

# Artificial Intelligence and Mind-reading Machines— Towards a Future Techno-Panoptic Singularity

Aura-Elena SCHUSSLER<sup>1</sup>

<sup>1</sup> Associate Lecturer, Ph.D.  
Department of Philosophy, Faculty of  
History and Philosophy, Babeş-Bolyai  
University, Cluj-Napoca, Romania,  
e-mail: [aurusch2005@yahoo.com](mailto:aurusch2005@yahoo.com)  
[aura.schussler@ubbcluj.ro](mailto:aura.schussler@ubbcluj.ro)

**Abstract:** The present study focuses on the situation in which mind-reading machines will be connected, initially through the incorporation of weak AI, and then in conjunction to strong AI, an aspect that, ongoing, will no longer have a simple medical role, as is the case at present, but one of surveillance and monitoring of individuals—an aspect that is heading us towards a future techno-panoptic singularity. Thus, the general objective of this paper raises the problem of the ontological stability of human nature which, within the limits of the technological singularity of mind-reading machines, leads to the loss of autonomy and a reduction in freedom when it comes to human thoughts. In this paradigm, the hypothesis of a future era of technological singularity is prefigured to be a cumulation of factors in which artificial intelligence holds a dominant position in relation to the human agent, in a techno-panoptic system of human supervision, in the form of a new world order of manifestation/imposition of power—that of a “singleton.” The theoretical objective analyzes the phenomenon of “deterritorialization” (Deleuze & Guattari, 2000, 2005) of the Foucauldian panoptic mechanism (Foucault, 1995, 2003, 2006, 2008)—which is based on the “biopolitical” system of “biopower”—and its “reterritorialization” in the “territory” of the techno-panoptic singularity, where the scenario of a strong AI “singleton” (Bostrom, 2004, 2006), represents the alienation of the Being into a hard technological determinism.

**Keywords:** *artificial intelligence; mind-reading machine; singularity; techno-panopticism; singleton.*

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## 1. Introduction

In a general framework, we can see that with the Enlightenment project, reason, science and technology have freed human nature from a dependence on transcendence, and placed it within the inherent limits of scientific and technological progress. Such a course of history, which gradually creates an increasingly-visible connection and interdependence of man with technology, by the desire to develop, expand, grow and progress is currently placing us in the midst of the fourth Industrial Revolution, characterized by the dynamics of the internet, virtual space, artificial intelligence, bio-nanotechnology, Big Data and Cloud technology (Schwab, 2017). But the paradigm shift, which appears as a feature of this fourth Industrial Revolution, as opposed to the previous ones, is that technology no longer represents simply a “means”, used by man to improve the human condition, but “an end-in-itself” (Kant, 1997)—a universal law which is meant to solve all the problems of human nature, within the limits of a technological optimism. A paradigm in which technology represents an autonomous force that acts outside social control, which can lead to the short-circuit of ethical judgments (Chandler, 1995). This is an aspect which leads us to this new existential dimension, in which the intrinsic value of the human being (that of a subject-centered paradigm) is undermined by a hard technological determinism (that of an object-centered paradigm), as a result of the fusion of human nature with technology. In such an order of ideas, technology tends to go beyond its instrumental ontological status—as a “readiness-to-hand” (Heidegger, 1962)—and to move on towards an emergent ontology of the “present-at-hand” (Heidegger, 1962). Thus, in a futuristic vision, technology will no longer be a simple accessory, equipment or extension of contemporary man—through the multitude of gadgets, applications, or intelligent programs that make his existence easier—but an integral and dominant part of his being and his existential condition. The case of mind-reading machines and artificial intelligence connected to these devices, as a techno-panoptic form of surveillance, is one such hypothesis. In this paradigm, the AI mind-reading machine becomes “present-at-hand”, because such a device is an object endowed with a series of hidden properties (that of monitoring/supervising human mental processes and thoughts) through which human nature gets to relate to the world—in a way in which mental reflections are blocked and short-circuited, by the invasive character that this device can have on the human being by alienating him to technology. Thus, AI mind-reading machines tend to overcome its “readiness-to-hand” condition, given by the purely instrumental character of

reading/decoding our thoughts (an approach that currently has a medical character, especially in the case of patients who are in a state of coma, or have lost their ability to verbalize after a physical or mental trauma). This means that these mechanisms of surveillance become a socio-technical constitution, which leads to the implosion of the “authenticity” of the human agent, by obstructing his mental properties. This is an aspect that questions not only the ontological stability of human nature, but also the ethical implications that this immersion of AI mind-reading machines in the individual’s life can bring by canceling free will, autonomy and freedom of human thought.

From here to a futuristic hypothesis of the mass implementation of such devices, there is only one step which directs human nature to a future techno-panoptic singularity, governed by strong AI. In the present study, this refers to a form of surveillance of individuals, which has as its starting point the Foucauldian theory of the “panoptic surveillance”—seen as a socio-political mechanism of manifestation of “biopower” through domination and control (Foucault, 1995)—subjected to the process of “deterritorialization” (Deleuze & Guattari, 2005). Within these limits, the new discoveries in the field of AI technology represent the “vectors of deterritorialization,” meant to “deterritorialize” the forms of surveillance managed by the human agent (the panoptic system of “biopower”), and to “reterritorialize” it in the paradigm of technological singularity—of human domination and control by strong AI (through these AI mind-reading machines). In another order of ideas, this hypothesis of using these mind reading devices in mass, could lead in addition to this techno-panoptic surveillance, to what Bostrom (2006, pp. 48-54; 2014) calls a “singleton”—an abstract and unifying concept of the manifestation of power, which in this case is under the auspices of a strong AI.

## **2. Mind-reading Machines and the Techno-panoptic Singularity**

In recent years, we have witnessed an accelerated growth of technology based on AI. This makes AI technologies to be, on the one hand, indispensable to human existence and, on the other hand, to dominate his existence. This paradigm shift in the human relationship with technology—especially that based on AI—fits in with the parameters of a “hard technological determinism” (Ellul, 1964), within whose limits human nature not only becomes dispossessed by the autonomy and the control over technology, but gets to be modeled by it, both at the individual and at the social level. It is an aspect that produces an “implosion” at the level of

human existence (Baudrillard, 1994) in the sense that, once the technology based on AI is heading towards a singularitarian condition (Kurzweil, 2005), human nature slips into an existential collapse, resulting from the routine of technological progress and the control of the human agent by intelligent devices—an aspect that short-circuits the ontological stability of man as “Being-in-the-world” (Heidegger, 1962), by dispossessing him by its authentic-being and freedom of choice.

For Vinge, this acceleration of technological progress, through the creation by technology of “greater-than-human intelligence” (Vinge, 1993), will lead in future to the emergence of “ultra-intelligent machines” that will act independently of human control. In addition, new discoveries regarding the uses and testing of mind-reading devices, with the help of weak AI, are heading in the direction of an increasingly visible subjection of human nature by technology—an aspect due to increasingly sophisticated algorithms that facilitate the accumulation of knowledge by this weak AI, regarding the mental processes of human nature. However, the current state of mind-reading machines is not very advanced. At present, tests involve an early stage of scanning the human mind, accompanied by the measurement of neurological activity, in order to translate as clearly as possible the thoughts, dreams and memories of the individual in the form of texts, images, or musical sounds—which is why it proves to be an effective mechanism in the case of people who have lost the ability to verbalize or who suffer from amnesia. But the day may come when these devices will be much more advanced, and they will not only have a simple medical role, but one of human surveillance/control, through strong AI. It’s about the hypothesis in which these mind-reading devices, besides the fact that they will be the size of a micro-chip, will be implanted in the brain, and will be connected and controlled by strong AI (Kurzweil, 2012). In fact, this devices will have the role of monitoring our thoughts, memories and mental processes, as well as storing them in a database.

The reason for such a hypothesis means the establishment of a techno-panoptic singularity. In overview, this refers to a techno-panoptic surveillance of the individual, through this (strong) AI technology located in the brain—an aspect that makes the AI mind-reading machine no longer a simple external device, but an *embedded* system. For the beginning, within the limits of a Deleuzian interpretation, this involves the processes of “deterritorialization” of weak AI mind-reading technologies, from its artificial dimension and its “reterritorialization” in the biological structure of the human mind, an aspect that subjects human nature to technology and induces the phenomenon of self-alienation. (Deleuze & Guattari, 2005;

Patton, 2010). However, the “reterritorialization” of AI in this new biological “territory” means the fusion of this weak AI technology (as a “deterritorialized” element) with human biology, a process that also involves the capture of the biological codes associated with the functioning of the mind, as part of the AI mind-reading process. This does not mean the (weak) AI imitating these biological codes, but for it to capture essential human features such as reason, thought, memory, self-awareness, etc. On the other hand, we also deal with the processes of “deterritorialization” of biological structures and of the mental properties of human nature, and their “reterritorialization” in the artificial dimension of weak AI mind-reading, a process that involves the capture of artificial codes—namely those of submission and docilization—by the human mental processes. Also, neither in this case, it’s not about imitating these artificial-cultural codes by the human mind, but about capturing the particularities of these codes—characterized by the dispossession of the human nature of free will, self-awareness, or autonomy in thinking. Thus, this human-technology interrelationship leads not only to a total transparency of thought, or to a pre-determination of human behavior, but particularly to the cancellation of free will through the establishment of this hard technological determinism—within whose limits the thoughts/actions of the human beings are determined by technology.

However, in order to understand this new panoptic paradigm, it is necessary to turn to the roots of such a surveillance system. These reside in the panoptic project initiated by Jeremy Bentham in the Eighteenth Century (2011). For Bentham, the panopticon was a mechanism of the manifestation of power through an annular architectural system—a mechanism that was initially designed to be applied to the prison system. The purpose of such a system—incorporating a surveillance tower located at the center of the prison inside which was the *panoptic gaze* of the guards, who could see every cell and prisoner, without the possibility of the prisoners having visible access to the tower—was the monotorization, submission and self-discipline of prisoners (Bentham, 2011; Foucault, 1995). This use of power, in a “deindividualized” manner, says Foucault (1995, 2002)—in the sense that the prisoner never has the certainty that the supervisor is a guardian, the director of the prison or any other person—although it seems unidirectional, does not exclude the active involvement of the supervised. This is because the supervised ones contribute in an involuntarily way to the increasing power of the system by being aware of being permanently exposed to a field of visibility, an aspect that ensures the automatic exercise of power. In the same vein, the metaphor of the panoptic mass surveillance system

introduced by Foucault extrapolates the Benthamian architectural paradigm, and refers to a political technology of the manipulation of modern man (“biopower”) through an organized mechanism of self-discipline of the human body (the “body-machine”) and population control (the “species body”), located at the level of society and in institutions such as prisons, schools, workplaces or hospitals (Foucault, 1995, 2008, 2003). For Foucault, the birth of the “disciplinary society” points to a genealogy of the instrumentalization of power, through this daily surveillance/docilization of the “body-machine” and of “species body” which, under the auspices of panoptic techniques, are objectified and reduced to a series of uniformized behaviors, as a consequence of self-discipline and willful submission to the “biopolitical” system. Thus, this hegemonic system of the normativization of the individual and of social behavior, identified by Foucault in Western modern societies, leads to a vicious circle of the hierarchy of panoptic surveillance, administered by the “biopolitics” of the population, and involving the use of “biopower” devices (Foucault, 2003, 2008, 2006). In this sense, the institutions that exercise their panoptic technology on human agents, as a consequence of the division of labor, the control of ideas, beliefs or biological processes such as propagation, health, births and mortality (Foucault, 2006), are in turn subjected to state supervision (Whitaker, 1999), which makes them subject to the “biopolitics” of “biopower” technologies. This subjective embodiment of social norms has the role, on the one hand, of monitoring the quality of life of the individual and, on the other hand, of creating a mind-body-society connection. However, future surveillance technologies will no longer focus on the existence of a central surveillance tower or that of an analogous “bio-power” structure such as the “reflexive embodiment” (Crossley, 2006), in terms of which the normativization of the perception of our bodily substance and subjective bodily experience falls within the limits of the “anatomy-politics of the human body” (Foucault, 2006), but on the mechanism of a “rhizomatic” (Deleuze & Guattari, 2000, 2005) technological control based on the *embedded gaze* of the strong AI technologies, which is meant to model subjective embodiment by the mapping of the mind and bodily movements. Whether we are talking about surveillance cameras located in different public places, at work or in our personal space, about data collection systems (Big Data), about different software for monitoring computers or personal or mobile phones, or about Internet Service Providers, the monitoring and surveillance of the individual will be, from now on, in the direction of a techno-panoptic surveillance controlled by AI. However, the current surveillance technologies are in the paradigm of the *disembodied gaze* of weak AI, due to the existence of these

surveillance devices, external to human being embodiment, in which we are still in the paradigm of an external field of visibility, both at the individual and the societal level. Also, we are still dealing with a passive “deindividualized” AI system of surveillance, given that we are not yet in the paradigm of the technological singularity, characterized by an active and strong AI relating to supervision and control.

Therefore, such a form of surveillance will not be limited, in the future, to the “biopower” devices of mass biological and behavioral control of the population, but to personal surveillance, on an psychological and mental level, of the human agent. This is an aspect that moves the panoptic surveillance from the biological paradigm of the “species body” and “body-machine” of the human embodied self, to that of the *disembodied* self. It is an aspect that risks the establishment of a schizophrenic attitude/experience on the part of the supervised individual which, due to the presence of this strong AI mind-reading surveillance, is determined to become an abstract entity, forced to contemplate its own existence from a ‘third-person perspective’, as a consequence of losing control over one’s own embodiment and the instauration of self-detachment (Deleuze & Guattari, 2000). Thus, this short-circuit of the human being, as an embodied self, leads to an abstraction of existence, by blocking the embodied self-awareness and intersubjectivity-intercorporeality, as a consequence of the presence of this *embedded* strong AI *panoptic gaze*, at the level of the mind. Therefore, the direct connection or symbiosis of each individual’s self to this AI technology, should be seen as a decomposition of the self of the supervised individual, by separated from the subjective condition of the being, as a “being-in-the-world”. This is because the supervised human agent does not get rid of the *panoptic gaze* and the objectification mechanism neither from the side of the strong AI mind-reading technologies. The difference is that, within these limits, the *panoptic gaze* is no longer given by the exteriority of the human gaze—which, through technology, has the panoptic control of the “biopolitics of biopower” (through which the human agent is reduced to the condition of a bodily and behavioral object of information)—but by that of the *embedded gaze* of strong AI technologies, for which the objectification of the subjective condition of human nature results from the cancellation of the autonomy of thought. This leads to the loss of the individual’s authenticity by short-circuiting the human being, both in its relationship with the other—which, until the emergence of the *embedded gaze* of the AI technologies, is/was represented by the panoptic control of the human eye—as well as by the alienation of its authentic self as a consequence of its fusion with, and submission to, technology. In this sense, technology is no

longer a *means* or a mediator in our relationship with the *other*—within the limits in which our being is a “being-in-the-world” in this “average everydayness” (Heidegger, 1962)—but “an end-in-itself”, a universal law, in which the individual becomes self-alienated.

Thus, the paradigm shift that appears at the level of this techno-panoptic singularity, consists in the “absolute deterritorialization” (Deleuze & Guattari, 2005) of the human *panoptic gaze*, from its faceless and (omni)present dimension, identified so far either with the Benthamian control tower, or with the Foucauldian coercive apparatus, or with the contemporary surveillance devices (based on weak AI)—and its “reterritorialization” in a plan of immanence of the *embedded panoptic gaze* of a strong AI technologies, which traverses the inner structures of the human being. This is an aspect that points techno-panoptic singularity towards a “negative” form of “deterritorialization”, given that the old metaphor of the human *panoptic gaze* is subjected to a “relative deterritorialization” that short-circuits the “line of flights” (Patton, 2010)—“line of flights” that in a “positive” paradigm have the role of overcoming the imposed form of the “reterritorialization” (which in this case can be found in the surveillance apparatus of the *embedded panoptic gaze* of the strong AI technologies) and to open in a completely different form to that of the pre-existing one (Patton, 2010), namely in a form that would allow human nature to be outside and disembodied from this technological hegemony, a condition that this techno-panoptic singularity imposes. Therefore, this new assemblage of the techno-panoptic singularity, resulting from the recombination of the old panoptic elements (the human *panoptic gaze*, the “species body” and the “body-machine”), with the new elements of AI mind-reading surveillance (the *embedded panoptic gaze* of the strong AI), under the “territorial” incidence of the technological singularity, leads to the short-circuit of the reserve of freedom, or movement in the reality of the individual (found until recently in the classical panoptic structures of “biopower”, which included the intangibility of mental structures). Thus, this future state of the ambiguity and self-alienation of the individual supervised under the auspices of technology, not only generates a unifying concept of manifestation of power (through this upcoming strong AI technology), but also distances human nature from the authenticity of being.

### 3. The AI Techno-panoptic Singularity as a ‘Singleton’

The dystopian hypothesis in which a strong AI mind-reading surveillance, in a future era of technological singularity, will prevail in terms of the mass control of the human species, can take the size of a “singleton”. Although such a scenario seems to be detached from the sci-fi literature/cinematography, at a theoretical level this “singleton” means a new world order of the manifestation/imposition of power, under the auspices of a single decision-making agency (Bostrom, 2004, pp. 339-371, 2006, 2014,)—an aspect that, in a futuristic perspective, refers to strong AI as an “independent decision-making power” (Bostrom, 2004, pp. 339-371). As Nick Bostrom points out, this singleton has not only a negative character, but can also take a positive dimension (Bostrom, 2006), in the sense that this future era of technological singularity will bring with it an improvement/increase with regard to the current human condition (Kurzweil, 2005). However, according to the arguments made up to this point, we can say that this technological increase attracts, to some extent, the sacrifice of what the Humanist concept of man implies—through referential authority of the anthropos as a rational entity. That’s why the hypothesis in which a future strong AI mind-reading ability is transformed into a techno-panoptic mechanism of population surveillance—by overcoming the currently medical character of weak AI—lies in the negative paradigm of a “singleton”. This is because, although in some cases this type of mind surveillance would mean, for example, lie detection, the detection of sexual deviations, criminal instincts or violence/aggression, in terms of both human nature and other species— aspects that, as a general approach, have an ethical character within the limits of an emerging social ontology—the price paid is that of the loss of the essence of being, as a consequence of the immersion of technology in the stable category of the ontological structures of man (i.e. mind/reason, self-consciousness, self-identity). This is an aspect that, in a humanist paradigm, would mean undermining this human-centered paradigm and establishing an strong AI-centered paradigm, which would not only cause a reversal of the hierarchy of human-technology binary opposition, but also affect the essentialist dimension of the human species as a rational and biological species, endowed with self-awareness and free-will.

The attempt to analyze this strong AI techno-panoptic “singleton” in a positive paradigm has, as a starting point, Kant’s third formulation of the “categorical imperatives” which house the idea of a “Kingdom of Ends” (Kant, 1997). This is because, in a narrow approach, we can identify in Bostrom’s concept of “singleton”, the idea of the Illuminist legacy of

continuous progress/improvement in terms of the evolution of moral duties in an objective rational order. According to Bostrom, “(...) a singleton could form is through convergent evolution, e.g. if it turns out that all sufficiently advanced individuals or cultures come to accept fundamentally the same values or goals” (Bostrom, 2006, p. 48). In a Kantian interpretation, this argument can be identified with the idea of—“(...) a systematic union of rational beings through common objective laws, that is, a kingdom, which can be called a *kingdom of ends*” (Kant, 1997, 41/4: 433). Here, the concept of “ends” is represented by the law of “categorical imperative” as a universal law, where “(...) all rational beings stand under the law that each of them is to treat himself and all others *never merely as means* but always *at the same time as ends in themselves*.” (Kant, 1997, 41/4: 433). However, unlike the Kantian concept of a kingdom that involves the moral-humanist paradigm, based on the autonomy of human reason, this specific paradigm of “singleton” implies the hypothesis of a strong AI, which undermines this autonomy of human reason and which, in the end, gets to violate this “categorical imperative”, due to the fact that it will use man as a *means* in its mechanism of domination and control. Thus, this strong AI comes to hold the position of “sovereign” in Kantian terms, because he “is not subject to the will of any other” (Kant, 1997, 41/4: 433)—namely the human one. Nevertheless, this strong AI, as a single decision-making agency, or as a lawgiver, has the role of establishing a community of moral agents (as in the Kantian paradigm of *Kingdom of Ends*) which are subjected to these universal laws within the limits of an objective rational order, but not within the limits of the “Formula of Humanity”. However, at a utopian level—in which all the negative aspects of this techno-panoptic singularity are placed in the brackets of the technological optimism of technological singularity—it would mean the establishment of the moral laws imposed by strong AI, which would lead to solving several problems that are being planned globally, such as the eradication of racial, ethnic, gender or species inequality and discrimination; the eradication of wars and inter-human conflicts (based on political, military, economic, religious, cultural, social, etc. divergences); stopping global warming and the excessive consumption of the planet’s resources; combating poverty, disease and mortality, etc. However, the establishment of a “singleton”—based on the control/manipulation of the human mind by this strong AI through the dispossession of the human agent by free will and reason—transforms its positive dimension into a simulacrum because, at this level, we are dealing with an implosion of the Kantian principle of the “Formula of Humanity”, necessary for objective moral behavior, where—“This lawgiving must, however, be found in every rational being himself and

be able to arise from his will, the principle of which is” (Kant, 1997, 42/4:433). In such a hypothesis, the strong AI immersion in the human mental processes by manipulating/supervising the reasons and the decisions/actions of the human agent, short-circuits this humanistic moral concept of “Kingdom of Ends” and reduces it to a hard technological determinism. This is why the circumstances under which such a “singleton” would manifest itself, falls within the normative-hegemonic parameters of reducing human ontology to an ontology of technological singularity, in which anthropocentric essentialism is dissolved and replaced by the dialectic of this hard technological determinism.

#### **4. Conclusions**

The possibility of devices such as mind-reading machines controlled by a strong AI can take the form of a techno-panoptic surveillance system of the individual, under the incidence of a “singleton”, meant to endow strong AI with a central power of domination and control of the human species. The establishment of this ‘techno-panoptic gaze’ resulting from a strong AI in the embedded system of human biology, not only removes the human nature from the essentialist paradigm of the autonomy of reason, thoughts and ideas, but leads to an undermining of social and cultural codes through the human dispossession of its own identity, autonomy and control. The loss of the authenticity of being as a result of its “deterritorialization” from the immanent structure of the metaphysics of presence, as a “Being-in-the-world”, alienates the individual within the limits of this technological singularity. The simulation of safety, security and moral responsibility, induced both at the societal and at the individual level—that such a surveillance system would impose—results from the undermining of the power games that will no longer unfold in the “biopolitical” paradigm of the “biopower” of the human, but in that of a universal technological system of domination and control, of the artificial, in the form of a “singleton” guided by strong AI. Such a radicalization of the genealogy of power, which decenters the human agent from the (bio)power paradigm, produces not only an implosion at the level of human subjectivity/individuality, but also an implosion at the level of the normativity of social codes and that of reality, vitiated by this techno-panoptic system that exercises its monitoring mechanism inside human mental processes. This fact opens an antagonism at the level of human existence and “average everydayness”, by the overthrow of power, within the human/technology binary—by placing the

human in a dominated position, and not in a dominant one, in relation to these future AI technologies.

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