



# Exit (digital) humanity: Critical notes on the anthropological foundations of “digital humanism”

Antonio Lucci<sup>a</sup>, Andrea Osti<sup>a,b,\*</sup>

<sup>a</sup> Department of Philosophy and Educational Sciences (DFE), University of Turin, Via Sant’Ottavio, 20, Torino 10124, Italy

<sup>b</sup> Département Humanisme Numérique, Collège des Bernardins, 20, Rue de Poissy, Paris 75005, Italy

## ARTICLE INFO

### Keywords:

Digital humanism  
Humanism  
Neolithic  
Anthropology of technology  
Luddism  
Neo-luddism

## ABSTRACT

This paper evaluates the historical-anthropological and ethical underpinnings of the concept of “digital humanism.” Our inquiry begins with a reconstructive analysis (§1), focusing on three pivotal works defining digital humanism. The objective is to expose shared characteristics shaping the notions of “human being” and “humanity.” Moving forward, our investigation employs anthropological-evolutionary (§2) and individual-cognitive (§3) perspectives to discern how cultural-historical contingencies shape the implicit understanding of the “human being” that forms the foundation for digital humanism. As an illustrative case study, we delve into Luddism (§4) to illuminate the potential and limitations of adopting a critical stance towards digital humanism. Through a thorough analysis, encompassing both efficacy and implicit anthropological elements, our goal is to extract ethical implications (§5) pertinent to our broader objective. This examination reveals the interplay between cultural-historical contingencies and anthropological constants in shaping assumptions about the “human being” within the context of digital humanism. In conclusion, our paper contributes to a nuanced understanding of the implicit assumptions permeating the digital humanism discourse. We advocate for a more critical and reflective engagement with the foundational concepts of digital humanism, urging scholars and practitioners to navigate the complexities of its historical-anthropological and ethical dimensions.

## 1. Introduction

In this paper, we intend to critique the historical-anthropological and ethical nature of some implicit assumptions we see at work where the concept of “digital humanism” is used. We will focus on the foundational idea of “humanism” that underlies the locution “digital humanism.” Initially (§1), our aim is reconstructive. By examining three works that we consider paradigmatic for the definition of digital humanism, we aim to elucidate how the notions of “human being” and “humanity” underlying them can be identified through shared characteristics. Subsequently, we will subject these characteristics to scrutiny from an anthropological-evolutionary standpoint (§2) and an individual-cognitive (§3) perspective. Our overarching goal is to investigate how certain presumptions concerning the concept of “human being,” which we contend are products of cultural-historical contingencies rather than anthropological constants, serve as the underpinnings for digital humanism and merit critical examination.

As an example of such critical examination – which, by its extremity, can paradigmatically elucidate both the potentials and limitations of a

critical stance towards digital humanism – we shall examine the phenomenon of Luddism (§4). Through a comprehensive analysis of this phenomenon, encompassing its efficacy and the implicit and unspoken elements from an anthropological perspective, we aim to derive plausible ethical implications (§5) pertinent to our subject matter.

## 2. Digital humanism: a survey of his implicit anthropological elements

To clarify our starting point, it proves instructive to engage with Martin Heidegger’s renowned *Letter on Humanism* (1949). Heidegger, as widely acknowledged, argues in the Letter that every discourse on humanism implicitly entails a conception of “human being,” an underpinning idea of *humanitas*: “All [forms of humanism] agree in this, that the *humanitas* of *homo humanus* is determined with regard to an already established interpretation of nature, history, world, and the ground of the world, that is of beings as a whole” (Heidegger, 1998, p. 245). We believe that Heidegger here makes a decisive point: to understand the theoretical framework of any “humanism” requires the

\* Corresponding author at: Department of Philosophy and Educational Sciences (DFE), University of Turin, Via Sant’Ottavio, 20, Torino 10124, Italy.

E-mail addresses: [antonio.lucci@unito.it](mailto:antonio.lucci@unito.it) (A. Lucci), [andrea.osti@unito.it](mailto:andrea.osti@unito.it) (A. Osti).

elucidation of the presupposed image of “human being.” However, where our perspective diverges from Heidegger lies in our characterization of any assumption about the purported essence of the human being that fails to interrogate its “truth” as inherently metaphysical (namely, a specific interpretation of “being” provided in both historic-philosophical and theoretical terms). Indeed, we posit that beneath the veneer of all humanism lies not merely a metaphysics but an implicit anthropology, that is, a set of assumptions that remain unarticulated yet are tacitly taken for granted and positioned as the ultimate foundation about what a human being is and should be, how it behaves and should behave, how it creates intersubjective collectives, and delineate its relationships with the surrounding world and self. This covert anthropology operates both descriptively and normatively: by establishing a specific, albeit unexpressed, conception of the “human being” as an unquestioned foundation within a given philosophical discourse, it not only defines the human but also demarcates deviations from it: once specific characteristics are assumed as defining the human being, subsequent delineations can be made, e.g., the animal, the monstrous, the insane, the criminal, the deviant. This theoretical maneuver marks their distinctions from the “standard” (cf. Agamben, 1998, pp. 130–143).

What is the implicit anthropology of discourses on digital humanism? Given the extensive literature on the subject (cf., e.g., Fuchs, 2022; Werthner et al., 2022; Bertolaso et al., 2022), our analysis will delve into exemplary positions to elucidate their anthropological implications.

Three pivotal texts, selected for their significance within distinct linguistic and academic spheres, namely the French (Doueihi), the English (the Vienna Manifesto), and the German (Nida-Rümelin/Weidenfeld), will be examined to discern their implicit anthropological frameworks. The *Vienna Manifesto for Digital Humanism* (2019), a concise and deliberately programmatic document, serves as one focal point. Additionally, Milad Doueihi’s seminal work *Pour un Humanisme Numérique* (Doueihi, 2011), renowned for its impact on Francophone debates, constitutes another critical source. Finally, the revised and expanded edition of Nida-Rümelin and Weidenfeld’s book *Digitaler Humanismus* (2018): *Was kann und darf künstliche Intelligenz? Ein Plädoyer für digitalen Humanismus* (Nida-Rümelin & Weidenfeld, 2023), released in October 2023, is a crucial text within the German academic and linguistic context. These selected texts are considered landmark contributions to the ongoing discourse on digital humanism.

The forthcoming analysis will focus on the theses and how they are conveyed through the authors’ stylistic and metaphorical choices. In examining the first text chronologically chosen, authored by Milad Doueihi, a prominent theme under consideration is the spatial revolution that digitization has brought into our daily lives (Doueihi, 2011, p. 12). According to the author, one of the most important outcomes of digital technologies is the rethinking of the spaces we inhabit, which are no longer confined to physical dimensions but extend into the virtual domain: “Digital humanism is thus the expression of this emerging virtual urbanism.”<sup>1</sup> (Doueihi, 2011, p. 16). In addition to urbanism, Doueihi frequently references “architecture”<sup>2</sup> (Doueihi, 2011, p. 16), observing that the advent of digital technologies and related intersubjective spaces, such as social networks, compels individuals to conceptualize space not merely in physical terms but as a hybrid entity: “The neighborhood also takes into account the hybridization of the territory and living space”<sup>3</sup> (Doueihi, 2011, p. 51). While Doueihi’s arguments do not overtly exhibit technophobic or anthropological-conservative overtones, they recurrently emphasize

what human beings might inevitably forfeit in the transition to digital modes of interaction. Regarding space, there is a discernible concern for a particular form of stability, accentuated by frequent references to the city and the “village” (in resonance with the McLuhanian “global village”), which are deemed endangered. Furthermore, the emphasis lies on an unavoidable relationship shift toward increased mobility (Doueihi, 2011, p. 135). Doueihi posits settled humanity and relationships with “neighbors,” i.e., those sharing the same spatial location (and likely possessing common language, beliefs, and social and cultural-national origin), as the optimal and standard initial situation against which the transformations brought about by digital technologies are evaluated.

Even concerning friendship, to a greater extent, Doueihi’s “humanist” discourse seems to align itself with an implicitly normative advocacy of a “classical” anthropological model, considered as the standard of reference (thus in an implicitly normative way). The author underscores how the classical model of friendship, as exemplified by Aristotle’s *Ethics* and Cicero’s *De amicitia*, is gradually being lost due to the transformative impact of digital technologies on our intersubjective relationships (Doueihi, 2011, pp. 91–97): “If classical friendship is a qualitative relationship that overcomes the ‘meanness’ disdained by Cicero, digital friendship remains subject to the inevitable and even constitutive calculation of the digital environment”<sup>4</sup> (Doueihi, 2011, p. 94). Notably, Doueihi does not explicitly engage with the fact that the theories mentioned above are the result of a social context characterized by ontological distinctions (reflecting a political relationship of brutal subjugation) between free and enslaved individuals, between men and women, between citizens and non-citizens. This historical context renders the concept of friendship extremely limited and, in some respects, exclusionary. The author, however, takes Aristotle’s and Cicero’s human being as the normative standard without thematizing that it is a male, adult, free, Western human being. The relationships woven by them are presented as optimal, the deviations as forms of degeneration.

Even more conservative, not to say reactionary, perspectives become apparent in the text authored by Nida-Rümelin and Weidenfeld (2018), titled *Digitaler Humanismus. Eine Ethik für das Zeitalter der künstlichen Intelligenz*. We will examine here the expanded version released in German in October 2023, titled *Was kann und darf künstliche Intelligenz? Ein Plädoyer für digitalen Humanismus*. The authors’ stance is unmistakably articulated right from the preface: “Digital technologies play the same role as other technologies in the history of our civilization: they neither change the essence of man nor the human condition. They are merely tools for shaping our lives”<sup>5</sup> (Nida-Rümelin & Weidenfeld, 2023, pp. 16–17).

At the heart of this line of reasoning lies a specific anthropological assumption: the belief that no technology can retroact on human beings, influence their way of feeling and perceiving themselves and the surrounding world. According to this viewpoint, technology is “merely” (“lediglich”) a tool – a stance that applies universally to all technologies, regardless of their historical, gendered, class-based, or cultural nuances. This anthropologically substantializing perspective, resistant to recognizing differences in the impact of technology across various contexts, is reflected in many of the examples, metaphors, and linguistic choices adopted by the two authors. The centrality of the family structure founded on blood ties, for instance, is uncritically reaffirmed in the following example, reflecting a consequent axiological primacy: “Parents have special duties towards their children. This constitutes their

<sup>1</sup> “L’humanisme numérique est ainsi l’expression de cet urbanisme virtuel naissante” [All translations from the texts cited in languages other than English are by the two authors].

<sup>2</sup> “architecture”.

<sup>3</sup> “Le voisinage tient compte aussi de l’hybridation du territoire et du espace habitable.”

<sup>4</sup> “Si l’amitié classique est une relation qualitative, une relation qui surmonte la “mesquinité” méprisée par Cicéron, l’amitié numérique reste sujette au calcul inévitable et même constitutif de l’environnement numérique.”

<sup>5</sup> “Digitale Technologien spielen die gleiche Rolle wie andere Technologien in unserer Zivilisationsgeschichte auch: Sie verändern weder den Wesenskern des Menschen, noch die *conditio humana*. Sie sind lediglich Werkzeuge für seine Lebensgestaltung.”

role as parents towards these children. Neither the teacher nor the parents have the same duties towards children from other classes or families. The fact that children from another school class or another family might need help more than one's students or children does not change anything about the duties regarding one's students or the other children"<sup>6</sup> (Nida-Rümelin & Weidenfeld, 2023, p. 94). The two authors also employ an ableist vocabulary, negatively calling the robot in the film *Ex Machina* (UK, 2015) "An intelligent autistic"<sup>7</sup> (Nida-Rümelin & Weidenfeld, 2023, p. 96). They go further to substantiate their theses – specifically, in acknowledging a distinction between agency in the virtual world as ontologically different from agency in the material world – by pathologizing opposing viewpoints: "It is part of a person's rationality to distinguish between reality and fiction, even in the digital age. Anyone unable to do this must ultimately be diagnosed with psychosis."<sup>8</sup> (Nida-Rümelin & Weidenfeld, 2023, p. 133).

In this particular case, our aim is not solely to accuse the authors of disqualifying positions contrary to their own through a potentially hazardous appeal to the realm of pathology but rather to critique their position for dismissing alternative ways of thinking – in this case, agency and spatiality – as unworthy of discussion when those perspectives differ from the authors' vision of human beings. Incidentally, the permeability and threshold of indistinction between virtual and material spaces is a recognized reality in contemporary discussions, evidenced by the increasing resonance of debates on violence in the virtual world within ethical and legal studies (Striano, 2024).

The foundation underpinning Nida-Rümelin and Weidenfeld's text appears to be heavily influenced by taken-for-granted anthropological-political premises. This is exemplified by the following two statements: "Optimization calculations are incompatible with the constitutional order of the Federal Republic of Germany and generally with the humane core of a civil, democratic order based on the rule of law"<sup>9</sup> (Nida-Rümelin & Weidenfeld, 2023, p. 103), and "The focus is not on maximizing the intersubjective user sum, but on securing individual rights and freedoms"<sup>10</sup> (Nida-Rümelin & Weidenfeld, 2023, p. 105). These quotes indicate a reciprocal collapse of ethical, political, and anthropological categories onto each other. As suggested by a specific constitution of a particular nation-state, the presented status quo is identified (implicitly) as the measure indicating what a "civil democratic order" should encompass, with the paramount goal of securing individual rights and freedoms. The optimal form of the human being is here conceived as the product of the political reality of the nation-state, shaped according to the model of liberal capitalist democracies centered on the concept of the individual. As demonstrated by the quoted passages, the implicit anthropology behind the concept of "digital humanism," as articulated (and recently reaffirmed) by Nida-Rümelin and Weidenfeld, is tied to a specific idea of human beings: modern individuals, citizens of a modern capitalist, liberal, individualist state (implying a Euro- and androcentric model).

Though mitigated in some points, these ideas also exist in the Vienna

<sup>6</sup> "Eltern haben besonderen Pflichten gegenüber ihren Kindern. Das macht ihre Rolle als Eltern gegenüber diesen Kindern aus. Weder die Lehrerin noch die Eltern haben dieselben Pflichten gegenüber Kindern aus anderen Klassen oder einer anderen Familie. Die Tatsache, dass Kinder aus einer anderen Schulkategorie oder aus einer anderen Familie möglicherweise hilfsbedürftiger wären als die eigenen Schüler oder Kinder, ändert nichts an den eigenen Schülern oder den anderen Kindern gegenüber."

<sup>7</sup> "ein intelligenter Autist."

<sup>8</sup> "Es gehört zur Rationalität einer Person, auch im digitalen Zeitalter zwischen Realität und Fiktion zu unterscheiden. Wem dies nicht gelingt, dem muss schließlich eine Psychose attestiert werden."

<sup>9</sup> "Optimierungskalküle sind mit der Verfassungsordnung der Bundesrepublik Deutschland und generell dem humanen Kern einer zivilen rechtsstaatlichen, demokratischen Ordnung nicht vereinbar."

<sup>10</sup> "Nicht die Maximierung der intersubjektiven Nutzersumme steht im Vordergrund, sondern die Sicherung individueller Rechte und Freiheiten."

Manifesto. This programmatic document outlines the perceived challenges and starting points for digital humanism articulated by scholars from various disciplines. In the opening remarks, the Manifesto argues, "Digital technologies are disrupting societies and questioning our understanding of what it means to be human" (Werthner et al., 2022, p. xi). This statement carries a double assumption: first, it assumes that the digital is dangerous; second, it implies a consensus on the definition of what "it means to be human," suggesting a shared understanding of the distinctive anthropological characteristics of humanity. When the Manifesto appeals to "encourage our academic communities, as well as industrial leaders, politicians, policymakers, and professional societies all around the globe, to actively participate in policy formation" (Werthner et al., 2022, p. xi), it is clear that the target audience is not citizenship (or "humanity," as one might expect from a "humanist" manifesto) in general, but different hegemonic social formations typical of the Euro-American world. Compared to Nida-Rümelin and Weidenfeld's text, however, the Vienna Manifesto deserves credit for declaratively addressing the "co-evolution of technology and humankind" (Werthner et al., 2022, p. xi) and acknowledging the importance of environmental considerations and broad-scale IT education. However, its primary emphasis remains on capitalist economic dynamics of production: "This disruption simultaneously creates and threatens jobs, produces and destroys wealth [...]. It is necessary to restore market competitiveness as tech monopolies concentrate market power and stifle innovation" (Werthner et al., 2022, pp. xi–xii).

Summarizing the analysis of the three texts considered, it seems possible to argue that the implicit – or rather, unexamined – assumptions in the discourse on digital humanism revolve around a specific idea of "humanity" that is presupposed to it without being questioned. Despite variations in perspective among different authors, this common ground portrays a human being who views technology as a tool and the surrounding world, including non-human actors, as the backdrop of their own story. Relationships such as kinship, connections to one's living space, production dynamics, and historical prerequisites of intersubjectivity are given for granted, almost as if they were epiphenomena of a more general "human nature." This paper aims to develop a critique of the implicit anthropological ideas embedded in modern digital humanisms. It proposes a model that involves minimal anthropological substantializations when considering the relationship between humans and technology.

### 3. Coming out of the neolithic

When compared with the evolutionary timeline of the *Homo sapiens* species, the history of settled humanity covers a minimal portion of it. What has been called the "Neolithic revolution" (although more accurately described as a protracted process embedded in the *longue durée* of many millennia and occurring in different places and different ways), the long process of sedentarization of human beings, which began about the twelfth millennium B.C., accounts for a mere 5 percent (Scott, 2017, p. 5) of the approximately 200,000-year history of the human species. This trajectory's prevailing narrative suggests a linear, progressive evolutionary path, ostensibly transitioning humanity from a primitive, precarious, and disadvantaged state to a more advanced and sheltered one. This narrative portrays a journey from a condition akin to what early social contract theorists envisioned as a "state of nature" toward a stage in the ongoing process of hominization *en route* to civilization (Graeber & Wengrow, 2021, especially chapter 5).

Recent archaeological and paleohistorical research and new discoveries have challenged the traditional narrative. The process of sedentarization led, particularly during the initial phase of the Neolithic, to an evident deterioration of humanity's living conditions. Skeletons unearthed from the early large sedentary settlements exhibit significant reductions in stature compared to those from the Paleolithic era (only in the 19th century did humanity regain an average stature in line with Paleolithic and Mesolithic standards, cf. Nathan Cohen, 2008, p. 485).

This reduction in height suggests poor nutrition, a conclusion supported by the compromised dental health of individuals from that period and other evidence derived from discovered bone remains (Nathan Cohen, 2008, pp. 484–495). The likely cause for this decline was the shift to agriculture, especially the cultivation of cereals, which required substantial time, resources, and energy, diverting attention from hunting, fishing, and gathering and leading to a less varied diet (Wittwer-Backofen & Tomo, 2008). Despite the demographic surge known as the Neolithic Demographic Transition (NDT), there was a simultaneous exponential increase in mortality rates in childhood and adulthood (Bandy, 2008, p. 334). In short, individuals during the Neolithic era lived less and worse than their Paleolithic conspecifics.

The psychic repercussions for both mothers and children resulting from an increased birthrate that was, however, always matched by the same psychic and attentional resources on the part of the mother have aptly been labeled the “disaster of Neolithic mothers” (Sloterdijk, 2016, pp. 715–720). According to the German philosopher Peter Sloterdijk, this era gave rise to both mythologies surrounding the Great Mother (serving as a symbolic supplement for children in a perpetual deficit of parental attention) and narratives relating to fratricide as a foundational event (Sloterdijk, 2016, p. 718). The cohabitation of numerous humans with animals in confined spaces also initiated the great age of epidemics, a concept previously inconceivable in the context of small nomadic groups of hunters and gatherers. At the same time, the specialization of roles within settled agricultural communities resulted in a reinforcement of gender roles (Scott, 2017, pp. 87–92) and the establishment of hierarchies among individuals and groups (Scott, 2017, pp. 150–182). This development was primarily driven by two factors:

Neolithic settlements, predominantly reliant on cereal monocultures, became swiftly subject to control and taxation. The subtraction of quantifiable commodities, such as grains, as a duty or punishment for failing to provide services to a central authority, could significantly affect populations more than in contexts where agriculture was not the primary subsistence source. This differed from the Paleolithic and Mesolithic settlements, where food resources stemmed from various survival strategies, including hunting, fishing, gathering wild fruits and vegetables, and occasional cultivation.

Compared to the Paleolithic era, the actions of individuals in the Neolithic had enduring effects on a territory hosting a collective for several generations. This allowed family groups to inherit the symbolic benefits accumulated by members, even those distant in time, fostering the emergence of the concept of genealogy and the blood bond among relatives beyond their immediate presence in space and time (Macho, 2005).

We hypothesize that, even though the chapter of human history centered around Neolithic humanity, as summarized earlier, being neither the lengthiest nor the most blissful in the annals of our species, it profoundly influenced our conception of human being and *humanitas*, including the underlying foundations of the various forms of digital humanism previously considered. Our assertion does not imply that Neolithic humanity serves as an anthropological constant universally representing diverse historical subjects up to the present day. We do not contend that the model of “humanity” grounding humanistic discourses has remained consistent across epochs. Instead, we propose a correlation and a form of inheritance between specific attributes of Neolithic humanity and the modes of self-representation underlying distinct definitions of digital humanism.

The remarkable success of Neolithic *humanitas* in shaping a comprehensive self-representation as humanity can be attributed significantly to the advent of writing. Writing made its historical debut as a product of Neolithic humanity, emerging as its primary medium for self-representation. The recorded portion of human history conveyed through myths, epics, and historiography and indirectly through lists of hierarchies and foodstuffs was composed by those who lived in “urban” conditions. These entities regarded a narrative portraying them as the only possible reality. The so-called “barbarians,” excluded from the

confines of cities and states, were depicted as barely human, serving as contrasting figures against which the inhabitants of so-called civilized collectives could define themselves (Macho, 2007). While recognizing the ongoing deconstruction of this narrative, particularly by archaeology and palaeoanthropology, it is still possible to draw a lesson from it. Over the past six millennia, “Neolithic” human beings have crafted a narrative aligning their identity with humanity at large (Scott, 2017, p. 13).

The rationale for revisiting the Neolithic revolution in a paper on digital humanism lies in our belief that providing a brief overview of this crucial phase in the evolutionary history of our species allows us to underscore a crucial point. Values often deemed “properly human,” assumed even in discourses on digital humanism, are far from being anthropological constants; instead, they are outcomes of a historical trajectory marked by contingencies, impositions, and declines in quality of life. Treating these values as an anthropological destiny or intrinsic to our essence as “humans” requiring preservation entails an undue ontologization of specific historical facts. In other words, the (implicit) *humanitas* presented by digital humanism is a *humanitas* of the neolithic type: not only because data about human “nature” are taken for granted that represent the legacy of the process of sedentarization (the existence of modern states, wage labor, the mononuclear family based on the blood bond), but also because this implicitly endorses a particular anthropological model (that, precisely, of the neolithic), presenting itself as the exclusive form of *humanitas* among many possibilities. We argue that reflecting on the relationships between the values characterizing human beings and digital technologies necessitates an anthropological inquiry. Through a well-informed critique encompassing anthropological and cultural-historical dimensions, we aim to question what is “properly human.” This inquiry seeks to explore whether such attributes exist independently of the relationships that specific human beings establish within their historical, social, cultural, and, in our case, technical frameworks of reference.

#### 4. Getting out of one’s skin

As demonstrated earlier, the implicit value model inherent in contemporary discourses on digital humanism takes a set of categories inherited from Neolithic humanity for granted. In the following, we aim to illustrate how this model aligns with a particular epistemological perspective on human subjectivity that we term “essentialist model.”

By using this expression, we refer to a specific conceptualization of the human being. In this perspective, the human is abstracted from the particular historical-cultural contexts in which it is always situated. Instead, it is analyzed to unveil its presumed original nature deduced from its physio-psychic structure. Subsequently, it is reintegrated into the world of life, perceived as an inert scenario that remains constant – a stage on which the drama of homination unfolds. Once defined, the fundamental characteristics of the human actor are considered resistant to change even if the scenario were to undergo alterations. This epistemological stance presents a static framework where elements external to *anthropos* are passively known and manipulated, lacking the potential to become agents capable of exerting a retroactive effect on the constitution of subjectivity and altering its ways of being in the world. Our aim is not to adopt a postmodern stance of total constructivism but rather to align with an interactionist position derived from modern studies that relate the problem of the agency of non-human actors to specifically anthropological matters.

The theory of the so-called “agency” of images has been a central topic in debates within both (visual) anthropology and visual studies for at least two decades. This theory can be seen as the development of the extended mind hypothesis formulated by Clark and David Chalmers (1998). According to the authors, the mind is not confined to the boundaries of the body or brain but extends to include external environmental conditions and tools. Horst Bredekamp radicalizes this hypothesis in his *Image Acts: A Systematic Approach to Visual Agency*

(Bredekamp, 2021), arguing that the images themselves can function as subjects, regardless of humans' symbolic projection onto them. In what he terms the "substitutive image act," Bredekamp describes a feedback effect between the human subject and the iconic subject, resulting in a series of inversion and exchange processes where the subject becomes the image, and the image becomes the subject: "In the process of substitution, bodies are treated as images and images as bodies" (Bredekamp, 2021, p. 137). This aspect was also examined in detail by Alfred Gell in his groundbreaking study *Art and Agency* (Gell, 1998), in which he attempted to anthropologically justify a theory of non-human agency, as well as by the Italian anthropologist Carlo Severi in his study on the concept of "objet-personne" (Severi, 2017).<sup>11</sup>

The most radical conclusions of the theory of extended agency are found in the work of authors like Lambros Malafouris. In his comprehensive investigation presented in *How Things Shape the Mind* (Malafouris, 2016), Malafouris, an archaeologist, builds on Clark and Chalmers' hypothesis, radicalizing it by suggesting that an extended mind implies the possibility of conceiving an "extended self."

This concept articulates a subject that exists not only in a trivial relationship with the external environment and tools but, even more radically, as a nexus of its own body and the tools it employs. These tools become integral components of both its agency and processes of subjectivation. We will call this perspective the "entangled model." Malafouris elucidates this notion of an "extended self" through an insightful passage dedicated to the primitive hunter's activity of crafting stones to create weapons:

More specifically, my suggestion is that the stone held in the knapper's hand did much more than simply and passively offering the necessary 'conditions of satisfaction' to the knapper's intention. Keeping in line with the *enactive* dimension of Material Engagement, I believe that the directed action of stone knapping does not simply execute but rather it *brings forth* the knapper's intention. The decision about where to place the next blow, and how much force to use, is not taken by the knapper in isolation; it is not even processed internally. The flaking intention is constituted, at least partially, by the stone itself. Information about the stone is not internally represented and processed by the brain to form the representational content of the knapper's intentional stance. Instead, the stone, like the knapper's body, is an integral and complementary part of the intention to knap. In the case of knapping, intentionality is not a property that stops at the boundary of the biological organism. The best angles for flake removal are neither identified nor imagined in the knapper's head before the act. The topography of the knapping activity and the accurate aiming of a powerful blow is neither pre-planned nor recollected; it is embodied and therefore needs, instead, to be *discovered* in action. This is not to deny that knapping as a form of embodied manual skill is intrinsically associated with, follows from, and leads to, specific patterns of neural activation. It is simply a way to avoid the wrong image of a central neural engine that merely uses the stone and the human body to materialize, and, thus, externalize pre-formed ideas and plans (Malafouris, 2016, pp. 17–18).

Malafouris's perspective is intriguing as it strongly supports the standpoint we aim to oppose to the "essentialist" position evoked at the beginning of the paragraph. While the "essentialist" viewpoint abstracts the human being at the anthropological level, considering it deducible from its physio-psychic structure and unchanging in the face of varying scenarios, Malafouris' entangled model of subjectivity recognizes the historical plasticity of humans beyond unwarranted anthropological substantializations. According to this perspective, human beings emerge as a specific historical outcome of interactions with technical tools and distinct social, historical, and cultural contexts. Rather than viewing the human as the starting point, it is considered the point of arrival of these processes of interaction and manipulation. In Section 6. we will push the implications of these theories to their extremes through the concept of

"Human-Technology-Entanglements" (HTE), which encapsulates not only a historically and culturally determined relationship between a specific type of humanity and a set of technologies but also the related processes of homination, self-representation, and horizon of moral agentivity that unfolds from it.

This perspective brings us to the heart of our argument: the critique of anthropological universals underlying the concept of digital humanism. As we have seen, the discourse on digital humanism often assumes the existence of "specific human" values. It posits the need to protect the human being from technological developments that might pervert its "authentic" nature. Contrarily, our position asserts that there is no fixed "authentic" human nature at the level of the anthropology of technology. Furthermore, evaluating technical tools and technologies from an external standpoint is deemed impractical since these tools alter us as we utilize them. The analysis, therefore, must focus on the plane of interaction, adopting a "transductive relation" perspective, as per Simondon's vocabulary (Simondon, 2020). This involves examining the subjectivation effects that the use of certain technologies causes in human beings who engage with them.

To illustrate this approach, we will explore the case study of "Luddisms" as political, practical, and theoretical stances that, at times, starkly highlight how processes of homination are intrinsically linked to the historical-material conditions of the diffusion and development of a given technology. We will also explore how, in many Luddite positions, a problem analogous to that of digital humanism surfaces: some forms of Luddism posit a return to an "authentic" human, often represented by pre-Neolithic humanity, despite their attempts to distance themselves from classic "humanistic" models. Through this confrontation with Luddism, we aim to lay the groundwork for the formulation of "techno-luddite" ethics. By avoiding a fixed concept of *humanitas* (whether it be the Neolithic or pre-Neolithic), we aim to critique the implicit "humanism" in neo-Luddite positions. This is because we reject the idea that a foundational idea of *humanitas* exists that predates technologies.

## 5. Luddism as a historical and cultural phenomenon

The emergence of the Luddite Club in New York City between December 2022 and early 2023 has garnered attention through various news outlets. This group of teenagers, belonging to "Gen-Z" or the "digital natives" generation, has made a conscious decision to do without their smartphones and embrace more intimate, technology-free relationships. The members of the Luddite Club aim to encourage reflection on the addictive nature of technology and inspire others to step back from digital dependencies (Ma, 2022). It is noteworthy that individuals who grew up in the digital age, typically associated with heavy technology use, are actively seeking alternatives to digital mediation in their social interactions. The choice of the name Luddite Club signals a deliberate connection to the anti-technological and ecological ethos commonly associated with neo-Luddite movements.

The historical phenomenon of Luddism, however, characterized by the destruction of mechanical looms by frame-breakers between 1811 and 1813, is a complex movement that cannot be simplistically reduced to a mere anti-technological or ecological stance. Contrary to common misconceptions, Luddism was not solely a reaction against the introduction of new looms into the production process (cf. Hobsbawm, 1952). As noted by Thompson (1964, pp. 549–552), Luddism was a response to oppressive living conditions that had pushed highly skilled workers and their families to the brink but also represented a radical form of consciousness and disdain against the new merchants allied with the government and *laissez-faire* policies.

The movement criticized the immoral and illicit enrichment of these merchants. The decline of "paternalistic" measures designed to protect the ancient privileges of cobblers, weavers, and other textile workers played a crucial role. These workers had rites of initiation, set apprenticeship periods, and a strong moral consciousness of their skills. The alliance between the government and the new machine owners was

<sup>11</sup> "object-person".

perceived as the enemy, leading to acts of sabotage against the new forms of oppression embodied by the looms and factories that replaced small workshops and homemade production. It is crucial to note that not all machines were destroyed, and Luddites often specified which machines were to be spared, depending on the behavior of the owner. A constitutionalist component within Luddism sought to reclaim ancient rights guaranteed on paper by the Crown. The central grievance, however, remained clear: new technologies were perceived as benefiting the masters at the expense of the workers (Müller, 2021), but what was disappearing above all was a particular form of life and moral order (Sale, 1996).

Examining the roots of historical Luddism through a cultural-historical lens reveals that the movement was also structured around a specific “rhetoric” and claim to symbolic and mythical identity (Jones, 2006). Ned Ludd, the legendary king and leader of the revolt that swept through Yorkshire, southern Lancashire, and the district of Nottingham between 1811 and 1817, became the symbolic defender of ancient workers’ rights. In ballads sung in taverns, he was portrayed as the executor of sentences against the “engines of mischief” and the executing organ of the workers’ “Trade” (Binfield, 2004, p. 99). But he was also the author of the numerous threatening letters sent to factory owners, creating the impression that a ubiquitous leader was coordinating wide-ranging actions while remaining invisible. The predominantly oral culture of the Luddites, the opacity of the sources, the climate of secrecy marked by reticence, oaths, and secret societies, the unreliability of the reports provided by government informants, and the support of the population: all these elements have led historians to characterize the movement as a continuity with the establishment of clandestine and illegal proto-syndicalist societies (Thompson, 1964, pp. 472–496). This occurred in a climate of fear on the part of government authorities regarding Jacobinist subversive movements, as evidenced by the well-known *Combination Acts*. The movement is also seen as a genuine subculture inherent to the ancient labor guilds, characterized by carnivalesque instances of “street theater,” subversive satire, cross-dressing, and symbolic violence (Jones, 2006, pp. 45–76).

Due to the secretive nature of the Luddite movement, it is challenging to pinpoint “historical Luddism” as a coherent anti-technological theory, as it left behind no theoretical manifestos. The romanticization of Luddites in the nineteenth century further obscured their true nature, creating myths that had to contend with varying rhetorical strategies employed by intellectuals who sought to reclaim their image (Jones, 2006, pp. 77–104). However, it is important to emphasize in line with our thesis that, as Thompson argued, Luddism had at its core a kind of “general theory of moral economy” (Thompson, 1964, p. 548). In other words, while not explicitly articulating the anti-technology sentiments that would characterize later neoLuddite claims, Luddism was grounded in a moral worldview. The act of physically destroying machines served as both a vindication of a moral order and a rejection of the prevailing material order. The hammer, the great Enoch of the Luddites (Binfield, 2004, p. 54), represented the symbol of their struggle against the hated machines, but it was also what came down on them: “One kind of technology could, the symbolism said, ultimately smash the other” (Jones, 2006, p. 70).

In the 1990s, Luddism underwent a transformation, evolving into a specific theoretical and political stance embraced by a diverse group of intellectuals. These thinkers interpreted technology as an all-encompassing, autonomous, potentially destructive force that had spun out of control, posing threats to humans and other living beings (Kryszczuk & Wenzel, 2017; Dietrich, 2021; Rauch, 2021; Tunç & Öcal, 2023). In this new context, Luddism shifted away from its historical strategy of sabotage to become a “rhetorical” strategy for anti-modernist, anti-capitalist, and countercultural self-legitimization (Frobish, 2002). Neo-Luddism traces its roots back to the counterculture of the 1960s, particularly what the cyberpunk writer and theorist Douglas Rushkoff (1994) referred to as the “New-Age type” (see also Bookchin, 1995, pp. 92–93). This perspective encompassed apophenic

paranoia and the belief that the techno-industrial system, initially represented by mass media (Mander, 1978; Postman, 1986; Winn, 1977) and later by emerging information technology, underpinned the dehumanization of contemporary society.

At the core of the neoLuddite imaginary is the perception that technology has gained autonomy (Winner, 1977), often articulated as the “Frankenstein Syndrome” by Best and Kellner (2001, pp. 158–164) or conceived as a repetitive, dehumanizing, impersonal, monotonous, and unvarying force, rooted in the “myth of the machine” (Nelson, 1974, p. 9; Mumford, 1970). Ecological concerns also play a crucial role, as evident in Edward Abbey’s text (2000), which will become the bible of radical environmentalism and eco-sabotage. The term “Luddite” entered common parlance during a historical period where opposition to technology was primarily directed at digital infrastructure and globalization under America’s neoliberal hegemony. In this context, the term began to encompass all those who opposed the introduction of new technologies, not necessarily resorting to violence or sabotage. Neo-Luddite theorists like Kirkpatrick Sale (1996) and Chellis Glendinning (1990a) explicitly connected historical Luddism to contemporary forms of resistance. Glendinning (1990b, pp.180–181) includes within neoLuddites those suffering from the technological changes caused by globalization, engaging in an ideological battle against the notion of progress that threatens traditional social relations. In contrast to historical Luddites, neo-Luddites oppose the destructive impacts of technology on the planet and other living species. According to Sale, they employ various strategies of “resistance,” such as green policies, ecological restoration, wilderness preservation, alternative technologies, defense of traditional ways of living, support for healthy and safe food, and advocacy for minorities endangered by globalization. Sale sees neo-Luddism not as a formal movement but as “a range of ideas and sentiments” (Sale, 1996, p. 241) encompassing intellectuals skeptical, critical, anxious, or distrustful of the Industrial Revolution. The “heroes” and precursors of neoLuddism, according to Sale, include figures like Jacques Ellul, Martin Heidegger, Paul Goodman, Herbert Marcuse, Ernst F. Schumacher, and Neil Postman.

The situation became more complicated with the arrest of Ted Kaczynski, who was 1995 identified as the Unabomber, associating the most radical instances of Luddism with terrorism and extremist branches of anarchism (Rauch, 2021, p. 110). Kaczynski had kept the United States in suspense for almost two decades and, a year before his arrest, had managed to publish a significant part of his Manifesto against the techno-industrial society in the pages of the *Washington Post*. This event opened a breach in the public debate, and neo-Luddite intellectuals faced the risk of being accused of collusion and sympathy with terrorism and radical anarchist groups (cf. Kaczynski et al., 2019, pp. 104–111). Following the decline of the anti-globalization movement and the 2007 financial crisis, the neo-Luddite momentum eventually waned. In the predominantly American public debate, “Luddite” turned into a sort of slur, a means to discredit opponents as anti-progressives, ignorant, and even barbaric (Rauch, 2021, p. 113).

## 6. Neo-Luddite theories: human-technology-entanglement (HTE) and humanism

In our study, it is relevant to investigate whether inherent in Luddite and neo-Luddite positions is a claim to a specific notion of humanity. In doing so, we aim to discern whether such positions can be considered a critique of the concept of “digital humanism.” Section 5 outlined the key features of historical Luddism as a political and cultural phenomenon. We will now conceptually differentiate “radical” Luddism, relating it to anarcho-primitivism, from the more strictly neo-Luddite positions and “methodological Luddism” to understand the extent and nature of these positions and whether they imply a certain kind of stance toward digital humanism.

Here, we define “Human-Technology-Entanglement” (HTE) as the historically and culturally determined relationship between a specific

type of humanity and a set of technologies. An HTE encompasses the material configuration and arrangement, including production relations and scientific-technical knowledge, associated with the widespread adoption of a set of technologies. An illustrative example of HTE is the introduction of the automobile as a large-scale technology, that is, in societies where cooperation and interdependence among different parts and functions of production, labor, and knowledge are fundamentally interconnected and essential to the overall functioning of society as a whole. The large-scale adoption of the automobile technology modifies the overall historical situation in which it is introduced. This technology necessitates various material arrangements, including road networks, fuel extraction and refining, mass production factories, extraction and processing of materials for the technology, electric power infrastructure, and more. All of this is required to make this technology operational. Furthermore, these material arrangements significantly impact the redefinition of territories and the reconfiguration of urban spaces, influencing divisions of cities into suburbs, the extension of cities along roads, and the cementing of green areas. Additionally, technology alters the perception of time. It introduces new possibilities, such as separating home and work, allowing geographically distant activities to be conducted within the same day, and more (McLuhan, 1964, pp. 200–201). It also demands technical and engineering knowledge and skills, along with users' awareness of traffic laws. At the same time, adopting such technology fosters labor policies characterized by specific production relations, involving owners of car manufacturers, oil-exporting countries, investors, shareholders, wage workers employed in the production chain, road maintenance and management personnel, mechanics, and others.

Building on our analysis of historical Luddism, we will adopt the perspective that a specific HTE contributes to forming a relative "moral economy." This term refers to an ethical and agentic horizon inherent to morally connoted subjects related to a defined set of technologies. A "moral economy" constitutes the entire expectations, goals, aspirations, and representations humans generate through their retroactive relationship with specific technologies (as discussed in Section 3). As Winner argues, "technologies provide a positive content to the area of life in which they are applied, enhancing certain ends, denying or even destroying others" (Winner, 1977, p. 29). A moral economy does not emerge from an HTE in a uniform or deterministic manner. Several "moral economies" can coexist within an HTE, often in varying degrees of conflict, as each technology brings about inherent changes on a broader socioeconomic scale, yet the user always shapes its appropriation. The appropriation of a given technology is not carried out by an abstract subject; instead, factors such as gender, culture, social status, and educational level play a crucial role in structuring the diverse uses and appropriations of the same set of technologies within a given HTE. This diversity is why subcultures may express anti-hegemonic values within the same HTE.

Any alteration affecting the material arrangement and disposition of a specific technology also consequently impacts everything that is complicated or entangled with that technology. For instance, an increase in fuel prices or a financial crisis may lead to a decrease in car travel, changes in the labor market, new investments, and potential layoffs, similar to how a landslide might obstruct a move from one country to another, subsequently altering the entire agentic horizon of particular communities. When introducing a new technology is substantial enough to establish a new HTE, there can simultaneously be the demise of a previous moral economy and the emergence of new ones. This prompted the Luddites to take action: introducing new technologies had conflicted with specific moral orders. Just as the materiality of technology can manifest itself during malfunctions or breakdowns (Milani, 2022, pp. 41–94), so moral economies emerge at moments of breakdown or malfunction of a given HTE: a new technology supplants a "way of life" and a universe of "values," or its malfunction produces consistent and radical changes in people's lives. Both radical Luddism and anarcho-primitivists aim to oppose two moral macro-economies: the

primitive and the "Neolithic." In both cases, the decline of hunter-gatherer communities, linked to the HTE of agriculture, aligns with the dismantling of a moral order (the "savage") and the debut of a new moral order ("civilization" and "domestication"). Our exploration aims to extract insights from Luddite and primitivist positions. On the one hand, the strength of these positions lies in their reaffirmation of a form of political agency in relation to HTEs. Luddism does treat technology as a mere fetish for symbolic violence: material destruction represents a mode of political agency toward an entire HTE and, therefore, the moral order arising from its specific appropriation. This is where the aspiration to reclaim a specific human form, deemed "authentic" and lost, comes into play: a conflict emerges between moral orders and anthropological ideals. However, we find a problematic aspect in these positions. Despite their critique of humanism, they rely on the essentializing assumption (Aaltola, 2010, p. 169) that the human was or is "authentically" human only within a certain HTE. In this sense, we will inevitably present a critique of these positions, emphasizing that such thinking amounts to postulating either a "state of nature" or an inherent essence in the human, akin to what we have encountered concerning digital humanisms.

### 6.1. Radical luddism: tearing down the technological-industrial system (Kaczynski)

In our examination, radical Luddism is primarily associated with Kaczynski's theories. Although the term "Luddism" may be a label applied by external observers (see, for example, Kaczynski, 2010, p. 6), exploring the relationship between moral order and HTE through some of the Unabomber's writings is helpful. This form of Luddism is advocated as a "materialist" and revolutionary strategy, focusing on concrete goals to collapse techno-industrial society (Kaczynski, 2020). Here, by "materialism," we do not primarily refer to a specific interpretation of philosophical materialism but instead to Luddite tactics, viewed as a counter-response to the material and organic aspects of HTE. This strain of Luddism is a minority perspective and entails significant risks of social disorder, mainly due to its "terrorist" implications. A targeted attack on technological-industrial society, strategically designed to precipitate its collapse, does not entail a withdrawal but actions aimed at striking at the vital organs of the techno-industrial society (such as the electricity, communications, and computer industries). According to Kaczynski, this will contribute to the demise of the entire societal body (Kaczynski, 2010b). The collapse of techno-industrial society is envisioned to coincide with the collapse of civilization, representing the moral order intrinsic to this type of HTE (Kaczynski, 2010c). The breakdown of such a moral order is understood as a return or reaffirmation of the savage, the primitive, i.e., freedom (Kaczynski, 2010, pp. 277; 298; 304ff; 2010a: §§93–96; 111–113; 125–135). The destruction of the industrial HTE, encompassing both the material conditions and the associated moral order, entails the assertion of a positive pole—a specific "essence" of humanity that radical Luddism strives to uphold. In his Manifesto (Kaczynski, 2010a), Kaczynski argues that the techno-industrial system leads to the erosion of human dignity and autonomy (Kaczynski, 2010a, § 2) by thwarting the "power process" (Kaczynski, 2010a, § 33 ff). In industrial society, individuals are compelled to forsake authentic goals achievable through personal effort. Instead, their endeavors are redirected toward surrogate activities, resulting in profound pathological discontent, frustration, and depression. Industrial society ostensibly fulfills basic individual needs but demands, in return, unquestioning obedience, leading to relinquishment of autonomy (Kaczynski, 2010a, §117). Reclaiming mastery over their power process allows individuals to regain freedom and autonomy.

By "freedom" we mean the opportunity to go through the power process [...] without interference, manipulation or supervision from anyone, especially from any large organization. Freedom means being in control (either as an individual or as a member of a SMALL group) of the life-and-death issues of one's existence: food, clothing, shelter and

defense against whatever threats there may be in one's environment. Freedom means having power; not the power to control other people but the power to control the circumstances of one's own life (Kaczynski, 2010a, §94).

### 6.2. Before civilization: anarcho-primitivism

The connections between radical Luddism and primitivism<sup>12</sup> can be witnessed in the correspondence between John Zerzan, a prominent figure in anarchist primitivism, and Kaczynski (2010d, pp. 145–149), although the latter repeated skepticism towards the myths and distortions of primitivists<sup>13</sup> and the former progressively distanced himself from the individualistic positions of the Unabomber. Anarcho-primitivism advocates a return to pre-industrial society through a radical anti-tech critique, which is why we included it in the (neo)Luddite universe, as acknowledged by Zerzan (2008, p. 63) himself. According to Zerzan (2008), the original sin of humanity lies in the agricultural revolution, what we referred to as “neolithic humanity.”<sup>14</sup> This revolution, according to Zerzan, has had a more profound impact on humanity than the Industrial Revolution, giving rise to symbolic thinking, sedentariness, domestication, domination over nature, the creation of gender binarism, relations of subordination, war, division of labor, slavery, urbanization— all stemming from the form of hominization produced by agricultural technology. In a more radical vein, Zerzan even theorizes that language itself introduces the fundamental mediation that separates Neolithic humanity from the immediacy of its world environment, suggesting that symbolic thought is a radical form of domination. Zerzan posits that anarchism is inherently primitive because, according to him, humanity spent most of its time in a natural state of anarchy (Zerzan, 2008, p. 63)—an existence characterized by leisure, egalitarianism, gender equality, and the absence of organized violence.

### 6.3. Neoluddites

Kaczynski's radical Luddite stance stands apart from the more “theoretical” and “rhetorical” claims made by neoLuddite intellectuals (see especially Kaczynski, 2020, pp. 131–137). Neo-Luddism is not a uniform phenomenon but encompasses a spectrum of perspectives ranging from ecological romanticism to New Age spiritualism, from conservative labor policies to more radical forms of anarchism. Generally, neo-Luddism reflects a hostile stance toward scientific and technological advancements, division of labor based on expert knowledge, and automation, robotics, and artificial intelligence (Kryszczuk/ Welzel, 2017, p. 54).<sup>15</sup> As for the idea of human being proposed by neo-Luddites, they explicitly reject the label of “humanism,” equating it with anthropocentrism. Instead, they advocate for a biocentric and holistic perspective on humanity, viewing Earth as a community of all living things and emphasizing the need for humans to find their place within this totality (Kryszczuk and Welzel, 2017, p. 57). Such positions are often associated with primitivism and deep ecology (Aaltola, 2010;

<sup>12</sup> For a survey of primitivist theses and their relation to “green” anarchism see Aaltola (2010). Other exponents of primitivism may include Paul Shepard, John Fillis, and Richard Heinberg (cf. Zerzan, 2005).

<sup>13</sup> Kaczynski (2010d) was critical of the anarcho-primitivist idealization of “hunter-gatherers,” but still believed that the primitive form of existence was still happier and more preferable than the current one.

<sup>14</sup> Zerzan (2008, p. 107; critically see also Bookchin, 1995, p. 137) identifies the turning point of the primitivist movement in the Man the Hunter conference organized in Chicago in 1969 by Richard Lee and Irvn DeVore, which was also attended by Marshall Sahlins. This event was followed by a key text for primitivism, Stone Age Economics (Sahlins, 2017). On the reception and importance of Sahlins' work, refer to Graeber (2017).

<sup>15</sup> For a neo-Luddite position on artificial intelligence, see especially Hunt-Bull (2006).

Bookchin, 1995). Sale (1996, p. 275), for instance, promotes a “tribal model of existence” based on an “apprenticeship with nature.” According to this perspective, humans must reclaim their place within the animal species and revalue the dignity of their physical needs. For neo-Luddism, in opposition to radical Luddism, overcoming technological-industrial society need not be inherently violent; even the success of the nineteenth-century Luddites, from the neoLuddite viewpoint, lies not in winning but in their resistance (Sale, 1996, p. 269). While violence might have efficacy, neo-Luddites recognize its limitations in inciting a strong response from authorities. Despite their attempt to distance themselves from anthropocentrism, neo-Luddites present a normative conception of humanity. Kirkpatrick Sale characterizes the Luddite worldview as a “morally informed ideology” (Sale, 1996, pp. 275–277). It is upon this normative assumption that neo-Luddites base their stance on technology. Neo-Luddism posits that technology inherently embodies a particular worldview or, in our terms, that a certain HTE simultaneously constitutes a “moral economy.” The prevailing moral economy aligns with a supremacist, rationalistic, and utilitarian ideology in which humans see themselves as the masters of nature. Glendinning insists that neoLuddite thinking involves “thinking about humanity and new ways of relating to life” (Glendinning, 1990a, p. 4). For neoLuddites, technology is not inherently evil; instead, different types of technologies reflect and embody different forms of humanity. The normative criterion is to advocate for technologies that are not destructive and harmful to humans, their communities, and other living beings. This normative stance guides the acceptance or rejection of specific technologies: among the latter, Glendinning lists nuclear technologies, chemical technologies, engineering-genetic technologies, television, electronic technologies, and emerging digital technologies. On the other hand, technologies in which people are directly involved in their use should be promoted.<sup>16</sup> These technologies should be flexible (allowing varied uses), understandable (transparent operation for users), should not cause dependency (users can do without them at any time), and should promote political freedom, economic justice, and ecological justice.

### 6.4. “Methodological” luddism: the “withdrawal” from technology

Within the spectrum of neo-Luddite perspectives, one can discern a type of Luddism characterized more by a “methodology” than a specific political program (Garcia et al., 2018). This is the “methodological Luddism” put forth by Langdon Winner (1977). Unlike destroying or sabotaging machines, methodological Luddism is a methodology aimed at subjecting technology to “political scrutiny.”

The distinctiveness of this form of Luddism lies in its insistence on a normative critique of technology. “To question technology and to submit it to evaluation in a technophilic age is to be a neoLuddite” (Coulthard & Keller, 2012, p. 266). The critical examination must consider, however, how technology is appropriated or integrated into the lives of its users. This involves assessing the relationship between technology and factors such as gender, class, and social status, as well as its design in everyday life's problems, solutions, hopes, and fears. Moreover, a normative critique must consider the long-term effects of technology on future generations (Coulthard & Keller, 2012, pp. 266–267). In addition, this positioning should also evaluate the “pharmacological” nature of technologies: what is gained and what is lost through their use. As for the strategic and practical side, Winner clarifies that modern technology cannot be “torn down.” Instead, it can be “disconnected,” “unplugged,” or “defused.” This involves temporarily suspending dependence on a specific technology to gain insights into its nature and impact on humanity. From this space of suspension, new configurations of HTE can potentially emerge. The situationist defusing of a given technology here replaces the destructive matrix proper to

<sup>16</sup> The influence of the texts by Schumacher (1973) is clearly visible here.



historical and radical Luddism. Other forms of Luddism, for Winner, are just pure nihilism (Winner, 1977, pp. 330–331).

## 7. Defusing humanism: for a luddism beyond humanitas

All these expressions of Luddism are forms of radical critique. Their merit is twofold. Firstly, they underscore the intrinsic connection between each HTE and a specific “moral economy” of the human. Secondly, they present a practical and political opportunity to scrutinize a particular moral order associated with an HTE. In essence, in its various forms, Luddism asserts that all technology engenders homination – a distinct kind of “humanity” and a specific “moral” order. It also paves the way for potential inquiries into that moral order by pointing towards alternative kinds of humanity and moral economies. When Luddites critique an existing HTE and its associated moral order, they aspire to explore diverse HTEs and alternative moral orders. On the other hand, the contemporary forms of Luddism that we have examined seem to grapple with an internal contradiction: they reject humanism (understood as anthropocentrism, or the assertion of the centrality and dominance of human beings over other living beings and the environment), yet simultaneously exhibit deep humanistic tendencies.<sup>17</sup> The term “humanism” is contentious (Soper, 1986, pp. 9–23) and has been criticized, particularly in 20th-century French intellectual circles, by post-structuralist philosophers such as Foucault, Derrida, and Althusser. However, it has also seen positive reevaluation by existentialism, especially Sartre, and the subsequent Marxist wave following the publication of Marx’s *Economic-Philosophical Manuscripts* (Fromm, 1965; Schaff, 1970, pp. 167–182; Thompson, 2014). The core of the theoretical debate lies in a fundamental concept of humanism, summarized as follows: humanism “appeals (positively) to the notion of a core humanity or common essential features in terms of which human beings can be defined and understood, thus (negatively) to concepts (“alienation,” “inauthenticity,” “reification,” etc.) designates, and intended to explain, the perversion or ‘loss of this common being” (Soper, 1986, pp. 11–12). While humanists, on the basis of this assumption, can appeal to the categories of “self-consciousness,” “agency,” “choice,” and “responsibility,” anti-humanists argue that humanist positions imply pre-scientific philosophical anthropology (i.e., a certain kind of ideology). On the contrary, a viable anthropology is possible only by abandoning the concept of the human subject (Soper, 1986, pp. 12).

In our interpretation, Luddites rightly reject humanism because they associate it with human dominance over nature, the supremacy of reason over animal instincts and local traditions, and a belief in progress and technological control. However, they often find themselves in the paradoxical position of embracing the notion that the Industrial Revolution led to a separation between human ends and technologies. As a result, Luddisms tend to embody forms of “romantic humanism” (Soper, 1986, p. 16). These Luddites not only appeal to “authentically” human values like freedom and autonomy but also assert that these values have been lost and must be reclaimed historically. In other words, these positions inadvertently adopt a humanist stance by criticizing humanism.

The issue with contemporary Luddites lies in the form of anthropological essentialism. A similar criticism applies to primitivism, where reliance on grand and often oversimplified narratives, linear causality, unidirectional historical change, and technological determinism all represent oversimplifications of the historical-anthropological complexity of humanity. Kaczynski appeals to the savage, Zerzan to hunter-gatherer ancestors, and Sale and Glendinning to the tribal life model. Primitivists posit the “primitive” humanity as the only “true”: pristine, free, innocent. They contrast a fallen humanity (neolithic humanity or the neolithic moral order) with an original or redeemed

humanity (cf. Kaczynski, 2010d for neo-Luddism’s links to Christianity). Moreover, the essentialism of contemporary Luddites distorts the image of “other” cultures by attributing paradisiacal and ahistorical dimensions to them, suggesting they should be the ethical and anthropological ideals for humanity in our own culture (Bookchin, 1995, p. 120; Smith, 2002). However, this idealized humanity is challenging to find today in supposedly “pristine” cultures, and, as Graeber and Wengrow (2021) have recently shown, it may never have existed.

Another criticism could be directed towards methodological Luddism. While it avoids considering an abstract or supposedly lost primitive humanity, it may distort the notion of Luddism through the strategy of “technological withdrawal” (Winner, 1977, p. 332). This approach might lead to systematic disconnections, which could be more at hand and compatible with concrete and immediate practices, as exemplified by the Luddite Club mentioned in § 3. However, we argue that such an approach underestimates the materiality of technology in terms of political agency. According to Winner, “the most interesting parts of the technological order [...] are not those found in the structure of physical apparatus. [...] I have tried to suggest that the technologies of concern are actually forms of life - patterns of human consciousness and behavior adapted to a rational, productive design. Luddism seen in this context would seldom refer to dismantling any piece of machinery” (Winner, 1977, p. 331). Winner suggests that the best course of action is to refuse to fix technological systems when they fail and not to tear down these means physically. A (methodologically) Luddite strategy toward digital technologies, for example, might involve preparing more groups of people to adapt to the absence of the Internet (Paniagua, 2021). However, this approach implies an almost “apocalyptic” acceptance that industrial technology will sooner or later fail.

What, then, can be salvaged of the Luddite spirit? Let us distinguish our proposal from the types of Luddism considered earlier and identify with a “techno-Luddite” position, which we will articulate in three points:

- (1) First, we must avoid demonizing rhetoric. Changes, especially the most radical ones, need a common grammar – popular culture and subcultures that support and give symbolic form to any struggle and claim over other and possible configurations of HTE. Rhetoric constitutes the imaginary, and the latter gives shape to any anti-hegemonic claim: for historical Luddites, Ned Ludd was a symbolic bonding agent, in the literal sense of the term - he was what held workers together, what they identified with, and what allowed them to threaten the machine owners. Precisely because neo-Luddite positions operate in the absence of collective symbolic horizons, we believe that they are implicitly individualist or, in the most extreme cases, sectarian. For sabotage to be actively supported by a large number of people, it is necessary that a large group of shared feelings can legitimize it.
- (2) Second, we argue that Luddism only occurs when a material intervention exists. “Technological withdrawal” and the development of critical science may not be sufficient to determine a Luddite position. Byrne (2013), for instance, suggests that the demonization of Luddism is a symptom of the repressed principles of our age concerning a potential mass rebellion and concrete demand for economic justice. In a recent essay on the “conviviality” of technologies (Ilich, 1973), Milani (2022) emphasizes how the malfunctioning of a technical object reveals its materiality and how little we know about the machines we surround ourselves with due to relationships of domination, subordination and delegation of knowledge. Above all, the hacker culture and pedagogy proposed by Milani express a way to reappropriate technologies in a libertarian manner to establish mutually supportive relationships. As we see it, this proposal can and ought to coexist as a political strategy and antihegemonic practice with our form of “techno-Luddism” – that is, with deliberate forms of tampering, destruction, and sabotage (cf. Malm, 2021) that

<sup>17</sup> According to Bookchin (1995, p. 85), on the contrary, primitivists and radical ecologists are examples of anti-humanism. The relationship between humanism and anthropocentrism is highlighted by Kopnina (2019).

presuppose, just as in the case of historical Luddism, a strong “conviviality” and knowledge of the technologies around us. It involves combining a practice of active criticism - even destructive criticism - against those technologies considered unacceptable (concerning conditions of oppression, exploitation, and domination) with a reflexive critical practice aimed at establishing a proper critical pedagogy of technology. In this sense, techno-material knowledge of devices, their potentials, and their feedback effects on the structures of subjectivity will constitute the fundamental step that makes it possible to move beyond unreflective hatred of the machine toward a grounded critique that has a clear understanding from the outset of what kinds of alternative technologies (and related entangled subjectivities) could and should replace the sabotaged ones.

- (3) Finally, we argue that the “techno-Luddite” option must decisively reject the temptation to appeal to a determinate essence of the human. No humanity is more genuine, authentic, or original than another, nor will there ever be. To reason in such terms is to universally extend an idea of the human to every conceivable humanity. At most, we believe exercising imagination is desirable, envisioning multiple post-humanities – and a given technological entanglement – that are possible and preferable to the current one. However, these should not be viewed as forms of humanity that are more genuine, authentic, or closer to a supposed “nature.” Ironically, returning to the savage might imply a return to barbarism; radical ecogism and primitivism might have Malthusian political counterparts in their attempt to decentralize the human. Moreover, even in situations where the technological-industrial system appears to create a “monolithic” humanity organically, efforts should be made to assess the multiple “moral orders” and anti-hegemonic values produced within an HTE (Salvia, 2022). Any technology is always context-dependent, and anthropology has strived in recent decades to show that technology never produces the same effects in different cultural contexts (Biscaldi & Matera, 2021).

## 8. Conclusions

In our exploration, we have aimed to critique what we perceive as a significant oversight in the current discourses surrounding “digital humanism,” specifically, the underlying conception of the human being (and associated values). To appropriately frame the inquiry into the potential (as well as the adequacy and potential necessity) of “digital humanism,” we contend that it is essential to challenge the notion that the values we attribute to “humanity” are ahistorical and timeless. Digital humanism, if it aims to avoid adopting metaphysical and political stances that merely echo a particular concept of humanity, ill-suited to address the challenges posed by the current ecological crisis, must refrain from aligning itself with expressions such as the following: “Digital humanism leaves the church in the village. It emphasizes the far-reaching immutability of human nature and the conditions for human development”<sup>18</sup> (Nida-Rümelin & Weidenfeld, 2023, p. 254).

Such a standpoint, which we consider paradigmatic of Nida-Rümelin and Weidenfeld’s theses (it is no coincidence that it is placed at the conclusion of their book and remains unaltered in the second edition of it), first of all, reveals the conservative horizon of the analyses already from the metaphorology chosen, as indicated by the reference to the church and the village hamlet. Second, it again assumes the invariability of human nature, which would derive a parallel invariability of the ethical and value horizon. Suppose human nature were also invariable (a position on which there is no consensus, cf., e.g., the classic Chomsky-

Foucault 1971 debate), to posit that the human value horizon would be a direct derivation of that nature would be to ignore how human beings construct their values historically and intersubjectively. Beyond that, and such is the step forward we intend to propose, human beings construct their values technically: that is, with and in dependence on the devices with which they are confronted, and which constitute for the latter, in turn, a kind of necessary access to the world. To consider the human being as antecedent, both chronologically and ontologically, respect to the techniques that structure its ways of being in the world is to make an undue operation of abstraction: to take the human being as they are in a given historical, social, technical and cultural context, to absolutize them as the paradigm of the Human being tout court by subtracting from them such historical determinations, and then to project them onto all of humanity, regardless of its historical, political, geographical, etc. situativity.

The human being exists only as a product of the relationship between Self and technique; they exist insofar as they are this relationship. A digital humanism that wants to be adapted to our age should always think together with specific humans and specific techniques in their mutual entanglement: only in this way is it possible to get out of a conservative position, which unduly substantializes the human and at the same time misunderstands the anthropogenetic potential of techniques.

At the same time, an operation of decentralization concerning humans is necessary if one is to take an ethical position that places at its basis the value of the survival of the sapiens species on planet Earth. Considering values “properly human” only because they are derived from anthropologically taken-for-granted bases risks assuming an untenable value horizon in the face of the present crises. “Neolithic” values such as considering procreation per se a good (even in the face of an overpopulated world with increasingly scarce resources), privileging the well-being of human subjects over non-human ones (even where ecological knowledge indicates how it is not possible to consider species as independent units), and the consideration of family and blood ties as the undisputed basis of socialization, where they are historical constructs, represent increasingly less ethically tenable positions when one wants to think of a future biosphere in which sapiens life is still possible.

To do this, digital humanism is probably necessary. However, the ground on which this can develop must first be cleared of many anthropological removals and implicit assumptions. Therefore, to make digital humanism possible, first of all, it is necessary to develop an anthropology of technology that clears the field of prejudices and implicit positions that lead to substantializing one specific idea of human being and humanity as if it were the only one. Only then will it be possible to think without prejudice about the entanglement between a specific humanity and that particular form of technique that is digital, thus going on to analyze its effects of subjectification.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## References

- Aaltola, E., Franks, B., & Wilson, M. (2010). Green anarchy: Deep ecology and primitivism. *Anarchy and moral philosophy* (pp. 161–185). London: Palgrave Macmillan.
- Abbey, E. (2000). *The monkey wrench gang [1975]*. New York: Harper Collins Perennial Classics.
- Agamben, G. (1998). *Homo sacer. sovereign power and bare life*. Stanford: Stanford University Press.
- Bandy, M. (2008). Global patterns of early village development. In: J.P. Bocquet-Appel, O.Bar-Yosef (eds.). *The neolithic demographic transition and its consequences* (pp. 333–357). New York: Springer.
- Best, S., & Kellner, D. (2001). *The postmodern adventure: Science, technology, and cultural studies at the third millennium*. New York: The Guilford Press.

<sup>18</sup> “Der digitale Humanismus lässt die Kirche im Dorf. Er betont die weitgehende Unveränderlichkeit der Menschennatur und der Bedingungen einer humanen Entwicklung.”

- Bertolaso, M., Capone, L., & Rodríguez-Lluesma, C. (2022). *Digital humanism: A human-centric approach to digital technologies*. London: Palgrave.
- Binfield, K. (2004). *Writings of the luddites*. Baltimore: John Hopkins University Press.
- Biscaldi, A., & Matera, V. (2021). *Antropologia dei social media*. Roma: Carocci.
- Bookchin, M. (1995). *Re-enchanting humanity. A defense of the human spirit against anti-humanism, misanthropy, mysticism and primitivism*. London-New York: Cassell.
- Bredenkamp, H. (2021). *Image acts: A systematic approach to visual agency*. Berlin/New York: De Gruyter.
- Byrne, R. (2013). A Nod to Ned Ludd. *The Baffler*, 23, 120–128.
- Clark, A., & Chalmers, D. (1998). The extended mind. *Analysis*, 58(1), 7–19.
- Coulthard, D., & Keller, S. (2012). Technophilia, neo-Luddism, eDependency and the judgement of Thamus. *Journal of Information, Communication and Ethics in Society*, 10(4), 262–272.
- Diederich, J., & Diederich, J. (2021). Neo-Luddism. *The psychology of artificial superintelligence* (pp. 73–93). Cham: Springer.
- Doueihi, M. (2011). *Pour un humanisme numérique*. Paris: Seuil.
- Frobish, T. S. (2002). Neo-luddites and their rhetorical paradox. *Peace Review: A Journal of Social Justice*, 14(2), 207–215. <https://doi.org/10.1080/10402650220140247>
- Fromm, E. (1965). *Socialist humanism: an international symposium*. Garden City/New York: Doubleday & Company Inc.
- Fuchs, C. (2022). *Digital humanism. a philosophy for 21stCentury digital society*. Bingley (UK): Emerald.
- Garcia, J. L., Mateus Jerónimo, H., & Mesquita Carvalho, T. (2018). Methodological Luddism: A concept for tying degrowth to the assessment and regulation of technologies. *Journal of Cleaner Production*, 197, 1647–1653.
- Gell, A. (1998). *Art and agency. an anthropological theory*. Oxford: Clarendon Press.
- Glendinning, C. (1990a). Notes toward a Neo-Luddite Manifesto. *Utne Reader*, 38 (March–April 1990), 50–53.
- Glendinning, C. (1990b). *When technology wounds: the human consequences of progress*. New York: William Morrow.
- Graeber, D., & Sahlins, M. (2017). Foreword to the Routledge classics edition. *Stone age economics*. New York: Routledge.
- Graeber, D., & Wengrow, D. (2021). *The dawn of everything. a new history of humanity*. Penguin: London.
- Heidegger, M., & Heidegger, M. (1998). Letter on 'Humanism. *Pathmarks*. Cambridge (UK): William McNeil. Cambridge University Press. ed. by.
- Hobsbawm, E. J. (1952). The machine breakers. *Past & Present*, 1, 57–70. n.
- Hunt-Bull N. (2006). "A Neo-Luddite manifesto; or why i do not love robots." Retrieved October 26, 2020.
- Ilich, I. (1973). *Tools for conviviality*. London: Calder and Boyars.
- Jones, S. E. (2006). *Against technology: from the luddites to neo-luddism*. New York: Routledge.
- Kaczynski, T. (2010). *Technological slavery. the collected writings of theodore J.Kaczynski, a. k.a. "The unabomber"*. Port Townsend: Feral House.
- Kaczynski, T. (2010a). Industrial society and its future (ISAIF). *Technological Slavery*, 36–121.
- Kaczynski, T. (2010b). Hit where it hurts. *Technological Slavery*, 246–253.
- Kaczynski, T. (2010c). The coming revolution. *Technological Slavery*, 206–221.
- Kaczynski, T. (2010d). The truth about primitive life: A critique of anarcho-primitivism. *Technological Slavery*, 126–189.
- Kaczynski, T. (2020). *Anti-tech revolution*. Scottsdale: Fitch & Medison.
- Kaczynski, T., et al. (2019). *Contro la civiltà tecnologica. gli scritti di ted kaczynski e il caso unabomber*. Torino: Nautilus.
- Kryszczuk, M. D., & Wenzel, M. (2017). Neo-Luddism: Contemporary work and beyond. *Przegląd Socjologiczny*, 66(4), 45–65.
- Kopnina, H. (2019). Anthropocentrism and post-humanism. In Hilary Callan (Ed.), *The international encyclopedia of anthropology*. John Wiley & Sons, Ltd.
- Ma, L. (2022). The anti-social network: These teens are ditching instagram, snapchat and TikTok. *NYCity News Service*. December 15.
- Malafouris, L. (2016). *How things shape the mind. a theory of material engagement*. Cambridge (MA): MIT Press.
- Mander, J. (1978). *Four arguments for the elimination of television*. New York: Morrow Quill Paperbacks.
- Macho, T., Weigel, S., Parnes, O., Vedder, U., & Willer, S. (2005). Künftige Generationen. Zur Futurisierung der Ethik in der Moderne. *Generation. zur genealogie des konzepts – konzepte von genealogie* (pp. 315–324). München: Wilhelm Fink.
- Macho, T., von der Heiden, A., & Vogl, J. (2007). Gute Hirten, schlechte Hirten. Zu einem Leitmotiv politischer Zoologie. *Politische zoologie* (pp. 71–88). Zürich/Berlin: Diaphanes.
- Malm, A. (2021). *How to blow up a pipeline*. London/New York: Verso.
- McLuhan M. (1964). *Understanding media: The extensions of man*. New American Library: New York/Scarborough/London.
- Milani, C. (2022). *Tecnologie conviviali*. Milano: Eleuthera.
- Müller, G. (2021). *Breaking things at work: the luddites are right about why you hate your job*. London/New York: Verso Books.
- Mumford, L. (1970). *The myth of the machine. technics and human development*. New York: Harcourt Brace Jovanovich.
- Nathan Cohen, M. (2008). Implications of the neolithic demographic transition for world wide health and mortality in prehistory. J.P. Bocquet-Appel and O. Bar-Yosef (eds.), *The neolithic demographic transition and its consequences* (pp. 481–500). New York: Springer.
- Nelson, T. (1974). *Computer lib/dream machines*. Nelson.
- Nida-Rümelin, J., & Weidenfeld, N. (2018). *Digitaler humanismus. eine ethik für das zeitalter der künstlichen intelligenz*. München: Piper.
- Nida-Rümelin, J., & Weidenfeld, N. (2023). *Was kann und darf künstliche intelligenz. ein plädoyer für digitalen humanismus*. München: Piper.
- Paninagaya, E. G. (2021). *Error 404. ¿Preparados para un mundo sin internet?* Madrid: Debate.
- Postman, N. (1986). *Amusing ourselves to death: public discourse in the age of show business*. New York: Penguin Books.
- Rauch, J. (2021). We are All Post-Luddites Now. *Slow media. why slow is satisfying, sustainable, and smart* (pp. 99–121). New York: Oxford University Press.
- Rushkoff, D. (1994). *Cyberia: life in the trenches of hyperspace*. Manchester: Clinamen Press.
- Sahlins, M. (2017). *Stone age economics [1972]*. Abingdon/New York: Routledge.
- Sale, K. (1996). *Rebels against the future: the luddites and their war on the industrial revolution. lessons for the computer age*. Cambridge: Perseus Publishing.
- Salvia, M. (2022). *Interregno. iconografie del xxi secolo*. Roma: Nero.
- Ed. by Schaff, A., & Cohen, R. S. (1970). *Marxism and the human individual*. New York/San Francisco/London/Sydney/Toronto: McGraw-Hill Book Company. Ed. by.
- Schumacher, E. F. (1973). *Small is beautiful: a study of economics as if people mattered*. London: Blond and Briggs.
- Scott, J. C. (2017). *Against the grain. a deep history of the earliest states*. Yale: Yale University Press.
- Severi, C. (2017). *L'Objet-personne. une anthropologie de la croyance visuelle*. Paris: Éditions Rue d'Ulm.
- Simonon, G. (2020). *Individuation in light of notions of form and information*. Minneapolis/London: University of Minnesota Press.
- Sloterdijk, P. (2016). *Spheres. volume 3: foams. plural spherology*. Semiotext(e): Pasadena.
- Smith, M. (2002). The state of nature: the political philosophy of primitivism and the culture of contamination. *Environmental Values*, 11(4), 407–425.
- Soper, K. (1986). *Humanism and anti-humanism*. London/Melbourne/Sydney/Auckland/Johannesburg: Hutchinson.
- Striano, F., Edwards, M. L., & Palermos, S. O. (2024). The dangerous liaison between rape culture and information technologies: reality, virtuality, and responsibility in cyber-rapes. *Feminist philosophy and emerging technologies* (pp. 74–94). New York: Routledge.
- Thompson, E. P. (1964). *The making of the english working class*. New York: Vintage Books.
- Ed. by Thompson, E. P., & Winslow, C. (2014). *Socialist Humanism. E.P.Thompson and the making of the new left. essays & polemics* (pp. 49–88). New York: Monthly Review Press. Ed. by.
- Tunç, Y. E., & Öcal, A. T. (2023). Neo-Luddism in the Shadow of Luddism. *Perspectives on Global Development and Technology*, 22, 5–26.
- Vienna Manifesto on Digital Humanism, Werthner, H., Prem, E., Lee, E. A., & Ghezzi, C. (2019). *Perspectives on digital humanism, 2022* (pp. Xi–xiv). Cham: Springer.
- Werthner, H., Prem, E., Lee, E. A., & Ghezzi, C. (2022). *Perspectives on digital humanism*. Cham: Springer.
- Winn, M. (1977). *The plug-in drug: television, children, and the family*. New York: Viking Press.
- Winner, L. (1977). *Autonomous technology. technics-out-of-control as a theme in political thought*. Cambridge (MA)/London: The MIT Press.
- Wittwer-Backofen, U., Tomo, N., Bocquet-Appel, J. P., & Bar-Yosef, O. (2008). From health to civilization stress? in search for traces of a health transition during the Early neolithic in Europe. *The neolithic demographic transition and its consequences* (pp. 501–538). New York: Springer.
- Zerzan, J. (2005). *Against civilization*. Los Angeles: Feral House.
- Zerzan, J. (2008). *Twilight of the machines*. Townsend: Feral House.