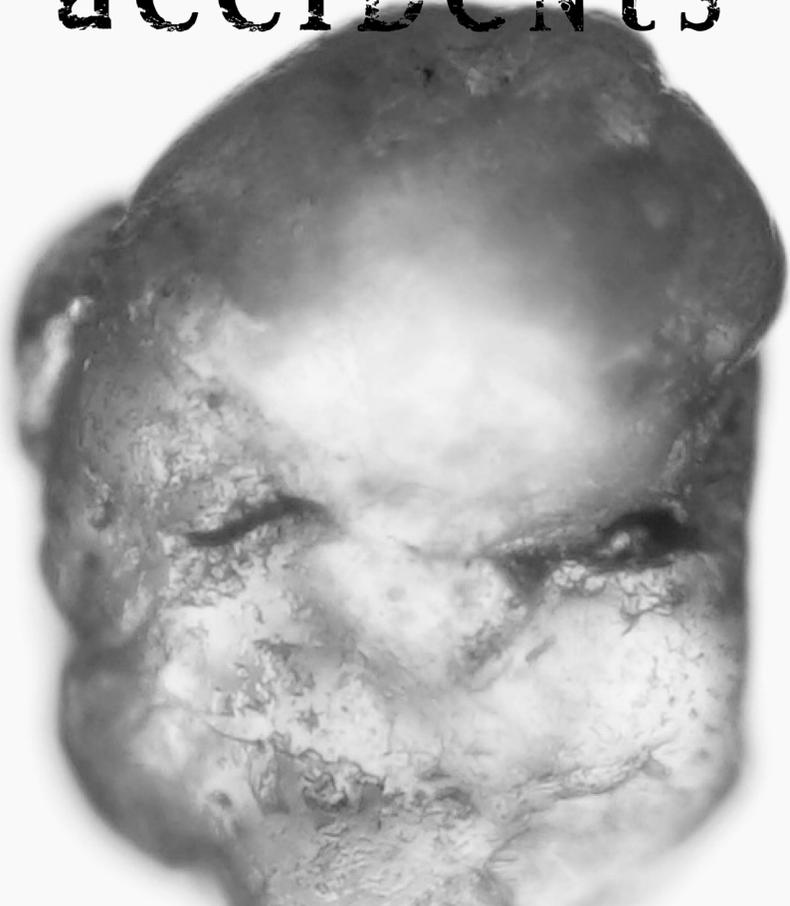


**technological  
accidents**



**accidental  
technologies**

eds. JOKE BROUWER AND SJOERD VAN TUINEN

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technological  
accidents

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accidental  
technologies

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the technocracy of contingency	4
sjoerd van tuinen	
there is no such thing as a technological accident	10
jason w. moore	
pareidolia	38
driessens & verstappen	
a near-sighted falling into technology	60
florian cramer & elaine w. ho	
methods, and the comma	82
vera bühlmann	
falling and image	118
lars spuybroek	
notes on technical normativity	154
yuk hui	
exteriority, black noise and the computational accident	168
ezequiel dixon-román	
technē beyond monoculture	186
cécile malaspina	
the derivative community	202
erik bordeleau	
capture	224
pao lo cirio	
thinking by accident — active pessimism	248
stefano harney, lev avitan, willem schinkel, and roger van reekum	

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the  
TECHNOCRACY  
of  
CONTINGENCY

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SJOERD VAN TUINEN

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When V2\_ published the previous volume in this series of interdisciplinary theory books, *To Mind Is to Care* (2019), it was already clear that caring was destined to become an ideologeme circulating smoothly between curators, bankers, farmers, university deans and other manager types. For what else is there to do when you find yourself living in the ruins of your emancipatory dreams? Although it has roots in anarchism, existentialism, environmentalism, and feminism, the primary meaning of care, at least in the West, has always been government. More than ever, the governmentalization of our world is built on our weakness. As our lives are stripped bare of their vital forms, we are turned into extraterrestrial inhabitants of a 'spaceship earth' requiring total care.

Then came Covid-19 and the madness of an insomniac state reason in the name of care, with the underfunded and privatized hospital as blackmail. It proved how vulnerability and violability are essential to life in the global metropolis. Life in a world in constant need of support systems is life lived in an unlimited state of exception. Hence the moral torpor of lockdowns, curfews, and morbid illusions of hygiene, not to mention the brutalization of public debate and the hasty biotechnological experimentation. Care is the human face of cybernetical reason – *kybernetike* originally referring to the art of government or steering a ship, and today, in Norbert Wiener's words, to "the science of control and communication" as well as "the care and feeding of ideas."

It is uncontroversial to observe that the virus was as much a *technological accident* as a natural accident. It stems from the industrial production of worst-case scenarios inherent to whatever circulates as life in the planetary infrastructure. But perhaps we should also say that the virus was an *accidental technology*. As a so-called side-effect, it almost instantaneously became an important tool in the landgrab through which we, the undead, are made dependent on medicalization as ultimate form of politics. Originating in China, Covid-19 was an acceleration of what Nietzsche had already warned against, the governmental dream of China – the instrumentalization of liberal citizenship aimed at blind obedience. The virus was not just a necropolitics – which showed how the ultimate accident, death, was actually a planned casualty of the healthcare system – but also a technopolitics – an illiberal conspiracy<sup>1</sup> of engineers, medics and administrators, in short, of all those professionals who, in a self-defeating escalation of power, converge upon the need to improve our "resilience": not our happiness, to be sure, but our capacity to suffer.

It was Paul Virilio who, in expanding Heidegger's question of technology to the accidents produced, argued that the technological accident is in fact nec-

essary to technology, whereas its substance becomes relative and contingent. “The shipwreck is consequently the ‘futurist’ invention of the ship, and the air crash the invention of the supersonic airliner, just as the Chernobyl meltdown is the invention of the nuclear power station.”<sup>2</sup> This reversal of the classical metaphysical priority of substance over accident gains new poignancy in the so-called Anthropocene. Instead of the possibility of nuclear war, the paradigm of the “risk society,” we have the certainty of climatic collapse, against which no strategy of deterrence can win. What today is called the management of “uncertainty” – that is, of unknown and unintended consequences as opposed to known risks – is based on the premise that what was once a possibility is now unavoidable. Customary pharmacological approaches – based on the truism that technology is both problem and solution, both poison and remedy – remain uncritical in this regard. Logistics, as Virilio says, is “pure war.”

More recently, Benjamin Bratton has reversed Virilio’s original observation, reminding us that accidents also produce technologies. In terms of their use, it is well known that new technologies develop and proliferate through unpredictable leaps. SMS was initially invented as a debugging tool for telecom providers, only to replace time-consuming phone calls, just as peer-to-peer technologies such as cryptocurrencies quickly became new media for financial speculation. In this regard, Marshall McLuhan already spoke of an “emancipation of the accident” in which the old medium becomes the content of the new medium or “milieu.” More or less at the same time, Gilbert Simondon described the functional openness of technical objects as essential to their concretization – that is, for their (in)compatibility with other objects to be regulated and for their own indeterminacy to eventually be reduced. More and more, however, the accidents are allowed to remain abstract. In smart technologies based on neural networks contingency is presupposed as the element in which functional mechanisms thrive, while at the same time remaining beyond human knowledge. Even though it is tempting to esthetically or politically romanticize the mistakes, breakdowns and glitches made by predictive algorithms, these errors are precisely what enable the algorithms to learn and change their form.<sup>3</sup> They are accidental technologies, just as capitalism as an open system of high frequency trading develops by rendering its crashes productive and profitable, for example through hedging, short selling and creative destruction. In fact, our very ability to render disasters intelligible depends on the parameters and technologies of observation that are the result of the disaster as much as the cause.<sup>4</sup>

This dialectics of the accidental and the essential has in fact been inherent to their conceptual division from the start. Just as, for Aristotle, accident serves to reveal substance, Epicureanism as related by Lucretius in *De Rerum Natura* teaches that the world itself is created by chance as the function of a swerve – the primal scene of the collisions and conjunctions of atoms – even though the individual forms of this world follow of necessity. The encounter of atoms is contingent, but for them to create a world their encounter must last and not come undone.<sup>5</sup> Historically speaking, the resistance to contingency is the signature of Western philosophy: the overcoming of the irrational through reason or control.

This still holds today, even if speculative and algorithmic reason increasingly relies precisely on the normalization of contingency as something that it cannot contain but that simultaneously protects it. In contemporary philosophies of the event, the accidental takes hold in the form of a bifurcation or breakdown/breakthrough. The Lucretian contingency of necessity is only the flipside of “the necessity of contingency,” which for Quentin Meillassoux expresses an arcane principle of hope, but is perhaps more adequately understood by as a “catastrophe without apocalypse” – that is, without hope for a new beginning.<sup>6</sup> If we are living in times of catastrophe – usually expressed with the ominous phrase “we ain’t seen nothing yet” – this not only means that our lives will be determined by accidents waiting to happen, it also goes to the heart of what we are (un)able to imagine. Are populism, fake news, conspiracy theories and social decomposition accidents of “social” media, for example? Are they not rather part of a profound de- and re-aggregation of the body politic?

Our relationship with catastrophe is one of stupidity or cold panic, such that even in the face of disaster we are morally stunned and unable to do anything. There are Frankenstein moments, when developers like Sam Altman (ChatGPT) shy away from the positive feedback loops generated by their own technology, and legislators take over. But since government increasingly understands and legitimates itself through the normalization of unmanageable disorder, these moments are rarely decisive. Even if it is widely acknowledged that the incredible potential for catastrophe is not an external possibility but a virtual tendency within technology (a car or a truck is as much a murder weapon as a means for transportation), catastrophe remains the routine outcome of technological arrangements (the worldwide automobile industry is still growing). No precautionary principle will save us from the chaos that is brought about under capital’s imperatives of growth and disruption.<sup>7</sup>

This returns us to Virilio's notion that "each period of technological development, with its instruments and machines, brings its share of specialized accidents, thus revealing 'en négative' the scope of scientific thought."<sup>8</sup> Conceived in the midst of a global pandemic that has briefly interrupted and then intensified the hold that digital technologies exercise on our common imagination, the aim of this book is to inquire into the accidents of technology, but also into the forms of power and authority they materialize. Among the questions presented to our authors are the following: What are the specific accidents of – call them what you wish: artificial intelligence, machine learning, enhanced pattern recognition, etcetera, systems? What do accidents tell us about the technology that generates them? How are these technological failures tied up with the creation and recreation of economic rationalities? Are we accidentally moving towards a new stage of capitalism, or perhaps to something that lies beyond? What kinds of alternatives to "the economy" may gain traction in the breakdowns and errors of current technological "advancements" and logistical webs of transport and distribution? How could we salvage and appropriate accidents? How could goods, people and credit move differently when we take accidents to be more than incidental to our existing infrastructures of life support? And do the events that come to mind really qualify as "accidents," or are they rather extended forms of functionality, which may be undesired, but not "dysfunctional" in the way that the derailment of a train appears dysfunctional?

## notes

1. Anonymous, *Manifeste conspirationniste* (Paris: Seuil, 2022).
2. Paul Virilio, *Original Accident*, trans. Julie Rose (London: Polity, 2007), 5.
3. Cf. Catherine Malabou's description of subject constitution in the event of death, the ultimate anthropological accident: "One does not die as one is; one dies as one suddenly becomes." Catherine Malabou, *Ontology of the Accident: An Essay on Destructive Plasticity*, trans. Carolyn Shread (Cambridge: Polity, 2012), 69.
4. On the indeterminacy of digital technologies, the moment when crisis becomes, more than a historical event, the transcendental placeholder that signifies the techno-social contingency itself, see Natasha Lushetich, Iain Campbell and Dominic Smith (eds.), *Contingency and Plasticity in Everyday Technologies* (London: Rowman & Littlefield, 2022).
5. Or as Louis Althusser reiterates: "a lasting encounter ... becomes the basis for all reality, all necessity, all Meaning and all reason" such that necessity itself must be re-understood as "the becoming-necessary of the encounter of contingencies." Louis Althusser, *Philosophy of the Encounter: Later Writings, 1978–1987*, trans. G. M. Goshgarian (New York: Verso Books, 2006), 169, 194.
6. Yuk Hui, "Algorithmic Catastrophe: The Revenge of Contingency," *Parrhesia* 23 (2015), 122–43.

*the technocracy of contingency*

7. Isabelle Stengers, *In Catastrophic Times: Resisting the Coming Barbarism*, trans. Andrew Goffey (Open Humanities Press, 2015), 32.
8. Paul Virilio, "Museum of Accidents," *Public 2* (1989), 81.

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there IS NO  
SUCH THING as a  
technological  
accident

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CHEAP Natures, climate  
CRISIS & technological  
Impasse

JASON W. MOORE

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Like Nature, *Technology* is one of our most dangerous words. It's a metaphysic, a narrative prime mover endowed with supernatural powers.

Such words are never innocent. They are never *just* words. They are guiding threads for the rulers. For the rest of us, they're everyday folk concepts. These concepts shape what we see and what we don't see, what we prioritize, and what we ignore.<sup>1</sup> Importantly, they not merely describe the world; they license and guide modern ways of organizing power and re/production. They have real force in the world, because of what they mystify, and because of what they enable. Such ideas present themselves as innocent. They are anything but.

These ideas are *ruling abstractions*.<sup>2</sup> They are ideological constructs that have made the modern world, a kind of software for the "hard" mechanisms of exploitation and extirpation.

Hence the uppercase. The ruling abstractions of Nature and Technology have very little to do with soils or machines; they have everything to do with modern fantasies of power and profit, and the dystopias they enable.

Such abstractions are dangerous for two reasons. First, they appear in our imaginaries as agentless forces of history: they are brain erasers for world-historical memory. They *seem* to have "lives of their own" – which they emphatically do not.<sup>3</sup> For over a century, these abstractions have seduced the political left no less than centrist and "eco-modernizing" techno-fixers. Technology is particularly tempting; it easily becomes an "idea of mechanical progress, not merely as a necessary development but as an end in itself, *almost as a kind of religion*."<sup>4</sup>

Second, the danger extends beyond false consciousness. Ruling abstractions are material forces, not just ideas but belief structures.<sup>5</sup> They are developed, used, and periodically reinvented by the imperial bourgeoisie and their intelligentsias to practically reshape the world in ways favorable to the endless accumulation of capital. Ruling abstractions are the building blocks of hegemonic ideologies that trickle down to the folk concepts of everyday life. From the Levellers to Blockadia, radical movements have challenged these abstractions. But they must also live with the contradictions – as Orwell underlines. When Lenin moved from the furious denunciation to the critical acceptance of Taylorism and Fordism after 1917, he was doing what all revolutionaries must do: wrestle with the contradictions of capitalism.<sup>6</sup> Those contradictions are far more than mechanical.<sup>7</sup> They are ideological, social, biological, cultural ... and planetary.

Sometimes demon, sometimes savior, the ruling abstraction *Technology* conjures something mystical, outside of history yet relevant to it. Its power is the

alchemist's illusion: the magical notion that machinery will produce something out of nothing. My uppercase emphasizes the double register of both Nature and Technology: as ruling abstractions, central to modern mythmaking, and as material processes of power, profit and life. Disentangling and resynthesizing the two moments – the ideological and the material – is difficult.

The difficulty stems from ideological mystification, not intrinsic complexity. I am not asking the reader to design a Mars rocket. The superficially counter-intuitive character of my argument shows how bourgeois ideology paints radical critique as unduly complex and unrealistic. Nowhere is this more evident than in its ruling abstractions, like Nature and Technology. Capitalism – through the media, the schools, and the professions – has so thoroughly indoctrinated us into the procedures of Cartesian thought, with its fantasy of thinking substances and extended substances, that it takes a deliberate and sustained choice to think dialectically.<sup>8</sup> Either/or thinking is so hegemonic that our neural pathways often resist the dialectical imagination's emphasis on unity-in-difference, on flows that shape that inside, the outside, the in-between. This makes it challenging to grasp historical movements as “rich totalities of many determinations.”<sup>9</sup> The alternative asks us not only to interrogate the ruling abstractions that sneakily find their way underneath our critical sensibilities and set up shop in our preconceptual habitus; it asks us to see how those ruling abstractions operate in world history, becoming – as a young Marx once quipped – ideas with “material force.”<sup>10</sup>

Nature and Technology, the ruling ideas, are so central to modern thought and everyday language that questioning them might sound absurd. Their common sense, descriptive innocence is so obvious that anyone who points out their ideological character must be insane – or some ivory tower thinker who prefers word games over hard-headed analysis. But these ideas are conceptual hammers of imperial rule and its false promise of Progress. As abstractions, they have material consequences. To liken the web of life to a machine, or the biosphere to a spaceship, is not merely an intellectual problem but a political and ideological project.<sup>11</sup> The responsibility of radical critique in the climate crisis is to lay bare the interpenetrating relations of class power, ideology and the forces of production in the web of life. How one *thinks* about Technology – and therefore Nature – is fundamental to one's world-historical conception of the crisis and its origins, and therefore essential to one's political assessments, “environmental” and otherwise.

The dominant intellectual and ideological view fragments the world into discrete concept boxes: Nature, Society, Economy, Technology, Race, whatever. The fragmented worldview – deeply indebted to the Cartesian primacy of parts over wholes – leads to interpretations of the climate crisis through causal pluralism, systems theory, and generalized schemes of interactivity rather than dialectical interpenetration and totality. In such approaches, parts trump the whole – or the whole overwhelms the parts (two sides of the same epistemological coin). The result is an intellectual and ideological impasse that fails to do what any radical climate critique must: identify the emerging “weak links” in the chains of imperial power and class exploitation in the unfolding planetary crisis.<sup>12</sup>

The dialectical – and I would say world-ecological – alternative begins neither with parts nor wholes, but with guiding threads. Let us take the example of the technology-resource nexus most closely identified with the climate crisis. On the left these days, the notion of “fossil capital” is hegemonic.<sup>13</sup> It powerfully implicates the class relations of steam power and coal from the early nineteenth century; it identifies the epochal character of varied permutations of oil, gas, and combustion engines since then. There is much to recommend in the thesis, but only to a point. It runs dangerously close to technological determinism and resource fetishism. As we’ll see, the history of the steam engine is wrapped up with a broader ensemble of technological, ideological, and imperial transformations. It was a crucial node in nineteenth-century industrialization, but was it decisive? Was it even the era’s most epochal machine?

These questions must be posed if we are to develop a revolutionary strategy for climate justice. Narrowing the problem to specific technological-resource combinations is not only historically problematic. A politics that flows from such reductionism is intrinsically vulnerable to ruling class “fixes” that reshuffle capitalism’s energetic-technological mix while preserving violent and unequal relations of class exploitation.<sup>14</sup>

Here we can remember the New Left slogan: the issue is not the issue.<sup>15</sup> Blow up a pipeline and you may slow global warming for days or weeks. Transcend the thinking – and its enabling webs of power and profit – responsible for the pipelines, and another biosphere is possible. To be sure, thinking is not enough; it is necessary but insufficient for revolutionary synthesis. Without an intellectual rupture that moves beyond substance fetishes, methodological nationalism, and Cartesian thinking, popular movements for fundamental democratization will remain vulnerable: easily divided, repressed, and co-opted

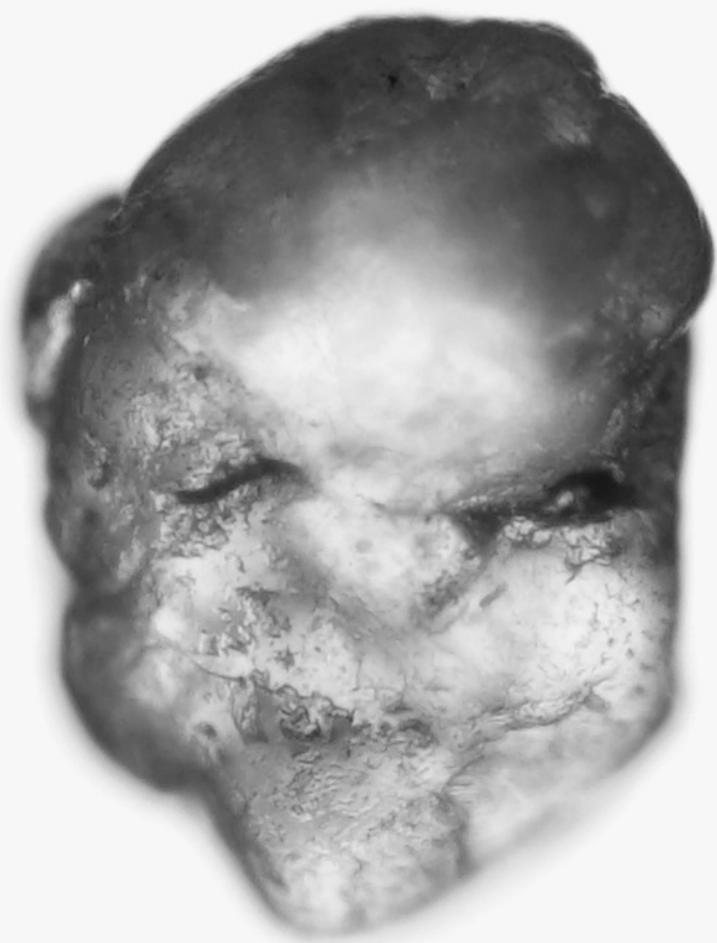
• PAREIDOLIA •

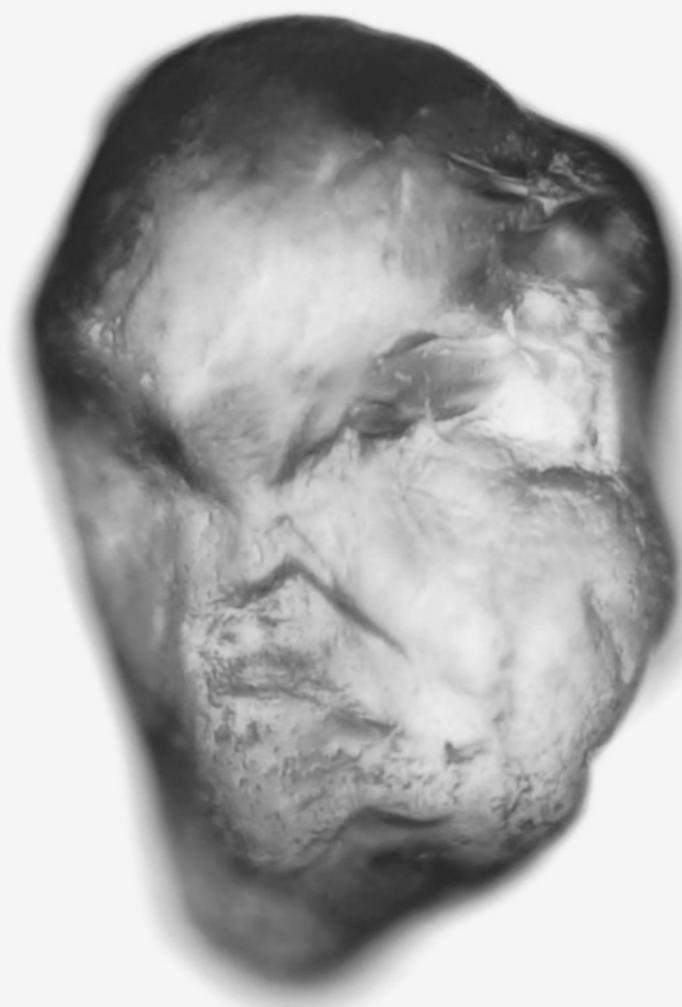
DRIESENS & VERSTAPPEN



The artists duo Driessens & Verstappen are fascinated by the idea that all the faces of all the people who have ever lived and will ever live, may be found within the enormous quantity of grains of sand existing on earth. And even though finding a face is very rare, you know that innumerable faces are concealed among them, if you search long enough in the well-nigh inexhaustible volume. *Pareidolia* is a fully automatic robotic search engine scrutinizing grains of sand in situ. This proceeds as follows: there is a dosing funnel in the machine that sprinkles the sand across a slowly rotating glass disc. The microscope above the disc detects the individual sand particles and applies face detection software to each of them. If a face is discovered within the scattered grains, a portrait will be recorded photographically. All photos are unedited and true representations of the grains in question. Finally, there is a swiper swiping the sand that has traversed round the circuit away, making space for new grains. In addition to the optics and the mechanics of the robot installation, the artists developed the face detection software themselves, utilizing AI and artificial neural networks. The artists keep tally of the top 100: as more grains are evaluated, this top 100 comprises ever better faces.

The work offers a more profound insight into the morphology of sand grains and the inconceivable number of their unique variants. In addition, the work comments in a playful and absurdist manner on the extreme implementation of an anthropocentric worldview in which everything revolves around Man who wishes to see his own image even in the tiniest grain of sand.





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Notes ON  
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In the 1920s, during his sojourn in Positano, the economist and philosopher Alfred Sohn-Rethel observed a rather astonishing phenomenon: every technical apparatus in Naples failed. His observation was published as a newspaper article in 1926 with the title “Das Ideal des Kaputten. Über neapolitanische Technik” (translated in English as “The Ideal of the Broken Down: On the Neapolitan approach to Things Technical”).<sup>1</sup> The title itself is intriguing, because here “being broken-down” (*Kaputt*) is described as an *Ideal*, something desirable and almost unreachable. The article opens with the following sentence: “In Naples, technical devices are, as a rule, broken: it is only under exceptional circumstances and due to some astonishing accident that something will be found to be intact.”<sup>2</sup> Being broken is nothing accidental; instead the opposite is true: anything being *normal* is rare and accidental. Sohn-Rethel’s experience may not sound strange to many people today, since in some places in this world, machine failures are routine, and it would be a surprise that they work properly. Sohn-Rethel also observed a paradox, one that is almost dialectical: “Not, however, that they are broken because they do not work: for the Neapolitan it is only when things are broken that they begin to work.”<sup>3</sup>

### **neapolitan technical normality and the necessity of failures**

Machines begin to work only when they are broken. How do we understand this paradox? *Normally* we know a machine works when it functions properly, but Sohn-Rethel is claiming the opposite. We can interpret what he describes as an intimate human-machine relation in which the human is neither a user nor a master, and the machine is neither an inert object nor a slave. Instead, what Sohn-Rethel saw is a *form of life* in which machines appear to be at the same time redundant and productive. They are productive because that is what they are designed to be, and *normally* they are supposed to work in the way envisioned by the designers and technicians upon leaving the factory; redundant, because they are frequently broken down, and it is so rare that they work, therefore they failed to produce the effect that one expects, consequently they might acquire a function completely different from what they were supposed to be, like when a book is no read, but used like a piece of wood to support an unbalanced table. Sohn-Rethel describes this norm: “To this end they are, against their will, completely remodeled, rendering them entirely redundant for their proper purposes.”<sup>4</sup>

Norms, as we know, are results of the process of normalization, that is to say, the abnormal or the deviation from the precedent norm becomes dominant and thus constitutes a new norm. This normalization occurs in human habits, or what Hegel calls “second nature,” until one day it is suspended, and a new norm emerges. Once I visited an old friend in Wales, and he told me that as a child, he believed that sunny days are not normal; the normal days are rainy days. He only realized that the opposite is what others experience when he went to study in the USA. Normalization presupposes an organicity, that is to say, a plasticity within the system that allows a re-organization of different parts to cope with the new environment or new input of information. This re-organization will be stabilized by producing a new norm to which different agents concerned have to adapt. The normativity of Neapolitan society is in this case determined by a “normativity” of the machines, which are not at all “normal,” but rather “broken down.” The human bodies in this case have to compensate for the broken-down machines. In the world of broken machines, they have to adapt to the unreliability of machines in order to make them function. A human agent is responsible for driving the machine to work, but more often remodels the machines to serve a different purpose. The contingency introduced by the Neapolitan machines shapes a normativity that is not based on its function, but rather on its dysfunction. In the case of dysfunction, a new assemblage of objects and bodies emerge to make it work. The direct consequence is the diminution of expectation – to expect a machine to work is a Heraclitan wish: to expect the unexpected. One of the typical examples Sohn-Rethel gives is the unpredictability of taking a train from Naples, as he reports: “at the last minute, one can never really be sure where the train will take you. At least, that is, according to the philosophy delineated, upon my enquiry, by the station master.”<sup>5</sup> This might be the best example to see how the dynamic of social and economic life is shaped by technical normativity: you don’t know at what time the train will arrive, nor do you know where it will go. A salesman who wishes to arrive punctually for a meeting with a client in another city, or a patient who doesn’t want to miss an appointment with a specialist doctor in a hospital of another town, may have to take the train one or two days in advance, and must be prepared to walk for a certain distance, so that finally they arrive at their destination on time. The humans have to compensate for the unpredictability of the machines by a more calibrated planning and constant adaptation.

We might be tempted to read Sohn-Rethel’s Naples as a historical phenomenon, because Naples gives us an example of how social and economic nor-

mativity was determined by machines in the 1920s, when cars, trains, radios, and so on became a part of everyday life in Europe. Gilbert Simondon, in his 1958 *On the Mode of Existence of Technical Objects*, provides us with a sketch of a theory of technical normativity and how the technical normativity in the nineteenth century led to the alienation in Marx's sense.<sup>6</sup> Simondon reproached Marx for his ignorance of technical normativity and the over-emphasis on economic factors. Retrospectively, one might notice that those machines Marx describes in his work are often generalized as fixed capital, and unlike Sohn-Rethel's examples, all of them function properly, without which it wouldn't be possible to calculate surplus value or surplus time.

For Simondon, the major problem of alienation is that modern automatic machines introduced a new normativity, in which the workers are rendered almost redundant: not that they are not necessary, but that they could be replaced by anyone else. That is to say, a worker's medium of exchange is almost homogeneous, namely their physical labor power, which has little to do with the knowledge they possess. I propose to read Sohn-Rethel with Simondon here because Simondon outlines an implicit theory of technical normativity which will offer us some insights into Sohn-Rethel's essay on Neapolitan machines. In order to do so, we will have to briefly sketch Simondon's thesis. Simondon classifies three kinds of technical objects, namely element, individual and ensemble. Technical elements are tools or simple machines; they are detachable in the sense that they can be transported from one place to another and used in different machines. For Simondon, the eighteenth century is the epoch of technical elements, because people believed in infinite progress, evident in the optimism they had for technical elements. The nineteenth century saw the emergence of technical individuals. According to Simondon's definition, they are automatic machines capable of autoregulation. Instead of being a simple machine following linear causality (for example in a mechanical clock), a technical individual consists of reciprocal causalities (or what the cyberneticians call a feedback loop) and integrates the external environment into part of its functioning. Simondon uses several terms to translate the term feedback, such as internal resonance, retroaction, recurrent causality, and so on.<sup>7</sup> The mechanism of integrating the reciprocal causality between the interiority of the machine and the exterior environment is what he calls an associated milieu, which distinguishes a technical element from a technical individual, because the former doesn't possess an associated milieu. A technical ensemble is a group of machines that produces a synergy to complete a task. The twentieth century

• capture •

PAOLO CIRIO

The series of photos *Capture* is composed of faces of French police officers found on the Internet and acquired from the press. The artist Paolo Cirio collected thousand public pictures showing police officers, photos taken during protests in France, and processed them with facial recognition software. Then, Cirio created an online platform ([capture-police.com](http://capture-police.com)) with a database of the resulting four thousand faces of police officers, to crowdsource the identity of the officers by name. Cirio also printed headshots of the officers as street art paper posters and posted them throughout Paris, in order to show police faces in the public space.

For the installation in the exhibition at Le Fresnoy, Tourcoing, France, 2020, Cirio selected hundred fifty faces for the background and featured seven unidentified officers in the act of shooting at protesters.

The project *Capture* comments on the potential use and misuse of facial recognition and artificial intelligence by questioning the asymmetry of technological power at play. The privacy implications of not regulating such technology can eventually turn against the same authorities that promote its use. With this provocation Cirio shows how the power of facial recognition technology is excessively dangerous for society and even for the police.

Further, as an activist, Cirio introduced a campaign to ban facial recognition technology in all of Europe by organizing a petition in collaboration with privacy organizations and policymakers. For this project Cirio produced a short video documentary about facial recognition and artificial intelligence with the youth journalism agency Labo 148, featuring interviews with experts and activists.



*Capture*, installation at Le Fresnoy, Tourcoing, France, 2020



ERIK BORDELEAU

VERA BÜHLMANN

PAOLO CIRIO

FLORIAN CRAMER & ELAINE W. HO

EZEKIEL DIXON-ROMÁN

DRIESENS & VERSTAPPEN

STEFANO HARNEY, LEV AVITAN,

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