Business Models that Weaponize the Brain

Brainomics™ Bulletin

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Teens who spend more than **3 hours** on social media face twice the risk of experiencing depression and anxiety symptoms²

51% of U.S. teens spend at least 4 hours daily on social media¹

Major depression among US teens (12 to 17 years) rose from 8.1% in 2009 to 20.1% by 2022³

Teen depression reduces employment rate by **5%** and annual earnings by **\$5,250** at age 22⁴

In the traditional economic worldview, producers make stuff that consumers want, where want is expressed by consumers' preference functions and something called utils.

Here in the real world, things are more complicated. Businesses have been pretty good at leveraging cognitive neuroscience for a while. In ancient times (like the 1980s), we called it advertising and later behavioral economics. In more recent times, firms have become very sophisticated,

including hiring neuroscientists to design products that elicit feel-good and reward neurotransmitters like dopamine and serotonin to get people to buy more of what the company sells. The brain becomes a weapon against itself.

The economic problem for society is that these business models privatize gains while socializing losses. Perhaps the most obvious one is social media, with its addictive properties leading to brain health challenges – including difficulty focusing and (more damaging) anxiety and even

depression, reduced earnings and employment, all while the social media companies earn extraordinary profits (well, except the one previously known as Twitter). The company earns profits, but society sees its brain capital depleted.

Awareness of the dangers these business models pose is growing. Thirty-three states are suing Meta because of the damage the business is causing to the mental health of young people.

If we want people to thrive and want a strong economy, business models that harm our precious brain capital have to disappear.

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Scientific Perspective

The impact of social media is particularly destructive when aimed at adolescents experiencing crucial neurodevelopment. The need for social acceptance renders social media remarkably potent, akin to addictive substances compelling compulsive behavior.

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¹Rothwell, J. (2023, November 21). Teens spend average of 4.8 hours on social media per day. Gallup.com.

²Riehm, K.E., et al. (2019). Associations between time spent using social media and internalizing and externalizing problems among U.S. youth. *JAMA Psychiatry*, 76(12), 1266-1273.

³U.S. Department of Health and Human Services. (2023). Major depression. National Institute of Mental Health.

⁴Fletcher, J. (2013). Adolescent depression and adult labor market outcomes. Southern Economic Journal, 80(1), 26-49.

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