Investigating superstitious beliefs in technology

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We completed an online survey to access the relationship between a novel measure of superstitious technological beliefs (STBs), computer skill, computer use, technological trust, negative attitudes toward robots, paranormal, and anthropomorphic beliefs. Trust in complex technological systems (e.g. automation, robots, etc.) is an important factor determining whether those systems will be used appropriately, used outside of their capabilities, or not used at all which may lead to loss of human life or property. Previous research has indicated that individual differences (e.g. experience, skill) are important considerations in complex technological systems. However, more research is needed to determine how individual differences influence beliefs, and attitudes toward technology. The current study may be the first empirical attempt to develop a measure of STBs and examine how they relate to technological trust. We hypothesized that that greater anthropomorphic beliefs, computer skill and paranormal beliefs would predict greater technological trust based on previous research. Our results show that computer use, skill, anthropomorphic and paranormal beliefs predicted STBs and greater STBs were predictive of greater technological trust supporting our hypotheses. However, contrary to previous research, anthropomorphism was not associated with technological trust or negative attitudes towards robots. Instead, we found that STBs may mediate the relationship between anthropomorphism and trust. Individuals who self-reported greater computer expertise had higher technological trust and had more positive attitudes towards robots. Greater paranormal beliefs and anthropomorphism were associated with greater STBs. Additionally, the mixed relationship between computer skill and usage habits may indicate that frequent users with lower skill may be more likely to develop superstitious beliefs. Additionally, because the concept of measuring STBs was novel, we conducted an exploratory factor analysis to determine an initial factor structure and cross-validated the findings with a different set of participants using a confirmatory factor analysis. Overall, the measure was found to be reliable and potentially valid as the measure correlated with previous measures of superstitious belief.