

Human enhancement technologies raise authenticity challenges

PHILOSOPHY

By YU XUE

Confronted with the unprecedented loneliness, nihilism, and alienation produced by the crisis of modernity, philosophers such as Kierkegaard, Nietzsche, Heidegger, and Sartre sought to recover the “authentic self” suppressed by modernity by reflecting anew on “authenticity.” In this context, authenticity acquired an ethical significance, coming to denote “one’s original and authentic self.” Contemporary human enhancement technologies (HETs) intervene precisely in this conception of the authentic self, prompting a series of debates over authenticity. In general, HETs aim to improve or augment human capabilities through traditional or emerging technological means. These capabilities primarily include physical abilities, cognitive abilities, emotional capacities, social abilities, intellectual capacities, and moral capacities.

The controversies surrounding authenticity arising from HETs involve questions of autonomy, the continuity of selfhood and personal identity, and the nature of the authentic self: “Can I make my own decisions?” “Am I still the same person?” and “What should my authentic self be like?” More fundamentally, does altering oneself through HETs make one “less like oneself,” or does it instead make one “more truly oneself?”

The two major schools in the debate over HETs—bioconservatism and transhumanism—offer sharply opposing answers. Opponents, represented by bioconservatives, argue that these technologies violate and suppress authenticity, ultimately causing the loss of one’s genuine self: “I am no longer myself.” Proponents, represented by transhumanists, contend that such technologies can awaken humanity’s authentic self, insisting that “only in this way can I become more truly myself.” Behind this opposition lie fundamentally different conceptions of authenticity. Bioconservatives regard authenticity as a stable and unchanging form of self-consistency, meaning that any intervention that disrupts this stability violates authenticity. Transhumanists reject this fixed conception, arguing that technological means are necessary for human beings to transcend their present condition. This article examines how HETs intervene in authenticity and whether such interventions can be philosophically justified.

Challenges to authenticity posed by HETs

HETs encompass a broad range of interventions. Of these, emotional, cognitive, and moral enhancement are the principal forms that have generated debates over authenticity.

Emotional enhancement involves regulating and modifying human emotions through pharmaceuticals and invasive or non-invasive technological interventions, enabling individuals to experience



A lower-limb rehabilitation exoskeleton developed by Fourier, an AI robotics company based in Shanghai, is on display at the 2026 World Artificial Intelligence Conference in Shanghai, June 19, 2026. Exoskeleton technology is a form of human enhancement. Photo: IC PHOTO

“better” emotional states, such as greater happiness, engagement, or vitality. Compared with other forms of enhancement, it raises particularly direct and conspicuous concerns about authenticity. Are emotions induced by enhancement technologies genuinely authentic? Can technologically induced emotions truly be regarded as one’s own?

Some have argued that induced emotions are not truly spontaneous emotions. The essence of emotion lies in the genuine feelings that individuals develop through their own experiences in everyday life. The joy experienced after overcoming numerous difficulties and achieving success, for example, cannot be regarded as equivalent in nature to medically induced pleasure. Moreover, the emotional states produced through such interventions may profoundly reshape an individual’s character, alienating that person from what was previously understood as the authentic self.

Cognitive enhancement refers to technologies that amplify or extend cognitive capacities by improving internal or external information-processing systems. It encompasses not only traditional interventions, such as education and cognitive training, but also emerging techniques, including brain-computer interfaces (BCI), deep brain stimulation (DBS), and transcranial magnetic stimulation (TMS). These technologies have the potential to substantially enhance attention, memory, and cognitive processing. This article argues that the main challenge cognitive enhancement poses concerns narrative authenticity—specifically, whether it undermines narrative identity. Cognitive enhancement may disrupt narrative identity at the individual level while also raising concerns at the social level, particularly by creating tensions between personal and broader social narratives.

For instance, memory modification techniques (MMTs) may allow individuals to erase particular memories. Yet if someone erases painful memories from their past, do they remain the same person? Moreover, while personal memories may be erased, social memories endure. How, then, should conflicts between individual narratives and social narratives be reconciled?

Moral enhancement refers to technologies that use specific interventions

to cultivate particular dispositions, attitudes, motivations, and patterns of moral behavior. This category includes both traditional methods of moral cultivation—such as moral education, behavioral discipline, customary socialization, and institutional regulation—and emerging biomedical interventions, including neuropharmaceuticals, gene editing, and neural stimulation. Although advocates of moral enhancement offer various optimistic visions of its potential benefits, this article argues that the concept nevertheless raises significant concerns about moral authenticity. Can morality that has been technologically regulated still be regarded as genuine morality? Can external interventions truly cultivate an individual’s active and internally generated moral consciousness? Does morality “synthesized” through non-natural means retain any moral significance or authenticity?

Moral enhancement technologies intervene in human biological traits and directly influence moral emotions and motivations, thereby inducing individuals to perform moral actions. This article argues that such interventions amount only to a mechanical “synthesis” of morality, as they remove the capacities for moral reflection and moral reasoning that ground the subject’s moral authenticity. What they produce is merely a quantitative “increase” in moral performance, rather than an enhancement possessing the intrinsic significance of authentic morality.

Roots of authenticity concerns

Concerns about authenticity stem fundamentally from a perceived conflict between artificial intervention and the authentic self. Underlying these concerns is the assumption that any artificial intervention necessarily compromises authenticity. The central issue, however, is how authenticity itself is understood and how its relationship with artificiality is conceptualized.

Mainstream philosophical traditions have generally approached authenticity from two perspectives: authenticity as self-discovery and authenticity as self-creation. These correspond, respectively, to essentialist and existentialist conceptions of authenticity, while also reflecting the central disagreement between

bioconservatives and transhumanists. Concerns about HETs arise because, as artificial interventions, they are thought to undermine not only the essentialist processes of self-discovery and self-identification, but also the existentialist processes of self-creation and self-determination—and perhaps even the authenticity realized through genuinely human practical activity.

From an essentialist perspective, the authentic self constitutes the defining essence of being human, and being authentic means discovering and realizing this true self. Critics of HETs argue that, regardless of the extent of technological intervention, any artificial modification obscures the manifestation of the authentic self because the resulting changes do not genuinely belong to the individual. They further contend that individuals transformed through enhancement technologies no longer retain the same personal identity, thereby altering the very mode in which their authenticity exists.

By contrast, the Sartrean conception of self-creation understands authenticity as confronting one’s possibilities through free choice and self-creation. From this existentialist perspective, the authentic self is defined by who one freely chooses to become, lending philosophical support to the claim that HETs may facilitate authenticity. Critics counter that processes of self-creation are not necessarily authentic. What appears to be autonomous self-creation and free choice may in fact remain constrained by external social forces.

In examining whether women’s choices to undergo cosmetic surgery represent authentic forms of self-creation and self-determination, American moral philosopher David DeGrazia argues that the crucial issue is whether such choices genuinely originate from the women themselves or whether they reflect their submission to social forces that largely shape those choices. Moreover, while enhancement technologies seemingly provide limitless opportunities for self-creation, they also shift the burden of change onto individuals themselves, placing human beings in a position where change becomes, in effect, compulsory.

Legitimate limits of HET interventions in authenticity

Artificial interventions into the authentic self are not inherently unreasonable; rather, they possess a form of limited legitimacy. This legitimacy rests on recognizing authenticity as a dynamic process. Shaped by social and cultural norms, authenticity changes over time and is not, as bioconservatives maintain, entirely fixed and immutable. Yet this dynamism also contains an element of stability: a relatively enduring core of the authentic self. Because authenticity forms gradually through an individual’s accumulated experiences and prolonged social influences, it retains a degree of continuity while remaining responsive to social development and historical change. Understanding authenticity as dynamically stable therefore helps clarify

the limited legitimacy of HETs: Artificial interventions may appropriately participate in the authentic self’s dynamic development, provided that they do not undermine its underlying stability.

Authenticity should be understood as a dynamic process because what is “authentic” is not necessarily desirable. Reality may be “true but not beautiful” or “true but not good.” By artificial means, HETs can improve such conditions and promote a higher-order reconciliation between truth and beauty, and between truth and goodness. Authenticity also unfolds diachronically through continual transformation. Rather than fixed, static, or immutable, it is fluid, malleable, and vital. In this sense, HETs may facilitate a process of renewal within the authentic self. Once such intervention exceeds appropriate limits, however, it loses its legitimacy. Excessive confidence in enhancement technologies reduces fundamentally human questions of value to technical problems, implying that conditions requiring human effort and moral development can be resolved simply through technological progress. Such technological reductionism ultimately undermines the intrinsic value of human beings.

The legitimacy of HETs thus lies precisely in the limited nature of their intervention. Authenticity is neither the immutable condition defended by bioconservatives nor the arbitrarily malleable construct advocated by transhumanists. Instead, it combines internal stability with dynamic evolution. When enhancement technologies threaten this balance, effective constraints become necessary. First, technological interventions into authenticity should proceed gradually, taking the limits of human adaptability into account. Second, these interventions should not be reductionistic or one-dimensional, but should respect the integrity and complexity of the human being. Third, they should not be guided solely by immediate benefits or individual preferences; social justice and the long-term common good must also be considered.

Authenticity has long occupied a central place in the history of philosophy. With their inherent uncertainty and indeterminacy, HETs have entered this domain in profound ways, posing new philosophical challenges. Debates between bioconservatives and transhumanists over the nature of authenticity and the means of achieving it have laid an important foundation for further philosophical inquiry. This article argues that interventions by HETs should always be governed by the principle of limited legitimacy. Only by attending to the intrinsic relationship among truth, goodness, and beauty can the ethics of authenticity be preserved and authentic human existence be achieved.

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