

# Compulsivity and impulsivity—personal reflections: why now and why here?

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This issue of *CNS Spectrums* contains a unique collection of manuscripts that examine compulsivity and impulsivity from a broad range of perspectives and helps to shape our evolving understanding of compulsivity and impulsivity as orthogonal symptom dimensions arising from parallel tightly regulated brain circuits giving rise to a spectrum of overlapping diagnostic categories.

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## Why Now?

My first book on this topic, *Obsessive Compulsive Related Disorders* (Hollander E, American Psychiatric Publishing, Washington, DC, 1993), was published over 20 years ago. So isn't this a rather tired and old concept? As I sit in my hotel room in Barcelona at the European College of Neuropsychopharmacology (ECNP), I am acutely aware of several emerging trends in our field that make this issue quite timely. First, the *Diagnostic and Statistical Manual of Mental Disorders*, 5th edition (DSM-5) has just arrived, and for the first time, categories of Obsessive-Compulsive Related Disorders as well as Behavioral Addictions now exist. I am quite pleased to see this development, and believe that this will have a profound impact on how clinicians actually diagnose and treat these patients, and how insurers pay for such treatment. Are the current treatments offered for most patients with behavioral addictions therapeutically effective or cost effective? The answer is resoundingly no, and so more work remains to be done. Second, the Research Domain Criteria (RDoC) process has highlighted the need to understand how brain circuits drive psychopathological symptom domains, and I can think of no area where emerging animal models can better be directly translated into novel experimental therapeutics. New findings in

optogenetics, deep brain stimulation, transcranial magnetic stimulation, and inflammatory mechanisms on synaptic plasticity have promise for impacting therapeutics. Nevertheless, when we consider the broadest conceptualization of “compulsivity,” there remains a very large unmet need, as the National Institute of Mental Health (NIMH) continues to regard these conditions as addictions and the National Institute on Drug Abuse (NIDA) continues to regard these conditions as mental health issues. Third, bad habits and addictions contribute enormous financial costs to society, considering the medical consequences of overeating, smoking, and drinking; societal costs of suicide and homicide; the possibility of long-term developmental consequences resulting from addiction to the Internet in the developing brain; and the legal implications with regard to free will and choice. Fourth, research networks are beginning to emerge (see the Targeted Network Meeting by the Obsessive Compulsive Related Disorders Network at ECNP) that can begin to examine real world questions, such as predicting who is at risk for the development of pathological gambling or for becoming a suicide bomber over the lifespan based on our understanding of the neurocognition of compulsivity and impulsivity.

## Why Here?

I helped to launch *CNS Spectrums* a number of years ago, and served as its first Editor. The first several issues of this journal highlighted compulsivity and impulsivity and examined a range of cross-cutting issues and related conditions. The Research Planning Agenda for DSM-5

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went on to systematically examine the relationship between various putative obsessive compulsive related disorders and OCD using these cross-cutting issues. It is only fitting that this collection of manuscripts be published here, and I am quite pleased to Guest Edit this issue of *CNS Spectrums* on Compulsivity and Impulsivity. The issue examines compulsivity and impulsivity with regard to diagnostic boundary issues; animal models; human neurocognition; functional and structural imaging; and experimental therapeutics and somatic treatments. Further, it examines what a habit or compulsion fundamentally is, and how this influences

our ideas of free will and personal choice. I hope you enjoy reading the issue and find it useful for your clinical practice and research endeavors.

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