Should We Program Robotic Emotions from the Gender Perspective?

Mercedes García-Ordaz, University of Huelva, Huelva, Spain
Rocío Carrasco-Carrasco, University of Huelva, Huelva, Spain
Francisco José Martínez-López, University of Huelva, Huelva, Spain

ABSTRACT

Scientific research on robotic emotions has been increasingly developing for the last few years. It is presumed that in twenty-five years’ time there will be robots with emotions capable of taking decisions. Therefore, it is important to determine if people should take into account gender when designing the development of this kind of robotic emotions. Moreover, the authors assume that nowadays there is no intelligence without emotions, which are the ones that ultimately help taking decisions. It is contended here that the emotional elements and features of human reasoning should be taken into account when designing the personality of robots. As has been shown in the last few years, the concept of gender is constructed by socio-cultural factors. Gender perspectives are increasingly being applied to different fields of knowledge. Indeed, and as recent feminist research has highlighted, technology is affected by gender relations. Technology in general has been traditionally considered as a sign of men’s power and masculinity defined in terms of technological capabilities. Nevertheless, current discourses have provided new definitions of technology, of gender identity and of what being human means. In the same way, definitions of gender also change with time, affected by technological developments. The present work aims at demonstrating that the gender perspective is indeed very useful when applied to the field of robotics. Specifically, and when dealing with complex decision-taking, it becomes necessary to analyse which managing activities women can better develop in order to apply them, together with other features, to the design of robotic emotions. The purpose is, then, to propose a robotic model that, after the inclusion of such emotional aspects, breaks with old constrained gender stereotypes and takes a rather liberating view. At the same time, such a proposal should enable researchers to get better results when creating robots capable of managing other robotic teams and taking complex decisions. In short, the authors seek to apply the gender perspective in the analysis of some emotional features to be taken into account before they are applied to the field of robotics.

Keywords: Feminine Perspective of Robotic Problems, Formative Processes, Gender, Human Reasoning, Intelligence, Management Styles, Robotic Knowledge Management, Robotic Resources Management, Robots’ Perception, Socio-Cultural Factors

DOI: 10.4018/ijrat.20130101
1. INTRODUCTION
So far, there is a limitation of academic and scientific research that deals with gender and robotic emotions. While it is true that there exist some works on the field of robotic emotions, they are still at a very early stage and there seems to be a lack of specialization at universities or academic departments. From this, it can be contended that, traditionally, literature has not given enough attention to the perspective of gender in the field of robotics. Significantly, the depiction of robots and cyborgs in science fiction literature and cinema has attracted many gender specialists. Just to mention two significant examples, Thea von Harbou’s *Metropolis* (1926), and its film adaptation by her husband Fritz Lang in 1927, depicts the character Brigitte Helm, or Isaac Asimov’s *I Robot* (1950), taken to the big screen in 2004, portrays another famous character, Susan Calvin, the female leader of “robot-psychology” in U.S. Robots and Mechanical Men. These classic examples do not only show the visual perspective of gender, but also deepen its psychological aspects.

In this chapter we seek to explain the advantages of investigating and applying the gender perspective to the field of robotic personality and emotions. We will propose some lines of work for their future application, focusing mainly on the issue of complex decision-taking oriented to robots that may help with the management of organisations and director teams.

Our main objective is, then, to specify the need to give an adequate gender perspective to robotic emotions. We believe that this is essential for the adaptation of both robot/human and robot/robot relationships to frameworks that take into account aspects that are better resolved if the gender perspective is adopted. Thus, we will concentrate on the issue of complex decision-taking, which does not merely refer to whether the robot decides to pick up one thing or another or move from one place to another. We are referring to management decisions, that is, how to run other robots and how to be successful in taking decisions linked to the management of robotic resources, in contrast to the management of human resources. In these cases, we are witness to the fact that in the business sphere great improvements have been made when adopting gender perspectives for complex decision-taking. This aspect should also be taken into account in the field of robots.

2. BACKGROUND
If we take into account the fact that science, technology and their power connotations over the natural world have always been linked to the masculine sphere, women’s recent closeness to technology has meant a challenge which should overcome traditional images of physical aspects to deepen into complex psychological aspects.

In this sense, every robot considered as female means a rupture with the masculine control of technology. This same violation of traditional patterns is also at work in all those virtual representations of the feminine, as can be seen in the popular science-fiction film *The Matrix* (1999) which shows virtually constructed women, as in the case of Trinity (Carrie-Ann Moss). Paradoxically, most feminist scholars dealing with science fiction agree in affirming that even these totally created bodies contribute to the reproduction of traditional gender stereotypes, especially in terms of behaviour. In addition, new media theories provide evidence of the impossibility of totally transcending the body in cyberspace, which further supports the idea about the importance of the material body, not only as an analytical tool, but also as a reminder that we need to find new forms of, using Braidotti’s words, “reembodiment” (2012: 61).

Yet, within the academic scope, only a few works have considered these issues from the robotic perspective. Donna Haraway, in her famous “A Cyborg Manifesto: Science, Technology, and Socialist-Feminist in the Late Twentieth Century” (1985), already dealt with the cyborg image and regarded it not only as a created being but also as a “creature of social reality”, although she did not consider it from the strictly robotic perspective. More
Related Content

Neural Networks to Solve Nonlinear Inverse Kinematic Problems
[www.irma-international.org/chapter/neural-networks-to-solve-nonlinear-inverse-kinematic-problems/198053/](www.irma-international.org/chapter/neural-networks-to-solve-nonlinear-inverse-kinematic-problems/198053/)

Cognitive Semiotics and the Game of Life
[www.irma-international.org/chapter/cognitive-semiotics-and-the-game-of-life/189275/](www.irma-international.org/chapter/cognitive-semiotics-and-the-game-of-life/189275/)

Improving Dependability of Robotics Systems, Experience from Application of Fault Tree Synthesis to Analysis of Transport Systems

Hybrid Behavioral Methods
[www.irma-international.org/chapter/hybrid-behavioral-methods/69697/](www.irma-international.org/chapter/hybrid-behavioral-methods/69697/)

Intelligent Wildlife Tracking Using Ubiquitous Technological Suite
[www.irma-international.org/article/intelligent-wildlife-tracking-using-ubiquitous-technological-suite/181640/](www.irma-international.org/article/intelligent-wildlife-tracking-using-ubiquitous-technological-suite/181640/)