

THE SHAPE OF ROBOT: APPEARANCE OF SOCIAL ROBOTS BASED ON A CASE STUDY

TIM CHEONGHO LEE

*Sangmyung University
Seoul, South Korea*

*E-mail: humantad@hanmail.net
www.smu.ac.kr*

The advent of social robots is expected to enhance human life in many respects. Social robots may satisfy basic human needs and enable a more convenient lifestyle. One of the basic human needs is the desire for social life which inevitably requires social robots to equip with communication skills that enables close relationships with humans. However, in addition to communication skills, the appearance of social robots may play a pivotal role in shaping close relationships between humans and robots.

This may be especially important when social robots are utilized for the education of elementary or secondary school students. If social robots have a “sufficiently human shape,” students may experience social robots with familiarity, identification, and empathy.¹ This is because social robots in human shape could be a source of curiosity and/or fantasy, facilitate students’ understanding due to the social robot’s ability to imitate, and support conversations (verbal and physical communication) in a non-judgmental and realistic perceptual way.

All of these may not be the case if social robots are “appropriately human.” The appropriately human robots may not fulfill the educational purpose due to the psychological distance between humans and robots. Students may feel robots like a machine that does not deserve sympathy.² However, student may feel less stressful with the appropriately human robots because students can be relieved from stress because of their perception of robots to be an inhuman machine that cannot judge itself and thus feel less intimidating and less fear of making mistakes.

Ethical issues may arise when using social robots in education. Students may experience excessive emotional attach to robots.³ For this, they are required to be reminded of the inhumane characteristics of social robots. Students also could harass against humanoid social robots. There could be privacy issues as well including information related to an individual’s education status. Social robots are not free from the problem of bias when they make recommendations after searching for data. Still, social robots may not be conveniently accessible to some people and gaps may occur due to economic status, generation, race, cultural difference, etc.

References

1. T. Belpaeme, J. Kennedy, A. Ramachandran, B. Scassellati, F. Tanaka (2018). “Social robots for education: A review,” *Science Robotics*, 3 (21).2018; Papadopoulos et al., 2020.
2. Irena Papadopoulos, Runa Lazzarino, Syed Miah, Tim Weaver, Bernadette Thomas, Christina Koulouglioti (2020). “A systematic review of the literature regarding socially assistive robots in pre-tertiary education,” *Computers & Education*.
3. Papadopoulos et al. (2020).