

ACTIVE WALKS AND SUBJECT FORMATION IN TECHNOLOGICALLY MEDIATED ENVIRONMENTS: A PHILOSOPHICAL-ANTHROPOLOGICAL HEURISTIC

Nargiz Majidova*

Department of Philosophy, Baku State University, Baku, Azerbaijan

Abstract

This article examines the heuristic value of the active walk model for contemporary philosophical anthropology. It starts from the problem that classical anthropological models, which presuppose a relatively stable subject, no longer adequately describe human existence under conditions of digitalization, technologization and increasingly complex environments of mediation. The article argues that the active walk model can be reinterpreted not as a reductive physical analogy but as an analytic and heuristic framework for conceptualizing human becoming. On this reading, the human being appears not as a fixed substance but as a trajectory unfolding within a mutable landscape of cultural, social, technological and normative mediations. The model thus makes it possible to analyze subjectivity as a process emerging at the intersection of embodiment, environment, practice and mediation. Particular attention is given to technologically mediated environments in which human beings are shaped by infrastructures, interfaces and algorithmic systems while also retaining the capacity to transform these conditions through action. The article concludes that the active walk model can be productively integrated into contemporary philosophical anthropology as a framework for analyzing identity, subject formation and the dynamic constitution of human existence.

Keywords

Philosophical anthropology, active walk, subjectivity, identity, human becoming, technological mediation, digital environment.

Citation: Majidova, N. (2026). Active walks and subject formation in technologically mediated environments: A philosophical-anthropological heuristic. *Social Issues*, 4(3), 300-308. <https://doi.org/10.30546/SI.2026.005.3.1089>

1. Introduction

Contemporary philosophical anthropology is compelled to reconsider conceptual models in which the human being is understood as a relatively stable, complete and self-identical entity. Digitalization, the technologization of the lifeworld, the algorithmization of social interaction, the development of biotechnologies and ecological disruptions have profoundly complicated the conditions of human existence. Under such conditions, the human being can no longer be adequately described in terms of a fixed substance. The human must instead be understood as an open, processual, socially and technologically mediated being whose identity takes shape within changing configurations of embodiment, technique, symbolic structures and social practice. This shift calls for analytical tools capable of addressing not only what the human is, but also how the human becomes.

One promising model for such an analysis is the active walk. In Lam's work (2002), active walks describe processes of self-organization and pattern formation in

*Corresponding Author: Nargiz Majidova, e-mail: nmajidova@bsu.edu.az

which a walker moves across a deformable landscape, alters that landscape and subsequently becomes constrained and enabled by the changes already produced. In Lam's (2002) extension of this logic to histophysics, historical processes are interpreted as open, stochastic and nonequilibrium systems whose trajectories are shaped not only by rules and constraints but also by contingency, the accumulation of traces and the feedback effects of environments transformed by prior action. It is precisely this reciprocal relation between action and landscape that makes the model philosophically suggestive.

Its philosophical-anthropological relevance lies not in any attempt to reduce the human being to a particle or a merely physical unit of motion. Rather, the active walk is valuable as an analytic scheme that helps conceptualize the human as a being whose subjectivity emerges and is transformed through movement within a multilayered landscape of norms, meanings, institutions, technologies and embodied practices. In this reinterpretation, the walker is not a physical object but an embodied and interpretive agent; the landscape is not simply an external environment but a historically and culturally organized field of mediations and the trace is not merely displacement in space but also memory, action, choice, social inscription and digital residue.

This reinterpretation is especially significant in contemporary philosophical anthropology, where identity and subjectivity are increasingly understood not as finished substances but as processual configurations. Ricoeurs (1992) selfhood account emphasizes action, narrative identity and responsibility. Gallagher (2024) develops an integrative, pattern-oriented account of the self that brings together embodied, embedded, extended and enactive dimensions of experience. Hayles (1999), Ihde (2002) and Verbeek (2005) show that human existence is technologically mediated rather than merely supplemented by external tools. Ferrando (2019) and Braidotti (2013), in different ways, situate the contemporary human within posthuman and relational constellations that unsettle the image of a self-grounding subject. Read against this background, the active walk can be incorporated into a broader philosophical-anthropological reconstruction of the human as becoming.

The aim of this article is to show that the active walk model can be productively adapted as an analytic and heuristic framework for describing human becoming in mutable technological, cultural and normative environments. Its central thesis is that, in contemporary philosophical anthropology, the human being is better understood not as a completed essence but as a trajectory unfolding within a landscape of mediations that is simultaneously inherited, inhabited and transformed. Methodologically, the active walk is employed not as an explanatory model of "human nature" but as a conceptual tool for analyzing the dynamic constitution of subjectivity.

2. The active walk model and the philosophical-anthropological perspective

In its original scientific context, the active walk model was developed to describe self-organizing processes in which an agent moves through a mutable landscape and its subsequent trajectory depends on the deformations already produced. The key feature of the model is that movement never takes place in a neutral, pregiven space. Because the landscape is itself transformable, every new phase of movement depends not only on initial conditions but also on the history of prior interactions. Action and environment are therefore linked through mutual formation.

For philosophical anthropology, precisely this feature is decisive. Classical models of the human subject often assume either that the subject precedes the world as an autonomous rational center or that the world stands opposite the subject as an external

datum. Contemporary conditions require a different scheme. The subject does not preexist the landscape in finished form; rather, it takes shape through movement within it. The human being does not simply enter an already given environment but is gradually formed through interaction with institutions, symbolic codes, technical devices, communicative structures and regimes of recognition. In this sense, the active walk is useful both as a metaphor and as an analytic model of human becoming.

This broader relevance is already anticipated in Lam's work on histophysics, where the active walk is extended beyond narrowly natural-scientific application to the modeling of historical processes. Historical dynamics are described as a combination of contingency and constraint and history itself is conceived as an open, stochastic system whose trajectories are reducible neither to pure arbitrariness nor to rigid determinism (Lam, 2002). The metaphor of the river of history is important here because the flow matters not in abstraction from the landscape but through its capacity to shape and reshape that landscape. For philosophical anthropology, this means that the environment of human existence cannot be treated as a passive background. It stores traces, channels action and redirects future possibilities.

Translated into anthropological terms, the model can be reformulated as follows. The walker is the human being as an embodied and interpretive agent. The landscape is the ensemble of cultural, social, technological and normative mediations. The trace is not merely an event of movement but also the sedimentation of experience, memory, reputation, status and digital visibility. The deformation of the landscape is the transformation of institutional structures, communicative regimes, ordinary practices and the horizon of what counts as possible or permissible. The human being thus appears not as a center opposed to the world but as a node of trajectories emerging at the intersection of embodiment, environment, technique and interpretation (Verbeek, 2005).

Such an approach is compatible with both hermeneutic and phenomenological traditions. Ricoeur (1992) enables us to retain the dimensions of selfhood, narrative identity and responsibility. Gallagher (2024) makes it possible to understand subjectivity as a processual configuration rather than an immobile substance. Ihde (2002) and Verbeek (2005) show that technologies do not merely surround human beings but participate in the constitution of perception, action and world-relation. Hayles (1999) and Ferrando (2019) situate this analysis within a wider reconsideration of the human under conditions of informational mediation and posthuman critique. The active walk thereby acquires philosophical-anthropological depth: it no longer designates the movement of an abstract unit but the becoming of a human being in a world of mediators.

The point becomes especially clear if we distinguish between static and trajectory-based understandings of the human. A static conception asks what the human is. A trajectory-based conception asks how the human becomes what it is within a determinate historical, technological and cultural configuration. The active walk clearly serves the second kind of inquiry. It allows human existence to be understood as a process in which past steps do not simply vanish but continue to shape subsequent movement through the landscape they have already altered. For contemporary philosophical anthropology, this means that identity can be described not as a fixed core but as a historically sedimented, bodily and technically mediated pattern of becoming.

The model nevertheless has a clear limit. The active walk should not replace phenomenological analyses of experience, hermeneutics of meaning or normative reflection on responsibility. Its strength lies elsewhere: it offers a language for describing how subjectivity develops in a mutable environment and how action leaves traces that

subsequently structure new possibilities and new constraints. The active walk therefore does not supplant philosophical anthropology; it extends its analytical vocabulary.

3. The human as an active walker: Subjectivity, identity and the technologically mediated environment

If the original active walk model centers on the relation between a moving agent and a deformable landscape, then from a philosophical-anthropological perspective this schema can be reinterpreted as a model of subject formation. The human being no longer appears as a preconstituted essence but as a being whose identity is shaped in the course of moving through a multilayered environment of social, cultural, normative and technological mediations. Movement here should not be understood in a merely physical sense. It names the succession of choices, practices, interpretations, appropriations and acts of self-redefinition through which a life takes shape.

On this view, subjectivity does not precede experience as a finished center but is generated and sustained in the very trajectory of human existence. Identity should therefore be understood not as a fixed inner core but as a dynamic configuration maintained through recurring practices, memory, embodied situatedness and the capacity for self-interpretation. The figure of the active walker makes it possible to describe the human being as one who continually works out the form of selfhood not outside the environment but within it. This approach resonates with Gallagher's (2024) account of the self as a pattern-like configuration that integrates multiple dimensions of embodied and socially embedded experience.

From this perspective, each "step" in the walker's trajectory is not merely an action but also an event of self-formation. A decision made, a practice acquired, an experience undergone or an institutional role inhabited leaves a trace that in turn shapes future possibilities of movement. In philosophical-anthropological terms, this means that subjectivity is historical and cumulative: one becomes oneself not instantaneously but through sequential interactions with the world that are retained in memory, language, embodiment and social roles. Hutto's (2007) narrative practice hypothesis is relevant here because it shows that our understanding of action and reason is intimately connected with narratively mediated practices of making sense of persons. Human trajectories are therefore not mere chains of reactions but interpretable and narratable histories of becoming.

Yet this trajectory never unfolds in empty space. The landscape through which the active walker moves is, in anthropological terms, an environment of mediation. It includes language, symbolic orders, norms of recognition, institutional structures, the material organization of everyday life and increasingly, technical and digital infrastructures. Such an environment is not a neutral background. It directs attention, organizes access, opens some possibilities while blocking others and distributes visibility, value and recognition. Here the active walk acquires a distinctively contemporary resonance: human beings move through a landscape already structured prior to them, yet they also modify it through their own actions. In the philosophy of technology, Verbeek (2005) explicitly argues that technologies should be understood not as external instruments but as mediators of the relation between human beings and world. Hayles (1999) similarly emphasizes that informational cultures alter the conditions of embodiment rather than superseding embodiment altogether.

An important consequence follows for philosophical anthropology: technologically mediated environments must be understood as active participants in the

production of subjectivity. Digital platforms, algorithmic filtering mechanisms, networked regimes of presence and data infrastructures do not merely accompany the human being. They shape modes of self-perception and social existence. They accumulate traces, reinforce specific behavioral trajectories, stabilize repetitions and create new forms of dependence between past action and future possibility. In terms of the active walk model, the landscape is not only deformed by the walker; it also returns the consequences of prior traces to the walker in transformed form. A philosophical anthropology attentive to this structure can more adequately describe how digital traces, metrics and regimes of managed visibility contribute to the constitution of new identities.

The human being as active walker, however, does not dissolve completely into the environment. It is essential to preserve the distinction between determination and becoming. Environments shape trajectories, but they do not exhaust them. Subjectivity emerges in the tension between the given structure of the landscape and the capacity for orientation, interpretation, displacement and reconfiguration. The active walk is therefore compatible with a philosophical-anthropological understanding of the human as an open being. Human freedom does not exist outside conditions, but neither is it reducible to them. Freedom is enacted as the capacity to move within an already structured space while altering that space and thereby transforming the conditions of one's own further becoming. Ricoeur's (1992) conception of the capable self and contemporary embodied accounts of selfhood reinforce rather than weaken this interpretation (Gallagher, 2024).

This is why the model is especially useful for analyzing the crisis of classical subjectivity. Classical humanism frequently presupposed a relatively autonomous and internally unified subject. Contemporary approaches, from postphenomenology to posthumanism, show instead that human existence is always already mediated by relations to technique, environment, other living beings and infrastructures of power and knowledge. Ferrando (2019) describes philosophical posthumanism as a philosophy of mediation that reflects on the meaning of the human not in separation from technology and ecology but through those relations. Braidotti (2013) likewise interprets posthuman subjectivity as relational and multiple rather than self-enclosed. This matters for the present argument because the active walk also begins not from an isolated agent but from an agent-in-an-environment whose trajectory is shaped through networks of interaction. The model can therefore serve as an analytic resource for a nonclassical and relational philosophical anthropology.

A caution is nevertheless required. Philosophical anthropology cannot be satisfied with a model of trajectories and environmental deformations alone, because human existence includes dimensions of meaning, suffering, hope, self-description and responsibility that cannot be fully translated into the logic of formal interaction. The active walk should therefore be treated as heuristic rather than exhaustive. It is particularly powerful where one needs to show processuality, path dependence, the role of environments and the accumulation of traces. But it must be supplemented by hermeneutic analyses of selfhood, phenomenologies of embodied experience and normative analyses of responsibility. Only within that broader constellation does it become genuinely philosophical-anthropological.

4. Technologically mediated environments and the transformation of the anthropological landscape

Contemporary philosophical anthropology can no longer treat the environment of human existence as a neutral background against which already given human capacities

are expressed. In the philosophy of technology, technology itself has become central to reflection on the human, the world and the forms of action that bind them together. What matters for philosophical anthropology is not simply that humans use tools, but that technological forms of mediation participate in the constitution of experience, orientation, memory and agency.

This is the point at which the active walk gains particular analytical force. If the landscape in this model is understood as an environment that not only channels movement but is also reshaped by it, then in contemporary culture such a landscape is constituted by technologically mediated environments: digital platforms, communication interfaces, algorithmic filters, infrastructures of storage and regimes of visibility. From a postphenomenological perspective, Verbeek (2005) argues that technologies mediate human action and perception rather than functioning as external appendages to an otherwise self-sufficient human subject. The human being therefore moves not through a passive environment but through a field of mediators that structures the very conditions of access to the world.

This argument is reinforced by Ihde's (2002) phenomenology of technology. In *Bodies in Technology*, he examines how informational technologies affect bodily orientation and embodied presence in the world. For philosophical anthropology this is crucial: if the body is not merely a biological datum but a condition of human world-relation, then technological mediations enter into the very structure of subjectivity. In the terms of the present article, the walker's landscape shapes not only the route of movement but also the mode of walking itself - that is, the forms of presence, perception and embodied self-experience through which the world is encountered.

From this angle, the digital environment must be understood as a space of trace accumulation. In the classical active walk model, previous steps deform the landscape and thereby affect later trajectories. In digital culture, this function is performed by profiles, data, metrics, interaction histories, algorithmically processed preferences and systems of reputational visibility. Such structures do not merely record action after the fact; they participate in organizing the conditions of future action. Baumer et al. (2024) argue that subjectivities emerge through algorithmic systems rather than being simply confronted by them from outside. This insight is especially important for philosophical anthropology because it shows that the digital trace is not a secondary residue of action but one of the mechanisms through which environments return processed conditions of becoming to the acting subject.

This also intensifies the problem of subjectivity itself. If classical humanism presupposed a comparatively autonomous subject, technologically mediated environments reveal a subject formed within distributed networks linking body, memory, technique, code and infrastructure. Hayles (1999) demonstrates that informational culture changes the conditions under which embodiment and subjectivity are understood. Stiegler's (1998) analyses deepen this point by insisting on the co-constitution of the human and the technical: technics is not an accidental supplement added to an already complete human essence but a constitutive dimension of temporality, memory and individuation. For the active walk model, this means that the landscape does not merely surround the walker; it participates in shaping the temporal structure and historical horizon of the walker's own becoming.

Posthumanist perspectives, at the same time, help avoid two opposite errors. The first is a naive anthropocentrism that continues to imagine the human as sovereign and self-transparent despite the density of technological mediation. The second is an equally

inadequate dissolution of the human into anonymous systems or networks. Braidotti (2013) and Ferrando (2019) are useful precisely because they show that posthuman critique need not abolish the human as a philosophical problem; rather, it redefines the human in relational, ecological and technologically mediated terms. The active walk is valuable here because it preserves both dependence on the environment and the capacity for movement, orientation and transformation. The walker is neither an absolute origin nor a passive effect. It is a situated agent whose path is conditioned yet not exhausted by the landscape.

Technologically mediated environments should therefore be described as deformable anthropological landscapes. They set external constraints and opportunities, but they also preserve traces of human activity, redistribute visibility, shape forms of bodily and symbolic presence and participate in the production of memory and identity. Digitalization does not simply provide the human being with new tools; it changes the architecture of becoming itself. This is why the active walk is especially productive for philosophical anthropology: it allows us to conceptualize the human as a being that moves through fields of mediation, leaves traces within them and later encounters itself again in the transformed landscape created by both individual and collective action.

5. Heuristic strengths and limits of the active walk model

The use of the active walk model in philosophical anthropology is justified insofar as it allows the human being to be described not as a completed essence but as a processual form of subjectivity whose movement unfolds within a mutable environment of cultural, social and technological mediations. Its principal advantage lies in its capacity to conceptualize the relation between action and landscape, between trajectories of becoming and the traces left in an environment that later feed back into new forms of existence. In this sense, the active walk is particularly apt for describing contemporary conditions, in which human life is increasingly dependent on infrastructures of memory, digital platforms, regimes of recognition and technical forms of mediation.

The model is especially significant because it helps overcome the limitations of static anthropological schemes. Where classical accounts concentrated on the question of what the human being is, the active walk shifts the emphasis toward the question of how a human being comes to be what it is within a historically changing and structurally heterogeneous world. This trajectory-based approach makes the model consonant with contemporary philosophical anthropology, for which processuality, embodiment, environmental embeddedness and openness have become central themes. In this perspective, the human being appears neither as isolated consciousness nor as a fixed substance but as a being whose identity takes shape through interactions with the world that leave traces within that world and transform the conditions of further becoming.

Another strength of the model is that it analytically captures the historicity of subjectivity. Selfhood does not arise instantaneously, nor does it coincide with an abstract identity with itself. It accumulates, is reconfigured and is provisionally stabilized through actions, experiences, repetitions and ruptures. This is especially important in the digital era, where past actions are preserved in the form of digital traces, profiles, algorithmically processed data and reputational structures that subsequently participate in producing new possibilities and new constraints. The active walk makes it possible to describe this situation as a feedback loop between action and environment in which the subject encounters the consequences of its own trajectory in a transformed landscape.

At the same time, philosophical-anthropological use of the model requires clear awareness of its limits. The active walk remains an analytic scheme and cannot claim to offer an exhaustive description of human existence. It is especially fruitful where one needs to show environmental dependence, path dependence, nonlinear trajectories and the cumulative significance of traces. But it cannot fully capture the inner dimensions of human existence: experiences of meaning, suffering, self-understanding, guilt, hope and responsibility. These dimensions remain central to philosophical anthropology and are not reducible to the logic of interaction between agent and landscape.

For this reason, the active walk should not replace phenomenological, hermeneutic or normative analysis. It should supplement them. It extends the conceptual toolkit of philosophical anthropology without eliminating the need to analyze the human being as meaning-making, interpreting, vulnerable, evaluative and responsible. The model is valuable not as a universal theory of the human but as a specific heuristic that helps articulate the processual, environment-dependent and historically cumulative character of subjectivity.

6. Conclusion

The analysis undertaken here suggests that the active walk model can be fruitfully reinterpreted as an analytic and heuristic resource for contemporary philosophical anthropology. Its philosophical significance lies in its capacity to present the human being not as a finished and self-identical substance but as a trajectory of becoming unfolding within a mutable landscape of cultural, social and technological mediations. In this perspective, subjectivity appears as a process arising at the intersection of embodiment, memory, interpretation, environment and technical infrastructures.

The philosophical-anthropological translation of the active walk makes it possible to describe contemporary conditions more precisely, especially where digital platforms, algorithmic regimes of visibility, communication interfaces and technical forms of memory become active participants in the production of identity. The environment of human existence can no longer be regarded as a neutral background. It must be understood as a deformable landscape that not only constrains and directs action but also stores its traces and returns transformed conditions of further movement to the subject.

At the same time, the active walk cannot function as an exhaustive account of the human. Its analytic force lies above all in disclosing processuality, environmental conditioning and historicity, while it does not fully capture the inner dimensions of experience, meaning and responsibility. Its use in philosophical anthropology is therefore justified only when combined with hermeneutic and phenomenological analyses.

Within those limits, however, the active walk is theoretically productive. It allows subjectivity to be understood as becoming, identity as trajectory and technologically mediated environments as active factors of anthropological formation. That is the source of its heuristic value and of its relevance for philosophical reflection on the human condition in contemporary civilization.

Acknowledgements

None.

Funding

No external funding was reported for this research.

Declaration

The author confirms that she qualifies as the sole author of this manuscript, has approved the submitted version and that the work is original, has not been published previously, is not under consideration by another journal and includes all necessary permissions for any previously published material.

References

- Baumer, E.P., Taylor, A.S., Brubaker, J.R. & McGee, M. (2024). Algorithmic subjectivities. *ACM Transactions on Computer-Human Interaction*, 31(3), 1-34. <https://doi.org/10.1145/3660344>
- Braidotti, R. (2013). *The Posthuman*. Cambridge: Polity.
- Ferrando, F. (2019). *Philosophical Posthumanism*. London: Bloomsbury Academic.
- Gallagher, S. (2024). *The Self and Its Disorders*. Oxford: Oxford University Press.
- Hayles, N.K. (1999). *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*. Chicago: University of Chicago Press.
- Hutto, D.D. (2007). The narrative practice hypothesis: Origins and applications of folk psychology. *Royal Institute of Philosophy Supplements*, 60, 43-68. <https://doi.org/10.1017/S1358246107000033>
- Ihde, D. (2002). *Bodies in Technology*. Minneapolis: University of Minnesota Press.
- Lam, L. (2002). Histophysics: A new discipline. *Modern Physics Letters B*, 16(30), 1163-76. <https://doi.org/10.1142/S0217984902004809>
- Lam, L. (2005). Active walks: The first twelve years (Part I). *International Journal of Bifurcation and Chaos*, 15(7), 2317-2348. <https://doi.org/10.1142/S0218127405013344>
- Lam, L. (2006). Active walks: The first twelve years (Part II). *International Journal of Bifurcation and Chaos*, 16(2), 239-268. <https://doi.org/10.1142/S0218127406014782>
- Ricoeur, P. (1992). *Oneself as Another*. Translated by Kathleen Blamey. Chicago: University of Chicago Press.
- Stiegler, B. (1998). *Technics and Time, 1: The Fault of Epimetheus*. Translated by R. Beardsworth and G. Collins. Stanford: Stanford University Press.
- Tekin, Ş. (2025). *Reclaiming the Self in Psychiatry: Centering Personal Narratives for a Humanist Science*. London: Routledge.
- Verbeek, P.P. (2005). *What Things Do: Philosophical Reflections on Technology, Agency and Design*. Pennsylvania State University Press. <https://doi.org/10.1515/9780271033228>

Received: 21 May 2026;

Accepted: 26 July 2026;

Published: 23 September 2026.