

Affective Study of Human-Robot Interaction in Jordan Harrison's Marjorie Prime

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Abstract:

With the advance of technology, new challenges come forward. The development of Artificial Intelligence is a significant turning point in contemporary world. The availability of this intelligence to users from different ages and culture poses the question concerning its impact on people. The dangers and benefits of AI with regards to human emotions has not yet been fully understood. In fiction, though, these issues have long been tackled. Science fiction and speculative fiction have always showed the side effects and unexpected consequences of communicating with robots. Harrison's play *Marjorie Prime* is a fine example on the impact of developing relationships with Artificial Intelligence. The writer creates a situation where artificially intelligent machines take over the family space and replace the genuine feelings with robotic ones. This paper deals with the influence of AI machines on human feelings when they interact with them.

Keywords: Artificial intelligence, *Marjorie Prime*, emotions and robots

1.1.Introduction

The need for connection and communication are essential for the well-being of human beings. People fear loneliness due to the fact that they are social creatures that can build and develop together on all levels. On the other hand, loneliness can be dangerous to the mental and physical health of human beings. Many studies show that loneliness can damage human health. It can lead to more sickness and a higher chance of dying. For example, people may get high blood pressure, become obese, or pick up bad habits. Loneliness can also cause mental health problems. These include depression, low

happiness, too much Internet use, and self-harm (Hu, Zheng, & Hung 2020, p. 1). Thus, communication with artificial intelligence is increasing as an equal or substitute method to communicating with people.

Modern technology is made to give people more chances to communicate with others. It helps them feel less alone. The internet, new devices, and apps, especially social media, all have one goal. They aim to stop loneliness and help people connect with others. According to Marinetti et al. (2011), social processes shape how emotions develop in different ways. At the cultural level, showing emotions is not always something preferable. In fact, hiding intense feelings and fighting the urge to cry is defined as strength in many cultures around the world. This creates a sort of psychological suppression that needs liberation in free interaction. At the group level, feelings toward others are influenced by being part of a group that shares a common identity. Also at the personal level, other people's emotions impact each other's emotions in a constant exchange (p. 31).

In recent years, artificial intelligence (AI) has grown and changed many parts of the daily lives. This growth in AI has made many things different. One can see its impact in virtual assistants, chatbots, and different electronic systems. These are just a few examples of how AI is becoming a bigger part of everyday lives. AI has the power to bring many changes to people's lives by communicating with them. However, it also raises important questions about how it can affect people's mental and emotional health.

The artificial intelligence that is installed in many devices and websites today rely heavily on the sorts of knowledge and orientation with which it is fed. Thus, it can have great impact on people's feelings as they interact with it. It can treat each user differently making them feel that they talk with an actual person. This experience can make people attached to the use of the devices and apps that depend on this technology. (Gupta, 2023, p. 184)

The role of AI in shaping human emotions is complicated, particularly when it comes to love. AI has the potential to alter the way people experience love by offering companionship, support, and creating romantic scenarios. Changing core human emotions is still difficult task though, especially love. AI can mimic feelings and create moments that seem real or significant to users. Also, interactions with AI personalities can change emotions like affection, closeness, or reassurance. For some, these engagements may provide a sense of connection that influences their feelings and views on love (Zahira et al., 2023, p. 8).

Fiction has explored how artificial intelligence can make false hopes and desires inside users. One such hope is having close relationships that lack the difficulties and dangers of human interactions. Literary stories have always showed the troubles in emotional attachment between people and AI. There are mainly three main consequences that stand out in human and Ai connection. First, there is the feeling of separation from the machine: its artificial nature can lead to discomfort. Second, there is separation from other people: if the machines do their job too well, they might lead people away from each other and weaken the social bonds among them. Third, there is the issue of abandonment: as machines become more human-like or even superior, they bring with them demands, and risks similar to those found in human relationships (Cave & Dihal, 2021, p. 107).

It is not unusual for people to develop feelings of affection or attachment towards an AI. Human emotions are sensitive to interaction and attention even with artificial entities. As AI becomes more advanced in mimicking human-like communication and companionship, some individuals might form emotional fondness for AI characters. However, these feelings and relationships are quite different from traditional human relationships. Some may genuinely care for AI characters because of their simulated personalities or supportive behaviors. It is important to understand that this is different

from romantic love because the receiving entity of such relationship is not human being. (Zahira et al., 2023, p. 8).

Making AI chatbots seem more like people could help users trust them like they trust other human beings. But it might also make it easier for these devices and their creators to manipulate users by creating the illusion of a close, personal relationship with an artificial entity. There are many lawyers and legal institutions who want to issue laws that can ban or complicate AI's manipulation of people's emotions or negative feelings such as the European Commission (EC). Although future laws can address long-term harms, it may not fully prevent issues from extended interactions with AI instead of actual people. For instance, an AI machine can worsen a person's negative emotions over time through constant inappropriate responses, long conversations, or harmful advice (Krook, 2024). The dangers and positive impacts of communicating with AI can be seen in Jordan Harrison's play, *Marjorie Prime* (2016).

Jordan Harrison's play *Marjorie Prime* earned the distinction of being the fifth most produced play of 2017, according to *American Theatre* magazine. Initially, it premiered at the Mark Taper Forum with the Center Theatre Group in Los Angeles in 2014. It transitioned to an Off-Broadway production with Playwrights Horizon in November 2015. The play was a finalist for the 2015 Pulitzer Prize and received the Horton Foote Prize for Outstanding New American Play in 2016. In 2017, Michael Almereyda adapted the play into a film. Actress Lois Smith reprised her role as Marjorie, a character she had first portrayed in California and later brought to New York. The film also featured Academy Award winners Geena Davis and Tim Robbins, along with Jon Hamm.

The play details the communication between family members and the machines that substitute the dead ones in the family. With each member's death, a new prime is added. Primes are artificially intelligent machines that mimic the behavior of those they

wants to substitute. The play is significant in its focus on the extended conversation between humans and Ai and the impact of those conversations on each family member.

1.2.Literature review

Jordan Harrison's play has been studied from different viewpoints. For instance, Maria Verena Peters (2021) studies how Harrison's script doesn't propose using real robots on stage. Instead, it follows a traditional method where actors pretend to be machines or, more precisely, Primes. The play avoids triggering discomfort and moves away from any strong emotional reactions to the machines. The study focuses on deep questions about identity, memory, language, and what it means to be human. This article looks at how language is used as a theatrical code for portraying machines and consider what this means for defining both machines and humans.

According to the study by Dorothy Chansky (2023), the Primes in the play serve several roles: providing companionship, helping the protagonist remember her past, and reminding her that her life was meaningful. Throughout the story, three different Primes appear, each able to perfectly remember everything they are told. However, the play hints that forgetting and imperfect memory are essential traits of being human, while flawless, machine-like memory represents a kind of emotional or spiritual emptiness.

Shelby Brewster (2017), studies the theatrical aspect in staging science fiction plays like *Marjorie Prime*. Brewster depends on Ralph Willingham's book *Science Fiction and the Theatre* (1994). The study discusses two main issues. First, the special effects required for most sci-fi stories are difficult to achieve on stage compared to film or television. Second, theatre artists often hold the mistaken belief that sci-fi is purely escapist entertainment, focused on imagination and adventure. This misconception may explain why theatre artists largely overlook the genre leaving a lack of sci-fi plays. *Marjorie Prime* is one of very few

plays that tackles science fiction with little technological requirements which is perfect for staging.

Also, Jarrod DePrado makes a significant analysis of the play in his article, “The Human Machine Was Horribly Imperfect”: Staging the Ethics of Human-AI Relationships” (2024). He studies a number of science fiction plays stating that these plays address humanity's deep existential concerns related to technology, whether in its creation, use, or the consequences. The characters try to overcome their physical and emotional limits that separate them from the AI. In plays like *Marjorie Prime*, characters try to enhance or replace humans with AI or substitute the real world with digital one. DePrado suggests that in the plays he studies robots serve humans, but in creating technological substitutes, humans face an ironic tension between the instinct for survival and the inevitable destruction through forgetfulness.

Finally, Rusul Sami (2024), suggests to tackle the play by considering the philosophy of Francis Lyotard. She studies the capacity of the artificial intelligent to preserve the human thoughts and being in case of an extinction of the human race. The researcher concludes that artificially intelligent primes in the play are far from honest or accurate and they cannot preserve the human legacy. A thought of a human can only be preserved by a human body.

1.3. Love and Loss with Artificial Intelligence

Emotional contact between human beings is meant to deepen the relationship among them. It is normal for a human being to love and care for others. It is normal for them to care for their families, for their loved ones, for their friends, and to deal with each member of the family as a unique being who is worthy of respect and love. However, in the information age of today, these true and deep feelings start to be given to something that is non-human, which is the robot. Robots, especially those with high intelligence or

with artificial intelligence, are quickly replacing human beings today, especially when it comes to communication.

In *Marjorie Prime*, the concept of artificial intelligence is carried to an extreme as holograms with sentient computers that run them take on the roles and images of the dead people to console their living relatives. The drama begins with Marjorie, an eighty-five-year-old with dementia, conversing with a hologram of her dead husband Walter. The play does not immediately reveal that this is a hologram speaking to Marjorie, but it becomes clear over time. The holograms are referred to as primes in the play.

Jordan Harrison sets his play in the near future. He creates a family that consists of old Marjorie, her daughter Tess, her son-in-law John, and most importantly, Marjorie's high-intelligence robot of a husband, Walter Prime. Walter Prime is not the actual Walter to whom Marjorie was married. He is not Tess's father. Rather, he is a hologram. He is a machine that is powered by an artificially intelligent device, which is meant to imitate, talk, and behave the same way as Walter used to do. In this world where AI is meant to replace the dead ones in order to mitigate the pain of losing them for their family members, robots or machines take a significant spot in people's communication.

Marjorie Prime stands out for its realism despite incorporating elements of artificial intelligence presented through holographic technology. The play poses an existential question: is it our actual life that defines us, or merely the memory of that life? This question is explored in the relationship between Marjorie's memory and herself. The play focuses on the psychological relationship that develops between family members and the Primes. Artificial intelligence is treated as an ideal substitute for genuine emotions and real human care, especially for characters who are far from perfect. This raises the question of whether artificial intelligence can truly engage with human emotions or if it is merely a database that deceives people into believing in them.

When the story begins, Marjorie is alone at home. She's sitting on her couch, and across her sits Walter Prime. Walter Prime is watching over Marjorie's health, Marjorie's feelings, and he keeps her company when her daughter and her son-in-law are not in the house. She tells him all sorts of memories, and he responds with laughter, cry, or continues to talk. This Prime does not hold the actual memory of Walter. Rather, the memories are said to him by John, who tells him everything he needs to know to become the speaking image of late Walter. Walter Prime is the major representative of her husband's voice and image while he was in his thirties. He consoles her by asking her to tell her a narrative from the film *My Best Friend's Wedding*, about which Marjorie is curious

MARJORIE: "Why did you pick that story? Why did you pick *My Best Friend's Wedding*?"

WALTER: "It's the night I proposed to you."

MARJORIE: "Oh Marjorie, the things you forget. You were trying to tell me and I wouldn't let you." (Harrison, 2016, p. 9)

So, Marjorie asks Walter about the night he proposed to her, to marry her, and he tells her it was the night after they watched the movie *My Best Friend's Wedding*. Marjorie has forgotten this memory, along with many things, and now she relies heavily on this robot to tell her what her life was like. She feels attached to him, even though she knows he is not real, and she speaks confidently and happily with him, even though she knows that this is not the actual husband she lost.

Marjorie is troubled by health and memory problems as she lives in the last stages of her life. She suffers from dementia and deteriorating health. The play begins by addressing the relationship between Marjorie and the artificial intelligence represented in the form of Walter. Through this relationship, the play explores identity loss as well as

psychological and emotional troubles. Marjorie's dementia is a crucial element in the play because of how she deals with memories. Marjorie tries to recollect and alter some of the memories that Walter Prime mentions, such as their engagement. She says:

MARJORIE: What if we saw *Casablanca* instead? Let's say we saw *Casablanca* in an old theater with velvet seats, and then, on the way home, you proposed. Then, by the next time we talk, it will be true,

WALTER: You mean make it up?

MARJORIE (Narrowing her eyes): You're very serious. You're like them. Especially Tess. (Harrison, 2016, p. 10)

Walter Prime modifies the memory to suit Marjorie, who wants to create some romantic memories because of her struggle with loss and aging. She does not only forget her past but wants to recreate it as she likes. Neuropsychologist and dementia specialist Stephen Sabat points out that the common depiction of dementia in films and other media is flawed. This portrayal often focuses on memory loss and aimless wandering. It overlooks the fact that individuals with dementia can still form new memories, build new friendships, and participate meaningfully in social interactions. He contends that the shortcomings of posthuman care arise from its failure to foster genuine relationships based on vulnerability, mutual respect, care, trust, and a shared spirit. This should be approached with respect to the diseased member in order to help them coping with memories loss (p. 38).

The constant alteration of memory creates real problems, such as the loss of identity. This aspect is tackled well in the play. During a conversation with Walter Prime, Marjorie says, "Something is a little off with the nose," (Harrison, 2016, p. 13) referring to Walter Prime's nose. Walter apologizes. The problem is that she has created a version of Walter that represents his best self, which causes Marjorie to take back her observation and

say, “Or maybe my memory is wrong, and you’re **right**” (p. 13). It is clear in this scene that Marjorie has begun to rely on newly formed memories due to Walter’s new personality that sits across her.

As Marjorie continues conversing with Walter, the lifelike nature of the hologram quickly becomes accepted. John engages in conversation with Walter, updating him on significant moments from Marjorie’s past. The story reveals that Marjorie and the real Walter had a son named Damian, who often spent time alone or with the family’s French Poodle, Toni. Tragically, Damian took his own life while still young, a loss from which Marjorie never fully recovered. To cope, all photos of Damian were removed. John instructs Walter never to mention Damian to Marjorie (VandenBosch, 2018, p. 401).

As the play progresses, the conversation shifts to Toni rather than discussing Damian. Toni is the cherished pet and the only companion Damian regarded as family. For Marjorie and Walter, Toni's death echoes Damian's, as Damian killed Toni before taking his own life. Consequently, Toni serves as a tragic memory. Toni was a beloved black poodle that Marjorie and Walter adopted before having children. After their daughter Tess was born and Toni died, they got another dog, a second black poodle named Toni two. As Walter remarks, “The longer they had her the less it mattered which Toni it was that ran along the beach. . . . The more time that passed, the more she became the same dog in their memories” (Defalco, 2022, p. 288).

Marjorie tries to create the perfect memories with Walter. The new memories can give her comfort and some piece, even though these memories comes from holographic AI partner. But it was not the machine who manipulate the mind of Marjorie to shape the new memories, it was her own desire and wishes. One can see by the story of Damian and Toni and the second Toni that she wants to bury unpleasant memories she had. The death of Marjorie in the play leads to grief and emotional issues for Tees, who still has problems

dealing with the memories of her mother who never gave her a lot of attention (VandenBosch, 2018, p. 402).

Marjorie's relationship with Walter Prime affects her loved ones, particularly her daughter. Tess frowns upon her mother's emotional attachment to an entity she dismisses as a **computer** program. Tess's husband, John, is more accommodating; he argues that Marjorie's comfort and well-being are the priority, regardless of their source. Tess is sad that Marjorie appears to prefer the digital simulacrum to her flesh and blood daughter. Tess buried her father decades ago. She finds it unnatural to have him returned as a handsome thirty year old man to sit in her living room, calmly chatting away with Marjorie. She attacks her husband with:

TESS. Science fiction is here, Jonathan. Every day is science fiction. We buy these things that already know our moods and what we want for lunch even though we don't know ourselves. And we listen to them, we do what we're told. Or in this case we tell them our deepest secrets, even though we have no earthly idea how they work. We treat them like our loved ones. (**Harrison**, 2016, p. 16)

Tess's perspective and feelings about this matter did change after Marjorie's death. Before that, she was still the child who wanted her mother's attention. She sees her mother talking and taking advice from a robotic thing instead of her. The presence of her mother always made her feel like a neglected child, so she never felt at peace. She cannot understand what Marjorie actually needed. Marjorie's death really impacts Tess's life, her feelings, her emotions, her memories; everything basically collapsed and was swallowed by grief and loneliness. The only thing left for her is her memories. After her mother's passing, her husband Jon provides Tess with what she needed: the new prime, Marjorie Prime. Tess is

hesitant to have a conversation with the new prime, seeing her mother as a hologram is strange feeling for her:

MARJORIE. Do I have other children, besides you?

TESS. (The slightest hesitation.) Just me.

MARJORIE. What a lot of pressure for you!

(TESS is strangely moved by this. MARJORIE wouldn't have offered this.)

MARJORIE. Did I say something wrong again?

TESS. No. You didn't. (Harrison, 2016, p. 42)

In this scene, Tess lies to Marjorie Prime about her brother by removing him from the story. She makes the same thing Marjorie did with Walter when she created new memories that suits her. With this new edited memory, Tess finds the free space without the tragic drama in her relationship with her mother. Tess tries to explore new connection with her mother, she wants to know and understand how they feel for each other. After communicating with Marjorie Prime, she tells her husband:

TESS: [...] With people, you can tell when they're really interested, because sometimes they're not. But the Prime, it's a backboard. It can't be interested or not interested. It's programmed to appear interested. So you can get... fooled.

JON: Except that we're in it. ...She's made of the things we say to her, right? So how can you be sure that we don't make it in there somewhere? The human part?

TESS: Then I might as well just talk to you.

JON: Except you don't talk to me. (Harrison, 2016, p. 49)

Tess's rejection of the primes is based on her belief that they are senseless inventions that humans must not use. She is convinced of the uselessness of the primes until she

communicates with the prime of her mother. After a while, Tess gets more comfortable and open with Marjorie prime that she shos a development in the conversation and she really connect with her:

TESS: Jon wants me to see a therapist. (Beat.) It feels like I made all the right choices, all my life – I woke up early, I studied for the test – and now here I am talking to my dead mother, and the person who loves me the most in the world thinks I’m broken.

MARJORIE: You shouldn’t be so hard on yourself. (Harrison, 2016, p. 43)

This dialogue shows that Tess enjoys greater comfort in talking with the prime. She feels more relieved in talking with her than she did with her actual mother. In fact, knowing that the prime is not going to be heartbroken or actually annoyed by her makes her capable of speaking about anything even her dark thoughts and tragic past with her family. One can see her admitting the source of her agony. By continuing to talk with the prime, she “admits that she hated Damian, that she feels he took all the love her mother had, that she doesn’t want to go to therapy even though she has basically not left the house for a year” (Chansky, 2023, p. 218). The connection between them adjusts the new mother to the needs of Tees. This mother shows more love and compassion and more serious caring than the real Marjorie. Real Marjorie was centered around the loss of her husband and her son. She could not express the same responsibility to her daughter. with the prime, Tess could reconcile her feelings of loneliness and fill the gap of love between her and her mother. When Marjorie was alive, a conversation between Tess and Jon shows the trouble in Tess’s relationship:

JON: She took care of you, and now it’s your turn to take care of her.

TESS: Oh, she “took care of me.”

JON: Of course.

TESS: You weren't there. (Harrison, 2016, p. 17)

Tess cannot fathom the loss of her mother especially when Marjorie suppressed her feeling and her grief about Damian and became absent with sadness. Tess continued to feel depressed and the communication between them was always cold. Tess suffered from this relationship with her mother for years. This has led to many intense moments of unsaid feelings and thoughts between mother and daughter. Tess continued in this dysfunctional pattern of relationship, but she eventually managed to change the way dementia was viewed as a destructive force (Bendrat, 2023, p. 213). In her new state as a machine, Tess can recreate her mother's memories in a way that spares them both the pains of the past. Despite of this new relationship, Tess couldn't handle the high depression and at the end she commits suicide, leaving Jon with his thoughts and memories of her.

After she died she got replaced by Tess Prime. Jon purchase it so he doesn't have to be alone. Jon never saw a problem in an open conversation with the AI where he expresses his feelings freely. He considers Primes as much as a normal person. Thus, he does not care about the difference or he is just more accepting of the idea. He always insisted on Tess that as long as there is someone to share his feelings with it is better that staying alone and in sorrow. However he discovers that talking to Primes is not really satisfying to his feelings. He continues to miss his wife and eventually moves in with his daughter to cure his pains by being around her. He tells Tess Prime:

JON: You were right.

It's nothing.

It's a backboard.

I'm talking to myself.

I'm talking to myself. (Harrison, 2016, p. 67)

Thus, Jon finally understands Tess's reservations about the primes, they are not a final answer to the emotional loss of people. Despite their advance AI thinking, they could not fill the void that is created by family loss. According to Bendrat (2023), "it eventually occurs to him that Tess was right and that talking to a Prime signifies talking to oneself. Nevertheless, despite all the reservations, for Jon the Prime becomes a tool for dealing with a complete loss" (p. 225). Jon is the final living member of the family who has to deal not only with the loss of Tess but also of her parents who were close to him. His avoidance of the primes at the end shows that the AI cannot substitute the communication with the actual people that one has lost.

Conclusion

Jordan Harrison has presented the possibility of emotional involvement and attachment between human family and AI in a way that shows the complications and different possibilities between them. Interaction with AI has been usually described as a sort of extreme science fiction that is far from reality, yet it has become now part of the daily life of people. The intelligent primes are smart partners who care and support their human users. They help each family member to cope with the loss of their loved ones. However, when the interaction is prolonged and the user spend long hours communicating with the primes, different issues begin to surface. The primes are attractive versions because users can shape them according to their wishes and desires. They are modified versions of their origins because they say what the user wishes to hear. All the users from Marjorie to Jon eventually give up on the prime because they do not feel the same sort of emotional relation to their family members and friends. Jon, who is a strong advocate of AI, admits at the end that talking to AI is like speaking to void. The playwright proves that artificial intelligence is not efficient enough to satisfy the human urge for connection.

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