Chapter XVII

Emotion in the Turing Test: A Downward Trend for Machines in Recent Loebner Prizes

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ABSTRACT

The Turing Test, originally configured as a game for a human to distinguish between an unseen and unheard man and woman, through a text-based conversational measure of gender, is the ultimate test for deception and hence, thinking. So conceived Alan Turing when he introduced a machine into the game. His idea, that once a machine deceives a human judge into believing that they are the human, then that machine should be attributed with intelligence. What Turing missed is the presence of emotion in human dialogue, without expression of which, an entity could appear non-human. Indeed, humans have been confused as machine-like, the confederate effect, during instantiations of the Turing Test staged in Loebner Prizes for Artificial Intelligence. We present results from recent Loebner Prizes and two parallel conversations from the 2006 contest in which two human judges, both native English speakers, each concomitantly interacted with a non-native English speaking hidden-human, and jabberwacky, the 2005 and 2006 Loebner Prize bronze prize winner for most human-like machine. We find that machines in those contests appear conversationally worse than non-native hidden-humans, and, as a consequence attract a downward trend in highest scores awarded to them by human judges in the 2004, 2005 and 2006 Loebner Prizes. Analysing Loebner 2006 conversations, we see that a parallel could be drawn with autistics: the machine was able to broadcast but it did not inform; it talked but it did not emote. The hidden-humans were easily identified through their emotional intelligence, ability to discern emotional state of others and contribute with their own 'balloons of textual emotion'.
INTRODUCTION

Humans steep their ideas in emotion (Pinker, 2008). Emotional states, Minsky writes, “are usually simpler than most of our other ways to think” (2007). Daily conversation is “glued together through exchange of emotion” (Tomasello et al, 2005). Be it an expression of joy or displeasure “sharing emotions with people other than our intimates is a useful tool to bond and to strengthen social relationships” (Derks, Fischer & Bos, 2008). We consider the conversations between unknowns in the 2006 Loebner Prize for Artificial Intelligence, from hereon referred to as the LPAI, to compare and contrast the human-human and human-machine dialogues to find any display of emotion, be it happiness or annoyance, in the participants. The LPAI is an annual science contest that provides a platform for Alan Turing’s imitation game (Turing, 1950), which, some would argue, should be killed, because it offers nothing that furthers the science of understanding emotions, intelligence or human consciousness. The game, originally configured for a human interrogator whose task it is to distinguish between an unseen and unheard man and woman through text-based conversational measure of gender, is the ultimate test for deception, and hence, thinking. So conceived Turing, when he altered the interrogator’s task to one that entails distinguishing a machine from a hidden-human. Turing believed that once a machine deceived a human judge into believing that they were the human, then that machine should be attributed with intelligence. But is the Turing Test nothing more than an emotionless game?

In this chapter we present an analysis of two three-participant dialogues involving two human judges: one male native English speaker (British cyberneticist Professor Kevin Warwick in his second outing as a Loebner judge, in 2001 and 2006), with a male, non-native English speaking hidden human (termed NNHH in this chapter) in parallel comparison with an artificial conversational entity –ACE (Shah, 2005); one female judge, textually conversing with a female NNHH and an ACE. Jabberwacky (Carpenter, 2007) was the ACE in both those conversations; it won the Loebner bronze-award for ‘most human-like’ programme for the second consecutive year in 2006. The contest does not see embodied machines, rather competing programmes attempting to simulate human thinking and intelligence. Nonetheless, in the sixteenth year of the competition we could reasonably expect an ACE to manifest some feeling and express some emotional state, such as cheerfulness or sadness. However, the two judges easily recognised the simulated from the natural, the machine from the non-natives. Though their expressions were occasionally unlike native English speakers, both NNHHSs were correctly identified as ‘the human’. The ACE did show an ability to produce complex and amusing utterances, for example: I will if you tell me who your parents are in response to the question so tell me all about yourself or Yes, it’s a good opportunity for a chat! when asked Are you enjoying today? (Loebner 2006 transcripts: Session 2, P4J2H3; Session 6, P4J1H4). Yip & Martin posit that the “use of humor may be an important skill in itself and may contribute to other social competencies, such as the ability to initiate social interactions, provide emotional support, and manage conflict” (2006). During their LPAI interaction an NNHH displayed a capacity to forget: contrary to LPAI 2006 Rules for the hidden humans, the male used his real name in introduction (participant H3 initially failed to use the line “My name is John”), but immediately corrected their error (table 1). Both male and female NNHHSs displayed “social cognition” (Tomasello, et al, 2005), through demonstrating an interest in their conversational partners, for example, through asking questions: “Hi what’s your name?” and “What are you working?” (table 5). The latter question highlights the non-native nature of the utterance formation. Derks, Fischer and Bos point out that text-based interaction is not a hindrance to emotion communication but
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