

When it comes to robots, Australians are more trusting than Japanese

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Australians trust androids - Creative Robotics Lab director, Mari Velonaki with Geminoid-F. Credit: Paul Gosney

Australians place more trust in robots than their Japanese counterparts do, new research conducted by UNSW Australia's Creative Robotics Lab (CRL) has found.

The first study of its kind, conducted with Japan's National Institute of Advanced Industrial Science and Technology (AIST) and the Research Center for Advanced Science and Technology, University of Tokyo, is a cultural comparison of how Australians and Japanese relate to android robots.

Undertaken by CRL director, Associate Professor Mari Velonaki, and UNSW's Dr David Silvera-Tawil, the research will be presented at the Sixth International Conference on Social Robotics in Sydney today.

"Our research aimed to measure and compare human trust, perception and attitudes towards an android robot in two different countries," said Professor Velonaki, who was voted one of the world's top 25 women to watch in the field of robotics in 2014 by Robohub.

A total of 111 participants in Sydney and Tokyo took part in the study which involved human interaction with Geminoid-F, an android robot resembling a young Japanese woman.

The experiments involved Geminoid-F asking each participant to move a box from one position to another and touch its hand. Participants were also asked to move a chair closer to the robot and ask it open-ended questions.

When analysing the participants' openness during interaction, it was observed that Australian participants were generally more open to the experience and asked the robot several more questions than the Japanese participants.

"Australian participants often focused on the robot's choices, for example Geminoid-F's favourite colour, what she dreams about and her 'feelings' about being a robot," said Dr Silvera-Tawil.

Participants rated Geminoid-F on a number of factors including:

- Likeability – Australian participants liked the robot significantly more than Japanese participants, both before and after interaction.
- Perceived intelligence – the android's perceived intelligence dropped

significantly in the Japanese participants after interaction, while Australian participants rated the android's intelligence slightly higher after interaction.

- Perceived safety – for both cultures, ratings for perceived safety increased after the interaction tasks. However overall safety ratings were significantly lower in Australia before and after interaction.

"The overall increase in perceived safety for both cultures is a response to the realisation that even though the robot looks human, it is not capable of creating any damage," said Professor Velonaki.

Overall, the findings contradict the stereotype of Western cultures rejecting robots and the Japanese accepting them.

"Understanding how people perceive robots, and the differences that might exist between different cultures, will play a significant role in the creation of future robots for human-robot interaction," said Dr Silvera-Tawil.

The CRL was recently awarded an Australia-Japan Foundation grant to research social human-[robot](#) interaction from the perspectives of Australian and Japanese society. The experiments, to take place at the CRL and the Watanabe and Matsumoto Labs, will result in a major bilingual publication.

Provided by University of New South Wales

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