A Computational Model for Emotional Alignment

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Every interaction in our daily life is emotionally colored. Our own emotional experience is influenced by our own internal state as well as different processes resulting from empathy with our interaction to self-alignment processes. All this affects our interaction with other humans.

In order to enhance the emotional and social competence of a robot it is necessary to enable robots to interact emotionally and to align with the interlocutor’s emotional expression. Therefore we propose a computational model of emotional alignment. This model considers emotions from a communicative and interpersonal view. It is based on three layers: The first layer comprises automatic emotional alignment, the second layer schematic emotional alignment and the third one conceptual emotional alignment [1].

This model is not limited to describe only one alignment process, e.g. empathy or mimicry. It regards emotional interaction processes from a more communicative perspective and integrates alignment processes, which can be allocated to the three layers.

In order to gather empirical data this model is partly implemented on the robotic platform „Flobi“ [2]. The next step is to evaluate how the emotional response, presented by the different layers, influences the interaction with the social robot „Flobi“.

References
