



Psychological targeting

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Psychological targeting of advertising using Facebook profiles has been a contentious issue of late. Researchers from Columbia University, Stanford University, University of Pennsylvania, and Cambridge University, but separate from Cambridge Analytica, report results suggesting that psychological targeting using Facebook is so effective that its use should be regulated (1). Here, we show that their findings actually refute the proposition that psychological targeting is more effective than normal advertising. Psychological targeting involves tailoring advertising messages to an individual's personality traits [e.g., dominant, submissive (2)]. Matz et al. (1) used the myPersonality.org database, which matches millions of people's Facebook likes with their responses to a "big five" personality questionnaire, to identify the likes that best classified people as either extraverts versus introverts or high versus low openness to experience. Professional graphic designers then designed ads that worked better for these personality types. Instead of testing whether ads performed better when targeted than when untargeted to the general population, Matz et al. (1) used a weaker test in two of their three studies. They compared targeted ads with deliberately mistargeted ads (e.g., showing an ad designed for extraverts to introverts). Across three studies, they carried out four tests of psychological targeting versus mistargeting and one test of targeting versus a standard message. If psychological targeting worked reliably, it should have been 100% effective in all five experiments. By random chance, it would have been effective in 50% of them in two or three of the five experiments. In fact, the results showed that psychological targeting was effective in only two of the experiments. We use click-through as the critical dependent variable, as conversions (sales or app installs) and conversion rates (conversions/reach [sic]), the measures highlighted in the article, occurred after click-through, and so are explained by self-selection effects out of the control of the experimenters (3). The two cases where the psychologically targeted ad worked better suggest instead that it was the creative quality of these ads that was superior, not their targeting. It is well known that creativity explains most of the difference between ads in their performance (4). The main problem with the study by Matz et al. (1) is the failure to rule out differences in creative quality as an alternative explanation for their results. Some pretesting was done with small groups of students, but not using the same target audience and dependent variable as the main experiments, to ensure that all five ads were equally effective in creative terms before testing whether they performed better when targeted. Until that study is carried out, the results of the study by Matz et al. (1) suggest that psychological targeting is difficult to attempt and, so far, not shown to work. This should allay fears about the power and potential misuse of psychological targeting.

- 1 Matz SC, Kosinski M, Nave G, Stillwell DJ (2017) Psychological targeting as an effective approach to digital mass persuasion. *Proc Natl Acad Sci USA* 114:12714–12719.
- 2 Moon MS (2002) Personalization and personality: Some effects of customizing message style based on consumer personality. J Consum Psychol 12:313–326.
- 3 Heckman JJ (1979) Sample selection bias as a specification error. Econometrica 47:153–161.
- 4 Wood L (2009) Short-term effects of advertising: Some well-established empirical law-like patterns. J Advert Res 49:186–192.

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