It sounds like Han! Testing the feasibility of a social robot delivered conditional discrimination training

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Abstract

Relational frame theory (RFT) is a relatively new account of human language and cognition. According to RFT, such complex human behaviors can be conceptualized as derived relational responding, the ability to respond to relations among stimuli (Hayes, Barnes-Holmes and Roche, 2001). In recent years research has implemente more and more RFT based training to teach language and other abilities to children with autism in order to make learning faster and more efficient and increase novel behavior. Most RFT training included conditional discrimination tasks, that is a discrimination task that depend on the stimulus context: for example a matching to sample task where the subject has been trained to select a stimulus in presence of another stimulus (select a triangle when the red light is on.

We tested a social robots mediated RFT training. The use of a social robot serves three main purposes:

• The robot may act as a motivating element for the child and can make learning more fun. Its anthropomorphic characteristics, together with the ability to produce words, spontaneously catalyze child's attention and create a motivating operation for the trials presented

• The robot can perform some operations that are usually performed by a technician who works with the child. For example continuous process data collection which, although necessary to ensure the scientific rigor proper of behavior analysis, causes a considerable expenditure of time and is still subject to human error as well, can be part of the robot tasks.

• The robot can be used by less skilled people, like parents or relatives, to increase the occasions of learning for the child, while maintaining a rigorous procedure.

We present an exploratory investigation of a standard conditional discrimination procedure to explore a social robot mediated therapy for kids with autism.

Biography

Daniele Lombardo is the CEO & founder at Behaviour Labs – RoboMate LTD. He is the faculty of Computer science at University of Catania (1994 – 1997) and University of Catania.

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