Developing emotionally intelligent virtual social agents

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Abstract: Among the key cognitive abilities that separate humans from artifacts is the ability to understand, generate and use social emotions underlying behavior. The recently developed emotional biologically inspired cognitive architecture (eBICA: Samsonovich, 2013) fills this gap, allowing for the design of emotionally intelligent agents. The approach is based on several new elements in the architecture, including appraisals, moral schemas, drives, desires and value systems. The main objective of this study is to validate and further develop the model using behavioral experiments with undergrads. Settings include a simplistic virtual presence of agents that interact with human participants and with each other by performing a limited repertoire of emotionally laden actions. Results indicate that the model allows us to describe and reproduce certain aspects of human social behavior that determine lasting emotional relationships. The question of episodic vs. semantic nature of emotional memories underlying the emergence of social relations is also addressed.