Editorial

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Neuroscience and Psychopathology

Since the publication of Karl Jaspers' *General Psychopathogy* [1, 2], which laid the foundation of contemporary psychopathology, psychiatry can be conceived of as a crucial way to shed light on the human condition and existence. Such a goal can be fulfilled only by integrating the scientific study of psychic diseases against a theoretical background focused on human experience [2, 3]. However, most of contemporary psychiatry seems to have lost sight of the patients' experiential dimension. As Herpertz and Fuchs [4] recently wrote: 'The DSM-IV and DSM-5 as well as the ICD-10 are mainly conceived for purposes of reliability and, therefore, characterized by rather simple psychopathological concepts compatible with easily applicable data collection techniques. Consciousness and subjectivity, however, are virtually excluded on the theoretical level and undervalued on the pragmatic level' (p. 1).

Their words echo those of Sass et al. [5] on the growing disillusionment within mainstream psychiatry, with the extreme emphasis on operationalizable concepts. As these authors write: 'A number of recent editorials by key figures in North American and European psychiatry have noted the relative lack of real scientific progress in the study of schizophrenia and many other disorders, and have related this to the loss of validity that can occur when there is an over-focus on reliability (operational concepts). These editorials have related this lack of progress to the loss, which they lament, of the rich, psychopathological tradition of European psychiatry, which is strongly (but not exclusively) rooted in phenomenology' [5, p. 2].

Since the second half of the last century, psychiatry underwent the so-called operational revolution. As recently argued by Parnas [6], a 'gaping disconnect' is today recognized between the impressive progress accomplished by genetics and neuroscience and their almost complete failure to shed new light on the causes of psychiatric disorders. Furthermore, in spite of the historically consolidated psychopathological perspective, neuroscience when applied to psychiatric diseases has so far almost entirely neglected the first-person experiential dimension, mainly focusing on high cognitive functions, like executive function, working memory, theory of mind and the like.

Perhaps time has come to reconnect psychiatry to its phenomenologically inspired psychopathological roots by means of a dialogue with cognitive neuroscience. Cognitive neuroscience has today for the first time the opportunity to study in parallel brain, behaviour and cognition, shedding new light not only on the human brain structure, but also on its wiring pattern of connectivity and on many of its functions. The dialogue and collaboration between psychiatry and cognitive neuroscience appear particularly fruitful today, since a new neuroscientific approach to the empirical study of the human condition is gaining momentum, capitalizing upon the study of the bodily dimension of knowledge: the so-called 'embodied cognition' approach [7, 8].

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Consistently with its explananda, this new neuroscientific approach is addressing the notions of subjectivity and self without searching for the neural correlates of a predefined, explicit and reflective self-consciousness, but investigating what constitutive set of brain and bodily conditions allow an implicit and prereflective sense of self to emerge and how the disruption of such conditions might generate psychopathological disorders. Today cognitive neuroscience can shed new light on the *Leib* by investigating the *Körper*. The point is not reducing the *Leib* to the *Körper*, but understanding that the empirical investigation of the *Körper* can tell us new things about the *Leib* [7, 8].

A further major turning point consists in contemporary neuroscience's discovery of the capital role played by affect and emotions in our cognitive life, as epitomized by the 'affective revolution' brought forward by Panksepp's [9] affective neuroscience and by Damasio's and Carvalho's [10] enlightening study and theorization on the neural basis of human feelings. Our encounter with the world is constantly guided by the feelings such an encounter evokes.

The literature on cognitive neuroscience applied to psychiatry abounds. However, when referring to 'psychopathology' in the title of this special issue, we wanted to stress the meaning originally put forward by its founder Karl Jaspers [1], namely disturbance of 'mental phenomena'. The main aim of this special issue is that of offering readers an updated and exciting survey of some of the best contemporary research using the methodology of cognitive neuroscience to shed new light on various psychopathological aspects of psychiatric diseases, like the bodily self, intersubjectivity, memory, emotion regulation and interoception.

We hope that by reading these articles more and more psychiatrists will realize how important it is to build bridges connecting the first-person approach to the experience and expression of psychiatric patients' psychopathological disorders and the search for their bodily and neurobiological roots.

Vittorio Gallese, Parma

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