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Emotional attachment in ubiquitous and multi-architectural HRI**Jordi Vallverdu**

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Human-robot interactions (henceforth HRI) are an increasing research field as well as a real problem for industries and laboratories. The challenges are several, from ethical, economic, cultural or to emotional. New robotic products can or not to be anthropomorphic or adopt ubiquitous shapes and locations, being produced in a range array of forms. These robots are being designed to cooperate in specific environments for an intense HRI, arising problems of attachment, interdependency, emotional bonds, instinctive rejection or fears, misuses or among other several aspects, trustability. From the human perspective, the emotional affordances that can provide these robotic platforms are shaped and biased by several variables: culture, age, gender, implementation context or haptic capacities, among a long list. This paper will review the disciplines and scenarios in which these real and in some other cases hypothetical robotic platforms operate in relation to the human needs and specific reactions to these multiple robotic architectures. We will suggest a situated human perspective related to the role of emotional affordances that make possible a 4-axis mapping and analysis of HRI variations, according to several possible combinations. Consider for example, the deep differences about size, form, skills or functional aims of robots like AISMO, ROMEO, Pepper, Nao Roomba, Jibo, Hubo, Paro, Alexa, Cortana, Riba II or PaPeRo, among a longer list. But about all possible relational variables, the most important is that one that allows trustability in the HRI process. This makes possible a real implementation and cooperation between service robots and human beings. The cognitive and socio-cultural mechanisms involved into this process will be analyzed in this paper, as well as the creative new ways of innovating in classic relational codes (think for example on light intensity, color variations or buzzing capacities implemented in some robots today that allow provide emotional and informational content).

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