

Article

The Machine as Artist as Myth

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Abstract: The essay proposes an art–historical contextualisation of the notion of the “machine as artist”. It argues that the art–theoretical tropes raised by current speculations on artworks created by autonomous technical systems have been inherent to debates on modern and postmodern art throughout the 20th century. Moreover, the author suggests that the notion of the machine derives from a mythological narrative in which humans and technical systems are rigidly figured as both proximate and antagonistic. The essay develops a critical perspective onto this ideological formation and elucidates its critique in a discussion of a recent series of artworks and a text by US American artist Trevor Paglen.

Keywords: machine; art; art history; myth; modernism; artificial intelligence; artificialism; machine realism

1. Machine Art

“Mechanical nature derives from human nature but will soon overtake it” (Versari 2009). When the young second generation Futurist, Fillia, wrote this in 1927, he was at the helm of a movement that began to think about the possibility of machines becoming independent agents no longer controlled by humans, but that would instead steer human behaviour. “The people whose sensibility today doesn’t adhere to modern life will find themselves weakened, nostalgic, and pessimistic, that is, practically useless, in the mechanical and intransigent organization of tomorrow” (ibid.).

A few years earlier, in 1922, Fillia’s fellow Futurist, Enrico Prampolini, had yet been less affirmative of the role of machine agency in “the new aesthetic of The Machine”. Somewhat vaguely, Prampolini wrote: “The machine marks the rhythm of human psychology and beats the time for our spiritual exaltations. Therefore it is inevitable and consequent to the evolution of the plastic arts of our day” (Prampolini 1922). This inevitability became the conceptual core for an exhibition, “Machine Art”, that Alfred H. Barr Jr. and Philip Johnson presented at the Museum of Modern Art in New York City in 1934. The show contained only objects from US American industrial production, polemically claiming the aesthetic superiority of designs that were determined only by functionality, rather than by artistic styles or human intention. “Good machine art”, as Barr put it in his introductory text for the catalogue, “is entirely independent of painting, sculpture and architecture” (qu. Broeckmann 2016).

These instances remind us that the trope of the “machine as artist” is not germane to the age of computers and Artificial Intelligence. The idea of a supersession of humans by technics, in art and other areas of human life, runs through the 20th century and is an inherent part of a modernist understanding of technics. Another aspect of this *mythological* dimension of technics is that the presumed cataclysm of a machine takeover is always *imminent* (Fillia says, “soon”), and that it is tied to the concern about an existential threat for humans. In Alfred Barr’s words, elsewhere in the catalogue introduction: “Machines literally multiply our difficulties and point our doom. [. . .] We must assimilate the machine aesthetically as well as economically. Not only must we bind Frankenstein—but we must make him beautiful” (ibid.). The Italian, third generation Futurist Bruno Munari would, a few years later, become

the first artist to build humorous, dysfunctional machine sculptures, *macchine inutile*, eager to counter the unforgiving rationality of functionalism. His motivation was a technosceptical concern similar to that voiced by Barr. In his 1938 “Manifesto del Macchinismo”, Munari warns of the dangers of an all-powerful machine whose slaves people will become—“in a few years’ time”. Munari continues: “The machine of today is a monster! The machine must become a work of art! We shall discover the art of machines!” (ibid.).¹

In our own time, at the beginning of the 21st century, the impact of technology on contemporary art, and on culture in general, is finally becoming a topic of general public attention. At this moment, even for the specialised technical field of Artificial Intelligence and Machine Learning,² every other week, a new exhibition, conference, funding program, or publication project is announced—think of exhibitions like, “I am here to learn: On Machinic Interpretations of the World” (Frankfurter Kunstverein, 2018), “Machines Are Not Alone: A Machinic Trilogy” (Chronus Art Center, Shanghai, 2018), “Entangled Realities: Living with Artificial Intelligence” (House of Electronic Arts, Basel, 2019), and “AI: More Than Human” (Barbican Centre, London, 2019); the workshop “The Work of Art in the Age of Artificial Intelligence” (Victoria and Albert Museum, London, 2018), or a panel on “art created by AI systems” (CAA Conference, New York City, 2019). Key players of the contemporary art world, like the artist Hito Steyerl (*The City of Broken Windows*, Castello di Rivoli, 2018) or Pierre Huyghe (*Umwelt*, Serpentine Gallery, London, 2018), elicit further attention to the topic through their recent projects.

The art–historical perspective taken here seeks to underscore the relevance and urgency of a critical engagement with such technological developments. It may help to tune the conceptual framework of such a critique by pointing out that, for instance, the recent stunt of the Artificial Intelligence-based “Next Rembrandt” painting was made possible by decades of art–historical and technical research on the painter’s works in the Rembrandt Research Project and could not easily be replicated for other historical artists.³ Moreover, the topic of a concrete “machine authorship” of paintings has been virulent ever since, in the early 1970s, Harold Cohen, started his research on the computer-based cognition and creation system AARON. When we think of the status of Duchamp’s Readymades and Rotoreliefs, or Warhol’s Factory, or the different strands of Generative Art, we realise that questions about the artistic validity of technical products (and reproductions) form part of the bedrock of art theoretical reflection in the last 50 years.⁴ The subversion of notions like artistic intention and artistic genius is constitutive of contemporary art discourses, and it has been understood throughout the 20th century to be the result of both artistic volition and of technical developments, as evidenced by Walter Benjamin’s analysis of the destruction of the artwork’s aura, in his essay of 1936 on “The Artwork in the Age of Its Mechanical Reproduction”. Hence, some of these questions are at least as old as the discourses on photography and on modern printing techniques, discourses that date back to the 19th century. There is no need for panic.

¹ Cf. Broeckmann, *Machine Art*, for an extensive treatment of the role of machines in the visual arts of the 20th century, as well as for specific aspects of machine aesthetics.

² Terms like “Artificial Intelligence” and “Machine Learning” are problematic, not least due to the mixing of both descriptive and metaphorical uses of such concepts as “intelligence” and “learning”; since in this text, I only tackle the notion of the “machine” in any detail, the words are used here with upper-case letters in order to indicate their problematic, ideological status.

³ The Rembrandt Research Project (1968–2011) initiated a radical sifting of works that had previously been ascribed to the Dutch 17th-century painter Rembrandt Harmenszoon van Rijn; for a summary treatment of the project, cf. (White 2015). This thoroughly analysed corpus no doubt provided crucial material for the training of the pattern recognition systems of the “Next Rembrandt” project. Another recent example is the AI-generated image, *Portrait of Edmond Belamy* (2018), by the French artist group Obvious, cf. <http://obvious-art.com> (accessed on 8 February 2019).

⁴ Cf. also Cornelia Sollfrank’s work on the digital multiplication of Warhol’s *Flowers*; cf. “copyright © 2004, cornelia sollfrank”. In Cornelia Sollfrank, *net.art generator*. Nürnberg, Verlag für moderne Kunst, 2004; cf. also Sarah Cook: “What would Artificial Intelligence find aesthetically pleasing? The burning question of generative art and its audience”. In (Sollfrank 2004, pp. 146–55).

2. The Myth of the Artist

The notion of the “machine as artists” provokes a reflection on what is “an artist”, and on the notion of “the machine”. While I want to deal with the latter more extensively in a moment, I can for the former refer to the text by Aaron Hertzmann (“Can Computers Create Art?”, [Hertzmann 2018](#)), elsewhere in this issue, which presents a detailed discussion of the question, “Could a piece of computer software ever be widely credited as the author of an artwork?” Hertzmann emphasises the instrumental function of computers, programs, and algorithms for people who make art, and insists that art is a social activity, an activity of social (thus human) agents.

Hertzmann’s argument is based on a mostly transhistorical understanding of “art”. It would benefit from a more critical understanding of the notion of “the artist” and a consideration of how this notion transforms in different historical and discursive settings. “Art” has been many different things in different cultural and historical contexts. The role of “the artist” in the Modernist art of the 20th century is far more complex than that of an intentionally acting “creative individual”, and some of the key issues in this debate—which the applications of Artificial Intelligence systems now also address—concern aesthetic transformations of concepts, processes, and systems that have been addressed extensively in the contexts of conceptual art and systems aesthetics, ever since the 1960s.

Throughout the 20th century, art has—very generally speaking—been understood as a practice or a form of material production that displaces, that makes strange the sense of social artefacts and conventions; in this understanding, art thus transcends aspects of the world, of the individual, of social existence, of the existential condition of humans. The fact that art is done by an artist is as essential an aspect of modernist and postmodernist art as the very question, “what is art?”. From Abstract Expressionism through Pop Art to Institutional Critique, discussions about art have been a pivot for debates on human production and creativity in the age of mass industrial production and consumption. Questioning the status of the artist is an inherent part of these considerations ever since the non-sense performances of Dada, the psychic automatism of Surrealism, and the mathematical automatism of Concrete Art. Of course, it is interesting to speculate about the “art” status of objects or practices which are produced or performed by non-human agents. But, as in the cases of Duchamp’s Readymades and Warhol’s Brillo Boxes and Sturtevant’s repetitions, it is unlikely that “machine artworks” will end or destroy art. Rather, they may contribute to the continuous transformation of sense-making that we tend to categorise as “art”. The question of whether they will be deemed “unethical”, as Hertzmann suggests, is in direct continuation of ethical debates around the works and practices by human artists like Jeff Koons, Sherry Levine, or Richard Prince, which have deliberately put “the artist” between quotation marks.

At the same time, in addition to such conceptual challenges to art, I keep thinking of the drawings by Joseph Beuys (as an example of personal relevance—we can easily think of others), feeble, sketch-like renditions of rudimentary, existential things, or beings. These drawings are both extremely humble and they are monumental documents of a search for relations and connections with the world, with fellow humans, with animals, the Earth. How does the graphic and emotional intensity of these hurried sketches relate to art-making by machines? Quite pragmatically, consider the immense effort that goes into making such machine artworks as “The Next Rembrandt”—the research, interdisciplinary deliberations, decision making, programming, accumulation and preparing of training data, bug-fixing, 2D and 3D printing—as against the overwhelming result of a small, unobtrusive, and meaningful gesture that humans, after so many “deaths of art”, continue to make for themselves, and for others.

3. The Myth of the Machine

While the “myth of the artist” is a common and well-rehearsed trope of art theoretical writing, even in more specialised discourses, the notion of the “machine” tends to be used affirmatively and quite uncritically. However, we can observe that the “machine” of, roughly speaking, the 20th century (and hence also the machine of “machine art”) is based on a conception of technology in which technics

is pitched against the human; the notion of the machine signifies this antagonistic construction, and the various usages of the term “machine” articulate and reaffirm this structure.

What I want to argue here is that, on the level of human communication and of culture, the machine operates as a myth—“myth” not understood in the polemical sense of an untrue story, but rather in the functional sense of the term.⁵ Very generally speaking, a myth is a form of narrative that is engrained in a culture. A myth is collectively held, and repeated and affirmed, and it is powerful. Until the 1960s, the notion of myth was generally reserved for the belief systems of ancient and of non-Western cultures, whereas since the ideological critiques of semiotics and structuralism in the 1960s, and not least through the analyses of popular cultural items offered by Roland Barthes in *Mythologies*, the belief systems of Western modernity have been shown to also be based on such mythological narratives (Barthes 2009).

According to German philosopher Hans Blumenberg, myths are characterised by a narrative kernel which is both variable and, more importantly, of extended continuity (Blumenberg 1985). A myth is an articulation of ignorance, resulting in fear or hope, and a way to make sense of the world, whether in the face of the forces—and the supposed agency—of nature, or, in modernity, also addressing the agency of technics and its spiritual (or ideological) dimensions, like rationality, functionality, or necessity.

A crucial reference text for a discussion of the machine as myth is social historian Lewis Mumford’s *The Myth of the Machine* (Mumford 1967–1970). Mumford claims that the conceptual power of the machine myth is not a modern phenomenon but that it harks back to human experiences in ancient and prehistoric times. For Mumford, the notion of the machine originates from an ancient order of ritual, an order which humans developed as a form of self-protection to compensate for the huge psychic pressures exerted by their hostile natural environment. In the contemporary machine myth (of the 1960s), there persist forms of unformed, unorganised phenomena of the human spirit that in the modern period have not disappeared but grown stronger by being channelled into science and technics. Mumford’s passionate analysis is driven by his frustration about the fact that this myth has resulted in a continued connection of excessive power and productivity with equally excessive violence and destruction. Echoing the worries of Alfred Barr and Bruno Munari, Mumford envisions that, as a result of the emergence of the modern megatechniques, humans will not act as autonomous individuals, but they will become passive, aimless, and machine-dependent animals whose true capacities are passed over to machines, or strictly limited and controlled in favour of depersonalised and collective organisations.

Mumford is convinced that the modern technological process is neither natural nor unchangeable nor did it come about without human intervention. His goal is therefore to shrug off the myth of the megamachine and for his readers to understand and, where necessary, to change the course of contemporary technics—again an argument in which we hear the echo both of Barr and Munari’s concerns, and of Fillia’s exultation.

It is now possible to identify the narrative kernel of the myth of the machine. As a comparison, consider the myth of Oedipus. Whenever the name Oedipus is mentioned, the whole complex narrative of the myth, its proponents, and tragic twists is evoked. In the same way, the whole of the myth of the machine is brought into play whenever the term “machine” is used. It goes something like this:

This is the myth of the machine.

There is a man-made object. It can be a physical device, or a symbolical representation, related to technics by association or indexicality.

⁵ Cf. (Assmann and Assmann 1998), where the authors distinguish between polemical, historical-critical, and functional conceptions of myth.—This argument was first developed in a talk at the conference “Politics of the Machines—Art and After”, EVA-Copenhagen, Aalborg University, on 15 May 2018, publ. by BCS/eWiC at <http://dx.doi.org/10.14236/ewic/EVAC18.49> (accessed on 20 December 2018).

It is composed of technical elements, it has moving parts, and it has a function which it performs by repetitive movement. And it exhibits a certain formal beauty.

It is made to function automatically and independent of direct and continuous human intervention.

Over time, the object attains an increasing degree of autonomy.

It may provide interfaces for human interaction. These, however, do not determine the functionality: The human interaction can be replaced by technical elements, or by other machines. The interfaces offer the human an illusion of control which can be overridden by the machine. The interfaces are only there to appease the humans, for their play and enjoyment, or for human–machine conviviality.

The autonomy of the machine becomes threatening for humans who, fearfully, struggle not for their lives, but for self-determination. The threat posed by the machine is existential, but not lethal.

The narrative tends not to have an ending. If it has one, then the story ends well for the humans.

Like other myths, the *myth of the machine* can be varied, but it cannot be told completely differently. It is always this one story of something man-made being functional and then gaining a dangerous, nonlethal form of autonomy.

Consider the example of a loom. It is a technical device that is used for weaving textiles. When a person beholds the loom and says, “ah, a machine”, he or she calls up the myth of the machine and at once, its particular narrative framing comes into play, its blueprint, its construction, its degrees of freedom, and the inherent threat. The ways in which the loom is then treated, in the realm of the myth, is different from how it is treated when viewed as a weaving device.

What we can learn from this *mythological* understanding of the “machine” is that the modern conception of self is imbricated with technology in this particular way. There really is no “machine” outside this narrative, and whenever the word “machine” is uttered, this figure of speech constructs the relationship between human and the technical object within that mythical structure, as binary, antagonistic, and ontologically differentiated.⁶ By contrast, the proposal put forward here seeks to make it possible to, finally, speak *about* the myth of the machine, and not *in* or *through* this myth.

For our discussion of the “machine as artist”, it implies that under this particular headline, even the use of these words makes us slip into a mythological realm where neither the figure of the artist nor that of the machine can easily be called into question. Instead, we automatically see them pitched against each other, struggling for supremacy and survival. The imagination of how the machine takes the place of the artist (in the phrase “the machine as artist”) further charges this figure of speech.⁷

4. Images of the Automatic

If the denomination of enhanced pattern recognition systems as “Artificial Intelligence” is already occluding their epistemological reach,⁸ then the subsumption of such systems under the notion of the “machine” executes even further closure and obstructs a critical and emancipatory discourse on the relation between art (or human agency and practice) and technics. Importantly, the problem is not technical but conceptual. But since human self-conception is in part shaped

⁶ According to philosopher Martin Burckhardt’s analysis of the history of the machine concept, throughout modernity and since the 18th century, the automatism of any technical system has been seen as both a condition of modern progress and as a betrayal of nature (Burckhardt 2018, p. 41).

⁷ Hertzmann (2018) can be credited for using the term “machine” sparsely and for seeking precise descriptions and concepts for the technical and creative activities he analyses.

⁸ The term “enhanced pattern recognition” has been proposed by artist researcher Francis Hunger as an alternative for “artificial intelligence”, cf. (Hunger 2017).

by the engagement with technical systems, an assimilation of technoid concepts is predetermined. Therefore, as Hertzmann (2018) observes, “The day may come in which these agents are so integrated into our daily lives that we forget that they are carefully-designed software”. Similarly, in 1950, the mathematician and information theorist Alan Turing had stated: “I believe that at the end of the [twentieth] century, the use of words and general educated opinion will be altered so much that one will be able to speak of machines *thinking* without expecting to be contradicted” (Turing 1950). Here, Turing imputes not that machines would be able to think like humans but that the conceptions of thought and computation would have converged so much that they could no longer be meaningfully distinguished (Rokeby 1995).

A recent artwork through which we can study the reproduction of the machine myth is US-American artist Trevor Paglen’s image series, *Adversarially Evolved Hallucinations* (2017), created from a combination of several image recognition software systems.⁹ The outcome are eerie, surreal, and mostly abstract images that contain human-recognisable elements like eyes, human limbs, or plants, positioned in nonrealistic constellations and surrounded by nonrepresentational, “painterly” modulated areas of intense colours. In the production of these images, constellations of algorithms in neural networks (so-called “generative adversarial networks”, or GAN) are trained with data sets and then deployed to generate a visual output. This visual output resembles and recombines elements of the training data sets, based on the software’s harvesting of what it is trained to interpret as the visual codes of human recognisability and naturalism. These are not images made by computers for themselves but tautological renditions derived from the visual training data that are themselves previously selected and tagged by humans on the basis of categories like monstrosity and uncanniness, the resulting images thus providing an algorithmically distorted mirror of the visual iconography of fear. The chilling recognisability of the output from Paglen’s image-generating, enhanced pattern recognition system does, however, underscore the illusion of a “dreaming machine”, an illusion that seeks to amplify fears about a potentially subjective and autonomous machine. As a subset of the myth of the machine, the myth of “artificial intelligence” is here evoked in order to affirm an existentially dangerous confrontation of human and technics.

There is a technical and an art historical genealogy to Paglen’s project. The technical genealogy is closely tied to the dialectics of mathematical functionality and specific data sets in neural networks.¹⁰ Seen from an art historical point of view, the *Adversarially Evolved Hallucinations* not only correspond to similar, GAN-based works like Constant Dullaart’s *DullDream* (2015)¹¹ but can also be traced back to the technically more simple, yet conceptually sharp *Sorting Demon* (2003) by David Rokeby, further back to the software-based and generative works by artists like Casey Reas, Vera Molnar, or Manfred Mohr, and to the yet older, “primitive” model of Jean Tinguely’s *Metamatics* automatic drawing sculptures from the late 1950s. In each of these cases, concrete image production is delegated to a technical system whose output is steered by affordances which are technically given and designed, yet which are suggestive of a machinic subjectivity and machinic volition.

In another art-historical genealogical line, the resulting images are more deliberately designed, and the human artistic intervention is more directly visible. We can think of the colourful abstractions of Thomas Ruff’s *Substrat* series (2001–2002), in which the reworking of digital image details by means of software programs leads to wildly chromatic images that, although based on pop cultural models, evoke ideas of nonhuman visual pleasures and desires. The automatism of abstract surrealist

⁹ Trevor Paglen is known for photographic works that deal with the intricate visibility of technical surveillance infrastructures like satellites and data centres. Cf. for reproductions of Paglen’s works <http://www.paglen.com/>; examples of the *Adversarially Evolved Hallucinations* and a short promotional text are at <http://www.metropictures.com/exhibitions/trevor-paglen4/selected-works> (both accessed on 8 February 2019).

¹⁰ Cf. the research on GANs published in Ian J. Goodfellow, Jean Pouget-Abadie, Mehdi Mirza, Bing Xu, David Warde-Farley, Sherjil Ozair, Aaron Courville, and Yoshua Bengio. 2014. *Generative Adversarial Nets*. Paper presented at the Advances in Neural Information Processing Systems, Montreal, QC, Canada, 8–13 December (also referenced by Hertzmann 2018).

¹¹ Cf. <https://zkm.de/en/dulldream> (accessed 18 December 2018).

paintings by mid-20th century artists like Max Ernst, Wols, Emmy Bridgwater, or Richard Oelze, or the results of automatic drawing and writing exercises by someone like Henri Michaux, were psychic rather than technical. But the confrontation with their visual output, emerging from the uncanny depths of the unconscious, was, we can presume, no less shocking than the discovery of supposed visual desires of AI systems.

A most striking reference example for Paglen's series are the paintings and drawings by the Czech artists Jindřich Štyrský and Toyen (Marie Čermínová), which combine abstract painterly surfaces with the placement of at times distorted, at other times clearly recognisable (partial) objects, body parts, everyday objects (Srp and Bydžovská 2007). During a joint stay in Paris in 1924–1928, Štyrský and Toyen had developed the principle, or style, of “Artificialism”, conceptually framing the abstracted Surrealism of their artistic production of the following years. In their manifesto of “Artificialism” (1927–1928), they wrote:

An artificial painting is not bound to reality in time, place and space, and for that reason it does not provide associative ideas. Reality and forms of the painting repulse each other. The greater the distance between them, the more visually dramatic is the emotiveness, giving birth to analogies of emotions, their connected rippling, echoes all the more distant and complex, so that at the moment of confrontation between reality and image, both feel entirely alien in relation to each other. (Štyrský and Toyen 2002)

What we can glean from passages like these for our reflection on machinic art is that there are complex conceptual and aesthetic decisions that lead to the realisation of such artworks, and that masking this conceptual and aesthetic framing can be part of an artistic strategy. To the same extent that it is the task of the art historian to uncover such maskings and their historical lineages, it is the task of contemporary critics of a technologically infused culture to pinpoint the technical affordances of specific systems, and to counter technological mystifications.

The artist Trevor Paglen developed the project *Adversarially Evolved Hallucinations* in order to make it possible to speak about the cultural effects of the expansive application of machine vision systems. In a recent text, he argues for a critical reading of the principles of such systems which he summarises under the title of a “Machine Realism”. Paglen understands Machine Realism as a doctrine and a style which has to be unpacked analytically in order to understand its workings, and its effects.¹² Machine Realism, he writes, is “an aesthetic and interpretive mode defined by the autonomous attribution of meaning to images by machine learning and AI systems”. This attribution happens through the recognition and identification of objects, followed by their association with metadata and the analysis of their relationships. Importantly, “Machine Realism operationalizes the meanings it assigns to images”. It turns the results of the analysis into control data for equally automated decision-making systems to which the machine vision systems are coupled.

However, as Paglen emphasises, this automatism does not come from nowhere but is based on specific training sets of data which are used to frame and steer the parameters of analysis and decision-making—something that can, for instance, be learned from a comparison of training data and the visual outcome of artworks like those by Paglen and others.¹³ The training data and the analytical parameters are the crucial aspects of such systems where political power can be exerted. As Paglen puts it: “In Machine Realism, he who controls the training sets controls the meanings of images”.

¹² Cf. (Paglen 2018). Paglen here compares Machine Realism to the artistic doctrine of Socialist Realism, an argument that is not entirely convincing but useful in highlighting, perhaps somewhat unintentionally, the ideological baggage that Machine Realism carries. The “reality” of this Realism is limited by an information model that can handle only what is computable, and only those aspects of things which are computable. For an earlier treatment of the topic of machine vision, cf. (Paglen 2014).

¹³ Cf. for instance Jake Elwes: *Machine Learning Porn* (2016), and the work by Mario Klingemann at <http://quasimondo.com> (accessed on 8 February 2019).

Paglen associates his analysis with a number of moral and political concerns, seeing Machine Realism in the hands of State and economic powers that seek to exploit and suppress their human subjects.¹⁴ Let us pause for a moment at two technical aspects, which suggest that the particular aesthetics of machine vision systems also require a modified ethics, and politics.

Paglen decries that the operations of such systems are mostly imperceptible for humans and that there are no means of auditing and contradicting the interpretations made and executed upon by those systems. While this observation is not new—even in 1988, the French philosopher Paul Virilio referred to the fact that the “blind gaze” of computer-based vision systems does not make “images” but captures and analyses data patterns (Broeckmann 2016)—there are many other examples of technically based processes that may not be open to human perceptual observation but that are nevertheless democratically controlled and policed. The “imperceptibility” is a question of governance over describable and efficacious processes—not one of technically inherent ungovernability.

A second concern that Paglen voices is that the “frangibility of the meanings of images” in Machine Realism undermines the possibility for individuals to self-determine how they want to be named and represented. From a humanistic point of view, this desire is understandable, even though historically, it was the insistence on the malleability, or frangibility, of meaning in postmodern semiotics since the 1960s that made the multiplicity of self-representations Paglen defends possible in the first place. The act of self-determination always comes at the cost of acknowledging the relativity of the truth of the “who I am”, and thus of the politics of its interpretation. And this is true not only in relation to historical systems of thought that seek to predetermine ideas of race or gender, and the personal consequences that follow from them, but it is also true in relation to the ideological systems that frame technics—what I take to be the essence of “technology”, or “techno-logics”.

On one level, therefore, the question of who determines individual representations by machine vision systems is a political challenge that must, and can, be addressed in political debates about the making, the functionality and the application of technical systems. This is by no means an easy task, but it is one that is not impossible, and this possibility should, even for strategic reasons, not be denied.

On another level, it is important to recognise the ontological difference between the social parameters of human interaction and the technical and mathematical parameters that structure the functionality of the systems at hand. Both are mutually dependent and can be seen as representations or models for one another, but they follow distinctly different operational logics, not least because of the scripted automatisms of technics. The abstraction of social facts, of body shapes and behaviours, into computable data has to be understood as a fundamental transformation of the epistemological level at which a vision system’s operations are planned and executed.¹⁵

5. Conclusion: Machines without Engineers

The “machine” is an anthropological category that describes the relation of humans and technics as one of antagonistic proximity, and the very use of the term machine, also in Paglen’s Machine Realism, tends to occlude the political dimension of dealing with technical systems, by subjectifying and thus essentialising these systems as antagonistic beings.

There is, no doubt, a certain value and usefulness in the posthumanist speculations about the potential agency, subjectivity, and sense-making by other-than-human entities. To frame such speculations in the terminology of “art” and of “machines” necessarily places them, though, in a humanist categorical framework. To speak of “machines” (without quotation marks) means to speak from within the myth. The idea of art-making machines whose products cannot be understood any more by humans is consistent with that myth, and it automatically leads to the uncanny aesthetics

¹⁴ On the political economy of data, cf. (Zuboff 2019), and the insightful critique by Morozov (2019).

¹⁵ A similar problematic underpins Brian House’s interpretation of his situationist project, *Everything That Happens Will Happen Today* (2018) which supposedly maintains its human-ness since the data sets are derived from human behaviour.

that Paglen's *Adversarially Evolved Hallucinations* share with Mary Shelley's *Frankenstein*. The unease they exert is a function of the myth, as is the sense of human obsolescence that has haunted a culture unable to come to terms with its technical determinations, ever since the Enlightenment.

In a recent essay on the "solitude of machines", French artist Gregory Chatonsky draws our attention to the algorithmic automata that populate the electronic networks and our technical environments, unobservable and solitary, and asks whether such a solitude is thinkable without the finality of being, a solitude without a relation to the world, a solitude without anybody (Chatonsky 2013). He concludes that this speculation about "the solitude of a machine, a subject with no subjectivity and relationality that nevertheless affects us" (ibid.) serves to rethink the relation of aesthetics and ontology, of thought and perception.

Yet, what had been a rather more mechanical challenge under the moniker of the "Daughter Born Without a Mother" in the mechanomorphic drawings and paintings by Francis Picabia (*Fille née sans mère*, 1915–1917), is, a century later, being transformed into the spectre not only of the obsolescence, but of the disappearance of the human, the engineer mother, and the total independence of *machines without engineers*. This last chapter of the myth of the machine is predicated on a cybernetic and nonhuman conception of intelligence. It inherits its ideological framing from the historical discourse on Cybernetics, geared at the subjection of humans under its technological and biopolitical paradigm.¹⁶ While the ontological speculation proposed by Chatonsky benefits from the contingent alterity of machines, the political debate on technics must address their biopolitical integration. For artists, there is no obligation to follow such a political agenda; however, they must recognise that an aesthetics of "artificialism" and "machine realism" may in fact work against the critical impetus that, as citizens and technologists, they seek to advocate.

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¹⁶ A powerful argument about this constellation was put forward under the concept of the "informatics of domination" by Donna Haraway, in the *Cyborg Manifesto*; cf. (Haraway 1991). Haraway also provides important hints at the gendered aspects of the machine myth, and of the access and subjection to technology.

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