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The Perception Machine

Our Photographic Future between the Eye and AI

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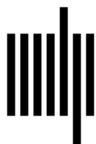

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1 Does Photography Have a Future? (Does Anything Else?)

Figure 1.1
Screenshot from the YouTube version of *Vilém Flusser's* Towards a Philosophy of Photography *as Performed by Ian James*, 2015. Featuring the video *An Assortment of Waiting Areas*, HD animation, 2014.

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Photography's modern past

Although its specter had haunted the domains of science and art on both sides of the English Channel since the early days of the nineteenth century, the technology of photography as a way of making singular monochrome pictures on a metal plate was made public in 1839, in Louis-Jacques-Mandé Daguerre's presentation to the French Academy of Sciences on January 7. Its arrival was met with much initial enthusiasm—John Ruskin portrayed daguerreotypes as "glorious things" and "the most marvellous invention of the century," while Edgar Allan Poe saw in photography "the most important and perhaps the most extraordinary triumph of modern science."[1] Yet, as with the invention of many other media that have significantly altered the way humans see themselves, communicate with one another, and picture the world, the arrival of photography—although largely welcomed by the growing middle class, whose status it represented and consolidated in France, England, and the United States[2]—also generated anxiety in some sectors of society. As Philip McCouat reports,

> One outraged German newspaper thundered, "To fix fleeting images is not only impossible . . . it is a sacrilege . . . God has created man in his image and no human machine can capture the image of God. He would have to betray all his Eternal Principles to allow a Frenchman in Paris to unleash such a diabolical invention upon the world." Baudelaire described photography as "art's most mortal enemy" and as "that upstart art form, the natural and pitifully literal medium of expression for a self-congratulatory, materialist bourgeois class." Other reputed doom-laden predictions were that photography signified "the end of art" (J.M.W. Turner); and that painting would become "dead" (Delaroche) or "obsolete" (Flaubert).[3]

The anxiety generated by photography's arrival can perhaps be explained by the fact that photography was seen to be altering the spatiotemporal organization of the world. As an "impressioning" medium, it was capable of carving time and fixing it by imprinting it on different surfaces. William Henry Fox Talbot, English inventor of a paper-based, reversed photographic process which initially gained less popularity than the one rolled out by Daguerre, even claimed "that the primary subject of every photograph was . . . time itself."[4] Photography made time visible while foregrounding its framing—and hence also its finitude for individual modern subjects. Those very subjects did not preexist the photographic medium but were rather constituted in its representational and communicative loop. Jonathan

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Crary points out that "the shifting process of one's own subjectivity experienced in time became synonymous with the act of seeing, dissolving the Cartesian ideal completely focused on an object."[5] This development took place against the background of the wider socioeconomic transformation across Europe and the United States, with progressing industrialization, expanding railway networks, and the appearance of the telegraph. Those changes were accompanied by a radical shift in the modes of knowing the world, with attempts to understand the workings of God the creator gradually giving way to trying to understand the machinations of nature. It has been argued that various social groups, from middle classes to laborers, across different continents, became ready for their own constitution *as modern subjects*: they were part of the fomentation of the "burning" desire[6] for both seeing photographs and seeing themselves photographed. The arrival of instantaneous photography in 1877 thanks to Eadweard Muybridge's experiments with "stopping time" by photographing animals and humans in motion, frame by frame, was seen, to cite Rebecca Solnit, as "violent, abrupt, glorious, like lightning, a sudden shock showing a transformed world."[7]

That there exists a mutually constitutive relationship between photography and modernity has been argued by many writers, from Walter Benjamin through to Susan Sontag and Solnit.[8] In recent years scholars such as Ariella Aïsha Azoulay, Jonathan Beller, and Andrew Dewdney have explored darker aspects of this relationship.[9] The point I want to make in the opening section of this chapter on the future of the photographic medium is that there exist three key "lightening" moments in the history of photography when a given stage of technological development became a conduit for the articulation of wider social concerns not just about the present but also about the future. Photography is of course not the only medium through which concerns are articulated, but, due to its role as a pencil of nature and a mirror of the world, it allows each subsequent generation to ask questions about its own self-image and self-projection—a process unfolding across the increasing liquidation of social foundations and structures. The three key moments I associate with the posing of some fundamental or indeed existential questions raised by, and by means of, photography can be connected with the following three instances: the invention and popularization of the photographic medium in the early to mid-nineteenth century, the shift from analog to digital photography in the last two decades of the

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twentieth century, and the present rise of "after-photography" as a result of developments in computation, specifically in CGI and AI. To paint in somewhat thick brushstrokes, these three instances coincide with specific moments in the industrial history of the modern world: (1) the expansion of the world for certain classes as a result of the development of transport and communication networks (the railway, the steamship, and the telegraph), coupled with the facilitation of imperialist politics, (2) the fantasy of the unification of the world promoted by globalization, with the increased flow of goods, services, and people, the rise of technological obsolescence, and the expansion of a throwaway culture, and (3) the dematerialization of "the world" into what used to be called "the cloud" but is now being renamed "the metaverse," with an increasing automation of both labor and leisure, and an impending planetary threat of the human—and human habitat—being designed into nonexistence.

The reports of photography's death are greatly exaggerated

Given photography's foundational role in the emergence of modern Western subjectivity and its associated modes of perception and knowledge-building—a role which arguably continues to this day—it is understandable that its own ongoing transformation should evoke so much anxiety. As a medium designed to fix things, its instability serves as a constant reminder of the fact that things cannot be fixed once and for all, that the world *is* in flux, and that any picture we make of it is only ever a temporary stabilization of molecules, be it as an image or thing. Moreover, photography can play the role of a displacement object, one that is made to carry the worry about the flux while offering to hold it at bay. This perhaps explains why, as put, somewhat tongue-in-cheek, by Geoffrey Batchen in the "Epitaph" to his *Burning with Desire*, "everyone seems to want to talk about photography's death."[10] Yet Batchen goes on to point out that not only has photography "been associated with death since the beginning," with the medium's arrival coinciding "with the demise of the pre-modern episteme," but also that "death has been part and parcel of photography's life."[11] This "perverse interweave of life and death"[12] is partly technology-specific: the low sensitivity of photographic materials in the early days of the medium, requiring long exposure times, resulted in living bodies looking as if they were dead. For generations of photography students, the medium was memorialized

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by Roland Barthes in his field-defining *Camera Lucida*[13]—as a mausoleum for his departed mother and an empty tomb for himself.

I staged a symbolic burial of photography's compulsive attachment to death in a previous work, in which I offered to read photography as first and foremost a vital, life-shaping force. This was because photography not only shapes our everyday existence but also partakes of the Earth's and Sun's vibrant and life-giving properties.[14] To revisit the matter in more funereal terms here is not to change my position but rather to recognize, with Batchen, the persistence of death *as a trope* in debates on the medium. This persistence functions on two levels: one positions photographs as reminders of death, its representations or even enactments, the other sees photography itself as dying—and us humans as dying with it, as its subjects. One does not need a complex psychoanalytic reading to see this tendency as an attempt to ward off death by means of fixing the photographic discourse and its object, for a little while at least.

Yet I would like to explore whether we can do better than this, whether an alternative model—more satisfactory on a philosophical level and more sound psychologically—could emerge from this perverse interweave of life and death Batchen talks about. If the incessant posing of the question about photography's future is primarily a reflection of our human anxiety about the disappearance of our subjectivity, and of our picture of ourselves and the world, or even, *tout court*, about the disappearance of ourselves *and* the world, can we mobilize photography to enable a different mode of perception and self-knowledge? Batchen himself ends his "Epitaph" by suggesting that "Photography's passing must necessarily entail the inscription of another way of seeing—and of being."[15] His own response to this (somewhat circular) argument is disappointingly, and limitedly, humanist. In stating that "while the human survives, so will human values and human culture,"[16] he confines photography to the enactment of those human values and the "human culture" they supposedly belong to, while prohibiting them from challenging them while radically changing the human. I would like to pick up the challenge offered by Batchen's earlier statement and investigate, with the full mobilization of the theoretical apparatus and various image practices, whether what I call "a philosophy of after-photography" (which I will expound more fully in chapter 2) could lead us to another way of seeing and being. Can the current moment of both photographic and existential instability serve as this opening toward something new? Can the

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photographic medium "as we know it"—and as we perhaps do not know it yet—offer us a new way of picturing and understanding that opening? Can it help ensure a *photographic future*?

Media existentialism: Vilém Flusser redux

The present context for the exploration of these mortal anxieties has been provided by a secular return of all sorts of existential finalisms, unfolding across different scales: some of them taking place on a species level ("end of man," the Sixth Extinction, Covid-19), others on a planetary one (Anthropocene, heat death, nuclear obliteration). Photography and other forms of mechanical images such as films and TV have certainly played a role in aiding us in envisaging our demise. Yet, its representational role aside, it is worth delving deeper into photographic practice, with its apparatuses and networks, to trace the constitutive role of mechanical image-making in enacting a certain vision of the future—or even enacting a certain future, full stop. One thinker who can help us with developing such a new analytic framework for understanding the world today—which for him is equivalent with the world of images—is the Czech-born writer and philosopher Vilém Flusser (1920–1991). A nomad at heart, if not always by choice, with the ruinous legacy of the Holocaust and antisemitism casting a dark shadow over both his family history and his work, Flusser wrote in multiple languages, disciplines, registers, and styles, across several continents, decades, and intellectual currents. His work on photography and other media was shaped largely in the early 1980s. This was a time when media production had already become mechanized in the Benjaminian sense, with photographs' and films' reproducibility in the early twentieth century leading to the loss of cultural artifacts' uniqueness as singular objects endowed with a special aura and value, and also to their democratization and their becoming-media, but it had not yet entered the era of mass digitization. Yet Flusser's analyses are uncannily prescient in grasping the consequences of the automation of image production, perception, and reception, consequences that we see today not just in photography, video, and other forms of communication such as journalism and literature, but also in politics.

In outlining what we might term a "nomadic media existentialism," Flusser pays particular attention to images, and even more to technical images, which he defines as "mosaics assembled from particles."[17] He

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differentiates them from "traditional images" such as cave or oil paintings, which for him have a different relationship to reality: the former are mimetic, the latter function as visualizations, i.e., models. "Traditional images," created by hand, are two-dimensional surfaces made up of their background (cave wall, canvas) and inscription (pigment, oil paint), while technical images, created by machines, are "without dimension"[18] because they are made from mathematical code. Traditional images, which are akin to representations, are to be apprehended as ensembles of features, in their totality, with the human eye having to scan them in a circular manner in an attempt to grasp their meaning. They thus introduce the viewer to recurrent, or eternal, time, creating a sense of a reality which is itself circular. Technical images, in turn, are much more abstract. They have been mathematically programmed and thus require linear processing to emerge as images. Through this course of action, they introduce viewers to the idea of linear time. Mark Poster was right to raise a suspicion about the rigidity or even accuracy of this distinction between the two types of images,[19] one that was premised on the excessive ontologization of the earlier forms of visual expression as ritualistic and magic-driven, at the expense of appreciating their specific technicity. Yet this reservation does not diminish the significance of Flusser's argument, which is premised on noticing the technicity of (at least some) images in the first place, i.e., noticing their informational value.

Photographs, addressed most explicitly in Flusser's book *Towards a Philosophy of Photography*, are one class of such technical images, alongside film, television, video, and other hybrid media. Taking analog photographs and other mechanically reproduced images as his starting point, we must note that Flusser is not really looking *at* them—but rather far beyond them, into the future of both images and humanity. This future is looking rather bleak: Flusser goes so far as to describe it as an ultimate catastrophe, because "images themselves are apocalyptic."[20] We will come back to this provocative formulation later on. For now, let us ask whether, by not really looking *at* photographs, Flusser is not repeating the error of many other theorists who have thought about media without actually using them in any meaningful way, thus reducing the operational technicity of those media and the outcomes of those operations to the banality of a mere example—or, worse, to a figment of their imagination. He would be in good company here: as Flusser's translator and writer Nancy Roth observes, "Virtually all

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of the voices that have substantially shaped contemporary photographic 'orthodoxy,' not only the historians, but critics, including Benjamin (1968), Barthes (1981), Sontag (1978), . . . *wrote* as receivers and judges of photographs, from the position Barthes designated the Spectator."[21] Yet Roth jumps to Flusser's defense by making an important differentiation: "As Barthes is looking at photographs, Flusser is looking at photograph*ing*. . . . [B]y framing his topic as a gesture, a particular kind of movement between states of consciousness and states of affairs, Flusser was able, in a way no other writer on photography has been, to take the photographer's part."[22] There is therefore a rationale for Flusser's avoidance of looking not just at photographs but also at photographed objects. Instead of looking *at* them, Flusser is looking *through* the photographic flow of images, and toward a future that, to cite Poster, entails "a more complex possibility for multiple assemblages of the human and the machine, not as prostheses *for* the human but as mixtures of human-machine in which the outcome or specific forms of the relation are not prefigured in the initial conceptualization of the relation."[23] Flusser himself argues that interest in technical images on the part of "future men and women" will have "existential" value,[24] as it will allow them to dream up new visions of the world, and of their place in it. Images for him thus serve as devices, offering an insight into the modern world in which we are all being constituted by the technical apparatus, becoming its functionaries.

The apparatus as an image-capture and world-capture machine

The notion of the apparatus is crucial in Flusser's theory. A kin concept to Foucault's *dispositif*, a sociopolitical arrangement whose role was to enact something by delimitation, regulation, and governance, the Flusserian apparatus—especially as introduced in *Towards a Philosophy of Photography*—evokes clear associations with the *(Foto)apparat* as a camera, a perception machine that generates visual outputs in the world in a mechanical way. Yet Flusser, as is often his way, plays with this concept, turning it around and twisting both its etymology and its function to arrive at something much more expansive and potent. Derived from the Latin word *apparare*, "to prepare," an apparatus is "a thing that lies in wait or in readiness."[25] In other words, it is waiting to be actualized, being a function in need of an operator. It is in this sense perhaps that "apparatuses are not machines,"[26]

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or not *just* machines. Extrapolating from the black box of the photographic camera, the concept embraces, in a nested manner, different layers of reality that enact functions of different levels of complexity. Flusser thus explains that the "camera functions on behalf of the photographic industry, which functions on behalf of the industrial complex, which functions on behalf of the socio-economic apparatus, and so on."[27] The rationale for using the term "apparatus" for naming all these different levels of reality becomes clear when Flusser reveals that the key issue "is who develops its program."[28] His ultimate concern is therefore with the multilayered automation of our lives as enacted in and by its institutions, machines, and media. They all have been preprogrammed in advance, with our role reduced to that of functionaries, or operators of apparatuses. Our task, in turn, lies not so much in understanding those programs—a task Flusser has already assumed is to a large extent futile—but rather in producing better images of the world. Those images will need to be capable of in-forming the world rather than mindlessly executing its operating commands, repeating the already known.

In his essay on the continued relevance of Flusser published in the *Los Angeles Review of Books*, writer Ken Goldsmith proclaims:

> After Flusser, the photo criticism of Sontag or Barthes, each of whom mostly ignores the apparatus in favor of the artifact, appears to miss the point entirely. Their achingly beautiful literary readings of the photograph as memento mori or studies in studium and punctum have no place in the Flusserian universe. While Sontag makes pronouncements like, "Photography is an elegiac art, a twilight art. Most subjects photographed are, just by virtue of being photographed, touched with pathos," Flusser counters that readings like Sontag's are simply more fodder for the apparatus: "A number of human beings are struggling against this automatic programming . . . attempting to create a space for human intention in a world dominated by apparatuses. However, the apparatuses themselves automatically assimilate these attempts at liberation and enrich their programs with them."[29]

This reading offers a useful explanation of Flusser's claim, one which echoes Marshall McLuhan's communication model, that "it is not what is shown in a technical image but rather the technical image itself that is the message."[30] With this, Flusser provides a deep insight into the technological setup of the world we have constructed—a world that also constructs us humans on a number of levels, with the message of technical images being "significant" and "commanding."[31] Flusser goes on to argue that

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the technical images that surround us "signify models, instructions about the way society should experience, perceive, evaluate, and behave."[32] His intimations were developed at the dawn of the digital era, long before the outpouring of social media influencers, with their image-based communication platforms. Yet his conclusions seem to have become validated by the fact that, today, restaurants, museum attractions, holiday destinations, and whole cities are being designed to look good on Instagram, thus feeding, via the flow of images, our desires, experiences, and purchases while also serving as blueprints for altering our environment. Our faces and bodies are changing too: cosmetic doctor Tijion Esho has coined the term "Snapchat dysmorphia" to refer to the "phenomenon of people requesting procedures to resemble their digital image,"[33] which had been manipulated with apps such as Facetune.

The image apocalypse

This mode of looking *through* the image flow does not mean that Flusser would not be able to recognize or acknowledge the content of a particular image: the specific arrangement of particles into what to a human viewer looks like a conventionally happy wedding party, a birthday celebration, or a holiday in the sun. It is just that these images are so predictable, so clichéd, and hence so redundant *in the informational sense* that Flusser moves beyond their superficial value and looks at them as objects in a broader communicative sense. (It goes without saying that I myself have taken a fair number of all those types of "redundant" images, recognizing the unique human pleasure *and* compulsion involved in both taking them and looking at them.) Yet we could perhaps go so far as to say that Flusser perceives images the way computers—and specifically, machine vision systems—do: breaking an image into a cluster of pixels to be analyzed for similarity and difference with other clusters in the database, and then matching it against the available categories and labels. Importantly, Flusser's theory allows us to concede that this machinic way of looking is not just a feature of machines, or an eccentric philosopher looking, literally, against the grain. Using his theory, we can perhaps surmise that *most humans now look at most images automatically*, scanning them for similarity and difference, engaging in quick categorization (on a binary level: like/not like; or a semantic one, via comments and hashtags), and going along with the image flow.

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The framing process for Flusser's theory of images and, more broadly, for his theory of media is provided by a nexus of disciplines, from philosophy through to cybernetics and communication theory, all the way to thermodynamics and particle physics. But he also reveals a strong commitment to writing as a form of zigzagging through ideas, concepts, and modes of expression to produce what could be described as thinking in action. This is undertaken in spite of Flusser's broader prophecy about the waning of writing as a mode expression for the contemporary human, offering instead that we are moving toward a postwriting form of culture, driven by technical images. Indeed, for Flusser writing as the dominant mode of developing and transmitting a linear argument has no future: it has *already* been replaced, to a large extent, by communication via technical images. Given that Flusser was writing in the early 1980s, before digital technology radically altered our speed and form of communication, before blogging gave way to image sharing via Instagram, Snapchat, and WeChat, and before reading was largely replaced by scrolling and touching, his theory of the end of print is indeed nothing short of prophetic. In a now-classic 2008 essay analyzing the state of photography in the age of the phone camera, digital snapshot, and broadband, Daniel Rubinstein and Katrina Sluis look at a research project analyzing the practice of users of the photo-sharing platform Flickr, many of whom said they had given up blogging because it was "too much work" and who now favored photography as a way of sharing their experiences. Rubinstein and Sluis argue that "the practices of moblogging (blogging with a mobile phone) and photoblogging (blogging with photographs rather then text) further exploit the way in which mobile phone images have become a kind of visual speech—an immediate, intimate form of communication that replaces writing."[34] Contemporary users of digital platforms and media thus seem to be confirming Flusser's tongue-in-cheek assessment that "images . . . are not so repulsive as massive rows of fat books."[35]

It is worth probing further why Flusser would resort to the idea of the image apocalypse when looking through images into the future. One may be tempted to equate his conceptualization with the dismissal of the increasing photographic output in terms of an image deluge. This latter metaphor was poignantly encapsulated by Erik Kessels—a Dutch photographer, curator, advertiser, and designer whose mode of operating makes him a Jeff Koons of the photography world—in his installation *24 HRS in Photos*.

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In November 2011 Kessels filled an Amsterdam art gallery with prints of images that had been uploaded to Flickr over a twenty-four-hour period. The visitors were presented with heaps of what looked like debris, spilling everywhere. The fact that this spillage had been carefully controlled by a number of wooden frames into which it had been placed to create this illusion of a "flow" not only tells us something about the artist's visual cant but also points to our wider desire for beautiful ruins, with the aestheticization of the apocalypse often having an anesthetic function. And thus the project could easily be read as an indictment of photography today, with its pointless content and visual sameness. Yet, following Elizabeth Kessler, it is also possible to read the installation as revealing the Flusserian apparatus in action, demonstrating human and machinic forces at work in the production of (the picture of) the world, while bringing forth a shared "thingness" of our media ecologies. "A person chose when and how to take each picture, but broader influences—human and nonhuman—shape the way we represent, see, and live in the world."[36] The image apocalypse does not therefore have to mean humans perishing in the debris of the world, but rather the expiration of the Anthropocene hubris enacted by the drowning of its core subject. Well versed in the canonical texts of Western culture, including its religious writings, Flusser was no doubt aware that the apocalypse is not just a catastrophe and that its occurrence, come what may, also carries a redemptive potential.

Before we move on to the redemptive aspects of the apocalypse, though, we need to recognize that there are different levels of there being "no future" announced in Flusser's work, with entropy, or heat death—an occurrence resulting from the dissipation of information as encompassed by the second law of thermodynamics—constituting our world's event horizon. Finalist expectations have organized the worldview of many continental philosophers, from the singular human's horizon of death as encountered in the writing of Martin Heidegger and Jean-Paul Sartre through to the death of the Sun as the star that nourishes our planet in the writings of Jean-François Lyotard. In a similar vein, Flusser's planetary perspective is meant to allow us to come to terms with the absurdity of the world, with its ultimate lack of meaning. But this is a form of pragmatic absurdism, one devoid of wallowing in tragedy and loss. Flusser accepts from the word go that the fate of the universe is subject to chance, that the endgame of this chance is entropy, and that any occurrences, be they "galactic spirals, living

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cells, or human brains," are the result of improbable coincidences, "erroneous" exceptions "to the general rule of increasing entropy."[37] Yet he quickly moves beyond that realization to introduce a differentiation between the cosmic program of the universe, which we cannot do very much about, and the human-designed program of the apparatus, which remains subject to human control—or which at least *entails the possibility of the human wresting away some degree of control*, be it through insurgence or chance. "Envisioners are people who try to turn an automatic apparatus against its own condition of being automatic."[38] Any act of resistance can therefore only come from within and via the apparatus. Flusser may be no photographer but he himself takes on the role of an enframer and an informer: someone who can rearrange particles, or pixels, to create a new "mosaic," provide new information, and offer a new vision. Creativity as an act of working against the machine, not in a Luddite manner that rejects it completely but rather in defiance of its program, is a task he implores us all to adopt, while there is still time.

Flusser is thus interested in photography as a mode of thinking and seeing to come, or one that has *already* partly come. His assessment that "we live in an illusory world of technical images, and we increasingly experience, recognize, evaluate, and act as a function of these images," refers to the fact that the world is not "immediately accessible" to us.[39] We need images to make it "comprehensible."[40] This diagnosis applies even more aptly to the era of social media and wide image sharing, although it is fair to conclude that this pedagogic and mediating function of images is gradually forgotten, with images losing their character of maps guiding us through the world, as Flusser points out in *Towards a Philosophy of Photography*, and beginning instead to function as objects projected *into* the world. Eventually the whole world will become a screen, with our creative power of imagination giving way to collective hallucination. For Flusser, photography serves as a model for understanding the functioning of the apparatus, with us becoming its functionaries—but it also entails the possibility of taking the apparatus to task. It can thus also serve as a laboratory for seeing otherwise, for reprogramming our vision of the world by creating better, more in-formed, pictures of it, with technical images being "phantoms that can give the world, and us, meaning."[41] It is in this sense that photography for Flusser has existential significance. While he recognizes that entropic decay is already part of our everyday experience, expressing itself "in the

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receivers' zeal for the sensational—there have always to be new images because all images have long since begun to get boring,"[42] he also observes, perhaps jokingly to some extent, that no apocalyptic catastrophe of nuclear or similar finalist kind is needed as "technical images are themselves the end."[43] Images themselves are thus "apocalyptic"[44] because they replace the linearity of writing, and thus of history, with the cybernetic feedback loop of the image flow—which becomes a magic circle of eternal return.

In the poignant assessment of the Instagram culture writer Dayna Tortorici has provided the following visceral account of what this image loop actually looks like in the age of social media:

> What would I see? A fitness personality lunging across the sand. An adopted cat squirming in a paper bag. A Frank Lloyd Wright building. A sourdough loaf. A friend coming out as nonbinary. A mirror selfie. A handstand tutorial. Gallery opening. Nightclub candid. Outfit of the day. Medal from the Brooklyn half-marathon. New floating shelves. A screenshot of an article titled: "A 140-year-old tortoise wearing her 5-day-old son as a hat." Protest. Crashing waves. Gabrielle Union's baby. Wedding kiss. Friend's young mother at the peak of her beauty for Mother's Day. Ina Garten in a witch's hat. Detail of a Bruegel painting. Brown egg in a white void, posted to @world_record_egg [verified blue checkmark], with the caption, "Let's set a world record together and get the most liked post on Instagram, beating the current world record held by Kylie Jenner (18 million)! We got this [hands up emoji]." By the time I saw it, the egg had 53,764,664 likes. The comments read:
>
> > "What does the egg mean?"
> > "That's a trick question."
> > "The egg doesn't mean anything."
>
> World records are meaningless in a culture defined by historical amnesia and the relentless invention of categories, I thought, and double tapped to like the egg.[45]

Tortorici describes the experience of the human viewer of images (in this case, herself) being faced with an Instagram flow in terms of entering into a loop of exchanges not only with other human photographers but also with the platform's algorithms. The loops of her brain activity generated by the intensifying visual stimuli coming from the pictures of friends, strangers, objects, and places eventually lead to affective overdrive. This state of high agitation is being sustained by the repetitive behavior of sliding and tapping, with the viewer's eyes and fingers enacting their own loopy dance in search of yet another dopamine hit. Flusser points out that the "general consensus between images and people"[46]—as evidenced in the popularity

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scores achieved by various images—inscribes itself in the repetitive cycle: nature—culture—waste—nature.[47] We may update it as "Flower—like—skip —the great outdoors. Someone I vaguely know—heart—unheart—God I hate them. Food—avo on toast—skip—#sohungry." But there is an escape from, or at least an opening within, that world of "meaninglessness" and "historical amnesia" on its way to heat death. The redemptive aspect of Flusser's apocalypse lies in the redefinition of the human as part of the "composting"[48] loop. This entails dissolving the myth of the human "I" as "a core that must be preserved and developed."[49] Repositioned as "an abstract hook on which to hang concrete circumstances, the 'I' reveals itself to be nothing."[50] The Flusserian apocalypse thus involves destroying the Judeo-Christian image of the human as a being made, albeit imperfectly, in the image of God and equipped with some core qualities, qualities whose nature has to be both veiled and revered. For Flusser, the "I" only emerges in a dialogue. Building on the philosophy of Martin Buber while giving it a cybernetic twist through his image of society as a "dialogical cerebral web," Flusser claims that the "'I' is the one to whom someone says 'you.'"[51] The communication model of subjectivity is not just linked to acts of speech: as previously stated, for Flusser the medium really becomes the message—and the messenger. Our consciousness is thus seen as being shaped by the media we make and use, and which also make and use *us*. This model of (say, Instagram-driven) subjectivity dispenses with universal humanist signal points such as choice, decision, and free will. Flusser does nevertheless offer an opening within this cybernetic-naturalistic theorization of the human. A being produced, literally, *from media res*, one whose brain "appeared as an accident in the natural game of chance,"[52] the human has the possibility of mobilizing this aleatory game as a strategy. S/he can do this because the brain has an inbuilt tendency to turn against chance, defy accident, and reject entropy. However, for the human's negentropic tendency to be actualized, certain conditions need to be created. Flusser's whole oeuvre, one might argue, is premised on identifying those conditions.

Photography and future-making

As well as being authors of their own destruction, human beings—who have inaugurated and then labeled a geological epoch in their name—are also a hope for our planet's survival. We can thus be said to have an inbuilt

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counterapocalyptic tendency. Even if this survival is just a delay, humans are an opportunity *for* the world, as well as functioning as its existential threat. The answer about the future—of images, writing, the world, or anything else—is therefore also a matter of temporal scale. Images themselves, and, in particular, technical images as produced and exchanged via platforms such as Instagram, Facebook, TikTok, or Snapchat, *can* serve as delaying tactics in this process of information dissipation, even if the majority of them do nothing of the kind. As an Instagram user Flusser would have no doubt been bemused by the banality, sameness, and predictability of the output. Yet his existential-level conclusion, "I play with images . . . to coexist,"[53] would surely serve as an encouragement not to sign off too quickly—from social media, from sociality, and from the world as we know it.

The answer to the question: "Does photography have a future?" thus depends on who is posing it and what time scale they operate on. If it is a curator or a gallery owner interested in securing investment in their Henri Cartier-Bresson or Ansel Adams, they probably have a few good years left. If it is a photojournalist or professional wedding photographer, the writing is on the wall, at least as far as high income is concerned—unless they can undergo a cross-media shift to become a personal TV channel. For those who are too busy posting on Instagram or editing their selfies to be even interested in posing it, because most of the things they know come from living in the constant image flow, some other questions may be more pertinent than the one about the state of the photographic medium, its supporting institutions and its industry: When looking at, sharing, and contributing to the media flow, what kind of future do you see, for yourself and the world? What kind of existence can you carve out and enframe from the media and image flow?

Flusser himself already pronounced in 1985, several decades before the wide adoption of photogrammetry, CGI, and AI-driven image-making, that "photography is about to become redundant."[54] With this, he was referring to the increased generation of synthetic images, as a result of which it became impossible to "distinguish between depictions and models."[55] Yet, even if the medium and practice of photography as we know them may indeed become obsolete, the *function* of photography will no doubt survive for a long time yet—although its execution, in the fully informational guise, will perhaps only be performed by the very few. Like writing, which is "a mesh of accident and necessity" yet which is nevertheless

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"*experienced*" by us (partially) code-driven and (occasionally) code-making humans "as a free gesture,"[56] photography will present us with new opportunities, beyond trying to seek meaning and order *in* the world, be it via religion or everyday semiosis. To approach the medium of photography through the "existential register" outlined by Amanda Lagerkvist[57] is to shift photography's role from memory-making to future-making, while repositioning the photographer as the very maker (or, to use Flusser's term, "envisioner") of those futures. The future photographer's gesture of pointing at the world can be expected to generate a whole new "revolutionary attitude,"[58] one that will involve projecting meaning *onto* the world. Technical images, whether in their photographic or post-photographic guises, will function as such projections. Through this process photography will have the potential to "give absurdity a meaning"[59]—not in a semiotic sense, but rather through reframing the photographic act and gesture as meaningful in themselves—and thus to serve as a life force, a generator of experiences transmitted as images. Transcending its representative function as the "pencil of nature" or "the mirror of life," future photography can instead *become* the future.

The world as an image

Already in the 1980s, long before the cross-generational shift to handheld screens as a primary interface of content acquisition, Flusser was also predicting that the culture of linear writing, and of historical consciousness associated with it, would soon give way to "a concrete experience of the present."[60] Rather than mediate the world via the system of notation that produces literature, historical narratives, and philosophical treatises, we will start absorbing it more directly, claimed Flusser, via apparatuses plugged more immediately into our own system of perception. Leaving writing, whether as recorder of history or creative analyst of the present, to apparatuses—which were supposedly able to do a "better" job at "historical thinking and action"—we were meant to be then able to "focus our attention on making and looking at images."[61] Flusser's diagnosis can be seen as partly ironic, evoking the future in which we all live in a version of a giant VR set fueled by ever-new iterations of ChatGPT, with the typewriter migrating "into our brains,"[62] as he playfully put it. Yet it is also tinged with a degree of melancholia, signaling the philosopher's awareness of the

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progressing evanescence of our engagement with the world by means of writing and reading.

Stories about the end of literacy and of the ensuing image deluge that will bring all sorts of intellectual and moral catastrophe go back a long time. In *The End of Reading: From Gutenberg to Grand Theft Auto* David Trend offers a historical overview of the role of visuality in human culture. Looking at the example of paintings in the Lascaux and Altamira caves dating back 30,000–40,000 years, he points out that "for much of the early development of the creatures we now consider modern humans, communication was pictorial and aural rather than written."[63] He goes on to remind us that the visual image, which was a dominant vehicle of communication in the pre-Enlightenment era, "ultimately was devalued and distrusted in the age of reason. To many people visual imagery became synonymous with propaganda and, eventually, with marketing."[64] By the twentieth century educators thus began to issue warnings about youngsters' "overexposure to visual media," from movies through to TV, which were all seen to be destroying young people's minds.[65]

Those sentiments and reactions have acquired a new legitimacy in the era of "neuroscience." Pronouncements such as the one below by cognitive neuroscientist and dyslexia expert Maryanne Wolf set the tone for the scholarly debate on reading today:

> Look around on your next plane trip. The iPad is the new pacifier for babies and toddlers. Younger school-aged children read stories on smartphones; older boys don't read at all, but hunch over video games. Parents and other passengers read on Kindles or skim a flotilla of email and news feeds. Unbeknownst to most of us, an invisible, game-changing transformation links everyone in this picture: the neuronal circuit that underlies the brain's ability to read is subtly, rapidly changing—a change with implications for everyone from the pre-reading toddler to the expert adult.[66]

Even though Wolf does recognize that reading is not a hard-wired activity but rather a specific cultural practice, her work, laid out in her popular-science book *Reader, Come Home: The Reading Brain in a Digital World* as well as many scholarly articles, focuses on demonstrating what is lost for us as readers in our encounters with digital screens. The first casualty seems to be the *volume* of reading, a conclusion seemingly confirmed by Jean M. Twenge and colleagues' findings that the "extraordinary amount of time iGen adolescents spend on digital media . . . appears to have taken

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time away from legacy media, especially print."[67] This "displacement," as Twenge et al. term it,[68] is coupled with the supposed loss of analogical reasoning and inference, empathy, and the ability to formulate insights or even perceive beauty. Once again, the transformation is said to affect primarily "young people," who, owing to this new mode of engaging with the world, end up "short-circuiting their reading brains."[69] Reading is also said to have given way to "browsing," "skimming" and "scanning," with the reader "mov[ing] across surfaces"[70] as if they were a collection of images. "Many readers now use an F or Z pattern . . . in which they sample the first line and then word-spot through the rest of the text."[71]

The seductiveness of those one-directional narratives about the end of literacy, and about the wider cultural loss ensuing from this proclaimed end, can perhaps be explained by the fact that they "feel" right. Inscribing themselves in the cognitive structure of "moral panics" (stories that establish and legitimate a given society's principles of social conduct and civic duty), these narratives feel right because they provide a firm explanatory framework to a variety of sociopolitical phenomena, from poverty and spending inequities in education (if you are a liberal) through to immigration and popular culture (if you are a conservative).[72] Yet we would be wise to listen to Flusser's diagnosis that "every epoch has its prophets of doom. There is nothing simpler, nothing more comfortable, essentially, there is nothing more optimistic than to predict the ultimate catastrophe."[73] This wallowing in the catastrophe allows its prophets to reaffirm their vision of the world without realizing, as Flusser acerbically put it, that "the very prophets of the catastrophe are the ones who cause it."[74] Literacy is coming to an end, we might therefore conclude, because its proclaimers are unable to see beyond the limitations of their own goals and worldviews, mistaking the finitude of their imagination for existential-level finalism. Without denying that the modes of literacy are indeed perhaps undergoing a significant change at the moment, or even that "literacy levels in the general population among both children and adults are falling,"[75] while acknowledging that engagement with media, including books, has always been in flux, and that it has always depended on the complex network of material and cultural forces such as class, access, education, and upbringing, Flusser's critique can thus encourage us to pose a different question: Was widespread linear reading just a transitory phase in human history? Trend points out that "reading is not natural . . .—it is a social convention

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adapted by Western civilization at the expense of other forms of communication."[76] What would need to change if we were to accept that our mode of engaging with the world was to be, once again, predominantly visual? Could anything be actually *gained* through this?

Flusser's diagnosis about the "end of reading" and about the ensuing "image apocalypse" therefore has a different tenor than many of the doom prophecies about "how the Internet is changing the way we think, read and remember."[77] His narrative, as argued earlier, carries a promise of a renewal, in the form of an opening beyond the seemingly impossible choice between consumption and refusal. In the introduction to his manuscript *The Last Judgement: Generations* penned in the mid-1960s,[78] Flusser offers the following assessment of the choices that await us in a modern technological society:

> The world of instruments (the world around us) seems destined, by its very structure of things already manipulated, to annihilation. The attitude I am describing lies in accepting the instruments as problems. This attitude is the consequence of a moment of choice; it means the existential choice of not accepting the instruments passively. And this resides in the experiential opening toward the world of technology, which means the existential decision to overcome the world of technology. Not by ever increasing consumption, not by angry and bored refusal, but by the manipulation and transformation of technology. Technology, to be overcome, needs to be transformed into something else. In this existential decision, in this choice of attitude, a different movement begins in the world around us.[79]

The Last Judgement focuses on the inevitable yet productive tensions between subsequent generations. We can see that Flusser's existential philosophy literally unfolds *in media res*, in the midst of the technical apparatus of which we are part—and which we can alter from within. Indeed, Flusser looks to the apparatus as an enframing and enabling device that can execute historical transformation. This apparatus can thus be read as both a framing device for societies, generations, and individuals *and* a subjectivation machine. Flusser's argument with regard to the impasse between passive consumption and equally passive refusal is that, for a truly meaningful change to occur, we need to change both our technology and our subjectivity. The latter, as we know from other thinkers of technology such as Gilbert Simondon and Bernard Stiegler, emerges in ensemble with our technologies. As Flusser's translator Rodrigo Maltez-Novaes puts it: "It is only through an existential dive into the programmatic dimension of the apparatus that we can save ourselves."[80]

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Tempting as it might be to see the world become an image in the age of digital media screens, with our brains being directly plugged into Netflix or Hulu, a better model for understanding this relationship with the incessant media flow is needed if we are not to fall prey to the prejudices and blind spots of the aforementioned prophets of doom. Postulating an uncritical retreat to some kind of "legacy media" or a fantasy escape from technology is therefore not the most prudent or responsible position to take. As part of the transformation of technology "towards something else," we need to acknowledge not only that "people now face a world in which one form of 'reading' really isn't enough"[81] but also that reading is currently also being undertaken by machines, at vast intensity and speed. Those forms of machine reading, from automatic translation, fact checking, and sentiment analysis through to code and instruction execution and automatic text generation, start forming a continuum with our human practice in which our "eyes take in the raw visual data of letter and word shapes and match them with remembered patterns of familiar utterances."[82] Taking to a new level ideas from biosemiotics, a field which postulates that communication and interpretation unfold across all living systems, we can perhaps describe the world as a giant reading machine in which the very relationship between the living and the nonliving is subject to reinscription. And it is within the lightning-speed operations of this machine that the distinction between linear machine reading and instant image recognition is increasingly becoming blurred.

In the Judeo-Christian culture, the world was seen as "an image made in God's likeness."[83] It was a representational model of the world, whereby humans were seen as part of God's creation. In the reading machine which also operates as an image machine, the world is an image *without* a divine origin. What is more, it has become increasingly impossible to distinguish between a representation and a model. We could go so far as to argue that now *all* images have become what filmmaker Harun Farocki has termed "operational images,"[84] carrying the potential of an execution of a function. According to Flusser, "From now on, we are the ones who project meaning on the world. And technical images are such projections."[85] Reprogramming the apparatus thus also means taking responsibility for our role in the co-creation of images, whether with technical devices or our cortico-corporeal apparatus, in full knowledge that we are neither sole authors nor sole recipients of the incessant media and image flow—although we may be

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the only ones for whom shaping this flow into a set of meanings becomes an ethicopolitical task, rather than just a preprogrammed function to be executed. The fact that the majority of people function as if that was not the case, running the programs of the apparatus in and with their lives, cameras, phones, and other media, only makes this task more urgent.

Photography as a unified perception machine

I want to conclude this chapter by looking at two examples of projects in which the overlap of functionality between pictograms and pictures, and hence between the reading machine and the image machine, is both tested and contested. The first is a four-hour-long performance of Flusser's *Towards a Philosophy of Photography* by artist Ian James (figures 1.1, 1.2). Originally

Figure 1.2
Screenshot from the YouTube version of *Vilém Flusser's* Towards a Philosophy of Photography *as Performed by Ian James*, 2015. Featuring the video *An Assortment of Waiting Areas*, HD animation, 2014.

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produced as a three-cassette audiobook edition of the unabridged book reading by James, accompanied by "binaural brainwave patterns, field recordings, product unboxings and other treats," it was presented at REDCAT, Los Angeles, in the Hotel Theory exhibition curated by Sohrab Mohebbi in 2015. It was then made available on YouTube, accompanied by an HD animation.[86] The final result is a meditative video of slow-moving pieces of photographic equipment (camera, printer, lab printing machine) and paraphernalia (prints, framed images, print storage cabinet) surrounded by furniture (sofa, coffee table, plant), all floating around like Photoshop cutouts or Thomas Demand-like paper sculptures in a white space. The effect is that of a de-montage, an opposite of Moholy-Nagy's "New Vision," where revolution may emerge at the slow interstices of a fluid optical mergence. But you really need to pay attention as there is a danger you may miss it. To some extent it looks like the video has taken over the process of making itself, running through the display formats (old-school 4:3, 16:9 vertical) and the previously used images in the ever-increasing entropic disarray. The idea of reading aloud, for a prolonged period of time, Flusser's classic text on photography does not resolve the philosopher's question posed in a different volume as to whether writing *does* or *does not* have a future—but it does foreground the mediatic character of both reading and writing. Situating those practices on a continuum with photographic acts, artifacts, and technologies, James's installation-video brings to the fore the fact that not only is reading a form of seeing and hearing but also that, for us humans at least, writing and photography are *experiences*. They are multisensuous zones of sensory stimulation which mobilize perception via vision, sound, and haptics to create sensations that are subjectively describable and qualifiable—and yet that (so far) escape computational logic. Human preferences, likes, and dislikes can of course be metricized and thus predicted with a considerable degree of success—to an extent that some algorithms are said to be better at knowing us than we know ourselves. Yet the subjective quality of experience, i.e., what it feels like to be me or you (or a bat), and to *have* an experience (i.e., what analytical philosophers have described as "qualia"), is something that does not yield itself to computational translatability in any straightforward way.

Investigating the terrains on which such experiences can take place has been of interest to me not just in my theoretical investigations and photomedia art practice but also in my pedagogic activities. The second example

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I want to present is thus related to my work as an educator. As discussed earlier in this chapter, I am wary of stories about the supposed progressing illiteracy amongst the young generations serving as evidence for the "end of reading." Yet during over twenty years of my teaching practice, I *have* indeed observed some changes in the way university students engage with textual and visual material. This has encouraged me to explore—experientially, so to speak—how the relationship between texts and images in the digital age is being played out in the pedagogic context. With a view to this, I designed two courses at my previous academic institution (Goldsmiths, University of London): a first-year (freshman) course called Media Arts and a master's-level course called Photography and After. Blurring the boundary between "theory" and "practice," the goal of both courses was to encourage students to *think about media* and *make media* as part of the same classroom experience and course assignment. In the process of designing them I was mindful of an anecdote from what seems like a different era, from a conversation between two philosophers whose work has been formative to my understanding of technology in theoretical terms: a book titled *Echographies of Television* featuring a series of dialogues between Jacques Derrida and Bernard Stiegler. In that book, Derrida recounts a time when, in a seminar he taught "in California" (most probably at UC Irvine), two students presented him with "videocassettes" in lieu of the written paper. Although seeing himself as being open to all sorts of experiments and intrigued by their "innovation," Derrida eventually decided against accepting the assessment presented to him in the moving image format, because, as he admitted, "I had the impression, in reading or in watching their production, that what I was expecting from a discourse, from a theoretical elaboration, had suffered from this passage to the image."[87] He was keen to emphasize, however, that he had not rejected the image-based submissions because of the image, but rather "because it had rather clumsily taken the place of what I think could have and should have been elaborated more precisely with discourse of writing."[88] Derrida was of course no Luddite, and he put a great amount of thought into analyzing our relationship with technology. The interview with Stiegler was conducted in 1993, a time when university education and philosophical praxis remained in a different relationship to media technologies as both everyday devices and pedagogic tools than it is today, when smartphones, laptops, virtual learning environments, editing software, PowerPoint, and Zoom organize our cognitive and

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conceptual horizon in a new way, beyond a strict distinction between texts and images.

Derrida already predicted that moment when he said that "there will come a time when, in effect, one will be able to and will have to integrate images into the presentation of knowledge,"[89] although he also issued a warning against using images "to the detriment of the rigor of anterior knowledge."[90] It was the desire to examine this tension between rigor and innovation, between "anterior knowledge" and new media, that has directed me to rethink and reimagine my teaching over the last decade. And thus my Media Arts course, which examined different ways in which artists have used media and technology across different historical periods, opened with the following questions: How do we decide if a piece of media art or a YouTube clip is any good? How do we combine critical thinking about the media with making interesting media? In the age of social media and user generated content, are we all artists now? But the course also challenged the notion of "art" as a unified field of specialist cultural production when placed in the context of the wider enactments of creativity and amateur media practices.

The similar attempt at boundary-crossing, whether between text and image, theory and practice, or old and new media, shaped my graduate-level course, Photography and After (the preparation for which planted seeds for the development of the argument of this book). This course analyzed the contemporary condition of living with photographs, approaching them not only as individual art objects, memory devices, or (increasingly doubtful) photojournalistic evidence, but also as flows of data that touched, animated, shaped, and regulated us in multiple ways. Through this, it explored sociopolitical implications of the fact that our ways of understanding the world and making meanings in it, as well as our social relations, were increasingly mediated by images, whether in their photographic or post-photographic forms.

The principal aim of Photography and After was not just to think about photographs but also to think photographically, with the theory-practice division crossed in both taught sessions and assessment. For their assessment, students needed to produce a photographic or photomedia work, involving a series of original photographs, a video, an online project, a hybrid media work, or a curatorial submission, and accompanied by an essay. Unlike in many other "practice" courses taught in the department,

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where advanced image-making technology was prized, whether in analog or digital guises, for me students had to use a low-fi camera (e.g., one included with their cell phone), Internet resources, or found images. Imagination and creativity were seen as more important aspects of the work than any advanced technology, although the "rigor" mentioned by Derrida and the recognition of the forms of "anterior knowledge" were equally important. The course involved extensive engagement with Flusser's work, among other texts, but it also built on his insights about the coproduction of media, including texts, with the "programmed instrument," be it a typewriter or a camera. The significance of the class for me, as both a credentializing activity and an ontological encounter with one's own networked autonomy, lay in the importance of experiencing the human creative act "as a free gesture."[91]

This sense of working with but also against the apparatus while trying to negotiate its constraints was interestingly captured by one of the students, Ben Prideaux,[92] in his project for the 2020 class. Applying this logic to the image recognition system devised by Google, he fed into its Cloud's Vision API a series of images of objects that, in some way, resembled the basic features of a human face: an electricity socket sporting two oblong "eyes" and a gaping ghostlike "mouth," doorknobs and a drawer handle making a stick-man face, a banana "smile" (figure 1.3). This was done in recognition of the fact that humans not only are drawn to faces (for example, when watching films or looking at websites)[93] but also tend to see faces in random objects and patterns—e.g., Jesus on a piece of toast, or a friendly mascot on the car bonnet. This phenomenon, known as "pareidolia," is explained by psychologists as an evolutionary trait that initially enabled differentiation between one's friends and enemies and hence, ultimately, one's survival. It developed due to the sheer frequency of having been exposed to other people's faces—and the significant roles those faces (and their "owners") played in navigating the environment. In the accompanying essay, Prideaux suggested that this trait "can be seen as the automaticity of the human subverting the program of the apparatus," thus reflecting Flusser's view that "everything to some extent follows a program, even the universe." Yet he also noted that, while human observers would easily identify the collected images as "stickman-faces," the image recognition system failed to make such identification. While he was aware that a more sophisticated algorithm could no doubt eventually be trained in matching humans in

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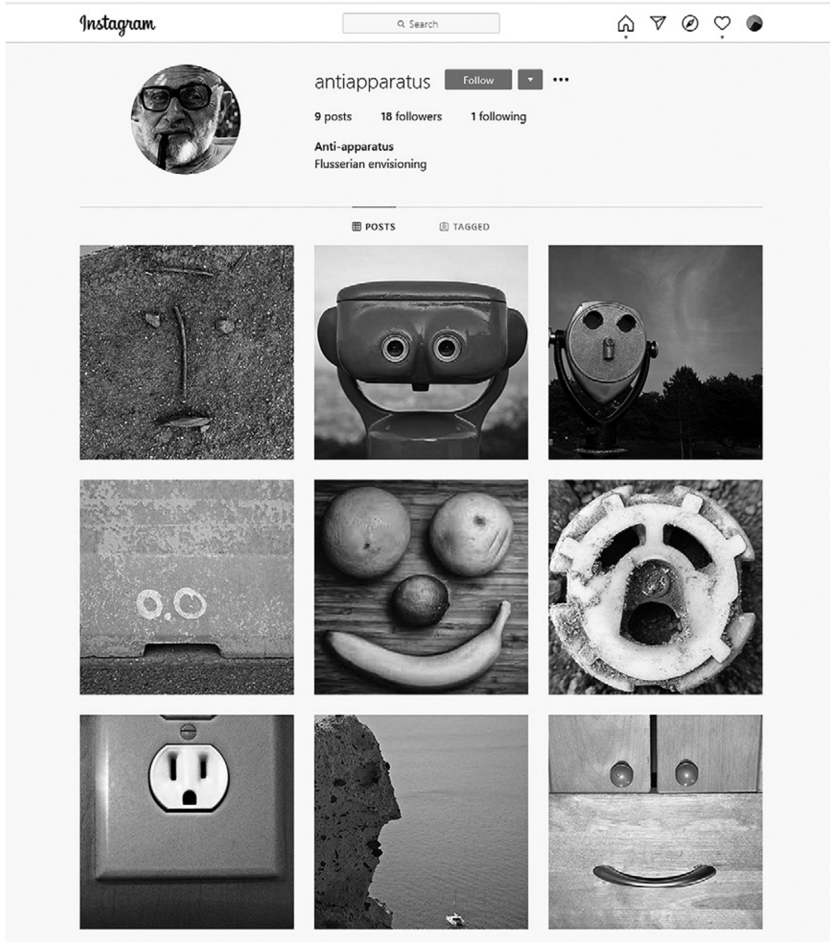

Figure 1.3

Ben Prideaux, screenshot of MA student project, *Anti-apparatus*, 2020. Used with student's permission.

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pareidolia, Prideaux was more interested in enacting, in the context of our class and the project on Flusser, a small trick that was able to challenge the apparatus as it became more automated and continued to "mechanise"[94] thought. These kinds of small gestures and creative interventions can also "help humans learn about the existence of ubiquitous sensing,"[95] beyond conscious theoretical reflection and rational analysis.

In the closing pages of *The End of Reading* David Trend looks at different media as generators of multisensory experience—but also as training devices that teach us *how* to experience. He writes,

> Isolated forms of communication like books, CDs, photographs, or movies offer us parts of the overall experience of perception that we experience in daily life. As these forms of media become more complex to become sounds, images, and events unfolding over time, the media come ever closer to replicating our unified *field of perception*. The closer media come in achieving this model, the more excited and interested audiences become. This is why photography became such a marvel when it came onto the scene in the mid-1800s and why multimedia experiences such as game playing in virtual worlds are even more captivating.[96]

We could perhaps thus claim that media become spaces through which we can better see and understand perception, and hence ourselves, because they allow us to grasp how we see and sense the world. In other words, media frame the world for us while also revealing that *there are frames* in the world, that we make the world through putting frames into it, and that perception is needed for us to have a sense of the world. Photography as a quintessential enframing practice plays a key role in this process. Marvin Heiferman claims that photography is an "existential, philosophical kind of medium" and that "there's no other experience like it. . . . For a moment, you can stop something and look at it in a way that you normally wouldn't see it."[97] We could therefore go so far as to suggest that photography and other media constitute a unified perception machine: they unify perception for us, within us, and between us.

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