This year marks the 25th anniversary of the creation of the World Wide Web by Sir Tim Berners-Lee (http://www.w3.org/People/Berners-Lee/). The code for this information management system was released to the public for free shortly after its creation and became a milestone in connecting individuals to the Internet—a global system of interconnected networks that together carry an extensive range of information resources and services. Original precursor networks were used mainly for academic purposes, but the commercialization of Internet services in the 1990s and its subsequent popularization have contributed to its integration in almost every aspect of modern, day-to-day life (http://education.illinois.edu/wp/commercialism/history-of-the-internet.htm). According to the U.S. Census Bureau,1 dramatic shifts in Internet use have occurred, increasing from 18.0% of households reporting accessing the Internet in 1997 to 61.7% in 2007. The Internet currently links several billion devices worldwide and, as of January 2014, eighty-four percent of Americans reported at least occasional Internet use.2

The Internet has reshaped and redefined many traditional forms of communication, media, financial services, and print publishing, giving birth to new services, such as blogging, Web feeds, social networking, electronic businesses, cloud services, and large-scale multiplayer games. With the explosion of digital technology and information, as well as the astoundingly high permeation of the Internet in daily life, there is concern that Internet use can become problematic. It is difficult, however, to find consensus around the issue of problematic Internet use (PIU) (also variously termed pathological Internet use, Internet dependence, and Internet addiction). For the majority of users, the Internet represents a tool that enhances information access and well-being, with most users facing no disruption in psychosocial functioning. For a subset of users, however, it can lead to a state associated with significant distress, psychosocial risk factors, and physical and emotional impairment. Individuals with PIU may experience an inability to maintain balance or control of their Internet use in relation to everyday life, opting to spend time online as opposed to performing other important tasks (eg, work) and may have characteristics typically associated with addictions (eg, development of tolerance, craving, withdrawal). Scientific understanding of this behavioral profile has lagged behind its growth, in part due to the inconsistency in defining the problem, a lack of empirical findings, an underrepresentation of certain subgroups (eg, females), and debates about its very existence. Nonetheless, preliminary research tells a cautionary tale about the psychological harm and addictive potential of Internet use.3

The extent to which PIU exists as a distinct psychiatric entity as opposed to the Internet acting as a medium for other addictive behaviors (eg, gambling, video-gaming, sex) has been debated. For example, Griffiths4 argued that some behaviors (eg, gambling) may be preferentially engaged online because of the anonymity and online disinhibition effect (ie, loosening of social restrictions that would otherwise be present in normal face-to-face interactions) of the medium. As such, arguments have been forwarded that PIU may be more appropriately conceptualized within existing
psychiatric disorders. Others have conceptualized PIU as a separate psychiatric entity, often proposed to be classified as an impulse-control disorder, an obsessive-compulsive disorder, or an addiction. Growing research suggests a substantial overlap of the symptoms, personality characteristics (eg, high risk-taking, low self-esteem), and neurobiological associations with substance use disorders.4 This has led to the conceptualization of PIU as a non-substance or behavioral addiction.5 The recently released fifth edition of the Diagnostic and Statistical Manual of Mental Disorders has, for the first time, included the category Substance-Related and Addictive Disorders, which does not limit addiction to substance use disorders.6 However, different forms of addictive behaviors may not overlap entirely and each may carry its own health correlates.7,8 Individual addictive disorders (such as PIU, disordered gambling, problematic video game playing, and compulsive shopping) may represent different expressions sharing common etiologies.9

Nonetheless, the Internet represents a new platform on which addictive behaviors can be engaged with relative ease.

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the extent to which Internet may be associated with harmful outcomes, as well as how the Internet may be used to promote healthier lives (eg, through the use of computer-based and/or smartphone-delivered interventions). Such research should provide valuable knowledge for identifying factors that reduce vulnerability and developing improved prevention, treatment and policy initiatives and strategies

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Dr. Potenza’s research has focused on the neurobiology and treatment of substance and non-substance addictions and other disorders characterized by impaired impulse control. The majority of this work has focused on understanding clinical and neurobiological underpinnings of these disorders, and their co-occurrences with other mental health disorders, in order to advance prevention and treatment strategies. He has been involved in studies of problematic patterns of Internet use and video-gaming and has been invited to participate in a World Health Organization expert meeting focusing on excessive use of digital technologies.