

Novel challenges to psychiatry from a changing world

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Editorial

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Medicine is a human science, and with no doubt, psychiatry is (or should be) the specialty most intimately linked to humanity in its more comprehensive and broader sense. Psychiatry is a person-centered branch of medicine and, as such, it includes and utilizes concepts and methods deriving not only from neuroscience, but also from psychology, sociology, and anthropology.^{1,2} In the past century, the two approaches were strongly opposed and sometimes taken to extremes with a wide emphasis on one or in the other position in recent decades.^{2,3}

In any case, the contributions of neuroscience to psychiatry were of paramount impact and, permitted us, on one side, to deepen our understanding of the pathophysiology of different conditions, and on the other, to sharpen pharmacological tools, as well as to treat disorders considered unresponsive to drugs for too long.^{4,5}

At the same time, by the end of the past century, it became increasingly evident that a “pure” neuroscientific approach was not enough to achieve exhaustive management of psychiatric conditions. Currently, it is evident that psychiatric symptoms/disorders are the final pathways of multiple factors.^{6,7} These include individual intrinsic or acquired characteristics (the first depending on genetics or early negative life events, the second on contextual or cultural variables, or habits) that make an individual particularly prone toward the development of psychopathology.

Indeed, modern psychiatry considers each person as the result of interactions between the brain and the environment. Even “orthodox” neuroscientists do not neglect this concept, because one of the most intriguing research achievements of the past century, is the notion of brain plasticity.⁸ Plasticity means that the central nervous system (CNS) changes continuously as triggered by life events, experience, culture, noxious or beneficial stimuli, and so on.

Every individual is constantly connected to and acts on the surrounding world that changes (even for his/her activity) and sends inputs to the brain, while modifying it. This is a never-ending process that has been shaping human history and development. Therefore, a psychiatric symptom or disorder cannot be considered any longer only a brain alteration or a disorder of a sick individual, but a complex condition deriving from both personal fragility and contextual/societal features. As a result, the improvement of a psychiatric condition is not only the resolution of a brain alteration, but also provokes change in individual effects on his/her society. It is equally true that the peculiar context where individuals live and operate, together with its problems and conflicts, may act as triggering variables in the most vulnerable member of that society.

In addition, unpredictable climate changes and desertification in several countries, pollution, economic worldwide crisis, local wars provoking increasing fluxes of refugees, immigrants from poorer countries, and great nuclear catastrophes may create hitherto novel psychopathological conditions, and raise a number of unexpected and emergent problems to psychiatry practice.⁹

For all these considerations and with the urgency of novel questions psychiatrists have to face nowadays, we thought it was important to devote a special issue of “CNS Spectrums” on this topic entitled “Novel challenges to psychiatry in a changing world.”

It is evident that new problems such as those concerning the appropriateness of pharmacological treatment of subjects belonging to different ethnicities and cultural background require appropriate instruments that, perhaps, in a near future would benefit from a wider application of genetic techniques that should be less expensive and more easily available.¹⁰ Again, the diagnostic instruments should be translated in several languages to overcome the linguistic barrier, and validated in different populations. However, it is even more crucial to create novel and individualized diagnostic instruments to assess the psychopathological impact of climate changes, that year after year seem to become more extreme and perhaps irreversible, and those of natural and human-provoked catastrophes. All these new emergencies also require a careful deepening understanding of their etiology including neurobiological underpinnings that may collide with the economic crisis provoking a constant decrease of public research funds and resources in several wealthier countries.

According to us, the present and the future of psychiatry lie on the acceptance on these challenges and on the attempts to resolve them quickly. This process implies constructive and real integration of both neuroscientific and human science paradigms, the only one that may lead to individualized treatments that are ethical and respectful of the unicity of each person.^{11,12}

Disclosures. Donatella Marazziti has no disclosures and she has no affiliation with or financial interest in any organization that might pose a conflict of interest. Stephen M. Stahl, MD, PhD, Dsc (Hon.) is an Adjunct Professor of Psychiatry at the University of California San Diego, Honorary Visiting Senior Fellow at the University of Cambridge, UK, and Director of Psychopharmacology for California Department of State Hospitals. Over the past 36 months (January 2016–December 2018), Dr. Stahl has served as a consultant to Acadia, Adamas, Alkermes, Allergan, Arbor Pharmaceuticals, AstraZeneca, Avanir, Axovant, Axsome, Biogen, Biomarin, Biopharma, Celgene, Concert, ClearView, DepoMed, Dey, EnVivo, EMD Serono, Ferring, Forest, Forum, Genomind, Innovative Science Solutions, Intra-Cellular Therapies, Janssen, Jazz, Lilly, Lundbeck, Merck, Neos, Novartis, Noveida, Orexigen, Otsuka, PamLabs, Perrigo, Pfizer, Pierre Fabre, Reviva, Servier, Shire, Sprout, Sunovion, Taisho, Takeda, Taliaz, Teva, Tonix, Trius, Vanda, Vertex, and Viforpharma; he has been a board member of RCT Logic and Genomind; he has served on speakers bureaus for Acadia, Astra Zeneca, Dey Pharma, EnVivo, Eli Lilly, Forum, Genentech, Janssen, Lundbeck, Merck, Otsuka, PamLabs, Pfizer Israel, Servier, Sunovion, and Takeda, and he has received research and/or grant support from Acadia, Alkermes, AssureX, Astra Zeneca, Arbor Pharmaceuticals, Avanir, Axovant, Biogen, Braeburn Pharmaceuticals, BristolMyer Squibb, Celgene, CeNeRx, Cephalon, Dey, Eli Lilly, EnVivo, Forest, Forum, GenOmind, Glaxo Smith Kline, Intra-Cellular Therapies, ISSWSH, Janssen, JayMac, Jazz, Lundbeck, Merck, Mylan, Neurocrine, Neuronetics, Novartis, Otsuka, PamLabs, Pfizer, Reviva, Roche, Sepracor, Servier, Shire, Sprout, Sunovion, TMS NeuroHealth Centers, Takeda, Teva, Tonix, Vanda, Valeant, and Wyeth.

References

1. Andreasen NC. DSM and the death of phenomenology in America: an example of unintended consequences. *Schizophr Bull.* 2007;**33**:108–112.
2. Messas G, Fulford KW, Stanghellini G. The contribution of human sciences to the challenges of contemporary psychiatry. *Trends Psychiatry Psychother.* 2017;**39**(4):229–231.
3. Turner MA. Psychiatry and the human sciences. *Br J Psychiatry.* 2003;**182**: 472–474.
4. Stahl SM. Personalized medicine, pharmacogenomics, and the practice of psychiatry: on the threshold of predictive therapeutics in psychopharmacology? *CNS Spectr.* 2008;**13**(2):115–118.
5. Quinlan EB, Banaschewski T, Barker GJ, *et al.* IMAGEN Consortium. Identifying biological markers for improved precision medicine in psychiatry. *Mol Psychiatry.* 2019. doi:10.1038/s41380-019-0555-5.
6. Reynolds CF, Lewis DA, Detret T, *et al.* The future of psychiatry as clinical neuroscience. *Acad Med.* 2009;**84**(4):446–450.
7. Konopka LM. Neuroscience and psychiatric patients: does the brain matter? *Croat Med J.* 2013;**54**(6):598–599.
8. Sale A, Berardi N, Maffei L. Environment and brain plasticity: towards an endogenous pharmacotherapy. *Physiol Rev.* 2014;**94**(1):189–234.
9. Trautmann S, Rehm J, Wittchen HU. The economic costs of mental disorders: do our societies react appropriately to the burden of mental disorders? *EMBO Rep.* 2016;**17**:1245–1249.
10. Marazziti D, Stahl SM, Simoncini M, *et al.* Psychopharmacology and ethnicity: a comparative study on Senegalese and Italian men. *World J Biol Psychiatry.* 2019;1–8. [Epub ahead of print].
11. Mezzich JE. Psychiatry for the person: articulating medicine's science and humanism. *World Psychiatry.* 2007;**6**(2):65–67.
12. Cloninger CR, Salvador-Carulla L, Kirmayer LJ, *et al.* A time for action on health inequities: foundations of the 2014 Geneva declaration on person- and people-centered integrated health care for all. *Int J Pers Cent Med.* 2014;**4**(2):69–89.