

# The Uncanny Valley in Psychopathic and Schizotypal Personality Traits as a Tool to Understand Human-Robot Interaction and Social Cognition

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Creating humanoid robots is an engineering longstanding goal. Yet a significant psychological obstacle stands in the way: the Uncanny Valley (UV). This phenomenon describes the abrupt shift in people's affective reactions towards robots, from affinity to discomfort, when the robot closely resembles a human, but fails to achieve true human-like appearance. Some scholars propose that this discomfort stems from attributing human-like mental abilities to non-human entities, regardless of their appearance. To date, empirical data have not yet conclusively determined whether human-like *bodily appearance* or *mental abilities* primarily elicit the uncanny feeling.

The present study aims to compare feelings of uncanniness evoked by androids with various degrees of human-like appearance and mental abilities in a large sample of individuals, with low to high psychopathic or schizotypal personality traits. Since high levels of these traits are associated with altered socio-cognitive abilities, if UV stems from a fallacious attribution of mental abilities, we expect our sample to exhibit differential UV effects, depending on the android's mental abilities and regardless of its bodily appearance.

The study will be implemented online and articulated in three phases: 1. Trait assessment: psychopathic and schizotypal traits, socio-cognitive abilities, general attitudes toward robots; 2. Stimulus presentation: photos of a human, an android, and a robot, accompanied by verbal descriptions of (high or low) mental abilities; 3. Rating phase: stimuli uncanniness.

Studying affective reactions in socio-cognitive atypical conditions could unlock insights for building more likeable social robots, as well as for shedding light on the complex nature of socio-cognitive dysfunctions.

**If you're submitting a poster, would you be interested in giving a blitz talk?**

No

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**If you're submitting a symposium, or a talk that is part of a symposium, is this a junior symposium?**

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