## Technology

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Technologies make **world**s appear. It is this capacity that has always interested the contemporary critic when turning to the concept of technology. In *The Human Condition*, Hannah Arendt, for example, discusses the effect technologies have on "the very worldliness of the human artifice" (1958, 150). Samuel Weber (1996) makes the same point – that technologies are "Upsetting the Set-Up" – when thinking through Martin Heidegger, who before him had remarked: "Techné belongs to bringing-forth, to poiesis. It is something poietic" (Heidegger 1977, 12). By adding new objects, by varying the measurements, by changing the perspectives, by linking what had been disconnected and connecting what had been apart, by providing destructive powers, by confusing the boundaries, technologies allow new and different movements of thoughts, things, and bodies into the human artifice.

Although all technologies have the forceful and fabulous capacity to **create** a different world, the worlds that appear do not automatically lead in any progressive direction. In other words, their technical realities are necessarily different, but not necessarily "better." Walter Benjamin's circular glasses were among the first to come across this: in his famous essay "The Work of Art in the Age of Its Technological Reproducibility" (1936), he discusses the divergent ways in which the new means of (re)

production – photography and cinema – are affecting the masses, an affecting that can be twofold as the "increasing proletarianization of modern man and the increasing formation of masses are two aspects of the same process" (Benjamin 1936, 120; emphasis added). Technologies can be employed to manipulate the masses in the interest of fascist capital, or they can be employed to allow masses meet themselves thereby helping them to understand their own formation, and therefore their needs. As Benjamin makes clear in his essay, the actual appropriation, the usage decides which of those worlds will be created. To ensure an appearance of a world aligned against fascism, his essay introduces a specific take on the new technologies:

In what follows, the concepts which are introduced ... are completely useless for the purposes of fascism. On the other hand, they are useful for the formulation of revolutionary demands. (102)

Here, Benjamin points out that technologies change the world that is in place. New technical realities "neutralize a number of traditional concepts – such as creativity and genius, eternal value and mystery" (101). As they "neutralize" the framework of the world in place, technologies create an opening that harbors a political moment. It is technology that makes this opening possible – a point Benjamin makes again in another text, where he describes "technical revolutions" as "fracture points": "[I]t is there that the different political tendencies may be said to come to the surface" (1927, 17). Years later, in "A Cyborg Manifesto," Donna Haraway embraces technology for the same reason: "The frame for my sketch is set by the extent and importance of rearrangements in world-wide social relations tied to science and technology" (1991, 161).

If technology has the capacity to question the world in place and if it offers difference, as Benjamin and Haraway write, technology is *in this world* but *not of this world*: It is alien to its conditions. Benjamin writes: "In every new technical revolution, the political

tendency is transformed, as if by its own volition, from a concealed element of art into a manifest one" (1927, 17; emphasis added). We certainly can work with technology and with the political tendencies it has created, but we can neither control nor predict technology and thus which tendencies it will create. Technology follows its own, alien logic. Even in the twenty-first century, in which prediction has become a paradigm, this is still the case: In a field as closely guarded as the digital economy, we are never certain what will be "the next big thing." We cannot predict the future of the technology we have invented. Alien to us, technology has the capacity to set up a truly different frame, which makes a new world appear.

Philosophical explorations of this frame tracing technology's alien-ness have started. Against the assumption that algorithms are obstinate step-by-step procedures, Luciana Parisi (2013) discusses the blind spots of computers with Chaitin's constant, for example, a number that is real but not computable. Parisi reads those alien logics of calculation as symptoms of algorithmic thought and uses them as a point of departure for an immanent critique of algorithmic practices and methods. Benjamin Bratton (2016), on the other hand, describes today's planetary-scale computation as an alien political geography. Based on mineral sourcing, it links the earth, the user, and technology in new ways and is inhabited by meaningful users, "human and otherwise":

It is with vestigial stupidity that we police the human/animal divide in the way that we do, and it is equally misguided to insist that computing machines are 'just tools' and not also co-*Users* along with us. (Bratton 2016, 349)

The theoretical challenge, of course, is then not to think of them as "just subjects" either – a challenge we are not very well equipped for. As Bratton points out, "we lack adequate vocabularies to properly engage the operations of planetary-scale computation" (xviii).

In our philosophical thinking of technology, the problem of vocabulary, however, has been central for quite a while – no lesser text than Heidegger's forceful essay asking "The Question Concerning Technology" (1954) is a good example of this. Although Heidegger aims "to experience the technological within its own bounds" (4), he leads out of those bounds looking for an answer by linking techné and poetry via classical Greek. Stating that "the essence of technology is by no means anything technological" (4), however, Heidegger might have sent us in the wrong direction – interestingly, this is exactly where Arendt turns the other way. Instead of finding an answer to technology in the human artifice, she points to the functioning of technology itself:

The discussion of the whole problem of technology, that is, of the transformation of life and world through the introduction of the machine, has been strangely led astray through an all-too-exclusive concentration upon the service or disservice the machines render to men. The assumption here is that every tool and implement is primarily designed to make human life easier and human labor less painful. Their instrumentality is understood exclusively in this anthropocentric sense. But the instrumentality of tools and implements is *much more closely related to the object it is designed to produce.* (1958, 151; emphasis added)

The technical object, according to Arendt, is misunderstood as a means to human ends. Its instrumentality is always more closely related to another object than to a human subject. In other words, the immanence of technology, its own, "alien" logic, is a force, which is driven by an **immanent** – "closer" – relation.

At the very same time, Gilbert Simondon (1958) explores this immanence at work in his philosophical analysis *On the Mode of Existence of Technical Objects*. Studying steam-powered and combustion engines, cathodes, turbines, telephones, and other technical objects convinces the French philosopher of the same close, immanent relation, which he describes as a "processus de

concrétisation" or process of concretization (1958, 19), triggered by the specific relation of a technical object with its environment. Comparing the modern engine of his time of writing to an older one from 1910, Simondon points out that the newer one is not "better" but that it just functions better because it is more tightly related to the rest of the car. This tight relation has changed how the engine runs in and provides energy for the car, but it has also made the vehicle more dependent on its environment. The engine of 1910 is "plus autonome," or more autonomous, (20); unlike the new one, it also functioned in fishing boats without breaking down. This and other examples lead Simondon to a number of interesting conclusions that today affect thinking far beyond technology. For example, that the transformation of matter (things, bodies, thoughts) is driven by concrétisations, which can be explained via concrete technical relations with their milieu, creating an immanent development, which is nondirectional. As Elizabeth Grosz points out:

Matter has a positive property immanent in any of its particular characteristics – it is capable of being modelled, formed. Matter has what Simondon understands as **plasticity**, the capacity to become something other than what it is now, as its positivity, its openness, its orientation to transformation. (2012, 45, bold added)

Here Grosz points out a political – open – moment that marks the start of something new. It marks, however, only the start. New technologies, alien to the existing human artifice, offer a forceful moment of upsetting the setup in unforeseen ways; this is why understanding technology is crucial to the contemporary critic, and this is the case more than ever in the technical realities that mark the twenty-first century.

To understand the force of technology, however, means to differentiate the opening of technology from its actual interpretation – too often technology gets blamed for capitalistic interests that hide in it all too well. It is, however, not the fault of the

mobile phone that we feel the need to be available for work on the weekend (Berardi 2009, 193). Instead, the connection of what was once free time to capitalistic interests has been installed by a human boss who wants his workers to be always available (Bunz 2014, 32); others have set rules in place to avoid emailing after working hours. The mobile phone, for example, could also be interpreted as an emancipative weapon as it also allows one to remotely be there for someone who needs care, a dear friend, a child, an old parent, which eases the work of social availability, a role that in this world is still mostly carried out by women.

While in this case technology has the force to change the set up of the human artifice – we all become potentially available – it does not dictate whose interests are put across. As Haraway once remarked: "Technology is not neutral. We're inside of what we make, and it's inside of us. We're living in a world of connections – and it matters which ones get made and unmade" (cited in Kunzru 1997). For this, we need to turn to technology, which starts with using and understanding it better and ends with coding or hacking it – different ways to appropriate it are possible and open to us all. Technology might be an alien force, but unsurprisingly we cannot sit back and let capitalism create the revolution.

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