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Climbing Out of the Abyss:
On Tearing Objects, Injecting Values, and Automating Work

“Do cave bears and hailstorms oppress us more than the secret
 police and thermonuclear weapons?”

Vilém Flusser¹

Tearing Objects

We humans have a complicated relationship with the world surrounding us. We tear things from their original contexts and transform them into more elaborate forms experienced in entirely new contexts. The initial context from which these things are torn is nature. This process of tearing and transforming is so thorough that the resulting things bear little resemblance to their original material essence. Everyday objects like smartphones and tablets, along with seemingly immaterial entities like the internet, the cloud, and artificial intelligence, have become radically detached from their material origins. These origins are made up of precious metals and rare minerals extracted from the Earth’s surface. The term *nature* as used here refers to the context of materials that exist on geological timescales, often called *deep time*, which vastly exceed the brief span of human timescales and form through Earth’s geological processes over millions of years without human intervention.

For Vilém Flusser (1980s/2017: 318), what exists in nature prior to human intervention looks to the human as an *unrealized value*, a problem. Technology acts as the human’s method of solving problems and realizing values, yet it often generates further problems in return due to the disproportionate waste it creates compared to the solutions it provides.

As Jussi Parikka (2015: 4) points out, understanding media materiality requires looking beyond immediate interactions with hardware to examine the geological components beneath, just as media criticism itself should extend beyond immediate engagement with technology. Nature and culture are not separate but deeply intertwined. Despite the complexity of our technological objects, which may suggest a sense of independence from natural conditions, our culture remains inextricably dependent on what the Earth can provide.

Microchips found across technology and infrastructure, from data centres to cruise missiles,

¹ Flusser, Vilém (2017). On Being Subject to Objects. In *Artforum: Essays*. Metaflux Publishing: 319.

smartphones to airplanes, are made from silicon extracted from quartz, a process that depends on industrial machinery whose own material origins eventually trace back to the Earth. Objects we surround ourselves with are entangled in a complex web of material transformations which inevitably lead back to sources drawn from above and below the Earth.

As we trace our technologies back to their geological roots, nature, with all its material resources, arguably becomes the fundamental variable shaping culture. Only within the existence and availability of natural resources does technology, and therefore culture, become viable. We shape natural materials and they shape us back until the feedback loop becomes unrecognizable. The Earth provides for and enables media technologies (Parikka 2015: 13) while humans design and enact the whole process. However, recognizing the material origins of media becomes increasingly challenging as a result of transformative operations that strip the material essence away from the objects we hold and the technology we use.

Technology mediates and shapes our experiences, but what mediates and shapes technology is our culture acting through natural resources. As Baruch Gottlieb notes, “design is not neutral and the material technology produced according to the design is not neutral” (2016: 296). In other words, what motivates design decisions — what our technologies are made from and what they are made for — always involves decisions about where to extract materials, whom the resulting value will serve, and who will eventually deal with the waste produced.

Excursion: Gelatin Silver Photography and Its Material Dependencies



Figure 1 Gelatin silver photograph of an abandoned quarry, Galway

This quarry was potentially abandoned because all reachable and/or profitable minerals and ores had been extracted, though the cause is unknown to the photographer.² A likely material extracted from this quarry—or if not here, from similar quarries worldwide—is quartzite, an abundant rock found just beneath the Earth's surface. Quarries and mines around the world also extract silver, primarily as a by-product of mining lead, copper, zinc, and gold ores. These same ores provide essential materials for batteries, electronics, electrical wiring, and corrosion-resistant components in modern technology, while silver plays a crucial role in film photography.



Figure 2 Gelatin silver photograph of Galway Bay, North Atlantic Ocean

The ocean smell from decomposing organic material is rather mild due to the high tide. It is common to harvest the ocean for salt around these areas. Salt is harvested for numerous reasons on a global scale—from food preservation and seasoning to chemical manufacturing. One specialized use involves photographic film: silver extracted from mines is chemically processed into silver nitrate and reacted with halide salts (obtained from brine deposits and salt water) to form the light-sensitive silver halide crystals essential to film photography.

² . All images were captured and printed in the darkroom by the author.



Figure 3 Gelatin silver photograph of sheep grazing, Connemara

Sheep are part of the landscape in many rural areas in Ireland and serve as informal mascots of the country. Around these parts, they are valued for their wool, which is transformed into sweaters. Globally, sheep are part of a huge livestock industry. As a byproduct of livestock processing, gelatin is extracted from the bones, flesh, and connective tissue of cattle, pigs, and sheep. Gelatin is not only used in diverse culinary applications but is also an indispensable substance in film photography, where it binds silver halide crystals to the film base.

All of these photographs are made using photographic film and printed in the darkroom using photographic paper, influenced by silver collected from mines, salt harvested from the ocean, and gelatin extracted from animals. However, just by looking at these images, it is nearly impossible to discern the material origins that make them possible. Silver, salt, and gelatin are torn from their original contexts (the Earth's crust, oceans, living beings) and transformed into something entirely different in both form and cultural value.

Digitization of these photographs and their presentation through pixel-based media introduces even more complex layers to the material transformations that make these images appear on your screens.

Injecting Values

The human lives in “the abyss between two worlds,” says Vilém Flusser (1980s/2017: 317) in his unpublished essay *On Being Subject to Objects* written in the latter half of the 1980s for Artforum.³ Throughout his writings, Flusser frequently resorted to the metaphor of the abyss to describe the alienation and otherness of humankind. The abyss, or abyssal zone, is an oceanographic term referring to the barren depths of ocean basins where light does not penetrate, oxygen levels are low, and life is scarce.

Humankind, of course, does not inhabit the abyssal zone; only a small number of life forms do. Isolated in their struggle for survival, these life forms develop unique mechanisms to endure such extreme conditions. Humans may not literally live in the abyssal zone, but in a certain sense, they are isolated from the rest of life on Earth. Instead of adapting to the unique conditions of their environment, humans want to transform the very conditions they live in. Humanity inhabits an antithetical abyss which extends in the opposite direction (travel into space is a good symptom of this). As an attempt to climb out of their abyss, Flusser (1980s/2017: 308) suggests that human existence is structured around a form of negation: humans look at one thing while imagining and desiring it to be something else.

Transforming things into other things is the human’s attempt to overcome its alienation and otherness, yet this attempt is ultimately in vain. As humans strive to climb out of the abyss, they find themselves pushed further into the depths of isolation and alienation. Referring to the *Vampyroteuthis Infernalis* (vampire squid from hell), which he locates in the abyssal zone, Flusser draws a provocative parallel with humans: “We are both ‘alienated’ beings: we are alienated from the ground and he from the sky. Ours are ‘analogue’ alienations” (Flusser, 2011: 45).

The two worlds that create the abyss where the human lives, as Flusser identified, are the world of phenomena and the world of values. While humans share the world of phenomena with other living beings, the world of values is a human-exclusive world. The struggle of the human is to overcome its alienation of living in between by bringing these two worlds together, or in Flusser’s words, by bringing *what is* and *what should be* together.⁴ Unlike other living beings, the human disturbs ecosystems when it walks into them as it cannot help but inject values into phenomena: “If a man walks in the forest, [...] his movement disturbs the complex system of motion, (the ‘ecosystem’), which is the forest. He breaks off a branch that stands in his way, turns it around, and uses it as a stick to break off further branches. He tears an object from its context, (he ‘pro-duces’ it), and he uses it to advance against its original context

³ The exact date of this essay is unknown. Flusser contributed regularly to Artforum from 1986, and *On Being Subject to Objects* was among his contributions that remained unpublished at the time. This piece, alongside others, was later published as part of the Metaflux anthology in 2017.

⁴ While in Flusser’s original typewritten manuscript, it is formulated as *what is* and *what ought to be*, in the Metaflux collection that brought together Flusser’s published and unpublished essays for Artforum, it is formulated as *what is* and *what should be*.

(he ‘applies’ it). This typically human gesture, transforming branches into sticks (nature into culture), this technical and/or artistic gesture, has an obvious purpose: to clear a path in the forest (to open a space for freedom). But understanding this gesture is not as simple” (Flusser 1980s/2017: 317).

The way the human attempts to bring the world of phenomena and values together is by removing an object from its context and advancing it “against its original context” (Flusser 1980s/2017: 317). The human presses values upon phenomena (Flusser 1980s/2017: 325). The branch appears to the human as a problem; it is not as it should be. The human projects the value *stick* onto the branch, seeing the potential tool within the branch. Flusser claims the motivation behind turning the branch into a stick is simple: the human does this to free itself from subjection to its surrounding phenomena. The stick becomes a human tool to clear paths, rather than the human being forced to navigate around the branch.

Flusser goes on to argue that “the production of cultural objects changes nature, man, and culture, [and it establishes a dependence of man upon culture]. It is also the source of knowledge (science) and it changes political and aesthetic values” (Flusser 1980s/2017: 321). After a while, stick making transcends or loses its original aim of clearing paths in the forest. As a result of what Flusser calls *creative giddiness*, the human strives to make sticks just for the sake of making better sticks. In the long line of stick production, the human aim evolves into making the most perfect stick. Detached from its original purpose, stick making becomes an end in itself.

As a result, the human becomes subject to its cultural objects in its desire to flee from being subject to natural objects (Flusser 1980s/2017: 323). Today, our relationship with cultural objects is more complex than ever. We can trace neither the phenomenal roots of our objects in nature nor the initial values pressed upon phenomena. Lost in creative giddiness as we advance our cultural objects, we have been neglecting the values meant to ensure our freedom from natural phenomena and help overcome alienation. “As far as values are concerned,” says Flusser, we are “in the Lower Palaeolithic era” (Flusser 1980s/2017: 327).

Our cultural objects may oppress and alienate us more while pushing us further into the depths of the abyss we desperately try to climb out of. As Flusser puts it “the stick may stand in one’s way just as much as the branch – only more so. It may stand in one’s way because it was placed there on purpose” (Flusser 1980s/2017: 319).

This reflects both a failure of technology and culture, as well as our inability to acknowledge this failure. In trying to use technology as our ladder out of the abyss, to free ourselves from the natural phenomena, we are paradoxically pushed deeper into the depths of the abyss, this time by becoming enslaved to cultural phenomena. Due to “enormously complex works of technology and art, and the equally complex immaterial structures sustaining them” (Flusser 1980s/2017: 323), we lose ourselves in the impressiveness of accumulated knowledge, technological creativity, and the desire for the ever

better. In doing so, we lose sight of how these very conditions not only fail to free humans from natural constraints but also introduce even more complex forms of limitations and oppressions in relation to material resources and the cultural reflexes. Wars are waged, bombs are dropped, and lives are ruined to gain control of oil, which still powers most of our tools, under the guise of democratic concerns. AI is thrown around as a buzzword to feed an economic bubble under the guise of investing in a technology that will solve our most notorious problems such as climate change, wars, hunger, and poverty while in reality it reinforces the intensity of these problems through increased ecological extraction, human labor exploitation, and class disparity. We remain very much subject to objects, both natural and cultural ones, now beyond our immediate control.

For Baruch Gottlieb (2018), freedom in one form or place inevitably reproduces itself as constraint in another form or context. Waste is an integral part of life but when it becomes excessive through scaling-up, it also scales the intensity of unfreedoms: “The capitalist narrative of social ‘progress’ through high technology is intentionally narrow. ‘Freedoms’ we are promised are always predicated on ‘unfreedoms’, discipline and order, unseen or overlooked, in the inner workings of the apparatus that provides the freedom. The shadow of this freedom is waste. Waste is freedom without agency” (Gottlieb 2018: 69).

When the modern human enters a forest, it does so with accumulated knowledge of what should become of branches, trees, and the land itself. If that accumulated knowledge tells us that branches should feed power plants, trees should become transmission towers or carbon offsets in a ledger, minerals beneath the land should turn into microchips, the surface should host data centers, rivers should cool down high-powered servers, the sky above should be filled with satellites, and a place across the world that people call home should become a landfill, have our cultural objects truly freed us from being subject to objects?

“If the purpose of technology and the arts is to make us freer, how is it possible to abuse them?” asks Flusser. “There must be some intrinsic contradiction in technology and the arts which permits this abuse” (Flusser 1980s/2017: 319-320). The contradiction is deceptively simple to understand. Technology and the arts create cultural objects, and these objects condition us in turn. While running away from subjection to natural phenomena, the human falls into subjection to cultural phenomena. Making a stick to clear a path through the forest evolves into the mass production of sticks in factories. Human labour becomes instrumental for sticks to exist. Flusser’s distinction between value-oriented and phenomenon-oriented advancement reveals the failure of technology: when work is pursued with degraded values, for instance, to serve capital accumulation, technology becomes another form of oppression instead of liberation.

Automating Work

Despite having rather pessimistic observations about the state of values, Flusser remains optimistic about the future of advancing them. This is thanks to *automation*, which now helps separate two phases of cultural production.⁵ In the first phase, “values were chosen and phenomena were examined with a view toward these values” (Flusser 1980s/2017: 324-325). In this phase, the human sees the branch as a problem and wants to turn it into a stick to gain more freedom in the forest. The second phase involves the gesture of forcing phenomena into values, turning branches into sticks. Automation, Flusser argues, reveals that only the first phase is truly human, while the second phase was falsely assumed to be a human gesture. If the work of turning branches into sticks can be delegated to automated machines, potentially, the human may not become so lost in the process of making ever-better sticks and instead turn its attention to the development of values that have been long-ignored. In this new equation, the first phase is called *programming* and the second phase *automation*, which replaces what used to be called *work*.

However, the decades since Flusser’s writing have revealed that automation has not delivered on this promise. The most striking applications of automated/autonomous systems today are taking place through AI technologies. Through models that talk, pretend, and lie like humans, human interaction itself is automated to an extent. But this is an automation that is highly incompatible with Flusser’s vision. Behind the facade of autonomous systems lies extensive human labour (data annotation, content moderation, system training), work that remains hidden and displaced rather than eliminated. The physical work of forcing phenomena into values has not truly been delegated to machines; it has merely been obscured behind interfaces and algorithms. So far, automation has not ensured the development of better values but contributed to the obsession with the next best thing and invisible infrastructures’ reliance on natural resources.

AI development, much like any other technology, depends on the material substrates Parikka identified: minerals extracted from the Earth, massive energy consumption, and infrastructure that ties us ever more tightly to physical resources. Rather than freeing us from subjection to objects, contemporary automation has deepened our entanglement with them, making the dependencies more pervasive.

To be clear, discussions about AI values are indeed taking place. Debates around ethics, safety, policy, environmental impact, and social consequences proliferate across the arts, academia, law, and tech industry. However, these discussions emerge not because automation has freed us to focus on val-

⁵ It is important to keep in mind that Flusser’s writing is from the latter half of the 1980s, which helps put his re-marks about automation into perspective. He is speaking from a world in which automation has not yet taken over everyday life.

ues, as Flusser anticipated, but precisely because contemporary AI development, subordinated to global tech companies ruled by sociopathic billionaires, has disregarded value-oriented development from the start. Even when questions such as “AI what for” are posed, rationalizations for AI development are often made through the growth imperative of the current economic model. As Baruch Gottlieb mentions, “AI is not a game changer if the game is capital-ism” (Gottlieb 2023: 340), but it only makes the rules of the game more rigid for those who do not have a say in the developmental trajectory of the technology.

The technical advancement of AI, particularly within large-scale private enterprises that dominate the field, remains driven by economic profit accompanied by the *creative giddiness* Flusser identified: the pursuit of ever-more-perfect AI systems for the sake of market expansion and control, with only vague promises of *progress, innovation, and democratization* attached. Value discussions around AI are thus reactive and corrective, attempts to impose moral constraints on technologies already built and deployed, rather than proactive deliberations that guide what we create. When we find the time to discuss values, it is not because we have transcended the struggle with objects, but because we remain deeply entangled with them, potentially more than ever, scrambling to address the consequences of our giddiness after the fact.

Flusser had been critical of automated apparatuses and systems in his previous work in relation to human values and freedom. In *Towards a Philosophy of Photography*, he talks about how we are increasingly observing the “programming [of] our life through rigid automation,” whereby “values of things are being replaced by information” and how “‘life’ is coming to mean feeding apparatuses and being fed by them” (Flusser, 1984/2000: 79-80). He also points to the intoxicating power of automation (Flusser, 1984/2000: 58). Technical complexity of media technologies with their *impressively* automated features, photographic cameras in this case, become objects of commodity fetish. What the apparatus can achieve through its automated abilities replaces what the human can achieve with and through the apparatus as the focal point of technology.

Flusser was not naïvely optimistic about the future potential of automation. He talked about automation’s detrimental impact on the relationship we establish with our cultural objects and values we form around them. So, why did he assume a more affirmative position about automation in *On Being Subject to Objects*? Was he finally convinced of the promise of democratization through the availability of a growing number of personalized technologies (i.e. PCs)? Or is it simply the human nature to oscillate in between pessimism and optimism?

Maybe the answer can be found in another passage by Flusser where he affirms both of his positions on the liberating potential of automation and its inevitable pitfalls and constraints. “Looking more closely, it becomes clear how revolutionary automation is. For from now on, human freedom no longer consists in being able to shape the world to one’s own desires (apparatuses do this better) but to instruct (program) the apparatus as to the desired form and to stop (control) it when this form

has been produced. Here a new freedom arises, which apparatus is supposed to serve. But unfortunately, the exact opposite very soon began to occur. Apparatuses become faster and faster and slipped out of control. The number of automatically produced coincidences and their consequences surpass any human capacity to control them. In this way, the possibility of stopping the apparatus at the desired coincidence is lost. The program becomes independent of human intention. It becomes autonomous and rolls on until every coincidence has been realized, even those human beings originally wanted explicitly to avoid” (Flusser 1985/2011: 73-74).

When automated machines are delegated to perform work, the human’s role in turning branches into sticks becomes redundant. Yet an alternative form of work emerges ensuring the automated machines function properly. As Flusser (1985/2011: 74) argues, automation reverses the roles of human and apparatus: humans become functions of apparatuses. Both physical and intellectual human labor is placed at the disposal of automated systems so they can perform their programmed tasks. As automation becomes increasingly integrated into the global economy, the uninterrupted functioning of these apparatuses becomes imperative, as does the constant human work required to maintain them.

In the case of large-scale and commercial artificial intelligence practices, not only humans but also natural resources are at the disposal of these systems. The supposed automated intelligence of machine learning relies heavily on humans, forcing phenomena into values. When the conversations we hold, images we look at, objects we have, and the world we live in are seen as though they should be data points, the abstract experience of life must be made compatible with concrete machine logic. Here, the work of transforming qualitative information into quantitative data also becomes a human task, both through designing algorithms that can do this somewhat automatically and through assigning data labelling tasks to humans working in precarious conditions. Meanwhile, natural resources ensure that all of this remains viable.

A key remark from Flusser regarding automated apparatuses is our ability to stop them at the desired coincidence. This may hold true for simple personal devices performing straightforward tasks (such as a camera’s autofocus). Consumer AI products like chatbots and text-to-image models offer similar experiences of control. However, we have neither the ability nor the authority to halt AI apparatuses, infrastructure, and economy at any desired point. Commercial AI development (especially of LLMs) appears to lack any meaningful stopping point, expanding until something breaks. Although we inform these large-scale models through the information we create and attention we pay, we are not in a position to make decisions about AI at its current scale.

The waste in Gottlieb’s claim (“waste is freedom without agency”) takes a multifaceted form with commercial AI tools. This waste, both cultural and material, manifests as artifacts constantly generated and discarded into the corners of online servers; as hardware becomes obsolete faster than

ever and ends up in landfills, the following questions become imperative: How do AI technologies obscure their own material origins, creating a myth of immateriality that masks a massive reliance on the very natural resources they seem to transcend? Furthermore, does the way AI overcomes our constraints (whatever those might be) justify a freedom that ultimately leaves us subject to elusive technologies and an inflated number of cultural objects we no longer have the agency to command?⁶

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