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Speed vs. Thought: Epistemological and educational challenges of the automation and AI civilization

Velocidade vs. Pensamento: Desafios epistemológicos e educacionais da civilização da automação e IA

Velocidad vs. Pensamiento: Desafíos epistemológicos y educativos de la civilización de la automatización y la IA

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ABSTRACT

Contemporary society, immersed in the digital revolution, faces hyper-speed information that limits critical reflection and exacerbates social vulnerabilities. The analysis identifies the "ultimate error": the attempt to manage complex systems using linear logic, sustained by the tyranny of concreteness and the illusion of technological control. This mindset fuels practices such as algorithmic surveillance and surveillance capitalism, which progressively erode civil liberties and individual autonomy. As a cultural and strategic response, a "new humanism" is proposed that revalues the human factor and systemic ethics. This humanism focuses on the ability to "inhabit complexity," integrating error and emergence as essential heuristic resources for adaptation. Education emerges as a strategic axis, privileging knowing-how-to-be and knowing-how-to-act, forming citizens capable of coping with uncertainty and resisting the logic of hypervelocity.

Keywords: Connection Society; Complexity; New Humanism; Hypervelocity; Education.

RESUMO

A sociedade contemporânea, imersa na revolução digital, enfrenta uma informação em hipervelocidade que limita a reflexão crítica e exacerba as vulnerabilidades sociais. A análise identifica o "erro definitivo": a tentativa de gerir sistemas complexos utilizando lógica linear, sustentada pela tirania da concretude e pela ilusão do controle tecnológico. Essa mentalidade alimenta práticas como a vigilância algorítmica e o capitalismo de vigilância, que corroem progressivamente as liberdades civis e a autonomia individual. Como resposta cultural e estratégica, propõe-se um "novo humanismo" que revaloriza o fator humano e a ética sistêmica. Este humanismo foca na capacidade de "habitar a complexidade", integrando o erro e a emergência como recursos heurísticos essenciais para a adaptação. A educação surge como um eixo estratégico, privilegiando o saber-ser e o saber-agir, formando cidadãos capazes de lidar com a incerteza e resistir à lógica da hipervelocidade.

Palavras-chave: Sociedade da Conexão; Complexidade; Novo Humanismo; Hipervelocidade; Educação.

RESUMEN

La sociedad contemporánea, inmersa en la revolución digital, se enfrenta a una información a hipervelocidad que limita la reflexión crítica y exacerba las vulnerabilidades sociales. El análisis identifica el "error definitivo": el intento de gestionar sistemas complejos utilizando una lógica lineal, sostenida por la tiranía de lo concreto y la ilusión del control tecnológico. Esta mentalidad alimenta prácticas como la vigilancia algorítmica y el capitalismo de vigilancia, que erosionan progresivamente las libertades civiles y la autonomía individual. Como respuesta cultural y estratégica, se propone un "nuevo humanismo" que revaloriza el factor humano y la éticas sistémica. Este humanismo se centra en la capacidad de "habitar la complejidad", integrando el error y la emergencia como recursos heurísticos esenciales para la adaptación. La educación emerge como un eje estratégico, privilegiando el saber ser y el saber actuar, formando ciudadanos capaces de hacer frente a la incertidumbre y resistir la lógica de la hipervelocidad.

Palabras clave: Sociedad de la Conexión; Complejidad; Nuevo Humanismo; Hipervelocidad; Educación.

Introdução

The hypertechnological era, marked by the exponential acceleration of information flows, imposes a "new hyperspeed" (Dominici, 2025) which, although it presents extraordinary opportunities, has the downside of subtracting the time necessary for reflection, critical thinking, and in-depth analysis of social phenomena. The articulation of Piero Dominici's works, in particular his vision of new humanism and the complexity of communication, reveals that the main sociological challenge does not lie in technology itself, but in the persistence of the "ultimate error": the attempt to manage inherently complex, dynamic, and unpredictable social systems as if they were merely complicated (Dominici, 2020a). In his other article, "From Emergency to Emergence" (2023), the author reiterates that emergence, like error, is an intrinsic and connotative element of complexity and life, and therefore can never be predicted, prevented, or eliminated.

The author argues that the main conceptual deviation is the tyranny of concreteness (Dominici, 2025). This expression refers to the simplistic belief that reality, however complex it may be, can be fully captured, measured, and manipulated by tangible and measurable data. The tyranny of concreteness devalues qualitative factors, unpredictability, and the inherently nonlinear nature of human systems. This approach fails in the illusion that algorithms and artificial intelligence can eliminate error and uncertainty (Dominici, 2023, 2025), underestimating the human factor and consolidated power relations. In this context, criticism of the slow erosion of civil liberties in an environment of surveillance and digital consumerism becomes inseparable, requiring a rethinking of culture and education that prioritizes the ability to inhabit complexity through shared knowledge and mediation, rather than the mere illusion of control.

From this central illusion derives what Dominici calls the great mistake: the conviction that all problems can be solved by delegating solutions solely to technology (Dominici, 2025). The great mistake manifests itself in the unshakeable faith that algorithms and Artificial Intelligence (AI) systems are capable of measuring, managing, and predicting the evolution of complex human systems. The promise underlying this mistake is both seductive and dangerous: (1) Absolute Control over complex systems and (2) the Elimination of Error and Uncertainty from social life. The delegation of decision-making and analysis capabilities to automatic and hyper-fast systems, based on this premise, is seen as the core of the crisis, as it ignores the fact that social systems are structurally open and dynamic, incapable of being managed by purely predictive models (Dominici, 2025).

The social system, the global economy, and organizational relationships are complex systems, where emergence is an inherent factor (Dominici 2023, 2024). The application of

management models (often algorithmic) that assume linear predictability fails when attempting to control complexity; organizations and decision-makers only amplify ambivalence and, paradoxically, increase the system's risk and vulnerability to crisis by disregarding the impossibility of predicting emergence (Dominici, 2023). The spread of these illusions is catalyzed by a defining temporal factor of the digital age: the new hypervelocity (Dominici, 2025). The speed of digital technology and the immediate nature of networked communication interact with complex systems, exposing and amplifying preexisting social and organizational inadequacies. The main sociocognitive consequence of this hypervelocity is the radical limitation of the time available for reflection, thought, and, above all, critical analysis (Dominici, 2025).

The acceleration of networked life forces individuals and organizations to react rather than act in a thoughtful manner. The constant urgency and need to be online undermine the capacity for observation and detachment. This temporal deprivation facilitates the dominance of the logics of control and rationality (Dominici, 2025), as speed discourages debate, mediation, and consensus building, reinforcing the tendency to give carte blanche to technology (the great mistake) and false dichotomies. On the other hand, network architecture is intrinsically linked to an economy of data extraction and behavioral monitoring.

It is in the vacuum of critical thinking and reflection induced by informational hypervelocity that algorithmic surveillance thrives, leading to the slow erosion of civil liberties and individual autonomy. This network architecture is intrinsically linked to an economy of data extraction and behavioral monitoring. Surveillance capitalism (Zuboff, 2021) is defined as a logic of accumulation that transforms individuals into commodities by extracting raw behavioral data to formulate prediction products. The ultimate goal is to sell the ability to predict and shape the behavior of others, where privacy is the "price" to pay for connection.

The quest to eliminate error and impose maximum rationality on what is complex leads to the blind delegation of decisions to technology. The result is voluntary servitude—metaphorized by Hypnos—where the citizen-consumer, seduced by hyper-consumption and convenience, voluntarily abdicates their rights in a technological feudalism.

In this context, the subject's focus shifts from the body and real life to the digital self or electronic personality, which becomes the idealized and most important version, being systematically co-opted by the demands of surveillance capitalism. The desire for self-exposure (Narcissus) and submission to invisible servitude reinforce the process of

commodification of the individual. This alienation culminates in what can be understood as the death of autonomy and critical thinking, illustrated by the myth of Thanatos. In short, the obsession with control and speed creates the conditions for an economic system that operates based on the extraction and prediction of behavior, dismantling autonomy and civil liberty.

In response to the crisis of thought, the solution lies in rescuing the human factor and redefining its role. The new humanism for the interconnected society (Dominici, 2014) is not a rejection of the digital, but an overcoming of the utilitarian logic of concreteness. This humanism is based on the reframing of error as a cognitive tool, on the economy of sharing and mediation, and on a systemic vision whose central objective is to inhabit complexity (Dominici, 2017), which implies abandoning the illusion of control to focus on accepting non-linearity and unpredictability.

Embracing complexity in an ethical and conscious way, combating the tyranny of concreteness, requires accepting unpredictability, rescuing the human (learning to expect the unexpected, Dominici, 2023), promoting dialogue, and developing systemic ethics. The concept, although it does not espouse the merging of humans with their technology -- Dominici has no objection to machines becoming more like humans, but objects most emphatically to the prospect of humans becoming more and more similar to machines -- is enriched by the contributions of Haraway (1988), who, with the metaphor of the Cyborg and Situated Knowledge, breaks the human/technology dichotomy and dismantles the illusion of objectivity, and of Ingold (2011), who contrasts the logic of the Network (discrete points) with the Meshwork, rescuing life as a set of continuous lines and experience in the world as an alternative to the logic of the network.

The criticism of traditional education lies in the fact that, based on compartmentalization and hyper-specialization, it reinforces the tyranny of concreteness and fails to prepare the individual for complex reality. The formation of the complex citizen requires the transition from a model focused on technical know-how to a model that privileges knowing how to be and knowing how to act (Dominici, 2023). The practical implementation of the new humanism therefore demands a profound educational reform, seen as the main engine for overcoming the great mistake. The formation of complex citizens must adopt epistemologies that value uncertainty and include error, doubt, and emergence in the learning process, understood as heuristic resources (Dominici, 2023) that promote the development of critical thinking to resist hypervelocity.

This article examines the conceptual illusions that underpin this logic, the ethical risks arising from algorithmic surveillance, and proposes a new humanism as a cultural and educational response to the crisis of complexity, outlining the theoretical and methodological bases for the formation of a complex citizen.

Algorithmic Surveillance, Consumerism, and the Mythological Metaphor

The central arguments of the article are articulated with the perspectives of other authors, adding layers of criticism about the role of science, technology, and the production of subjectivity in the current regime.

Isabelle Stengers' (2015) thinking complements Dominici's concept of hypervelocity by advocating a deceleration of science ("Slow Science"). Stengers (2015) sees science as a human construct permeated by political and social nuances, rather than as a singular or superior field. The author highlights the presence of power relations and power games that divert the scientific ideal, which resembles Dominici's criticism of consolidated power relations that underestimate the human factor in favor of the illusion of technological control. Her criticism of "professionals" with their "minds in a rhythm" who neglect vigilance and abstraction reinforces the idea that digital hypervelocity limits reflection and critical thinking, suggesting that capitalism is a sorcerous system and that resistance must be an act of disenchantment, a call to question the idea that the world is fully known and controllable, aligning itself with the new humanism that seeks to abandon the illusion of control.

The contributions of Guattari and Rolnik (2000) deepen the discussion on the capture of subjectivity inherent in algorithmic surveillance and consumerism. For the authors, subjectivity is something produced, mechanical, and constitutes the raw material for all production. This perspective is directly connected to surveillance capitalism, which develops profiles to formulate prediction products, transforming the individual into a support for value.

Algorithmic machinery aims to accelerate the flows of desire and individuation, compelling users to produce data about themselves and reinforcing the logic of consumerism and narcissistic display. This technological arrangement generates supra-individual profiles from infra-individual data, functioning as a security device that reflects criticism of algorithmic surveillance. Furthermore, Guattari and Rolnik (2000) point to the structural basis of the system as a colonial regime, where the logic of plundering life is reactivated by big tech companies, adding a historical and global dimension to the critique of data accumulation and the threat to civil liberties.

It is possible to employ a mythological metaphor to describe this process of capturing subjectivity and eroding freedoms: Narcissus (culture of self-exposure and consumerism), Hypnos (sleep of consciousness and passivity), Thanatos (death of autonomy and the private sphere), and Cronos (linear and predatory time of data collection).

Zuboff (2021) argues that the concept of surveillance capitalism refers to the new form of market in the 21st century, led by the main social media platforms, which is a unique logic of accumulation in which surveillance is a fundamental mechanism in the transformation of investment into profit. Nevertheless, she points out that the accumulation of our behavioral data by digital platforms through technologies (including AI), with the aim of manufacturing products designed to predict human experience, affects human rights and undermines the autonomy of individuals.

These concerns, in fact, are the basis for questioning its harmful effects based on the correlation between narcissism, netscapism, morbid hypervisibility, and time spent on virtual social networks. The phenomenon of consumerism and monetization of social networks and the commodification of people through surveillance capitalism is contextualized. Based on the cultural mythèmes of Narcissus, Hypnos, Thanatos, and Cronos, highlighted by Contrera and Torres (2019), it is possible to demonstrate how the alienation of individuals in the transparency society manipulates them psychologically and hijacks their self-determination.

Although one of the principles of virtual social networks is their openness and porosity, enabling, facilitating, and stimulating social connections, the fundamental connection between people occurs through identity, with several studies seeking to highlight the damage that the mode and frequency of their use can cause to users. Virtual social networks are an invaluable resource for human sociability, but instead of happiness, the anesthetic and corrosive effect of social networks serves to increase helplessness and vulnerability, exacerbating problems with self-image, reality, death, and time.

Contrera and Torres (2019) conducted research using the Google Trends tool, which aimed to map the emergence of the most frequently searched topics and content in the cultural imagination, reflecting, in their findings, the archetype of Thanatos and its symbolic ramifications for media society. As pointed out by the authors, narcissism and death, viewed from a psychoanalytic perspective, can also aid in understanding today's society and, more specifically, recreational and professional social media users, such as bloggers, YouTubers, Instagrammers, among others. Surrendering to the false, the unreal, choosing to sleep in virtuality rather than live in reality connects with the logic of transparency, but when one tries to see what lies beneath, the result is a necropsy, because after all, there is no way to see

inside a person without invading them or even killing them. The examples mentioned above, together with the proposal by Contrera and Torres (2019), aim to highlight the vulnerability of individuals to virtual social networks and the helplessness of users. If before the world was made up of small communities in which it was possible to know about the affairs of others, cities and routine have made social ties less close, with virtual social networks being a distorted version of lost proximity. Virtual social networks turn reality into a dream, distorting everyday life so that it reflects, to a greater or lesser extent, the imagination of each of its users.

The dimensions of narcissism can be correlated with countless behaviors on social media, including the frequency of personal posts, tags, comments, and likes. Grandiosity and exhibitionism can commonly be associated with these and other actions in virtual social spaces, revealing a global narcissism (Singh; Farley; Donahue, 2017). However, social networks are also responsible for another phenomenon: the creation of heroes in today's world. Whether fictional or real, they inspire and influence, being related to the promotion of transformation and inspiration, both their own and that of others, representing a human construct of worldview, as pointed out by Allison and Goethals (2012).

The discourse of individualization justifies a performance-oriented society and the recognition of social inequality and social class differences. Moral boundaries constructed through discourse individualize success or failure, minimizing the relevance of vulnerable group contexts and their potential for reproducing limiting structures, as denounced by Trappmann, Seehaus, Mrozowicki, and Krasowska (2021). According to these authors, individualization has brought with it a myth of equality (i.e., equal opportunities) and autonomy in individual life projects (i.e., the decision of how and with whom to live). Individualization has also led to the breakdown of collective identities and a change in political participation. Individuals now tend to believe that the problems they face are personal, which limits their ability to understand their collective nature.

The time spent on social media is an investment in one's online persona (so much so that digital personalities now have legal recognition, requiring analysis, including digital heritages, with memorials being one example). The online persona has become the ideal life of the individual, often making it possible to live what reality does not allow. The more technology humanity has at its disposal, the less time seems to be available. The figure of Cronos, the god of time in Greek mythology, especially when seen in his destructive, impregnable aspect, seems to be an appropriate allegory for the representation of the information society and, consequently, the notion of time today. Similarly, individual

freedoms protect against the arbitrariness and abuse of the state's power to interfere, but they have been losing their strength since the advent of the security state and, currently, with information security. The consumer-consumed is nothing more than monetized information, data, obtained with or without their consent or that of their government.

In this context, surveillance capitalism (Zuboff, 2021) envisioned the monetization of information obtained through surveillance in the digital age, using legitimate and illegitimate mechanisms of extraction, commodification, and behavior control to produce new markets for behavior prediction and modification, concentrating power and threatening civil liberties, undermining values such as freedom and privacy. Capitalism uses consumerism as a tool to achieve its ends, instilling desires and creating demands for the alienation of consumers, leading them to unnecessary consumption as a form of narcissistic display, often associated with deprivation, including deprivation of rights. The imagination continues to be inhabited by stigmas, and the narcissistic individual seeks to remain desirable—young and beautiful—and shows a psychological revulsion toward decrepitude and mortality. Consumerism encourages such behavior, promoting a constant devaluation of the elderly while revaluing ageism and gerontophobia. In a performance-based society, aesthetics continues to be marked by the dictatorship of the "always new," and the new "I," responsible for its achievements—and for its failures—is convinced that anyone can be happy, successful, and have money and power. It is believed that with enough money, one can overcome phenomena such as aging and even death by acquiring the right products to avoid these tragic events.

For Han (2019), one of the characteristics of postmodernity is undoubtedly an avid preference for smooth shapes (contours/skins/faces/bodies) that offer little resistance to pleasure and immediate consumption. Smoothness, as a visual and aesthetic attribute, advocates agreement and acceptance through "likes" on social media. This agreement, which comes from visibility, is consolidated in the desire to constantly evaluate the lives of peers through harmonized images in sequence (feed). Smoothness is materialized, for example, in the idealization of the perfection of eternally young bodies and faces (without wrinkles or signs of aging) that offer themselves as a spectacle. At the same time, the predilection for smoothness causes the isolation of people who do not submit to the aegis of liquid relationships (Bauman, 2009), or who live in a continuous state of permanent self-mirroring (Han, 2019, p. 43). What occurs is a vehement distancing from any dissent, preventing experiences that promote otherness. When all we see, in a saturated way, is smooth and

associated with unattainable perfection, this provokes us to reflect on the existence of beauty as essence and not just as form.

Targeting the youngest, surveillance capitalism domesticates them until their power of production and consumption is exhausted, abhorring the elderly and the disabled. The dictatorship of aesthetics feeds back into discrimination, including ageism (Butler 1969), characterized by the prejudice of one age group against others. This logic stimulates and reinforces prejudice, stigma, and violence, making hate speech and behavior increasingly noticeable.

In the consumer and information society, old and new take on a new guise, making constant updating and exposure essential. Even aware that they are finite [mortal], individuals aspire to and idealize immortality. In their eagerness to delude themselves, all stratagems are permitted, the most common of which is virtual reality and, within it, hypervisibility. Human beings deprive themselves of their rights; they strip themselves of their dignity and historically won civil liberties, as if taking off a garment, baring themselves in and for the information society. Naked, they expose themselves—like animals exposed in a cage—and, exposed, they satisfy the hole in their minds with hyper-reality.

In this context, social media act as tools of connection and establish new forms of subjectivity agency, facilitating the avoidance of discomfort through immersion in the network, bringing subjective and behavioral implications derived from information sharing, the status of reality present in interactions, and helplessness (Assunção, 2014). Netscapism, therefore, strips away civil liberties, insofar as it alienates the holders of these rights, damaging the connections between the real person and the subject entitled to legal protections of privacy and freedom. These technologies accelerate and distribute globally a set of discourses and images that create a network from which it is difficult to escape, a "web of technological risks" that configures a new form of capitalism, of a global order, but which definitively intervenes in personal life (Beck, 1999). This technological development has an ambiguous role, because on the one hand, it aims to expand the domain and "visibility" of the future; on the other hand, it deepens the domain of uncertainty.

The consumption of digital information and communication technologies (DICT) and surveillance capitalism no longer captures only personal data (big data), privacy, and consumer freedom; it also co-opts the right to information. Such co-optation has an impact on democracy itself, on its electoral process and pluralism, and consequently on civil liberties, the functioning of government, political participation, and political culture. Even democracy is inextricably linked to consumption. Paes (2020), paraphrasing Marx, states that a central

feature of the new surveillance is precisely the digital conversion of what is collected, which makes information/data communicable and comparable on a previously unimaginable scale. In addition, the indicators or guidelines used to make sense of this data are inferential, circumstantial, and future-oriented.

Virtual and real are transmuted, so that electronic personality appears much more concrete than organic personality. The word network is gaining a meaning that is increasingly more significant than that of society, while privacy—the “nakedness” of consumers—is stimulated and exploited. Transparency becomes an essential concept for understanding the social and cybernetic phenomena that consolidate contemporary society as a regime of control, whose immediate reflection is the culture of exhibitionism, de-ritualization, and nudity; an exaggerated exhibitionism that has transformed the way of being and acting transparently into something supposedly beneficial and important, but in reality constitutes a naked society that is neither seductive, constructive, nor reflective (Han, 2018).

The digital revolution, the internet, and social networks transform society in its essence, offering as a product a mass of individuals without identity, who do not question the established order and voluntarily submit to nihilistic dataism (Han, 2017; Han, 2018). The surveillance instilled through the network, therefore, has been eroding the boundaries of privacy, training consumers to confess and denounce, concealing differences and otherness (Han, 2017) in a process of consumption of subjectivities built on the logic of consumption (Pelbart, 2003). The fate of those who rebel or who have never been inserted into this "reality" of cyberlife is ostracism and social death in life.

In a world where having—and even appearing to have—outweighs being, one no longer "is": "what appears is good, what is good appears" (Debórd, 1997, p. 16-17). And nothing is "had"; human beings become increasingly objectified, placing the demand for the satisfaction of [imposed] desires above their own needs, their rights, and themselves. The combination of algorithmic capitalism and hyper-technological forms of well-being saturate everyday life and lead to the acceleration of digital connections. We are, more than ever before in human history, exposed to each other, but increasingly lonely and helpless. Surveillance capitalism celebrates algorithms and big data, venerating their ability to consume [data from] people and oppress rights, to manipulate liberty of choice. According to Paes (2020), it should not be forgotten that changes in regulation have led to laws, policies, and practices that limit and regulate the collection and processing of citizens' personal information. Similarly, these information consent policies offer individuals the option to opt

in or out of data collection efforts, to pay for a higher level of privacy, or to be rewarded for a lower level.

The connection between these arguments and Dominici's thinking is clear: algorithmic surveillance is the functional expression of hegemonic organizational cultures that use digital infrastructure and hypervelocity to extend control logic to all fields of praxis (Dominici, 2014). The erosion of civil liberties is not a side effect, but a direct consequence of the mindset that seeks to eliminate error and impose maximum rationality on a complex world. The goal is to overcome the binary and utilitarian logic imposed by the culture of concreteness.

Beyond Black Swans...

Complicated systems are linear, predictable, and decomposable. Complex systems (which include social systems) are nonlinear, ambivalent, emergent, and unpredictable. By attempting to control complexity through algorithmic and linear models, organizations only amplify ambivalence and increase the system's risk and vulnerability to crisis. The crucial error or problem lies in applying the logic of intervention where the logic of adaptation is required.

In a world where digital hypervelocity interacts with complexity, communication and information are the only elements capable of uniting a problematically complex reality (Dominici, 2023). Communication is not just the transmission of data; it is the process of exchange, sharing, and mediation that gives cohesion to society and allows for the management of the emergent. Criticism of linear management of complexity inevitably leads to an ethical discussion about the role of the human factor and the need for a new humanism that counterbalances the logics of control and the delegation of autonomy to technology. Dominici (2014) demystifies the deterministic view, stating that digital technology cannot guarantee, in and of itself, horizontality or more symmetrical relationships. The strategic differential always lies in the human factor and in the uses that people and organizations make of technology. Technologies are not the sole agents of social transformation; they are co-opted and shaped by pre-existing power relations, hierarchies, and hegemonic organizational cultures. Inhabiting the emergency means recognizing the relentless dynamism of complex systems, their non-linearity, and their unpredictability (Dominici, 2013). This is a fundamentally different approach from traditional problem solving. The so-called "complexity manager" must abandon the illusion of being able to manage the system and focus on the ability to inhabit it (Dominici, 2013).

Inhabiting complexity is an ethical and cultural act that requires accepting unpredictability, working with uncertainty and emergence as permanent conditions; promoting dialogue and shared knowledge; and developing a systemic ethics that understands that every intervention in a complex system generates unforeseen consequences.

The persistence of the human factor implies ethical responsibility. Hypervelocity and algorithmic surveillance only become threats to freedom because individuals, immersed in the tyranny of concreteness, abdicate their critical capacity. The great mistake of delegating analysis and decision-making to machines is primarily an anthropological failure.

The new humanism for the interconnected society is the sociological response to the crisis of complexity. It is not a matter of rejecting the digital, but of redefining the role of human beings in a hyper-technological environment. This new humanism is based on pillars that restore the centrality of reflection and ethics: (1) Reframing Error, which becomes a strategic cognitive tool; (2) Economy of Sharing and Mediation, promoting "shared knowledge" and conflict mediation (Dominici, 2014), although Dominici is quick to underline the value of the freedom to express (respectful) conflict and debate, which is the very basis of education and of democracy itself; any kind of mediation must take care not to stifle dissent or plurality, and (3) Systemic Vision, which questions the traditional logics of control and surveillance. The new humanism is the cultural antidote to the tyranny of concreteness, rescuing the critical autonomy that is slowly being eroded by hyper-speed and algorithmic control.

In this debate, the concept of the "Black Swan" (Taleb, 2007), which describes events of very low probability but very high impact (uncontrollable and unpredictable), is often used to rationalize the crisis and the inability to manage it. However, Dominici's thinking, developed in works such as "Beyond Black Swans," transcends the simple identification of the rare event. For the author, the real problem is not the Black Swan itself, but the fact that the metaphor is used to justify the structural inadequacy and cognitive fragility of our institutions (Dominici, 2023). Dominici (2023) argues that by labeling an event as a Black Swan, managers divert attention from the fact that emergencies, like Black Swans, are not a rare event, but rather an intrinsic and connotative element of complexity and life, and therefore "can never be predicted, prevented, or managed, much less eliminated." (Dominici, 2023).

The great mistake (Dominici, 2025) therefore lies in two interconnected dimensions: The Tyranny of Concreteness, which is based on the illusory belief that complex systems can be mapped and controlled by data and linear models, disregarding emergence. And the Black

Swan as justification, in which the Black Swan metaphor is used to exempt responsibility for systemic failures. The unpredictable event is not the cause of the fragility of the system, but the consequence of our confusion between complex and complicated systems and our inability to understand that the complex cannot be managed.

By betting all its chips on know-how, hypervelocity, and simulation, the digitized society (Dominici, 2023) creates systems that are inherently vulnerable. The real challenge, which moves the debate beyond Black Swans, is to build a systemic culture capable of dealing with uncertainty and emergency as permanent conditions, focusing on resilience and the ability to inhabit complexity (Dominici, 2017), rather than pursuing the chimera of total control.

Educational Implications and Methodological Proposals

In response to the crisis of thinking induced by hypervelocity and the risk of erosion of civil liberties by algorithmic surveillance, the solution lies in rescuing the human factor and redefining its role. The proposed new humanism for the interconnected society is not a rejection of the digital, but an overcoming of the utilitarian logic of concreteness. This strategic project is the cultural antidote to the tyranny of concreteness, based on the reframing of error as a cognitive tool, on the economy of sharing and mediation, and on a systemic vision that questions the traditional logics of control and surveillance.

The central goal of new humanism is the ability to inhabit complexity, which implies abandoning the illusion of control to focus on accepting non-linearity and unpredictability. Although Dominici's concept dialogues with the contributions of Donna Haraway (1988; 2016) (Cyborg and Situated Knowledge), and Tim Ingold (Anthropology of Dwelling), his perspective proposes a new humanism with strictly human -- not posthuman -- "hybrid figures": men and women with critical, questioning, logical yet creative minds, who have learned how to inhabit complexity and unpredictability without trying to control them, who are capable of holding together imagination and rationality, creativity and rigorous methodology, of recognizing connections, and of uniting false dichotomies, including the human and the technological, all the more so as technology, according to Dominici, must never be considered something external to (human) culture, precisely because "technology is a part of culture". Like Haraway, he considers objectivity to be impossible, inasmuch as all members of complex systems are participants, but points out that we have no way of imagining the consequences and implications of a complex synthesis. Haraway, on the other hand, breaks the human/technology dichotomy and dismantles the illusion of objectivity,

reinforcing that new humanism must be posthuman. Ingold (2011), in turn, contrasts the logic of the Network (discrete points, logic of surveillance) with the Meshwork, rescuing life as a set of continuous lines and experience in the world. The imperative to inhabit complexity is thus the rejection of life as a series of information nuclei and the rescue of life as a tangle of lines.

The practical implementation of the new humanism therefore demands a profound educational reform, seen as the main driver for overcoming the "great mistake." Traditional education, based on compartmentalization and hyper-specialization, only reinforces the illusions of concreteness. The first methodological imperative is to overcome the fragmentation of knowledge, forming hybrid figures capable of navigating inter-, multi-, and transdisciplinary fields. The formation of the complex citizen requires the transition from a model focused on technical know-how to a model that privileges ethical and critical capacities, including knowing how to be and knowing how to act, since the complex citizen must be able to act responsibly in contexts of emergency, uncertainty, conflict, and, above all, be able to question the validity of algorithmic models.

To combat the tyranny of concreteness and hypervelocity, education must adopt epistemologies that value uncertainty through two crucial strategies:

1. Inclusion of Error, Doubt, and Emergence: Error should be seen as a heuristic resource, essential for learning, resilience, and adaptability in nonlinear systems. The learning environment should welcome doubt and unpredictability, teaching how to cope with and expect the unexpected.

2. Development of Formal Logic and Critical Thinking: These are the only tools that allow individuals to discern relevant information from noise, question the validity of algorithmic models, and regain autonomy at the expense of blind delegation to simulation and technology.

In short, educational reform is the lever for cultural change. By integrating error, uncertainty, and systemic vision, schools empower individuals to inhabit hypercomplexity, providing them with the necessary cognitive and ethical defenses against the erosion of civil liberties and the great error. The practical implementation of new humanism necessarily involves a profound educational reform, seen as the main driver for overcoming the "great error." Schools must move beyond the emphasis on technical and instrumental know-how, which only reinforces the illusion of control and the tyranny of concreteness, because learning to manage and expect the unexpected (Dominici, 2023) is essential for the development of resilience and adaptability in nonlinear systems.

The methodological imperative for this is the transition from a model focused on technical solutions to a model that privileges ethical and critical capacities (Dominici, 2023). Complexity cannot be solved solely by algorithms or hyper-specialized experts; it requires individuals capable of operating in uncertainty and ambivalence. The formation of a "complex citizen" therefore requires the integration of new dimensions of learning that involve know-how, technical and instrumental knowledge (necessary but insufficient), knowing how to be, the capacity for reflection, ethical awareness, and critical autonomy, and finally, knowing how to act, which refers to the ability to make decisions and act responsibly in contexts of uncertainty, conflict, and emergency (Dominici, 2023), restoring autonomy at the expense of blind delegation to simulation and technology.

From Classical Humanism to the Ontology of Connection: Haraway and Ingold

The imperative of a new humanism (Dominici, 2014) gains ontological depth when confronted with the feminist and post-structuralist critique of Donna Haraway (1988; 2016) and the anthropology of dwelling of Tim Ingold (2011).

Dominici's critique of the tyranny of concreteness and the illusion of objectivity finds a powerful ally in Haraway (1988), who dismantles the ideal of the "nowhere view" of positivist science. For the latter author, all knowledge is situated and partial, being produced by interconnected bodies and technologies. Technology is not just a tool, but an organic extension of the subject. The cyborg—the hybrid of organism and machine—becomes the political and ontological metaphor that breaks the human/technology and natural/artificial dichotomy. This conception deepens Dominici's (2014) argument that the difference lies in the human factor, since the new humanism cannot be a return to classical anthropocentrism, but posits, unlike Dominici, that it must be a post-human humanism that recognizes the intrinsic entanglement between life and technology.

Digital hypervelocity (Dominici, 2025) and algorithmic surveillance are manifestations of network logic, which seek to reduce complex life to data and predictability. The response, therefore, is not only ethical (as Dominici proposes), but ontological: the imperative " " of "inhabiting complexity" is the rejection of life as a series of information hits and the rescue of life as an entanglement of lines (Ingold, 2011), where knowledge is situated and emergence and error are intrinsic (Dominici, 2023).

The new humanism, therefore, requires a material sensitivity (Ingold, 2011) to the way in which human beings are rooted in the world and in technologies, overcoming the

illusion of abstract control and recognizing the interdependence inherent in any complex system. The inadequacy of traditional management logic in the face of complex systems, as discussed in the previous section, is directly projected onto the ethical and anthropological plane. The connected society, in its relentless pursuit of eliminating error and uncertainty through hypertechnology (Dominici, 2025), falls into a paradox: the same network that promises freedom and horizontality is co-opted by logics of control and surveillance that promote the slow erosion of civil liberties.

The final reflection on educational impacts is the practical conclusion and culmination of the article's thesis. It summarizes the urgency of educational reform in light of all the theoretical criticisms raised. The entirety of the theoretical discussion—from the critique of the "ultimate error" (Dominici, 2017) to the demand to inhabit complexity (Dominici, 2023) from the perspective of Ingold's Entanglement (2011) and Haraway's Situated Knowledge (1988)—converges on a single practical conclusion: the need for a pedagogical revolution that subverts the control paradigms of the hypertechnological civilization.

Education, in its current form, operates as a factor of cognitive fragility because, by excessively valuing technical know-how and hyper-specialization, it endorses and reproduces the tyranny of concreteness. This mindset fails to prepare individuals for complex reality, teaching them to fear error and emergency rather than integrating them as vital heuristic sources (Dominici, 2023). Reflection "beyond Black Swans" imposes a new educational goal in which the focus is not only on resilience to rare events, but on the systemic capacity for waiting and mediation. Education must equip individuals to "expect the unexpected" (Dominici 2023), transforming students from mere passive consumers of data (vulnerable to Algorithmic Surveillance) into active agents of cohesion.

The educational impacts therefore require three interconnected pedagogical transformations:

First, the transition from know-how to know-how-to-be and know-how-to-act. The focus of this change should be on ethical and reflective dimensions, forming individuals capable of acting responsibly in uncertainty (Dominici, 2023). Second, the development of ontological thinking about connection: Teaching should promote an understanding of the individual as a hybrid and situated being, part of a meshwork and not a network of isolated points. This dismantles the illusion of objective control (Haraway, 1988; Ingold, 2011). And finally, the focus on the culture of mediation and debate so that the learning environment

becomes a laboratory that encourages conflict mediation and shared knowledge, which are the true pillars for coping with the emergent, as opposed to simulation and hypervelocity.

Ultimately, the impact of the proposed theoretical discussion is the demand for literacy for complexity. The dialogue with the authors shows that education should be the space where time for reflection (thinking) is actively defended against hyper-speed, preparing future generations not to control the world, but to inhabit complexity in an ethical, critical, and conscious manner, aware of their position in an intrinsically unpredictable system.

Final Considerations

This article sought to articulate Piero Dominici's sociological arguments about the hyper-technological/connected society, using as an interpretive key the opposition between digital hyper-speed and the human capacity for critical thinking and reflection. The analysis demonstrated that the great vulnerability of contemporary society lies in the persistence of the ultimate error: the (futile) attempt to manage complex systems through control logics that are only adequate for complicated systems (Dominici, 2017).

The tyranny of concreteness and the illusion that AI can eliminate error culminate in serious ethical challenges, notably the slow erosion of civil liberties in an environment of algorithmic surveillance and consumerism. It has been found that the great mistake is also the attempt to eliminate emergence, which is, by nature, unpredictable and intrinsic to the complexity of life (Dominici, 2023).

In response to this scenario, the article reaffirms the need for a new humanism as a strategic and cultural project. This humanism transcends technocentrism, proposing a reorientation of the human mindset toward the acceptance of uncertainty and the ability to inhabit complexity, learning to expect the unexpected (Dominici, 2023). Such a change requires an educational revolution that shifts the focus from technical know-how to knowing how to be and knowing how to act, methodologically integrating error, doubt, and emergence into the training process. Only then can the hypervelocity of the network be tamed by critical reflection, autonomy be restored, and civil liberties be defended from their progressive and/or total erosion.

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