TEXTO 25 - NEW EMOTIONAL ROBOTS

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New 'emotional' robots aim to read human feelings

Buddy the companion robot by Blue Frog Robotics is seen on display during the CES Unveiled preview event at the Mandalay Bay Convention Center during CES 2018 in Las Vegas on Jan 7, 2018. Credit: AFP/Mandel Ngan

The robot called Forpheus does more than play a mean game of table tennis. It can read body language to gauge its opponent's ability and offer advice and encouragement. "It will try to understand your mood and your playing ability and predict a bit about your next shot," said Keith Kersten of Japan-based Omron Automation, which developed Forpheus to showcase its technology. "We don't sell ping pong robots but we are using Forpheus to show how technology works with people," said Kersten.

Forpheus is among several devices shown at this week's Consumer Electronics Show which highlight how robots can become more humanlike by acquiring "emotional intelligence" and empathy.

Although this specialization is still emerging, the notion of robotic empathy appeared to be a strong theme at the huge gathering of technology professionals in Las Vegas.

Honda, the Japanese auto giant, launched a new robotics program called Empower, Experience, Empathy including its new 3E-A18 robot which "shows compassion to humans with a variety of facial expressions," according to a statement.

Although empathy and emotional intelligence do not necessarily require a humanoid form, some robot makers have been working on form as well as function. "We're been working very hard to have an emotional robot," said Jean-Michel Mourier of French-based Blue Frog Robotics, which makes the companion and social robot called Buddy, set to be released later this year. "He has a complex brain," Mourier said at a CES event. "It will ask for a

caress or it will get mad if you poke him in the eye."Other robots such as Qihan Technology's Sanbot and SoftBank Robotics' Pepper, are being "humanized" by teaching them to read and react to people's emotional states.

The Omron Forpheus robot plays table tennis against a human at CES in Las Vegas. (AFP)

Pepper is "capable of interpreting a smile, a frown, your tone of voice, as well as the lexical field you use and non-verbal language such as the angle of your head," according to SoftBank.

Robot in human shoes

Developing emotional intelligence in robots is a difficult task, melding the use of computer "vision" to interpret objects and people and creating software that can respond accordingly.

"Empathy is the goal: the robot is putting itself in the shoes of the human, and that's about as hard as it gets," said Patrick Moorhead, a technology analyst with Moor Insights & Strategy.

"It's not just about technology, it's about psychology and trust." Moorhead said this technology is still in the early stages but holds promise in some areas, noting that there is strong interest in Japan amid a lack of caretakers for the elderly population. "In some ways it can be a bit creepy if you're crying and the robot is trying to console you," he said. "If you have no friends, the next best thing is a friend robot, and introverts might feel more comfortable talking to a robot."

'Emotion chip'

One CES exhibitor offered a promise of going further than the current devices by developing an "emotion chip" which can allow robots to process emotions in a manner similar to humans.

"There has been a lot of research on detecting human emotions. We do the opposite. We synthesize emotions for the machine," said Patrick Levy-Rosenthal, founder of New York-based Emoshape, which is producing its chip for partners in gaming, virtual and augmented reality and other sectors. It could be used to power a humanoid robot, or other devices. For example, an e-reader could better understand a text to infuse more emotion in storytelling.

As for Forpheus, Kersten said the robot's ability to help people improve their table tennis skills could have numerous applications for sports, businesses and more. "You could sense how people are feeling, if they are attentive or in a good state to drive," he said.

Another key application could be in health care, he said: "In an elderly patient facility, you can determine if someone is in distress and needs help."

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