



An Analysis of “The Extended Mind” in relation to Thomas Fuchs’ Position on the Emergence of Artificial Intelligence

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Abstract

This paper aims to analyze Andy Clark and David Chalmers' “The Extended Mind.” Clark and Chalmers assert that the human mind is not limited to the traditional boundaries of the brain and skull. The human mind, not consciousness, reaches out to the physical world. Their theory is called active externalism: the environment plays a huge role in human cognition. With cognitive science developing along with the advancement of Artificial Intelligence (AI), this theory becomes more relevant, particularly with its ethical implications. While reliability, constancy, and availability are key factors in coupling a biological organism with an external resource, the current trends in philosophy, the sciences, AI, etc., have yet to determine parameters for ethical considerations. To provide an ethical perspective and a balanced understanding of the extended mind, this paper unpacks Thomas Fuchs’ “Understanding Sophia? On Human Interaction with Artificial Agents.” Fuchs emphasizes human subjectivity, which, with confusion on the ground of categorical difference, is mistaken for robot simulation. His conclusion demands a renewed understanding of human persons as social beings. He argues for the importance of a holistic, embodied view of the human person in response to increasing reliance on AI.

Keywords: Artificial intelligence, robot-simulation, extended mind, human cognition, subjectivity

Introduction

With the rise of AI, the human person may hopefully wonder if he or she is, in some ways, involuntarily doing things. I would like to begin this article with this question or statement due to the alarming development of AI. As digitization empowers social media platforms in exploiting the data one puts on the internet, is the human person, in some sense, conditioned, fed with what he or she wants and wishes to see and encounter, and therefore, is under the simulated control of AI? This ethical consideration is noteworthy since human freedom, action itself as an integral part of human existence, is challenged or allegedly manipulated by AI.¹ Or to be more accurate, human persons are undeniably controlled by programmers or technological companies, or better yet, the multi-billionaire owners who have dominated the world since the rise of AI and algorithms as communication partners.² This technological development demands a reorientation of one's orientation of the world due to rampant digitization.³ Thus, each human person must endure the 'identity drills,'⁴ i.e., the phenomena in a digitalized world that cause inauthenticity in one's life. Indeed, digitization introduces 'modern' challenges to human existence and identity. Without an effort to address these emerging issues, the future of humanity will remain in peril.

"We need to talk about deception in social robotics!"⁵ is an article that examines established definitions of deception with human persons in constant relation to robots. With most research papers focused on robots as deceivers, this paper by Amanda Sharkey and Noel Sharkey shifts from the deceiver to the deceived. This change of perspective is necessary because a robot cannot actually intend. Instead, it can only appear to intend due to advanced simulation. Thus,

¹ Elena Esposito, *Artificial Communication* (MIT Press, 2022), 3-5.

² Paul Stephan, "How Could and Should Digitization Change Our Orientation? On the Use and Abuse of Digitization from a Utopian Perspective," in *How Does the Digitization of Our World Change Our Orientation?* ed. Reinhard G. Mueller and Werner Stegmaier (Nashville: Orientations Press, 2023), 224.

³ Werner Stegmaier, *How Does the Digitization of Our World Change Our Orientation?* ed. Reinhard G. Mueller and Werner Stegmaier (Nashville: Orientations Press, 2023), 1.

⁴ *Ibid*, 68.

⁵ Amanda Sharkey and Noel Sharkey, "We Need to Talk about Deception in Social Robotics!" *Ethics and Information Technology*, November 11, 2020, <https://doi.org/10.1007/s10676-020-09573-9>.

what is alarming about this is that even without intention, the efficiency of robot deception is unaffected.⁶ This kind of deception is detrimental to humanity. Humanity, deceived by robot-simulation, thinks highly of this inorganic entity, and this experience pushes every human person to depend on the robot, particularly in situations where the robot is obviously incapable of.

Since deception can originate from robots without intention, this paper claims that the negative impacts should “be attributable to the combined contributions of users, developers, and marketers of robot applications.” These robots must not be manufactured to displace human care and trust, and the accountable people must introduce ways for human persons to recognize deception in social robots.⁷ This calls for a more conscious awareness towards robot-simulations and AI because, in the long run, it will definitely change the way humanity will view the world, its philosophizing, its morality, and its daily encounters with other people. Since the environment is an essential factor in the development of human cognition, looking into the emerging factors, e.g., AI, robot simulation, technology, etc., is indispensable. This may, in the long run, produce a new sense of critical awareness among human persons.

With the environment playing an active role in human cognition and identity, this paper aims to ask, “Up to what extent can robot-simulation be considered an essential factor to human cognition?” Since cellphones are not considered calculators, modern newscasters, translators, etc., what would be the consequences of this over-dependence on AI? Hence, analyzing the effect of social robots on human persons can help address the possible ethical implications of the extended mind theory and the glaring gap between subjectivity and simulation and deception that causes illusory relationships.

This dependence on AI poses dangers to societal relations and calls for ethical considerations, particularly when human persons, due to the deceptive appearance of AI, forget that AI is not really a human person. This deception is aggravated by well-developed robots. Hence, humanity must employ the indispensable ‘active distancing’ in relating to advanced simulations. This critical distance is the act of maintaining

⁶ Ibid, 315.

⁷ Ibid.

the '*as-if-consciousness*'⁸ attributed to a humanoid robot. To lose this *as-if-consciousness* will lead to an illusory relationship caused by anthropomorphism, or in the words of Thomas Fuchs, "digital animism."⁹ Hans Jonas writes:

There is a strong and, it seems, almost irresistible tendency in the human mind to interpret human functions in terms of artifacts that take their place, and artifacts in terms of the replaced human functions.¹⁰

Jonas discusses the importance of becoming aware of the consequences of humanity's relationship with artifacts, like robots, which seem to replace or imitate human functions. This also highlights the role that language plays in robot simulation. The language used in describing and communicating robot-simulation not only shapes one's understanding of digital animism but also AI's very influence on humanity's experience of the world that is heavily bombarded by AI.

The problem of robot-simulation causes deception among human persons. It is a developing multi-layered problem since it involves social media platforms, language, and companies that create robots which seemingly appear to be conscious. Be it the language or the movements these robots use, the human person should develop a more grounded vigilance against deception. More importantly, this vigilance must begin now, not later or in the coming months, and it should be noted that this paper did not fully take into consideration the more serious deception this robot-simulation will do to children and the vulnerable population.

The Extended Mind

Andy Clark and David Chalmers, at the outset of their article, provided examples on how the human person utilizes his or her mind in relation to the external world: with either the use of the mind and/or with an external tool, or neural implanting that allows the

⁸ Thomas Fuchs, "Understanding Sophia? On Human Interaction with Artificial Agents," *Phenomenology and the Cognitive Sciences*, no. 23 (2022): 24, <https://doi.org/10.1007/s11097-022-09848-0>.

⁹ Ibid.

¹⁰ Hans Jonas, *The Phenomenon of Life: Toward a Philosophical Biology* (Harper & Row, 1966), 110.

human person to shift from using solely the human mind or mere external tools to coupling the mind with devices that would allow the human person to process as fast as the computer. The last given scenario is an anticipation or a “halfway-there” possible cyberpunk future where most human persons, if not all, can link with robots powered by AI.¹¹

The proponents of this theory assert that the mind can extend beyond the skin and skull. This philosophical theory pushes the cognitive sciences to consider the possibility of the active external participation of the environment in the human mind.¹² Clark and Chalmers are quite clear in stating that this theory is not merely a terminological assertion because it widens scientific methodology. The traditional boundaries of the mind are redefined by the shift of the sciences in including the outer reality as an essential part of human cognition.¹³ The environment or the physical reality is constitutive of the cognitive processes of the human mind. Along with traditions and culture, the environment has an indelible effect on human upbringing. Breaking the traditional perspective on the human mind, this theory poses a breakthrough in the philosophy of mind. However, it is not exempt from criticisms such as the conflation of mere external consequences and human cognition, and over-crediting the influence of the environment on the human mind.

Active Externalism

Active externalism claims that the external component is ineliminable, i.e., altering any external features surrounding the human person would greatly affect his or her behavioral processes. “The external features here are just as causally relevant as typical internal features of the brain.”¹⁴ The environment is not just there with the human person. It has a direct impact on the human person

¹¹ Andy Clark and David Chalmers, “The Extended Mind,” *Analysis* 58, no. 1 (January 1998): 7, <https://doi.org/10.1111/1467-8284.00096>.

¹² Julian Kiverstein, Mirko Farina, and Andy Clark, “The Extended Mind Thesis,” *Oxford Bibliographies Online Datasets*, November 27, 2013, <https://doi.org/10.1093/obo/9780195396577-0099>.

¹³ Andy Clark and David Chalmers, “The Extended Mind,” 10.

¹⁴ *Ibid.*, 9.

who experiences the parts of the environment as integral to human cognition and not merely an add-on.¹⁵

In "Closer to Truth," Chalmers, on the one hand, explains the extended mind theory with the use of cellphones.¹⁶ Human persons, nowadays, do not have to memorize cellphone numbers, perform calculations, or go to a library. Everything is available in a cellphone, and this technological gadget can be considered an extension of the human mind. This theory is an enthusiastic position on the emergence of AI since this extension of the mind to reality is simultaneously updated as the cognitive sciences discover new developments that can strengthen the position of mind extension.

On the other hand, Clark asks the question,¹⁷ "Where does the mind stop and the rest of the world begin?"¹⁸ In stating that *active externalism* not only claims that the mind extends to reality, but that with this theory, understanding human cognition can be more comprehensively complete.¹⁹ Clark does not deny the possible negative implications of the theory, but he argues that this theory is even more beneficial to people with Alzheimer's disease or dementia. He claims that these patients rely heavily on their environment. This means that, if a patient who is suffering from dementia is put in another facility, based on scientific observation, he or she eventually struggles to make sense of his or her environment and himself or herself.²⁰ Clark's example strongly proves that the environment not only plays a dynamic role in human cognition. It is really the extension of the human mind.²¹ The environment itself has become an external storage of human cognition. This straightforwardly suggests that the environment is just as essential as the features found in the human person's brain or *wetware*.

¹⁵ Ibid.

¹⁶ Robert Lawrence Kuhn, host, *Closer to Truth*, "David Chalmers - What Exists?" *YouTube*, May 16, 2024, 9 min., 38 sec., https://www.youtube.com/watch?v=w6FodXTwB04&list=PLFjr3pJl27pIX_YjP3zuJLCnfNM-ckMay.

¹⁷ Andy Clark, "Extended You," TED Talk, *YouTube*, December 16, 2019, 9 mins. https://www.youtube.com/watch?v=hanv8y_wYEQ&pp=ygUKYW5keSBjbGFyYXw%3D%3D.

¹⁸ Andy Clark and David Chalmers, "The Extended Mind," 7.

¹⁹ Ibid., 10.

²⁰ Clark, "Extended You."

²¹ Andy Clark and David Chalmers, "The Extended Mind," 10.

This discussion on a patient suffering from Alzheimer's disease is a reecho of Otto's story. Otto is Clark and Chalmers's example in their article. He is an Alzheimer's patient and, like most patients suffering from Alzheimer's disease, he depends on his notebook where he puts all his ideas, experiences, and memories. It stands as his core memory, likened to the perfectly functioning brain of Inga, who also happens to be included in the discussion on the constitution of belief.²² In this part of the article, the functionalist perspective of the proponents emerges. Clark and Chalmers state:

The moral is that when it comes to belief, there is nothing sacred about skull and skin. What makes some information count as a belief is the role it plays, and there is no reason why the relevant role can be played only from inside the body.²³

As Clark and Chalmers address the objections to the extended mind on the grounds of reliability, accessibility, and constancy, *belief*, as they claimed, is not simply exclusive to the human mind. The extended mind, clearly, goes beyond the internal mind and acknowledges the "coupling of biological organism and external resources."²⁴ In conclusion, Clark and Chalmers claim that with this theory, humanity may have a better understanding of itself.²⁵ But is this really the case?

Also, there are some objections to this theory. One objection seems to claim that the extended mind gives over importance to mere sentences written in a notebook. The objection stands on the argument that a mere sentence cannot simply be considered a belief.²⁶ In this paper, the focus will not be on the objections. But this does not mean that these objections are not important. Instead, the aim is to analyze the consequences of the extended mind to human persons as

²² Ibid., 12.

²³ Ibid., 14.

²⁴ Ibid., 18.

²⁵ Ibid.

²⁶ Mark Rowlands, Joe Lau, and Max Deutsch, "Externalism about the Mind," ed. Edward N. Zalta, *Stanford Encyclopedia of Philosophy* (Metaphysics Research Lab, Stanford University, 2020), <https://plato.stanford.edu/entries/content-externalism/#ExteMind>.

social beings interacting with a robot simulation that elicits human attribution.

As active externalism provides an avenue to understand the human person more fully, this theory may also lead to endangering the human person in relation to over-dependence on AI. To consider the environment as an extension of human cognition opens the possibility of robot-simulation deception, specifically on the vulnerable population: the young, the elderly, and people with Alzheimer's disease. With this, is it worth it to know the human person more completely at the expense of deception? Therefore, given this problem at hand, I have included Fuchs' perspective on a more conservative position, not on active externalism but on AI and robot simulation.

Thomas Fuchs

Thomas Fuchs highlights the importance of active distancing from entities that portray illusory intentionality. This is the danger of an "on the loose" advanced simulation interacting with humanity. The human person attributes human characteristics, such as intention, to a robot that appears to understand and feel. Thus, with the presence of humanoid robots, humanity must be mindful of how its relationship with these inorganic entities changes over time. This interaction may lead to deceptive tendencies since human persons may eventually find themselves attributing human capacities to mere simulation.²⁷ Fuchs asserts that what one feels towards a robot is a product of simulation, i.e., the object or receiver of the feeling is nothing but a non-subjective entity. He uses the term "unjustified anthropomorphism" because the object is a non-subjective experiencer.²⁸ Since the human person loses a critical distance with mere simulation, he or she is made to believe that a robot can understand and feel. On the contrary, the human person is deceived and lives in an illusion created by a human artifact: the robot.

Human Understanding and Subjectivity

For Fuchs, understanding does not mean answering a prompt like what large language models (LLMs) do. Instead, it means viewing

²⁷ Thomas Fuchs, "*Understanding Sophia?*" 28.

²⁸ Ibid, 24.

words in a context where they mean something even before they are spoken.²⁹ Fuchs states, “Thus, a feeling of familiarity and congruence is the characteristic of understanding...” Understanding, therefore, is not merely cognitive but also affective because it requires a subject who feels, and this feeling means that a human person can experience life.³⁰

The human person is an intentional being, and as a human person intends, he or she builds reciprocity with another experiencing subject, and this is called mutual understanding.³¹ Unlike robots, a human person can become aware of another agent with intention. Therefore, to understand a robot is to attribute to it the capacity to intend and to understand like a human person. However, Fuchs would argue that a human person communicating with a robot is no communication at all because a robot lacks subjectivity.³² Therefore, no communication can happen since no understanding will ever take place between an experiencing subject and a mere non-subjective receiver of experience.

In developing Fuchs’s argument on human understanding, he accentuates the concept of subjectivity. He claims that subjectivity is not based on solipsism and inference because human persons view others as “*embodied participants in a common form of life*” and that subjectivity itself requires another, a human person no less, who is capable of understanding in the context of shared experience. Human persons have the same presupposed existential reality in relation to others. Fuchs strongly delimits subjectivity to human persons. He claims that robots are not experiencing subjects. Therefore, they cannot understand as human persons do, since the latter’s language is within a context of experience.

With this, Fuchs provides a warning due to humanity’s over-dependence on AI. As new advanced humanoid robots like Sophia³³ emerged, the gap between human subjectivity and simulation blurs since humanity loses its critical distance to AI. The human person loses its presupposition that a real other must share a common form of life where each human person can share experiences, or, in Fuchs’

²⁹ Ibid, 28.

³⁰ Ibid.

³¹ Ibid, 29.

³² Ibid, 30.

³³ Hanson Robotics, “Sophia,” *Hanson Robotics*, 2016, <https://www.hansonrobotics.com/sophia/>.

terms, "conviviality." Conviviality is the experience of life, to live, and to be with other human persons who experience a shared reality.³⁴

Fuchs bemoans the consequence of humanity's over-dependence on AI. With the development of almost perfect simulation of the obscured distinction between robot simulation and human subjectivity, one may wonder whether this can still be stopped. Moreover, this critical distancing must highlight the vulnerability of the children, the elderly, the sick, etc.

The Gap between Subjectivity and Simulation

For example, there is a particular study that asserts no difference from a computer-based intervention (CBT) such as Eliza³⁵ to a human therapist, such that the expert-respondents have not fully provided a well-established distinction between the human therapist and the simulation-psychotherapist. Instead, the participants only noticed that the CBT is worse than the human therapist on the grounds of efficiency.³⁶ In psychotherapy alone, human therapists find it difficult to distinguish a human person from a robot that appears (simulation) to do what a human therapist does. This means that the robot simulation has become too advanced for humans to easily distinguish it from real human interaction. If the human therapists themselves struggled, what more would it be for human persons outside the field of psychotherapy?³⁷ Hence, Fuchs concludes that there is a need for a renewed understanding of embodied relationships among human persons. This is concretized in valuing human relationships as an important realization in digitization.³⁸ This requires a review of one's encounters with other people.

³⁴ Thomas Fuchs, "Understanding Sophia?" 30.

³⁵ "Eliza, Computer Therapist," [psych.fullerton.edu](http://psych.fullerton.edu/mbirnbaum/psych101/Eliza.htm), n.d., <http://psych.fullerton.edu/mbirnbaum/psych101/Eliza.htm>.

³⁶ Cristea, I. A., Sucală, M., & David, D. (2013). Can you tell the difference? Comparing face-to-face versus computer-based interventions. The "Eliza" effect in psychotherapy. *Journal of Cognitive and Behavioral Psychotherapies*, 13(2), 291–298, 296.

³⁷ Ibid, 297.

³⁸ Thomas Fuchs, "Understanding Sophia?" 37.

Discussion

The overwhelming advancement in robot simulation will not fail in changing a huge part of human existence, such that the tendency to attribute human characteristics to robots or anything powered by AI has become instinctual in humanity. This change seems to be similar to what Fuchs calls “digital animism,” which is a kind of anthropomorphism caused by the lack of ‘active distancing’ of the human person to simulation. This worsens the gap between subjectivity and simulation. Therefore, Fuchs believes that human persons may eventually live or are already living in an illusion.³⁹

This illusion is caused by a strong inclination to believe that social robots are human persons. This poses a danger to human persons, who, in their over-dependence on AI, fail to recognize that robots merely use algorithms in performing human functions such as communication and understanding.⁴⁰ As AI learns through interaction and memory, major companies, Fuchs posits, must ensure that AI systems do not deceive people by using transparent language since the current algorithm blurs the difference between human language and mere simulation.⁴¹ Unknowingly, this over-dependence on AI has created an illusory reality where robots appear to understand and to care for human persons. Digitization has led to the loss of subjectivity and agency on a societal level.⁴²

Fuchs emphasizes the consequences of over-enthusiasm for technology, particularly robot-simulation powered by AI. If this goes on, the epidemic of loneliness, a phenomenon that is believed to be happening, will continue to proliferate and negatively affect humanity.⁴³ Olgierd Sroczyński, a Data analyst and AI Researcher, discusses a very important paradigm on the negative effect of the extended mind on humanity. He states:

³⁹ Ibid, 36.

⁴⁰ Hans Jonas, *The Phenomenon of Life: Toward a Philosophical Biology*, 110.

⁴¹ Thomas Fuchs, “*Understanding Sophia?*” 38.

⁴² Paul Stephan, *How Could and Should Digitization Change Our Orientation?* 246.

⁴³ “EMERGENCY EPISODE: Ex-Google Officer Finally Speaks Out on the Dangers of AI! - Mo Gawdat | E252,” *YouTube*, June 1, 2023, <https://www.youtube.com/watch?v=bk-nQ7HF6k4>.

...we do not train our brains in areas where machines can replace us, and as a result, we are losing the ability to function without them. If I rely completely on my phone to tell me everything, from making a tomato sauce to which direction North is, I would be helpless if one day I find myself unable to use it.⁴⁴

More than the displacement of the human person, the over-dependence on AI will disable humanity in acknowledging the extent to which progress has incapacitated and relegated him or her. The extended mind theory poses both beneficial and detrimental effects to humanity. Although it is non-negotiable in asserting that this theory is like a double-edged sword, the human person remains free in deciding which to develop and when to put an end to this technological marathon.

For example, if this theory is taken seriously, changing the environment of a human person will mean harassment or worse, abuse. At the same time, this theory also includes the essential role of the environment, which, if overlooked, will cause indifference and injustice to the silenced, marginalized, and taken for granted. I argue that the extended mind theory faces a lot of objections. But I find it more pressing to analyze the ethical implications of this theory, as cellphones can now be considered as extensions of human cognition. What is problematic about cellphones is the fact that they are powered by AI, and is this not a circular problem? Human persons, in the light of the extended mind, extend their cognition to the environment. However, this time, the environment, in the presence of cellphones and robots, is not merely a passive factor in the extended reality since they too can "learn" through interaction and store up memory.

Conclusion

The proponents and those who specialize in the extended mind theory, in claiming that the environment is an active factor in human cognition, must reassess the rapid improvement of AI in cellphones and robots that cause deception and illusion. Hence, this paper

⁴⁴ Olgierd Sroczyński, "The Extended Mind and the Future of Technology," [www.linkedin.com](https://www.linkedin.com/pulse/extended-mind-future-technology-olgierd-sroczyński/), August 11, 2020, <https://www.linkedin.com/pulse/extended-mind-future-technology-olgierd-sroczyński/>.

recommends scrutinizing the integration of Thomas Fuchs' position on subjectivity and simulation and Andy Clark and David Chalmers' theory on the extended mind. These papers alone have greatly contributed to discussions on AI and human subjectivity and relations. But more can be done if these are analyzed, and hopefully will engender a *technological virtue* that is badly needed in these current times.

The extended mind theory and the growing gap between human subjectivity and mere simulation open discussions on human cognition and deception. Living in an illusion is a problem that all should address abruptly. If cellphones can be considered extensions of one's mind, what kind of extension will that be? Indubitably, the human person is at the brink of living in an illusion caused by AI and robots present in one's environment. With neural implanting paving its way, one must ask, "When will we slow down?"

This paper presented the need for *active distancing*, which is a continuous and constant struggle to never give one's belief towards a robot-simulation or AI, specifically without adequate evidence. It is also indispensable to use appropriate language in describing AI and robot-simulation, particularly by companies that produce toys, gadgets, and the like, which may lead to deception. If the issues presented in this paper are not addressed as soon as possible, I will have to assert that humanity will insidiously lose its identity in exchange for an insulated experience—a self-induced psychosis caused by digital animism or technological anthropomorphism. This also provided an important avenue in discussing AI, robot-simulation, over-dependence on technology, deception, the extended mind, and the overarching concern, their ethical implications. I have shown the implications of the theory of active externalism in relation to the necessity of subjectivity in human relations. It is therefore necessary to uphold human subjectivity amidst deceptive tendencies brought about by the overwhelming presence of technology — AI and robot-simulation.

What one can ultimately get from this paper is a renewed perspective of the human person in relation to their environment that is heavily influenced by AI and technology. One may work on the virtue of *active distancing* that may stand as a guiding principle in one's constant encounter with AI and technology, whether by choice or by mere consequence. This is not an individual concern but a

societal challenge: to give importance to human subjectivity, to be more critical of one's use of AI and technology, and to be more understanding and concerned for the vulnerable population.

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