

Artificial Rat Project: a Study of Human-Machine Interaction

Ioann Maria STACEWICZ

School of Mathematical and Computer Sciences, Heriot-Watt University, Edinburgh
info@ioannmaria.com

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A number of studies analyse interaction between human beings and programmable machines relating these to the social responses to communication technologies. Numerous studies show that individuals respond instinctively to computers and apply social rules and expectations to them [1,2]. This type of response involves the application of social scripts - appropriate for human-human interaction, but not necessarily for the interaction of humans and computers [1]. The questions how a human can effectively distinguish organic from artificial and about the impact on their life on the introduction of the robotic entity, remain to be addressed.

The Artificial Rat Project aims to investigate the nature of human-machine relationship, provoking an interaction between the two. In the closed installation space, human will be forced to interact with the “animal”. The “animal” is a programmed mechanism emulating the physical animal in both behaviour and appearance. It has been noted that people tend to react emotionally to the machines and refer to the computers using the vocabulary of human psychology to describe the performance of the machine, even though they are able to clearly distinguish between the 'real' and 'artificial' [3]. In the course of this project, such strong emotional reactions of humans to the machines, will be examined.

The artificial rat should appear to respond to human emotional states, and hence the biofeedback technology will be employed for the reactions measurement. Changes in emotional state of human participants will be used as an input for the rat, thus enabling a response. The responses of each participant will be visualized and compared in real time. Finally, the reaction of human participant after the discovery of the real nature of the robot will be studied. Two main challenges of the project are technical - building a machine that is as close to the real animal as possible, in both appearance and behaviour; and socio-psychological - provoking an interaction between the machine and human, which results in human's emotional involvement.

References

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