Presence, Reciprocity and Robotic Mediations: The Case of Autonomous Social Robots

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ABSTRACT

In this paper, the author proposes a theoretical framework for drawing a line between acceptable and non-acceptable technologies, with a focus on autonomous social robots. The author considers robots as mediations and their ethical acceptance as depending on their impact on the notion of presence. Presence is characterised by networks of reciprocity which make human beings subject and object of actions and perceptions at the same time. Technological mediation can either promote or inhibit the reciprocity of presence. A medium that inhibits presence deserves ethical evaluation since it prevents the possibility of a mutual exchange, thus creating a form of power. Autonomous social robots are a special kind of technological mediation because they replace human presence with a simulation of presence. Therefore, in interactions between human beings and autonomous robots, attention should be paid to the consequences on legal, moral, and social responsibility, and, at the same time, the impact of simulated forms of presence on human beings.

Keywords: Autonomous Robots, Ethics of Technology, Media, Presence, Robotic Meditation

1. INTRODUCTION

In the following, I will attempt to draw a line between what is acceptable and what is not from an ethical point of view with regard to the technological enhancements of human beings through robotic technologies. With such an objective, I may appear to be a technophobe, a Luddite or a conservationist—quite the opposite. I agree with the definition that humans are technical by nature, even if it may sound to be a contradiction in terms, but I also agree with the truism that “not all progress is good or necessary.” We cannot deny that technology and science are core aspects of the human nature. Nevertheless, it is also unquestionable that there are other forces, driven by scientific interest and economics, which push scientific and technological developments towards choices that are not always integral to the survival of human species.

This paper responds to the needs and objectives of the ethics of technology, which are called technoeconomics or roboethics and these are:

1. To identify the dangers and benefits that come out from the research and application of advanced robotic technologies and systems;
2. To develop tools and knowledge which allows us to direct the development of robotic technology in a sustainable way for the human being (present and future generations) and the natural environment (Veruggio & Operto, 2010)

1.1. Why Should We Care about Technologies?

There are many ways to demonstrate that care should be taken about technological and scientific progress. I have chosen three: two from philosophy and one from history. French philosopher Paul Virilio introduces the concept of the “accident of the future” (Virilio, 1997). According to Virilio: ‘Every time a technology is invented, take shipping for instance, an accident is invented together with it, in this case the shipwreck, which is exactly contemporaneous with the invention of the ship. The invention of the railway meant, perforce, the invention of the railway disaster. The invention of the airplane brought the air crash in its wake’ (Virilio, 2000, p. 32). Virilio points out that the incidents brought about by real-time communication technologies present new alarming characteristics: one of which is that the accident is no longer limited to a specific here-and-now, but is delocalized taking place everywhere. As a consequence, the accident of the future will be integral, meaning it will be a general accident that involves all mankind. As a second example of an “almost integral accidents,” Virilio quotes radioactivity leakage, and a virus in an electronic network, which makes the “globalization” effect of the accident apparent. In his discussion on the accident of the future, Virilio is clearly referring to the consequences of what he calls the “absolute velocity of electromagnetic waves,” which are certainly becoming increasingly pervasive also in many technologies such as robotics. Virilio’s argument is a warning to us and should encourage us to investigate this issue from a scientific and technological point of view: ‘to examine the hidden face of new technologies, before that face reveals itself in spite of us’ (Virilio, 2000, p. 40) and avoid the idea that ‘the hype in favour of technology dismisses its negative aspects’ (Virilio, 2000, p. 32).

We can also try and answer this question by looking at the way opened up by Hans Jonas. Jonas introduces the principle of responsibility, which holds human beings responsible for the preservation of life with respect to the current generation of human beings and those that follow along with the natural environment. Indeed, according to Jonas, ‘with certain developments of our powers the nature of human action has changed, and since ethics is concerned with action, it should follow that the changed nature of human action calls for a change in ethics as well: […] in the more radical sense that the qualitatively novel nature of certain of our actions has opened up a whole new dimension of ethical relevance for which there is no precedent in the standards and canons of traditional ethics’ (Jonas, 1979/1985, p. 1). Autonomous robots clearly fall in the category of technologies which transform the nature of human action. If Virilio is telling us that every new discovery brings with it a new danger, similarly Jonas is saying that the new possibilities offered by scientific and technological developments put forward the problem of “what we do not know yet”: ‘The gap between the ability to foretell and the power to act creates a novel moral problem. With the latter so superior to the former, recognition of ignorance becomes the obverse of the duty to know and thus part of the ethics’ (Jonas, 1979/1985, p. 8).

However, both Virilio’s and Jonas’s remarks come into their own when we look at history, which is my third and final way of demonstrating a need for an ethics of technology and science. In other words, as is pointed out by Patrick Lin et al. the history of scientific and technological progress is overflowing with examples of products, the result of technological and scientific research, which have gone wrong: DDT (DichloroDiphenylTrichloroethane) and asbestos are two cases in point (Lin et al., 2011). Again we find ourselves in the realm of the unknown as the effects, or accidents, are caused by what we are unable to predict. Of course,
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