

Does culture matter? The role of individuals' cultural profile in anthropomorphizing robots.

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In the Human-Robot Interaction (HRI) field, individual differences play a fundamental role in shaping people's attitudes towards robots. Among individual differences, culture is one of the most deeply ingrained in individuals through their development and upbringing, leading to the use of such cultural values as biases and heuristics in daily interactions with others. Given the crucial role of culture, in the present study, we sought to examine whether, and to what extent, individuals' cultural profile modulates their tendency to anthropomorphize robots, i.e., the likelihood of attributing anthropomorphic traits to them. Therefore, we recruited a sample of middle school students (aged 11-14) to perform a set of questionnaires about their cultural values. Then, we adapted two well-established paradigms to measure their implicit attitudes towards robots: (1) the Implicit Association Test (IAT), which allows detecting the strength of association between concepts and attributes (in our case, between the concept of "robot" and the attribute of "anthropomorphic") and (2) the Cyberball ball-tossing game, which allows to gain information about the perception of the other players (in our case, a human confederate and an embodied humanoid robot) as a partner. Results showed that culture, operationalized as participants' responses to questionnaires, significantly modulated their tendency to anthropomorphize robots, yet differently according to the kind of task (IAT vs. Cyberball). Interestingly, only some cultural values significantly affected participants' anthropomorphism towards robots, thus indicating that culture is a multi-faceted concept that has to be deeply investigated to fully understand how it shapes people's attitudes towards robots.

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