These two interpretations do not constitute mutually exclusive models. On the contrary, we believe that both perspectives may complement each other as well as fruitfully inform doxastic theories, which are currently more focused on the cognitive level. Such a pluralistic framework would have the advantage of providing a finer-grained picture of the nature of delusions, one that would do justice to such a complex range of phenomena.

The recovery of phenomenological and psychoanalytic aspects would enrich the philosophical research on pathological and non-pathological beliefs "for at least four practical reasons", as suggested by Green and colleagues (2018, 2):

> First, how we characterize delusions will impact how we treat them. Cognitive behavioral therapies focus explicitly on engaging with and restructuring beliefs […], but if delusions are not (or not always) belief states, it may be important to

> develop other therapeutic approaches. Second, the cognitive nature of delusions is important for a full understanding of the ethical and legal status of people who hold them and who act on them. Third, the status of delusions has implications for how we understand the experiences of those who hold them […]. Fourth, understanding the nature and phenomenology of delusions has a bearing on how to assess them. This is particularly important when considering whether patients are attempting to malinger delusions. (Ibid.)

Summary of each contribution

The special issue opens with an article by Valentina Cardella who immediately gets to the heart of the matter by investigating schizophrenia and delusions in their complex relationship with the notion of rationality. She does so by reviewing some interesting evidence suggesting that "psychopathological patients can be, in some circumstances, more logical than normal controls" (p. 13). This further contributes to dismantle the commonsense view of delusional subjects as irrational people who lack autonomy, rationality, responsibility, or who are unable to sufficiently control their own emotions and behaviors. Cardella convincingly overturns this view by showing that, as long as we equate logical abilities with broadly rational ones, there seem to be no robust reasoning deficits in schizophrenia, with the exception of cases linked to a more general cognitive deterioration. Her article thus contributes to shed light on a seriously overlooked fact, namely that—at least in some cases—schizophrenic people seem to be more rational than non-schizophrenic ones.

Taking a deeper look at the mechanisms underlying delusion formation, Lancellotta and Bortolotti focus on two-factor theories (Coltheart et al. 2010; McKay 2012) to assess whether these views are compatible with the pathological and adaptive character of delusions. After discussing naturalist and normativist accounts, they argue that both views encounter difficulties in assessing the pathological nature of delusions. On the normativist reading, delusions would need to be harmful to count as pathological; however, it is not fully clear that delusions are always the source of harm as opposed to a response to an existing crisis that causes harm. On the naturalist reading, delusions count as pathological because they are seen as the outcome of a dysfunctional process. However, it is far from clear that the cognitive process underlying delusion formation is dysfunctional as opposed to simply operating in non-ideal conditions. Bortolotti and Lancellotta go on to show that the two accounts under

examination importantly differ in their assessment of the adaptive potential of delusions. While McKay's model grants that some delusional beliefs may be adaptive in the short-term, Coltheart's model rules out this possibility entirely.

Sam Wilkinson's paper tackles the complexity of delusions from a different angle. By focusing on delusion attribution, i.e. on what happens when we say that someone is delusional, he puts forward an expressivist view based on positions defended in the field of meta-ethics. Wilkinson aims to move beyond the philosophical discussions on how to best characterize delusions, be it through strict definitions, working hypotheses, or canonical examples. Instead of focusing on delusional phenomena themselves, he raises fundamental questions about the way in which these phenomena are picked out. This different perspective allows him to cast doubts on the expectation—quite widespread in the literature—that delusion could be clearly defined. Such an expectation may turn out to be mistaken: when we say that someone is delusional, we are not in the business of describing reality but rather of expressing an attitude towards a state or condition that we wish to "flag as suspect" according to a plurality of norms and paradigms (many of which are social, rather than epistemic, in nature).

Valentina Petrolini's contribution zooms in on disorders of agency and sets out to offer a unifying account of these phenomena, including auditory verbal hallucinations (AVH), thought insertion, and pathological guilt. She characterizes disorders of agency as situations in which individuals have difficulties in assessing their own degree of responsibility or involvement with respect to a relevant action or event. Her main goal is to show that we may better understand these conditions by characterizing them as dimensional. Four case studies are discussed to corroborate this point: first, she characterizes AVH and pathological guilt as extreme cases of hypo- and hyper- agency, respectively. Then, she explores mind wandering and false confessions to show that these phenomena, despite their similarity to pathological ones, may be successfully distinguished from them. Seeing agency on a spectrum allows her to discuss these intermediate cases in a finer-grained manner: although some intermediate cases still turn out to be problematic (e.g. false confessions), others exhibit an adaptive nature in many circumstances (e.g. mind wandering).

We felt it was important to close the special issue with a section devoted to historically informed reflections on the boundaries surrounding rationality. Matteo Fiorani's contribution thoroughly investigates how rationality and irrationality were characterized and discussed throughout the history of psychiatry, focusing on the years spanning the second half

of the 1970s. Specifically, his article tackles the intricate debates that took place within the so-called anti-institutional psychiatry movement and how these were received and developed within the Italian New Left. Starting in 1968, social and political movements in Europe and the United States raised radical concerns about the traditional idea of normality and its consequences in terms of laws and institutions. In this scenario, psychiatry and the anti-psychiatry movement became "an ideological battleground centered on the boundaries between normality and madness", and, Fiorani explains, "the very ideal of reason was questioned".

Emiliano Loria's paper concludes the special issue with some important epistemological reflections on the history of psychiatry. His contribution focuses on the discovery of electroconvulsive therapy (ECT) by Ugo Cerletti in 1938 and its development throughout the twentieth century. Cerletti's historian and biographer Passione (2007, III) stresses the fact that ECT was seen by its inventor as a research tool as opposed to a revolutionary means of treatment. The idea that seizures may improve the catatonic and hallucinatory state of schizophrenic patients had been already applied by Ladislas von Meduna a few years earlier (exactly from 1936). However, the use of camphor and cardiazol to induce seizures had proved distressing for patients and at times clinically ineffective. The use of electricity introduced by Cerletti was less invasive, cheaper, more tolerated by patients, and most importantly allowed clinicians to exercise a greater degree of control on convulsions and seizures. This last aspect greatly benefited the diffusion of ECT all over the world in record time. In the process of writing this article, Loria had the opportunity to visit the archives of the Roman Clinic of Nervous and Mental Diseases where Cerletti and his team worked. This allowed him to follow the interesting trajectory of development and application of ECT to schizophrenic patients, initially adults and later also children and adolescents. Such a review of past and present use of ECT is also meant to stimulate an ethical discussion surrounding the future of this therapy in the context of severe psychopathologies.

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