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Love and addiction: an uneasy marriage? A response to “The devil is in the differences”

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We would like to thank Hostetler and Ryabinin for their insightful commentary on our review. We welcome their perspective and believe that it is wholly complementary to our own. In our manuscript, we focused primarily on highlighting the parallels between social attachments and drug addiction. Nonetheless, we agree that examining both the remarkable similarities and detailed differences between these processes is essential for rapid progress in understanding the biology of social relationships and for the development of new treatment strategies for addiction.

While we agree with most of Hostetler and Ryabinin’s points, there is one issue that deserves a comment. Hostetler and Ryabinin point out that social attachments (which we termed “partner addictions”) are evolutionarily adaptive and generally promote healthy social functioning. Contrarily, in drug addiction, there is no social partner, and subsequently all of the social, societal, and evolutionary benefits are subtracted; while detriments to mental and physical health are observed. However, these differences in mental health outcome may not be related to fundamental differences in neuro-chemistry underlying bonding or addiction, but rather may derive, in whole or part, from the beneficial aspects of being in a social relationship. Another possibility is that criminalization, social stigma, and side-effects due to excessive exposure to an exogenous substance lead to detriments in mental and physical health as seen in drug addiction. With partner addictions, the resulting behaviors are widely accepted and strongly encouraged, and their performance often results in social prestige; if these behaviors resulted in a similar social stigma, perhaps we would also see reductions in mental health. In fact, homosexual populations, whose social attachments are sometimes treated in exactly this manner by society, are at a substantially higher risk for depression, anxiety disorders, and suicide (Fergusson et al. 1999; Herrell et al. 1999; Sandfort et al. 2001; King et al. 2008; Chakraborty et al. 2011). Finally, high-functioning addicts may meet the criteria for drug dependence despite experiencing no

distressing feelings or negative consequences (Kuhar 2012). Therefore, the observation that social attachment and drug addiction have different mental and physical health outcomes is not necessarily evidence of a difference in the underlying neuro-chemical pathways.

Finally, we wholeheartedly agree that understanding the bidirectional interactions of the neural mechanisms of social relationship and addiction is an exciting new direction of research that may have important implications for the prevention and treatment of substance abuse. While we obviously failed to raise this and other issues mentioned by Hostetler and Ryabinin in our original review, we are delighted that our review has already initiated dialog between social neuroscientists and addiction researchers through this commentary, and we hope that this dialog leads to a lasting union and exciting new discoveries for both fields.

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