

Introducing Emma as Testbed for Emotional Alignment

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Alignment can be defined as the ability to adjust to the behavior of others. This is relevant in research on virtual humans because it would allow them to behave more believably in human-computer interaction and would facilitate their communication with the human interactant. One aspect that can be considered important is emotional alignment, which can be understood as sharing the same feelings with the others. This relates to the definition of *empathy* as an affective reaction to the other's emotion [4]. A fundamental mechanism of *empathy* is *mimicry*, the process of simulating another's facial expressions, voice and posture, that triggers an afferent feedback eliciting the same feelings in oneself as that of the others [4].

Beside our virtual human Max [6] we are developing the virtual human Emma, whose face replicates 25 actions units—the core elements of the *Facial Coding System* [2]—enabling about 3000 facial nuances related to pleasure-arousal-dominance values [3]. Based on the study by Grammer et al. [3] and inspired by the concepts used to implement the imitation algorithms as in [1] and [5], we will describe how our virtual human Emma constitutes a testbed for realising emotional alignment through *mimicry*.

References

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