At one point in my daughter's young life, she lived in a house in the country with nary another child around. Being an only child only made the isolation problem worse. Two things resulted: She loves talking to adults. As soon as we moved into town, she chatted up every elderly person on our street, lathering them with stories of her pet crickets and spiders. Second, she developed a deep affinity for interactive technology, particularly a noisy little toy robot that hatched itself from a large egg and started immediately emoting—conveying joy, sadness, hunger, and even the robotic expression of affection for its new owner. Children and their toys, right? But I'm not so sure we adults play a different game with robots. After all, our news sources bubble with stories of "nearly" sentient artificial intelligence. We adults wait to see what robots will soon convey *to us*. And even though our fiction books scream warnings of this, it seems we are anxiously awaiting the story of a robot that tells its own story: A terrifying tale of how it came to the knowledge of itself.

This month's blog post isn't quite along those lines, but it is about robots telling stories and the robot's programmers' concerted but crude attempts to turn electricity into emotion. This experiment's story begins with the researchers' desire to fill a gap in the testing literature: To what extent will a robot's facial expressions while telling a story impact how well a human being receives the story and how the human will regard the robot afterward?[1] The authors note a wealth of testing already published on the effects of human-to-human storytelling. No new ground to break there. So, they found a robot with a face that possessed many moving parts, and could light up its own cheeks, and they gave the robot an electrical, but still quite-human voice.[2] Meet Reeti:

[3]

Reeti would tell three sets of test subjects the same story. For each group, Reeti's vocal track wouldn't change. What *would* change for each group was Reeti's facial expressions. For the first group, the expressions would be congruent with the story's emotional content. For the

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[1] Markus Appel et al., *The emotional robotic storyteller: On the influence of affect congruency on narrative transportation, robot perception, and persuasion*, 120 COMPUTERS IN HUMAN BEHAVIOR, no. 106749, July, 2021, at 1-9, https://doi.org/10.1016/j.chb.2021.106749.
[2] *Id.* at 4.
[3] *Id*. Photo appears as Figure 2. Here Reeti is displaying joy and sadness.

second group, the facial expressions would be *incongruent* with the story's emotional content. For the third group, just Reeti's mouth would move and its face would be expressionless. Reeti told the subjects the story of how its human owner took increasingly less interest in it because Reeti's energy levels had dropped. Reeti learns its owner has gone out looking for a new robot to replace it. This makes Reeti sad. Reeti searches for ways to perk its energy and performance and says it found its pep again after discovering "Lifebar," which is an actual energy bar brand—though one that would not have been familiar to the German test subjects. After its energy is revived by Lifebars, Reeti happily reports that its owner likes it again and expresses relief that Lifebar has effectively restored its relationship with its owner.[4]

For the sake of space in this blog, I will skip to some of the key outcomes of the tests. First, those subjects in the group that saw facial expressions that matched the story's emotions reported a higher affinity to the story over the other two groups. To put it more plainly, "…when the robot is showing emotions congruent to the story recipients are more immersed in the story world."[5] Additionally, those seeing congruently emotional facial expressions reported the robot to be more anthropomorphic and more likeable.[6] As the test subjects were leaving, the researchers offered them as a gift all the Lifebars they wanted, and then measured how many each test group took. Those who saw congruent facial emotions during the robot's story of the salvific powers of the Lifebar were significantly more likely to pocket more Lifebars on their way out the door![7] Who wouldn't want more energy and pep, eh?

Here is one of the more fascinating parts of the study: All of the test subjects were asked to rate whether the robot's voice and voice modulation matched the emotions of the story. Keep in mind that the vocal track was the same for all three groups. The researchers found that those seeing emotionally congruent facial expressions were significantly more likely to believe the robot's voice modulation matched the story's emotional swings.[8] They called this phenomena the "illusory intonation effect."[9] In short, a robot's emotional faces caused people to think the robot's voice was more emotionally in tune with the story it told.

Now, perhaps you are thinking this blog is about the efficacy of robot attorneys, and it might be. Perhaps you're even more cynical than those who think robot Perry Masons will put us out of work, and you're thinking this blog is about trial ad students who can't help but be robots. What are we to do with them, right? This blog might be about them as well. But what if this blog is really about us? No, not just about how our brains are drawn to faces or how susceptible we are to emotionally charged marketing. What if this blog, at its core, is about loneliness and the human need to feel connection in relationships? Like a small girl living in the countryside, telling a toy robot mindlessly spinning in circles on the floor around her that she's its mother—talking loudly over the stream of amplified gibberish to reassure it that it will always be safe with her. What if a storytelling robot is whispering to us one of the smaller secrets about what it means to be human?

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[4] *Id.* at 3.
[5] *Id.* at 6.
[6] *Id.* at 7.
[7] *Id.*
[8] *Id.* at 6-7.
[9] *Id.* at 1.