

Hooray for Hollywood robots: Movie machines may boost robot acceptance

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Remembering robots from film portrayals may help ease some of the anxiety that older adults have about using a robot, according to Penn State researchers.

In a study, older adults who recalled more robots portrayed in films had lower anxiety toward robots than seniors who remembered fewer robot portrayals, said S. Shyam Sundar, Distinguished Professor of Communications and co-director of the Media Effects Research Laboratory.

The researchers, who presented their findings at the Human-Robot Interaction conference today (March 9), suggest that robot anxiety may influence older adults' perception of how easy it is to operate robots and their intentions of buying a robot. Finding ways to ease anxiety about robot adoption could help them accept robots as caregivers, they added.

"Increasingly, people are talking about smart homes and health care facilities and the roles robots could play to help the aging process," said Sundar. "Robots could provide everything from simple reminders—when to take pills, for example—to fetching water and food for people with limited mobility."

The most recalled robots included robots from Bicentennial Man; Forbidden Planet; I, Robot; Lost In Space; Star Wars; The Terminator; Transformers and Wall-E.

The effect seemed to hold even when older adults recalled robots that were not friendly human-like helper robots, he added.

"One of the most surprising results in general was the more robot portrayals they could recall, regardless of the robot's characteristics, actually led to more positive attitudes on robots and eventually more positive intentions to use a robot," said T. Franklin Waddell, a doctoral candidate in mass communications, who worked with Sundar. "So, it seems like the more media portrayals they can recall, the more likely their attitudes would be positive toward robots, rather than negative."

An example of a portrayal of a friendly helper robot might include C3PO from Star Wars, while the robot from Terminator may be an example of a threatening one.

According to the researchers, people also had a more positive reaction to robots that looked more human-like and ones that evoked more sympathy.

"The more sympathetic the participants felt toward the robot—for example, the robot in Wall-E—the more positive they felt toward robots," said Sundar. "So, Hollywood portrayal of sympathy makes a difference and Hollywood portrayal of humanness makes a difference. Both reduce anxiety toward robots."

Robot designers may want to incorporate features that remind older adults of robots in the media, according to the researchers. They should also create more human-like interfaces and ones that increase sympathy, which may ease apprehension toward the devices.

The researchers conducted a survey of 379 [older adults](#)—ages 60 to 86. They were asked to list up to three films they remembered watching that featured a robot. Of the 379, 160 remembered one [robot](#) film, 129

recalled two and 90 remembered three. The participants were then asked about their opinions on and feelings toward the robots that were recalled.

Provided by Pennsylvania State University

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