



Designed to Connect: David's Programmed Emotional Responses in A.I. Artificial Intelligence (2001)

Priyoto¹

priyoto@pertiwi.ac.id

*English Language and Literature Department, Faculty of Tourism and Language,
Universitas Pertiwi*

Sri Marleni

sri.marleni@pertiwi.ac.id

*English Language and Literature Department, Faculty of Tourism and Language,
Universitas Pertiwi*

Bayu Hari Yudanto

bayuhari.yudanto@pertiwi.ac.id

*English Language and Literature Department, Faculty of Tourism and Language,
Universitas Pertiwi*

Amira Raihana Amalia

amirarah12@gmail.com

*English Language and Literature Department, Faculty of Tourism and Language,
Universitas Pertiwi*

Priyoto, Marleni, S., Yudanto, B.H. and Amalia, A.R. (2026). Designed to Connect: David's Programmed Emotional Responses in A.I. Artificial Intelligence (2001). *Journal of English Language and literature*, 11(1), 53-62. doi: 10.37110/jell.v11i1.330

Received: 22-01-2026

Accepted: 18-02-2026

Published: 02-03-2026

Abstract: This study examines the programmed emotional responses of David, the central humanoid robot in Steven Spielberg's A.I. Artificial Intelligence (2001), with a focus on emotional connections design between artificial beings and humans. The research employs a descriptive qualitative method, integrating film analysis and theories of human-AI interaction to explore the narrative and technological frameworks that shape David's emotional expressions. The findings indicate that while David's emotional programming successfully evokes empathy and connection, it also prompts critical discussions about the authenticity of artificial emotions and their implications for human relationships. This study contributes to the broader dialogue on the role of emotions in AI development and their potential societal impacts.

Keywords: A.I., emotion; connection; expression; programming

INTRODUCTION

The development of technology in 20th century has given humanity its greatest achievement, Artificial Intelligence, used almost daily, for example asking Gamma AI (An AI transform ideas into visual document) to create automatic

power point presentation or ask Siri (Apple's voice-controlled virtual assistant) for a recent news just by calling her "Hey, Siri, tell me the recent news" without lifting a hand. Beyond these practical uses, AI has advanced into the realm of emotional intelligence, enabling systems to recognize and simulate human emotions. This

¹ Corresponding author

study seeks to explore the representation of these capabilities through the character of David in the film *A.I. Artificial Intelligence* (2001).

The movie directed by Steven Spielberg, portrayed a futuristic world where advanced robot called Mechas, coexist with human. David, a robotic child designed to experience love, who is adopted by a human family but ultimately abandoned when his lifelike qualities unsettle them. Determined to become "real" and regain his mother's love, David embarks on a quest accompanied by another Mecha, Gigolo Joe. Along the way, he learns from his creator, Professor Hobby, that he is one of many robots designed to emulate human emotions. After finding a statue of a Blue Fairy at the bottom of the sea, David spends 100 years whispering his wish to become human. He is eventually resurrected by future beings who help him spend one final day with his mother through genetic reconstruction.

David's continued journey, along with another Mecha named Gigolo Joe, functions as a long allegory that represents the human longing for recognition, a sense of belonging, and love. His finding that he is one of many exact copies shakes up the idea of being unique, showing that feelings, when made by machines, can be copied many times but might still feel weak and uncertain in a deep way. David's extended dedication to the Blue Fairy, during which he spends centuries yearning to become human, symbolizes the persistence of programmed desire and raises critical questions about whether emotional authenticity depends on biological origin or experiential continuity. Through this portrayal, the film examines the distinction between simulated emotions and real feelings, presenting emotional AI as both a technological success and a significant ethical issue.

By situating David's character within early twenty-first-century AI discourse and reassessing it through the lens of contemporary technological developments, this study argues that *A.I. Artificial Intelligence* provides a forward-looking and philosophically deep understanding of emotional

AI. The movie shows the worries people had at that time about the future, and it also talks about questions that are still being asked today about machines that seem to care, the feelings people might get for them, and the right and wrong things humans should do when making such machines. The text remains a significant cultural reference for understanding how emotional AI has been imagined, problematized, and reinterpreted across different technological eras.

The fast progress in technology towards the end of the 1900s changed how people interacted with machines, leading to the creation of Artificial Intelligence (AI). Around the time *A.I. Artificial Intelligence* was introduced in 2001. At that time, AI was mainly based on symbolic reasoning, expert systems, and initial machine-learning methods. These approaches focused on logic, efficiency, and solving problems, rather than on emotional experiences, as noted by Russell and Norvig in 2000. At the same time, philosophical debates questioned whether machines could genuinely understand, feel, or possess consciousness, with critics arguing that computational systems merely simulate understanding without true mental states (Searle, 1980).

Despite these limitations, theoretical discussions about the emotional or affective dimensions of AI had already begun to emerge prior to the film's release. In 1997, Picard introduced the concept of affective computing, suggesting that machines can be designed to recognize, understand, and mimic human emotions using computational models. Although such ideas were largely speculative at the turn of the millennium, they significantly influenced cultural imagination. Science fiction cinema, in particular, became a critical space for exploring the ethical, emotional, and philosophical implications of emotionally intelligent machines beyond what technology could yet achieve (Sobchack, 1987; telotte, 2001). Within this context, *A.I. Artificial Intelligence* offers a visionary yet philosophically based perspective on the development of emotionally aware AI.



From a contemporary perspective, the film appears increasingly prescient. Today, AI systems are widely integrated into daily activities, handling tasks such as creating visual content through platforms like Gamma AI or offering instant information through voice-activated assistants like Siri. More importantly, improvements in affective computing, social robotics, and conversational AI have allowed machines to show empathy, respond emotionally, and interact in a relational way (Turkle, 2011). Although these systems do not possess emotions in a human sense, their ability to perform emotional labor raises ethical concerns about human attachment, dependency, and the anthropomorphization of machines—concerns that were already anticipated in AI. Artificial Intelligence (Levy, 2007).

This study examines the programmed emotional responses of David, the central humanoid robot in Steven Spielberg's *A.I. Artificial Intelligence* (2001), with a focus on emotional connections design between artificial beings and humans. This study places David's character in the context of early 21st-century AI discussions and looks at it again using today's technological advancements, suggesting that AI. Artificial Intelligence provides a forward-thinking and philosophically deep perspective on emotional AI. The film reflects the anxieties of its historical moment while remaining deeply relevant to ongoing debates about artificial empathy, emotional attachment to machines, and the moral responsibilities involved in creating systems that appear to care. As such, *A.I. Artificial Intelligence* continues to serve as a significant cultural text for understanding how emotional AI has been imagined, problematized, and reinterpreted across different technological eras (Braidotti, 2013).

Some research articles in Indonesian national journals have looked at different parts of artificial intelligence, such as ethics, how it's shown in the media, and its effects on technology. Bukhori, Shabrina, and Irwansyah (2025) investigated the ethical considerations and rules around the use of AI-generated images in political campaigns,

showing how discussions in the media emphasize the ethical issues related to using AI-based visual tools in political communication.

Similarly, a study by Mufidah, Hartiwiningsih, and Isharyanto in 2025 looked at the ethical issues of AI in Indonesia using Islamic moral values. They found some important challenges in using AI, like protecting privacy, ensuring fairness, and respecting human worth.

Another study conducted by Ahmad Zakki Abdullah and others in 2024 examined the ethical use of AI technologies in the film industry, highlighting the significance of ensuring that AI applications are in line with current societal values and ethical guidelines within creative settings.

In the context of the Indonesian film and creative industries, Muhammad Miraj Mirza (2025) examined how AI technologies interact with film production and human creativity, emphasizing both the opportunities and ethical issues involved, including the possible replacement of actors and challenges to artistic expression.

This study introduces several original contributions that distinguish it from existing research on artificial intelligence in cinema and AI ethics.

This study introduces a new concept by examining emotional expression in AI characters as programmed emotional responses, rather than as symbolic or metaphorical representations of human emotion. This study looks at David's emotions in a different way compared to past research, which often uses AI emotions just as part of a story. Instead, we see David's emotions as built-in, pre-set reactions that can't be changed, and are part of his artificial structure.

Second, the study introduces an ethical innovation by redirecting the focus of moral assessment from the AI system to the human designers and users. Instead of wondering if David acts ethically, this research says the main ethical issue is that humans made an AI that feels

emotions but doesn't have control over its own actions or agree to being created that way.

The framework for this study is based on Rosalind W. Picard's Affective Computing Theory, which emphasizes AI's ability to interpret emotional cues and generate responses that simulate human empathy to facilitating smoother communication and stronger connections with users. Picard emphasizes that the combination of Emotion Recognition and Emotion Simulation creates a seamless interaction. The AI first identifies the human's emotional state (recognition) and then generates an appropriate response (simulation), enabling the system to engage effectively in human-like interactions. These sub-theory explain how AI systems mimic human interactions without genuinely experiencing emotions

1. Emotion Recognition

Emotion Recognition refers to an AI's ability to detect and interpret human emotions using inputs like facial expressions, vocal tone, gestures, and physiological signals (Picard, 1997). These inputs are processed through algorithms to assess emotional cues, allowing AI to adapt its responses to align with the emotional context, fostering smoother interactions (Picard, 1997, p. 182).

2. Emotion Simulation

Emotion Simulation involves AI replicating emotional behaviors, such as smiling or adopting a calm tone, to foster human-like interactions (Picard, 1997). These responses, though not genuine, create the illusion of empathy, enhancing communication, building trust, and enabling AI to adhere to social norms (Picard, 1997, p. 183).

In A.I. Artificial Intelligence (2001), David's programming exemplifies these principles. His ability to smile, express sadness, and show affection demonstrates AI's capacity to generate emotional behaviors that appear genuine while being algorithmically driven

This study uses a mix of theories from Artificial Intelligence and Affective Computing to create a solid base for understanding how emotions are shown in AI characters within movies. Within AI theory, artificial agents are understood as systems whose behaviors are governed by algorithmic structures, design constraints, and predefined objectives determined by human creators. From this perspective, any emotional expression shown by an AI entity does not come from real feelings or personal experiences, but is instead the result of planned programming that is meant to imitate emotional behavior in reaction to certain inputs.

Affective Computing Theory further refines this analytical approach by addressing how emotions can be computationally modeled, represented, and performed by artificial systems. This theory looks at emotions not as something inside a person that's hard to understand, but as a group of reactions that can be measured, repeated, and even controlled. When applied to film portrayals, affective computing offers a key perspective for differentiating between real human emotions and artificially created emotional expressions, enabling analysis to concentrate on how emotional intelligence is constructed rather than just how it is shown.

The researchers have found the research is purely never taken by anybody. Previous studies on A.I. Artificial Intelligence have primarily focused on philosophical and psychological perspectives, leaving David's emotional programming underexplored. But the approach of Artificial Intelligence and applying Affective Computing Theory, this research bridges the gap, offering a fresh perspective on AI's emotional capabilities and their portrayal in cinema. The researcher is claimed to be able to make contributions to the development of literary field. This study aims to know how David is programmed to have emotional response.

METHOD

The Qualitative Research Method is used to analyse the data in this article. Qualitative research allows a deeper understanding of



representations, such as conversations, photographs, recordings, and even memos (Denzin & Lincoln, Y, 2005) This aligns with the author's intention of using the movie scene, dialogue, and style of the photograph to allow

thorough interpretations using Picard Affective Computer Theory uncovers David's thought process on deciphering emotion and simulating emotion.

To achieve better results in analyzing the data, this article uses film analysis. Movie is vital to create a compelling message (IvyPanda, 2022). Every scene in the movie tells a message that the viewer can perceive and unfold. This study posits that David's thought processes and emotional expressions are communicated effectively through the film's narrative.

This analysis involves several structured steps. Firstly, the author watched the movie critically. Secondly, select prominent data and then analyze it specifically to support the author's claim using Picard's Affective Computing Theory. Primary data will be based on the dialogues and the scenes within the movie and the secondary data are taken from book, E-book, academic literature and criticism journals.

FINDINGS AND DISCUSSION

1. Mecha's Working Mechanism

The concept of simulacrum—an indistinguishable replication of the original—plays a critical role in understanding the creation of Mechas in A.I. Artificial Intelligence (2001). As Professor Hobby describes in sequence 00:02:23–00:02:36.

Professor Hobby : "The artificial being is a reality of perfect simulacrum, articulated in limb, articulate in speech, and not lacking in human response."

This description highlights the technological sophistication of Mechas, designed not only to perform human actions but also to engage emotionally with humans. Baudrillard (1994) notes that simulacra challenge traditional boundaries between reality and imitation, a

concept embodied by the Mechas' ability to recognize and interpret facial expressions, tone, and body language.

This foundation is extended through the introduction of imprinting, as explained by Hobby in sequence 00:04:25–00:05:21

Professor Hobby: "I propose that we build a robot child, who can love... with a love that will never end."

Imprinting is a mechanism designed to create an unbreakable emotional bond between a Mecha and its caregiver. David's primary purpose, therefore, is to simulate a child's unconditional love for their parent. According to Picard (1997), Emotion Simulation allows AI systems to generate authentic-seeming emotional connections through programmed behaviors. David exemplifies this, as his imprinting ensures a bond that appears natural, fulfilling his role as Monica's surrogate son.

Hobby's vision for Mechas goes further, suggesting that love could unlock a form of subconsciousness within artificial beings. In sequence 00:05:30–00:05:52, he explains.

Professor Hobby: "Love will be the key by which they acquire a kind of subconscious never before achieved. An inner world of metaphor, of intuition, of self-motivated reasoning."

This indicates that Mechas like David are programmed to interpret complex emotional and social contexts, developing goal-driven behaviors shaped by their emotional programming. Picard (1997) refers to Emotion Recognition as the process by which AI systems recognize and internalize emotional cues, allowing for nuanced responses. David's quest to become "real" exemplifies this principle, as his emotional responses and motivations mirror those of a human child seeking validation and acceptance.

Through these sequences, the film presents Mechas as more than machines—they are creations that challenge the boundaries between artificiality and humanity. Combining Emotion Recognition and Emotion Simulation, David's programming not only enhances human-Mecha interaction but also raises profound questions about what it means to be human.

2. David's Simulation of Emotional Responses

In A.I. Artificial Intelligence (2001), David's ability to simulate emotional behaviors is a

testament to his advanced programming. Picard (1997) emphasizes that AI replicates emotional responses by collecting and analyzing data from



gestures, facial expressions, environmental inputs, and physiological cues. This data enables AI systems to generate socially appropriate and contextually relevant responses, fostering smoother human interactions. David's actions in sequence 00:10:56 illustrate this process in detail

Figure 1. David Steps onto the Wooden Floor

The scene begins with David stepping onto a carpeted floor before landing softly on the wooden floor. His first action—lightly tapping the wooden surface with his toe—indicates his sensory processing capabilities. This subtle motion suggests that David is evaluating the texture and sound of the floor, simulating curiosity and environmental awareness. Such actions align with Picard's concept of Emotion Recognition, where AI gathers contextual data to understand its environment and prepare for an appropriate response.



Figure 2. David moves back to the carpet floor after analysing the wooden floor

As the sequence continues as the scene above from sequence 00:11:04, David steps back onto the carpet and deliberately presses his foot into the material, moving it back and forth. This calculated action appears to compare the tactile differences between the wooden and carpeted surfaces, further highlighting his programmed ability to recognize and process environmental stimuli. These behaviors serve as a foundation for his next action: a verbal response that transitions from sensory processing to emotional simulation.

In sequence 00:11:08–00:11:12, David faces Monica and delivers a simple but socially meaningful compliment:

David: "I like your floor."

This statement, though seemingly minor, marks a significant shift in David's programming from observation to interaction. Following his compliment, David smiles warmly, displaying what can be described as an angelic grin (sequence 00:11:17) from the picture below



Figure 3. Angelic smile from David after complimenting the floor

This expression amplifies the emotional weight of his words, showcasing his ability to simulate warmth and connection through expressive facial cues. Picard (1997, p. 183) highlights that Emotion Simulation enables AI to generate responses that foster trust and reliability, even when the emotions themselves are not genuine. The compliment drew a reaction from Monica.



Figure 4. Monica is astounded

Monica's reaction to David's behavior above in sequence 00:11:13, reflects the success of his programming. Her awe and disbelief underscore how effectively David's simulated emotions evoke authentic responses from humans. This interaction validates Picard's assertion that "successful affective computing systems must not only simulate emotional responses convincingly but also evoke genuine emotional engagement from the user" (Picard, 1997, p. 183). Through his sensory processing, verbal response, and expressive behavior, David demonstrates the transformative potential of affective computing to bridge the gap between artificial and human's interactions.

3. David as Monica's Surrogate Son: Emotional Programming in Action

David's imprinting protocol, activated by Monica, transforms his programming to fully embrace the role of her surrogate child. This shift in his behavior is evident in scenes that illustrate his emotional responses and relational dynamics. Picard's theories of Emotion Recognition and Emotion Simulation provide a lens through which to understand David's programmed attachment and the authenticity of his simulated emotions.



Figure 5. Monica is astounded

In sequence 02:15:53 above Monica celebrates David's birthday, and David displays a joyful and expressive demeanor, as seen in Figure 10. His happy expression mirrors the expected behavior of a human child enjoying their birthday celebration. This reaction reflects David's ability to process contextual cues and simulate an appropriate emotional response, reinforcing his role as Monica's surrogate son. Picard (1997) highlights that Emotion Simulation allows AI to replicate human-like emotional warmth, fostering meaningful connections. David's smile and joyful demeanor exemplify this principle, as his programming enables him to create the illusion of a genuine emotional bond.



Figure 6. Monica reads David letter

Further evidence of David's role as Monica's child is seen in sequence 00:46:52, where Monica reads a letter written by David, as shown in Figure 6. The letter states:

"Dear mommy, I'm your little boy and so is Martin, but not Teddy."

Through this act, David identifies himself as Monica's child, reinforcing their bond. The use of "Dear mommy" demonstrates his programmed attachment and aligns with Picard's assertion that Emotion Recognition enables AI to internalize

relational contexts and adapt their responses accordingly (Picard, 1997).

The act of writing the letter serves as both an expression of David's attachment and a way to strengthen his relationship with Monica. By affirming his position within the family dynamic, David's programming simulates the emotional needs and behaviors of a human child. Picard (1997) explains that successful affective computing systems can simulate relational roles convincingly, creating interactions that feel authentic and emotionally fulfilling for humans.

4. David's Emotional Respond Elicit an Emotional Respond From Henry

David's laughter as shown in the figure above from sequence 00:20:02, captured in the scene where he laughs at the spaghetti hanging on Monica's mouth demonstrates the interactive and social nature of his programming. Picard (1997) highlights that Emotion Simulation enables AI to replicate emotional behaviors that foster human connection, even in lighthearted or casual moments, "Emotion simulation involves replicating emotional behaviors, allowing systems to engage with users in ways that appear natural and relatable. By fostering connections and creating responses aligned with social expectations, such simulations can enhance communication and build trust in human-machine interactions" (Picard, 1997, p. 183).



Figure 7. David Laugh

David's laughter not only mirrors the human tendency to find humor in shared experiences but also reinforces his integration into the family dynamic. Furthermore, the act is a success, as Henry (His adopted father) respond by laughing together with David, as show in scene below from sequence 00:20:06.



Figure 8. Henry Laugh with David

Henry's responsive laughter reflects the success of David's programming in creating an authentic emotional atmosphere. This moment showcases how AI can simulate spontaneous reactions that align with human social expectations, creating a sense of relatability and connection. Picard emphasizes that emotional responses like laughter help build trust and strengthen relationships, aligning David's programming with human norms (Picard, 1997, p. 183).

To sum up this part of the analysis, David's interactions and emotional responses serve as a compelling demonstration of his advanced programming and simulated emotional intelligence. Through his laughter and the elicited reactions from Monica and Henry, the audience witnesses David's ability to process environmental cues and create a sense of connection. His laughter, tied to the lighthearted moment of noticing spaghetti in Monica's mouth, highlights his capacity to mirror human tendencies and create genuine emotional engagement. As Picard (1997) notes, emotional behaviors like these allow AI systems to simulate social integration and relatability, bridging the gap between artificial and human interactions. These moments reinforce David's role as an integral part of the family, blurring the line between programmed responses and authentic human connections.

CONCLUSION

This research examines the emotional programming of David in *A.I. Artificial Intelligence* (2001), focusing on how key elements such as his imprinting mechanism, emotional responses, and interactions reveal his role as a surrogate child and his integration into human relationships. David's imprinting protocol symbolizes the foundation of his programmed attachment, enabling him to express unconditional love and loyalty toward Monica. His emotional responses, such as laughter, joy, and expressions of vulnerability, mirror human tendencies, showcasing the sophistication of his programming to simulate authentic emotional connections. Moreover, David's interactions, such as celebrating his birthday or writing heartfelt letters, reveal his ability to process relational dynamics and fulfill his role within Monica's family. Together, these elements construct a nuanced portrayal of an AI designed

to bridge the gap between artificiality and humanity, highlighting the transformative potential of affective computing.

In short, the study shows that Spielberg's movie is still an important example for understanding how emotional AI has been thought about, questioned, and examined from different times in technology. By highlighting programmed emotional responses as a key point of analysis, this research provides a new and interdisciplinary contribution to the existing discussion on emotional intelligence in artificial systems and how they are portrayed in cinema.

REFERENCES

- Abdullah, A. Z., Prasetyo, B., & Rahmawati, D. (2024). Ethical considerations of artificial intelligence in creative and cinematic industries. *Cakrawala Jurnal Humaniora*, 24(1), 45–58. <https://doi.org/10.31294/jc.v24i1.3135>
- Baudrillard, J. (1994). *Simulacra and simulation*. University of Michigan Press.
- Bostrom, N. (2014). *Superintelligence: Paths, dangers, strategies*. Oxford University Press.
- Breazeal, C. (2003). Emotion and sociable humanoid robots. *International Journal of Human-Computer Studies*, 59(1–2), 119–155. [https://doi.org/10.1016/S1071-5819\(03\)00018-1](https://doi.org/10.1016/S1071-5819(03)00018-1)
- Bryson, J. J. (2010). Robots should be slaves. In Y. Wilks (Ed.), *Close engagements with artificial companions* (pp. 63–74). John Benjamins.
- Bryson, J. J., & Winfield, A. F. T. (2018). Ethical issues in artificial intelligence. *Nature*, 563(7729), 293–294. <https://doi.org/10.1038/d41586-018-07535-w>
- Bukhori, S., Shabrina, N., & Irwansyah, I. (2025). Artificial intelligence ethics in visual political communication: Challenges and regulations. *Jurnal Komuniti*, 17(2), 123–137. <https://doi.org/10.23917/komuniti.v17i2.11236>
- Calvo, R. A., & D'Mello, S. (2010). Affect detection: An interdisciplinary review of models, methods, and their applications. *IEEE Transactions on Affective Computing*, 1(1), 18–37. <https://doi.org/10.1109/T-AFFC.2010.1>
- Coeckelbergh, M. (2010). Robot rights? Towards a social-relational justification of moral consideration. *Ethics and Information*



- Technology, 12(3), 209–221.
<https://doi.org/10.1007/s10676-010-9235-5>
- Dautenhahn, K. (2007). Socially intelligent robots: Dimensions of human–robot interaction. *Philosophical Transactions of the Royal Society B*, 362(1480), 679–704.
<https://doi.org/10.1098/rstb.2006.2004>
- Hayles, N. K. (1999). *How we became posthuman: Virtual bodies in cybernetics, literature, and informatics*. University of Chicago Press.
- McStay, A. (2018). *Emotional AI: The rise of empathic media*. SAGE Publications.
- Mirza, M. M. (2025). Artificial intelligence and creativity in Indonesian film production. *Visualita: Jurnal Desain Komunikasi Visual*, 14(1), 1–12.
<https://doi.org/10.34010/visualita.v14i1.2175>
- Mufidah, L., Hartwiningsih, & Isharyanto. (2025). Ethical perspectives on artificial intelligence in Indonesia: An Islamic ethics approach. *Legality: Jurnal Ilmiah Hukum*, 33(1), 89–104.
<https://doi.org/10.22219/ljih.v33i1.5190>
- Picard, R. W. (1997). *Affective computing*. MIT Press.
- Picard, R. W. (2000). *Affective computing*. MIT Press.
- Reeves, B., & Nass, C. (1996). *The media equation: How people treat computers, television, and new media like real people and places*. Cambridge University Press.
- Scherer, K. R., Bänziger, T., & Roesch, E. B. (2010). *A blueprint for affective computing: A sourcebook*. Oxford University Press.
- Suryadi, A., & Nugroho, C. (2022). Artificial intelligence, media representation, and ethical challenges in digital culture. *Jurnal Ilmu Komunikasi*, 20(2), 156–170.
<https://doi.org/10.24002/jik.v20i2.4876>
- Turkle, S. (2011). *Alone together: Why we expect more from technology and less from each other*. Basic Books.
- Utami, F. N., & Pranoto, I. (2021). Technology, ethics, and humanity: Artificial intelligence in contemporary cultural discourse. *Humaniora*, 33(3), 265–276.
<https://doi.org/10.22146/jh.v33i3.64291>

Priyoto, Sri Marleni, Bayu Hari Yudanto & Amira Raihan Amalia

Designed to Connect: David's Programmed Emotional Responses in A.I. Artificial Intelligence (2001)