

How Good Are We at Distinguishing Humans from Computers?

Robert Epstein

American Institute for Behavioral Research and Technology

re@aibr.org

Yijing Chen

American Institute for Behavioral Research and Technology

Abstract: In an internet-based study with an ethnically diverse group of 7,796 people from 81 countries (56.5% from the U.S. and Canada, mean age 22.5), people were asked questions that revealed whether they could identify subtle characteristics of human behavior, thinking, emotions, and social relationships, which, at the present time, distinguish humans from computers. In all, eight different categories were assessed. To our surprise, many subjects were poor at this task, even when asked fairly simple questions about human relationships or anatomy, scoring 54.8% on average on our 66-item questionnaire. Participants were best at identifying subtle aspects of human cognition (67.7%) and worst at identifying subtle aspects of human communication (45.7%). Sensitivity to what it means to be human was a good predictor of whether someone was employed and a modest predictor of other self-reported outcomes, including personal and professional success. Scores also increased with age, and test scores were positively correlated with participants' self-assessment of how human they were. Small effects were also found for race/ethnicity, country, and education level. Males and females scored equally. Most notably and disturbingly, people identifying themselves in marginal societal categories (for example, in the "other" category for either gender or sexual orientation) not only identified themselves as less human, they also scored substantially lower on our test of humanness. In general, the study suggests that as computers become more human-like, most people will have difficulty distinguishing them from humans. Given that we are dealing with A.I.s and bots more and more frequently—and often unknowingly—this is a matter of concern. At some point in the not-so-distant future, will we need to devise methods for training people to distinguish humans from nonhuman? What will such training look like? Will people who excel at making such distinctions—like the "blade runners" depicted in the 1982 film with Harrison Ford—hold a special place in society?