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Love Unshackled: Identifying the Effect of Mobile Application Adoption in Online Dating

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Abstract

The proliferation of smartphones and other mobile devices has led to numerous companies investing significant resources in developing mobile applications in every imaginable domain. As apps proliferate, understanding the impact of app adoption on key outcomes of interest and linking this understanding to the underlying mechanisms that drive these results is imperative. In this paper, we explore the changes in user behavior induced by adoption of a mobile application in terms of engagement and matching outcomes in the online dating context. We also identify three mechanisms that are somewhat unique to the mobile environment, but are hitherto unestablished in the literature, that drive this shift in behavior: ubiquity, impulsivity, and disinhibition. Our main identification strategy uses propensity score matching combined with difference-in-differences, coupled with a rigorous falsification test to confirm the validity of our identification strategy. Our results demonstrate that mobile app adoption induces users to become more socially engaged as measured by key engagement metrics such as visiting significantly more profiles, sending significantly more messages, and, importantly, achieving more matches. We also discover various mechanisms facilitating this increased engagement: ubiquity of mobile use (users login more and login across wider range of hours in the day). We find that men act more impulsively, in that they are less likely to check the profile of a user who messaged them before replying to them. This effect is not visible for women who continue to be deliberate in their checking before replying even after adoption of the mobile app. Finally, we find that both men and women exhibit disinhibition, in that users initiate actions to a more diverse set of potential partners than they did before on dimensions of race, education ,and height.

Keywords: Mobile applications, online dating, social engagement, adoption, ubiquity, implusiveness, disinhibition