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The Rule of the System of Technology and Its Algorithms and the Problem of Moral Responsibility

Abstract: The article offers an analysis of the problems of technology in the context of exercising power in an organization. The power of the system today is addressed in terms of the "rule of numbers," based on the impersonal authority of the algorithms which is an extension of the modern concept of the instrumental reason. In keeping with the rules of efficiency the employees manifest modes of behavior analogous to those characterizing the functioning of technology and specifically emphasized by Max Horkheimer and Jacques Ellul. In the author's view, the rule of the algorithm-based technological systems leads to the atrophy of the moral responsibility and the loss of agency. Attempting to defend the idea of man's free agency in the context of the algorithm-based technological system, the author invokes Hans Jonas's theory of moral responsibility and refers to the concept of "ethical anarchism" as proposed by Emmanuel Lévinas.

Keywords: algorithm, a technological system, power, responsibility, Horkheimer, Jonas, Lévinas

> *[…] the point of power today resides in networks, computers, algorithms, information and data.*[1]

Introduction

At the onset of the Early Modern era, Francis Bacon resolved that knowledge was power. Today, we have not departed very far from this type of thinking, even though, admittedly, the way in which we imagine knowledge and power differs from how these two notions were conceptualized in the 16th century.[2] Next to "technoscience," the contemporary conceptual inventory includes such notions

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1. Alexander R. Galloway, *Protocol: How Control Exists after Decentralization* (Cambridge: The MIT Press, 2004), 92.
2. See Francis Bacon, *Selected Writings of Sir Francis Bacon* (New York: Franklin Library, 1982), 105.

as "technocracy" (the rule of the men of technology), or "Technopoly" (a utopian social order built upon the foundation of *techne*).[3] Technology impacts practices related to formulating directives, setting up bylaws, or framing codes of conduct, all of which are intended to help optimize an organization's work in such a fashion as to warrant the best possible results at a given level of the engagement of the human workforce. It is in the rules imitating the automatism of the actions of the machines that managers seek ways to organize complex and uncoordinated human behaviors into orderly routines. The axiological premises underlying the social recognition of the technological tools for the management of human personnel are based on such values as their versatile applicability, their decision-making efficiency, their adaptability to a variety of situations, their capacity to optimize operations, and their safety. Incidentally, these are also the values which we also invoke in our social relations, that is, relations ostensibly independent of the rule of technology.

The organizational culture of the algorithm comes into existence as a result of the social recognition of the value of the machines and computational technologies. Among others, this phenomenon becomes visible in rhetorical strategies adopted to reinforce one's professional prestige. When used in specific contexts, terms such as "management techniques," "human resources management tools," or "the algorithm of the organization," may strengthen the position of the speaker, whose persona is then construed as that of a business professional in possession of qualifications warranting his or her capability to efficiently manage an organization. The present-day social imaginary, informed with the affirmation of technology, is conducive to the shaping of the customers' dispositions to accept such phrases as evidence of the speaker's ability to adequately perform tasks necessary to reach particular goals set by the organization. However, it is not possible to associate all human behaviors with "technology" by virtue of its definition; such a gesture would be tantamount to unjustified stretching of its limits, and thereby to the misuse of the term.[4] Instead, we shall concentrate on instances of human behavior related to the use of contemporary technological instrumentarium.

The term "algorithm" (Latin: *algorithmus*) denotes a finite sequence of precisely defined actions necessary to accomplish specific tasks. The tools serving the purpose of the realization of these tasks – are numbers. Some simple calculations involving the use of algorithms can be carried out without the help

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3. See Neil Postman, *Technopoly. The Surrender of Culture to Technology* (New York: Knopf Doubleday Publishing, 1992), 15–18.

4. Such an excessively broad understanding of technology is postulated, among others, by the social psychologist Burrhus F. Skinner, who used the phrase "technology of human behavior" in his work *Beyond Freedom and Dignity* (New York: Knopf Doubleday Publishing, 1971), 41–42.

of the machines (for instance, when we plan a trip, or cook dinner on the basis of a recipe). However, when more complex procedures enter into play, we rely upon available IT systems. In the digital age, machines are increasingly entrusted with even the simplest of tasks. Computers process information using algorithms inscribed into and stored in the machine code. To ensure the machine's efficient operations, such a code must be clear and unambiguous.[5] The efficacy of the work of the machine becomes appealing to individuals managing organizations to such an extent that they often choose to apply a similarly non-ambivalent procedural language to define the rules of institutional life, for instance – the life of a business enterprise, a university, or a state. Exercising power in an organization aims at containing chaos and transforming it into order; its ultimate goal is to attain the organization's objectives by means of the selection of appropriate means. In this sense, algorithms find application in defining technical procedures for personnel management. In a similar sense, we create rules underlying the principles governing strategic computer games.[6] However, due to the large amount of data to be processed, the computational work necessary to develop such procedures is delegated to artificial intelligence (data power). In such contexts, we talk of the implementation of an algorithm within institutional structures for the purpose of generating "mechanical" rules in the process of the development of decision-making procedures.

These procedures may apply to human resources management, conflict solving in social contexts, procedures serving the purpose of the increase of the efficiency of the organization's operations, determining the scope of legal responsibility, or even resolving work-related moral dilemmas that the organization's employees may face. As a consequence, algorithmization itself becomes a normative operation, serving to determine proper principles of procedure. Once particular commands are translated into a programming language, the procedures may be broken down into a series of steps and expressed in the form of an algorithm.[7] In this context, the literature of the subject frequently emphasizes the emergence of the phenomenon of the "algorithm culture" (or "algorithm ideology") which

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5. See: Zbigniew Jędrzejczyk, Karol Kukuła, Jerzy Skrzypczyk, and Anna Walkosz, *Badania operacyjne w przykładach i zadaniach* [Operational Research: Examples and Tasks] (Warszawa: Wydawnictwo Naukowe PWN, 2011), 45–48.

6. See Alexander R. Gallway, *Gaming: Essays on Algorithmic Culture. Electronic Mediations.* Volume 18 (Minneapolis – London: University of Minnesota Press, 2006), 89–90.

7. See Kevin E. Davis, Benedict Kingsbury, and Sally E. Merry, "Indicators as a Technology of Global Governance," *Journal of the Law and Society Association*, vol. 46, no. 1, March 2012, 71–104; Tarleton Gillespie, "The Relevance of Algorithms," in: *Media Technologies: Essays on Communication, Materiality, and Society*, ed. Tarleton Gillespie, Pablo J. Boczkowski, and Kristen A. Foot (Cambridge: MIT Press, 2014), 167–193; "How Capitalist Society Shapes Search Engines." *Information, Communication & Society*, vol. 15, no. 5, 2012, 769–787.

has gained the status of an important component of the basic set of principles determining the formulas of the present-day institution, business corporation, or state management.

It is against such a backdrop that the author of the present article intends to examine the problem of the atrophy of the sense of individual responsibility among the personnel employed in the institutions of power, within whose structures power is exercised on the basis of a system of particular techniques and the reto related algorithms. Observations made by the German social philosopher Max Horkheimer and the French philosopher of technology Jacques Ellul offer the methodological context for the present reflections, whose goal is to uncover the anthropological foundations underlying the idea of the power of a technological system in the context of the role that the algorithms play in the systemic power structure. The ubiquity of algorithms positively affects the overall levels of the social approval for their further implementations in various areas of life. Internet users run online searches for resources based on search engine algorithms; we work in institutions whose management would not be possible without computer software, and it is resorting to (coded or informal) algorithms that we seek partners with whom we wish to build close relationships.[8] As a result, the presence of algorithms in institutional management system hardly is surprising. Furthermore, if an individual perceives the pressure of the rules instituted by the organization as too onerous, he or she usually does not relate this sensation to the tyranny of the algorithm, but with erroneous algorithm design, and, consequently, acts towards the improvement of the algorithm itself.

In the author's opinion, however, it may be argued that the rule of algorithms, leading, in principle, to the optimization of operations and standardization of decision-making procedures in organizations and institutions of various levels of complexity, is also responsible for the adiaphorization of human behavior: it causes the emergence of a rift between one's perception of the causes of one's actions and one's awareness of its effects. Ultimately, the rule of the algorithm leads to the atrophy in the area of individual capacity to pass moral judgments

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8. Malte Ziewitz, "Governing Algorithms: Myth, Mess, and Methods," *Science, Technology & Human Values*, vol. 41, no. 1 (Special issue: *Governing Algorithms*), 2016, 3–16, http://www.jstor.org/stable/43671280. This problem has also attracted the attention of a number of Polish scholars; in the last few years, several texts addressing this issue were published. Among these works, the most recent are: Magdalena Szpunar's *Kultura algorytmów* [The Culture of Algorithms] (Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego, 2019), 23–35, and Łukasz Iwasiński's "Społeczne zagrożenia danetyzacji rzeczywistości" [The Social Dangers of the Datafication of Reality], in: *Nauka o informacji w okresie zmian: informatologia i humanistyka cyfrowa* [The Science of Information in the Time of Change: Informatology and Digital Humanities], ed. Barbara Sosińska-Kalata, Maria Przastek-Samokowa, and Zuzanna Wiorogórska (Warszawa: Stowarzyszenie Bibliotekarzy Polskich, 2016), 135–147.

on events and actions in terms of his or her own ethical responsibility. Reflections presented in the sections below seek to support the validity of this thesis.

Man in the System of Technology

Algorithms are a part of the system of technology. The cultural recognition that products and principles of technology enjoy generates a particular model of a techno-centric culture: a model, in which machines define the standards for man's functioning in the world.

In his *Philosophy of Technology. An Introduction*, Val Dusek observes that the word technology (Gr. *techne*) may be understood in three ways: (a) as a set of objects (devices) created by man; (b) as a series of principles and the reto related activities which humans perform in the processes of building and using various devices; (c) as a technological system. These three aspects of technology are related to one another, as it would be difficult to imagine a technological system without machines and without specific principles determining their operation.[9] The first two concepts of technology, that is, *techne* as a "tool" and *techne* as a "principle," are referred to in the analyses proposed by eminent philosophers addressing the problems of technology, including Martin Heidegger[10] and Lewis Mumford. The latter introduced a distinction between tools and machines, arguing that the tool is an object of human manipulation while the machine enjoys a far greater independence in its operations. According to Mumford, the idea of machines operating without human oversight triggers concern that man will lose control over them or that the machines will gain control over us, thereby depriving the user of his or her ability to decide about their life. Common access to the artifacts of technology and the long history of their influence upon us impact cultural narratives of the "self," of the place an individual occupies in the world, and of the nature of the relations that bind us with other people.[11]

On the one hand, the notion of the "system of technology" encompasses devices, principles and actions taken up by man as the producer of objects and their user; on the other, it also comprises advertising and other aspects of marketing, as well as the model for the management of organizations whose operations are based

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9. Val Dusek, *Philosophy of Technology. An Introduction* (Oxford: Blackwell Publishing, Ltd., 2006), 39–40.

10. The issue of the twofold understanding of technology was raised, among others, by Martin Heidegger. See *The Question Concerning Technology, and Other Essays*, trans. William Lovitt (New York and London: Garland Publishing, Inc., 1977), 4–5.

11. Lewis Mumford, *The Myth of Machine: Technics and Human Development* (New York: Harcourt Brace Jovanivich, Publishers, 1967), 344–348.

on the application of technological tools. Therefore, a reference to the concept of the "system of technology" makes it easier to explain those aspects of technology that remain beyond the control of the user.[12] The system of technology is an element of the sociocultural imaginary, a component of the broadly shared image of the world, which consists of popularized scientific claims, technology-based social utopias, and cultural (behavioral) practices related to artifacts and to socially-determined rules of their use.[13] As an anecdotal example of such an interdependency one may quote the situation of Iran under the rule of Shahinshah Mohammad Reza Pahlavi in the 1970s, when the Iranian government allocated enormous financial resources obtained from the profitable sales of the country's crude oil to the purchase of modern machinery and technologies without making any initial provisions as to where the devices would be stored or who would operate them. In Pahlavi's Iran, however, the artifacts were to symbolize civilizational progress and access to the consumer goods of the western world; ultimately, much of the imported machinery ended up abandoned in the desert. Although it seems indisputable that in order for the tools to fulfill their function, their users need to know how to make the most of the machines' actual potential,[14] it is also clear that the person who uses technological devices acts in accordance with his or her own projections of how these tools change an individual, how they improve the quality of his or her life, and how they allow them to gain an advantage over competitors. The concept of the system of technology is thus a holistic idea, encompassing both the equipment and the technical skills required to create and operate them, and the complex cultural imaginary embedded in the civilization in which the creators and users of machines function.[15]

The system of technology may appear to be so obvious to its users that they are likely to overlook its implicit assumptions. For the same reason, they fail to observe the process of their own gradual adaptation to the use of the technological tools which they (unreflectively) take for granted. A technological outsider, or a "digital immigrant," may indeed choose not to take advantage of the landmark artifacts of the present day, avoiding computers and smartphones, or refusing to use Internet browsers or online communicators. He or she might reject the idea of online research, choosing to harvest information from books and other traditional media

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12. See Stephen J. Kline, "What is Technology?" *Bulletin of Science, Technology and Society*, vol. 5, no. 3, 1985, 215–218.

13. The concept of social imaginary in the sense referred to in the article was developed by Charles Taylor and presented in his work *Modern Social Imaginaries* (Durham and London: Duke University Press, 2004), 23–25; Mariusz Wojewoda, "Narratives about Cyborgization in the Context of Technoevolution," *Logos i Ethos*, vol. 52, 2020, 11–32.

14. See Ryszard Kapuściński, *Shah of Shahs* (London: Penguin Books Ltd., 2006), 75–78.

15. See Val Dusek, *Philosophy of Technology. An Introduction*, 41–42.

instead. However, such a digital immigrant condemns himself or herself to technological exclusion, which, routinely, is tantamount to social and occupational exclusion.[16] A person of the like *Weltanschauung* may experience difficulties finding a prestigious job and, in exceptional situations, such as that of an epidemiological emergency, he or she will not be able to work online. A technological outsider will probably consent that while he or she does not want it, he or she must either adapt to the system of technology that has become ingrained in the daily cultural practice of communications and work, or will face the necessity to change the nature of his or her profession altogether. This compulsion to adapt to the system does not deprive a person of his or her freedom, but it does significantly affect the number of options, thereby restricting one's liberty of choice to a limited set of available paths. It places the individual in a situation in which the conditions of his or her freedom, defined by the use of a variety of technological artifacts, are pre-determined, and by that virtue, it affects one's access to particular goods. The lack of access to products of modern technology may effectively block certain aspects of an individual's professional and social development. This, however, does not mean that we, as beneficiaries or technological progress, do not miss moments when we "drop off the radar" and become invisible to IT systems, "out of range" and "out of reach."

The fascination with the development of exact and technical sciences is characteristic of the modern period. Diagnosing the state of intellectual and technical culture in the first half of the 20th century, the German philosopher Max Horkheimer claimed that although science and technology allowed man to overcome his fear of nature and supernatural powers, it made humans slaves to social codes of conduct and principles of procedure that, paradoxically, we created ourselves while striving for the improvement of the quality of life and security. At the center of his considerations Horkheimer put the problem of instrumental reason. The operations of instrumental reason are based on the formula of perceiving man and the world through the lens of technology.[17] On the one hand, the conceptual shift from metaphysical reason to instrumental reason, which occurred at the onset of the modern period, removes the spell of magical thinking from the world and thus "disenchants" it, but, on the other, it grants reason the position of an essential cognitive tool allowing one to interiorize the system

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16. The distinction between the *digital natives* (generation of people born after 1980) and the *digital immigrants* (generation of people born before 1980) has been introduced by the American media researcher Marc Prensky. See "Digital Natives, Digital Immigrants," *On the Horizon*, vol. 9, no. 5 (October 2001), MCB University Press, http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf (10.12.2020).

17. Max Horkheimer, *Critique of Instrumental Reason. Lectures and Essays since the End of World War II*, trans. Mathew O'Connell (New York: Seabury Press, 1974), 34–35.

of principles and rules, without which neither an individual nor a community can function. Furthermore, instrumental reason creates criteria for the assessment of the validity of these principles. Challenging Horkheimer on this issue, however, one might argue that civilizational rejection of magic is only illusory; rather than that, it seems reasonable to claim that magic changes its character, especially that most users of modern digital tools do not understand the essential tenets of their operation, they are unable to repair them, and focus solely on their use – and even in this respect they often utilize the simplest functions of their hardware and software alike.

Horkheimer pointed out two aspects of the use of the concept of reason: subjective and objective. The former manifests itself in subjective thinking or in a reflection characteristic of a certain community of thought. When adopting this usage, we may, for instance, talk of people organizing something rationally, resorting to their abilities of logical and calculative thinking. In turn, the objective aspect of the use of the term manifests itself in metaphysical reflection, in which, for instance, the objective Logos establishes the order of the world, while the subjective (human) logos is conceived of as a means to explore and understand the objectively established metaphysical order. The subjectivization of reason ultimately leads to its instrumentalization and formalization.[18] As a consequence, the values which guide us in our actions lose their roots in the ontic structure of the world: they become part of the social contract and their sense becomes negotiable. Thus, for instance, from the point of view of instrumental reason, the claim that "freedom and justice are better than slavery and injustice" is unverifiable, because it expresses a subjective belief of an individual subject or of a political faction. What connects people is not revealed through a common understanding of values: it becomes manifest in communally accepted, formal, or – in other words – procedural and technical, norms.

According to the principle of instrumental reason, decisions are expressions of the arbitrary will of the subjects who are in possession of the appropriate ability (power) to influence the environment. In an action model based on a system of technology, the arbitrariness of individual choices must be constantly revised in reference to formally defined rules of operation. The defining of procedures becomes a recipe for sorting out complex situations, and *techne* – understood as a principle – becomes a tool allowing one to carry out calculations fundamental for such procedures. As a consequence, the subject ceases to trust his or her understanding of the situation, and associates the efficiency of a particular action with the reliability of the technological algorithm.[19] The authority of formally

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18. Horkheimer, *Critique of Instrumental Reason*, 40–42.
19. Horkheimer, *Critique of Instrumental Reason*, 49–50.

established rules derives from the arbitrariness of the impersonal (non-human) principle (*techne*). Thus, in terms of the philosophy of the system, the point is not to make employees' decisions morally right, but to make them optimal in terms of the efficiency of the decision-making process. The instrumental reason becomes a tool for creating rules of human behavior in organizations.

In the system of technology, the rationalization process is not a result of the actions of anonymous market forces: it is an effect of planning and of the adaptation to particular circumstances that individuals and organizations undergo. Those unable to adapt are excluded. Adaptation becomes a model for human activities of all types.[20] Paradoxically, however, adaptation does not lead to an increase in the employee efficiency: it entails work under the pressure of the fear of making a mistake and, consequently, bears fruit in terms of the lack of courage and, effectively, inability to make decisions in the situations of crisis.[21] Instrumental reason is supposed to supersede independent thinking; it is a tool facilitating the operations of the mechanisms of adaptation granting an individual a sense of security in a quantified reality. As a result, the individual activity of an employee of an institution becomes inscribed into a calculated sequence of events, whose frames and aims have been unambiguously defined and specified.

In what sense can technology affect the exercise of power? Writing about the system of technology, Ellul observed that it tends to be simultaneously complete and comprehensive:

> Now, anything that is incorporated, or seized, is treated as an object by the active system, which cannot develop or perform without acting upon a set of elements that have previously been rendered neutral and passive. Nothing can have an intrinsic sense; it is given meaning only by technological application. Nothing can lay claim to action; it is acted upon by technological process.[22]

The social recognition for the efficiency of the functioning of the system of technology and of the algorithms induces a change in interpersonal relations. Within the system of technology, social development is no longer a random or spontaneous phenomenon: it is rational. It is divided into successive stages, of which each is attuned to a clearly defined goal. Technical thinking presupposes a certain idea of mechanized consciousness, whose approach to artifacts is a calculated approach, and whose thinking about objects is determined by the criteria of their

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20. Horkheimer, *Critique of Instrumental Reason*, 111–112.

21. Among others, also Arnold Gehlen arrived at similar conclusions. See: *Anthropologische und sozialpsychologische Untersuchungen* (Hamburg: Rowohlt Repertoire, 1986), 120–123.

22. Jacques Ellul, *Technological System*, trans. Joachim Neugroschel (New York: The Continuum Publishing Corporation, 1980), 12.

technical utility and practical uses.[23] Consequently, this mode of thinking transgresses the threshold of the world of objects and affects the area of interpersonal relations and institutional life.

This process is founded upon the general principle of the technicization of human behaviors. Such a shift, among others, serves the purpose of anticipating future problems and eliminating them before they arise. It is to facilitate and accelerate the decision-making process in difficult situations, in which the employee hesitates and the refore must consult his or her superior. Hesitation, and ensuing consultations, delay the moment of reaching the institutional goal, which renders them undesirable from the point of view of the organization's interests. For this reason, the principles of the functioning of an organization are based on procedural instructions – bylaws, codes (legal and ethical) – and, as such, they bear all the hallmarks of technology understood as a system. It is particularly important when what is at stake is the optimization of one's own efforts, adjusted to specific levels of the expenditure of energy and resources. However, as Ellul points out, paradoxically, the process that succeeds in improving the functioning of institutions by means of the technicization of operating procedures simultaneously fails to enhance the desired moral assets of their employees. Contrariwise, it hinders the development of their ability to make unconventional decisions, rewards conservative attitudes, and effectively blocks the employees' ability to unaidedly seek solutions to problems they encounter.[24] By eliminating difficult situations from the life of the organization, the procedural algorithm also eliminates the personnel's need to develop problem-solving skills and strategies, so when a crisis situation occurs, the employees turn out to be unprepared to tackle problems they face.

In the model in which power is exercised with the use of an algorithm, it is still people – IT specialists – who create the latter, although, just as well, this task could be successfully performed my AI-enabled machines. Should this happen, all the unpleasant aspects of exercising power, that is, controlling and disciplining others, move into the domain of "the artificial." That which is "non-human" appears to be free from all characteristically human shortcomings: in this sense, the non-human is more rational and more just. From the decision-makers' point of view, whether in business organization or in state institution, the digital language of technology is better suited to controlling people than the natural language, as it nullifies the belief that we are subject to the power of "a sovereign" (a ruler, a people, or a tradition). In such a context, an individual does not follow

23. See Jacques Ellul, *The Technological Society, with an Introduction by Robert K. Merton* (New York: Vintage Books, 1964), 6–12.

24. See Ellul, *The Technological Society, with an Introduction by Robert K. Merton*, 79–85.

his or her error-prone superiors' arbitrary orders, but is subject to impersonal, technically calculated, rules.

The analyses presented above demonstrate that the idea of the algorithm rule is a consequence of three assumptions: (1) it is based on the belief that it is the technological reason that is the key to ordering complex social processes, with particular emphasis on the consequences of the automation of human behavior; (2) in this approach, the idea of social progress (manifest in the improvement of the quality of human life) is directly related to the idea of technological progress; (3) technological reason is based on an algorithm designed to optimize the decision-making process. Man is often mistaken, self-interested, unpredictable, and the refore prone to make erroneous decisions. This is why the task of the algorithm is to eliminate the human factor from the process. If exercising power becomes a technical activity, then the human, whose flaws could adversely affect the cohesion of the system, may prove to be an obstruction on the organization's way towards the accomplishment of its strategic goals.[25] The rule of the system of technology for the benefit of man, in fact, is the most inhuman form of exercising power, because it effectively marginalizes the role of the alleged beneficiary in the decision-making process.

The Problem of Responsibility in the World of Algorithms

Because the computing power of the algorithm-calculating machine is limited, the assumptions indicated above may prove erroneous. In the process of big data computation, the machine must stop to propose a specific solution to a given problem. The dynamic data growth results may impact the result of the computing operations, should the same calculations be performed repetitively. No algorithm is capable of predicting events that will occur in the future, although, admittedly the computational power of contemporary machines proves sufficient to predict a wide variety of possibilities in task areas lending themselves to being defined by parametric values, such as chess or Go. To some extent, their processing potential may prove efficient enough to resolve highly formalized and complex legal formulas. The above notwithstanding, algorithms are helpless in contexts, in which the factors of stochasticity or contingency prevail, enforcing intuitive decision-making.

It is the opinion of the author of the present article that the rule of the system of technology and algorithms is a form of the rule by Nobody. The concept, coined by Hannah Arendt, originally referred to the totalitarian regimes of the Second

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25. See Ellul, *The Technological Society, with an Introduction by Robert K. Merton*, 84.

World War period. In this case, it is not the rule by Nobody understood as a rule aiming at the extermination of people deemed undesirable from the point of view of a particular political system, but as a model of exercising power which operates on the principle of the reduction of the subject's (civic) responsibility.[26] Expanding his critical view to encompass the problems of the technicization of social life, Zygmunt Bauman claims that the unlimited power of technology makes us conceive of human actions as determined. The subject – a functionary of the political system of technology – no longer feels his or her own agency: the outcomes or his or her actions are severed from their causes. The contribution that particular individuals make to the operations of the machine-as-an-institution appears so miniscule that its significance seems close to naught, which is why the active subject does no longer perceives it as a causative factor. As a consequence of the above, he or she ceases to valuate technology and the reto related algorithms from a perspective of his or her moral responsibility.[27]

The compulsoriness of our dependency on the systems today is not as oppressive as that characteristic of the times when totalitarian regimes ruled, or at least we do not experience it as equally painful. The pressure to conform to the system becomes more subtle, outwardly less burdensome, and, as such, gets inscribed into the mechanical pragmatics of the institution and its operations. On the one hand, conformity with the exigencies of the system is driven by the fear of making an error, and on the other – by the urge to maximize profits. Institutions choose to rely upon technology and its algorithmic tools to manage their personnel because such tools give them an advantage over their competitors. In doing so, however, they legalize the most inhuman, mechanical mode of exercising power, whose paradox lies in the fact that although its primary objective is the good of man, it ultimately instrumentalizes both "good" and "man."

Yet, at the controls of the system of technology one will not find a mentally dysfunctional tyrant, an institutional psychopath, or a ruthless robber baron, but a likeable manager or a group of congenial managers, who – better than others – understand the ins and outs of the institution's organizational system and its conditions, who readily adapt to them, and who successfully compete with other institutions, operating on similar principles. Their success, tantamount to the success of their team, however, may be parameterized: for instance, if they score a high number of points according to the criteria pertinent to their particular field, their score may then translate into their high position in the intra-institutional rankings. Thus *techne*-based objectivity is born: a non-human objectivity, which

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26. See Hannah Arendt, *Responsibility and Judgment*, edited and with Introduction by Jerome Kohn (New York: Schocken Books, 2003), 61–63.

27. See Zygmunt Bauman, *Modernity and Holocaust* (Cambridge: Polity Press, 1989), 438–441.

is deemed as unbiased as it is impartial. Numbers (points) become tools to which the function of (the formerly human) authority is shifted.[28] In this sense, the rule of algorithms dehumanizes institutions by introducing mechanical strategies of operation into the very core of their organizational philosophy.

The institution's mechanical rules are implemented to increase the confidence in the infallibility of its operations, which eventually replaces the value of the trust in human responsibility for thereto related decisions. In this view, certainty does not emerge from the tyranny of coercion: it is a function of the application of the digital camera and of the processing of data allowing the system to predict human behavior. The individualism of the employees hampers the development of the institution. From the perspective of the system, it is better when the employees feel that they form a homogeneous whole with the organization for which they work. The idea of individualism is an obstacle; it prevents the organization from the achievement of homeostasis. Therefore, new technologies are geared towards predicting human behavior: they are used to warrant the certainty of the financial result of the organization's operations (prevailing over the competition), to attain a satisfactory level of social prestige, to live a comfortable and pleasant life, and to gain a sense of security. The price may seem "insignificant" – after all, what one gives up is but the right to decide about oneself, which, in the context of any "employment," is limited anyway. Yet, in fact, the cost is "exorbitant": one's willingness to pay it ultimately leads to the disappearance of the individual's autonomous self. In this context, Shoshana Zuboff uses the term *Big Other* (a new incarnation of the Big Brother). In an organization, the Big Other represents the power of the rational correctness of action, based on hard "data facts" that, anticipating our future expectations, stimulate our current needs. The ideas of moral choice, of which an inseparable part were doubts about the correctness of one's behavior, are now being replaced by digital engineering based on algorithmic certainty and impartiality of action.[29]

The tools of oppressive control and coercion, characteristic of the model of totalitarian rule, have transmogrified into the so-called big nudging, a strategy involving the use of the rhetoric of suggestion, or persuasive techniques, such as propagating a vision of the success of the entire organization which, when attained, will (inevitably) result in pay rises and higher professional prestige for its employees. Up to a certain point in their evolution, algorithms relied on statistical tools. Today, the computational technology allows one to create algorithms tailored

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28. See Robert Seyfert and Jonathan Roberge, *Algorithmic Cultures. Essays on Meaning, Performance and New Technologies* (London & New York: Routledge, 2016), 13–18.

29. See Shoshana Zuboff, *The Age of Surveillance Capitalism. The Fight for a Human Future at the New Frontier of Power* (New York: Hachette Book Group, Inc., 2019), 513–520.

to idiosyncratic characteristics of an individual. This transformation affects both clients and employees: in this sense no one is free from the pressure of algorithms, or "immune" to their influence.[30] Examples include algorithms designed to predict human behavior on the basis of the analysis of facial photographs registering the reactions of individuals facing difficult decisions.

Algorithms used for such purposes indeed influence human decisions: even though the employee of an organization may quietly object to the idea of applying algorithmic calculations to the analysis of his or her client, he or she is aware that their performance will also be assessed by their superiors, who will also apply some algorithm for this purpose.[31] Algorithmically defined procedures will also provide a justification for the subordination of the operations carried out by an individual to global organizational strategies. They will legitimize such a uniformization of procedures by demonstrating that each action of an individual is an element of a market game in which the more clever and the more resourceful win. This, however, begs a question: will the employee be able to muster enough courage to act contrary to the procedures if circumstances demand it? One should only hope that it is still possible.

The problem of the rule of the system of technology and of the impact of algorithms upon human life is usually addressed in terms of a threat posed to the freedom of the subject. In this context, it is also worth the while to consider the question of subjective moral responsibility, as well as the issue of other risks related to the use of algorithms within the system of technology. While one's legal responsibility lends itself to being described on the basis of the schema of an algorithm, one's moral responsibility resists any attempts at its technicization or quantification. Its essence is one's moral intuition: one makes his or her moral choices, figuratively speaking, beyond and above profit-vs-loss considerations. Sometimes one's moral reflection urges one to seek a consensus, to adopt non-standard solutions to solve non-standard problems, or to account for the uniqueness of the situation in which another person – perhaps someone subject to one's ethical judgment, or someone compelled to make a decision – actually is. While addressing the problem of responsibility, Hans Jonas employs the category of "the causal power of human action," which relates the subject's activity within an institution to his or her belief that an individual may tangibly influence the organization's operations. Let us illustrate the sense of this phrase with an example: when we use the word "responsibility" while talking

30. See Jean-Hervé Lorenzi and Mickaël Berrebi, *L'avenir de notre liberté* (Paris: Groupe Eyrolles, 2017), 176–180.

31. See Davis Kevin E., Benedict Kingsbury, and Sally E. Mery, "Indicators as a Technology of Global Governance," *Journal of the Law and Society Association*, vol. 46, no. 1 (March 2012), 79–80.

of "delegating responsibilities to individual employees," we use it in the sense which underlies Jonas's concept.

Yet, if the subject holds a contrary belief about his or her influence upon their institution, he or she will adopt a cautious, conservative attitude with respect to it. The above notwithstanding, moral responsibility, according to Jonas, implies the obligation on the part of the subject – even when he or she is not formally compelled to carry responsibility. This type of responsibility goes beyond consensual and algorithmic responsibility; in essence, it is similar to natural responsibility. In this sense, responsibility is a function of the subject's care for the long-term effects of his or her actions in the light of the obligations that he or she voluntarily accepted.[32] The essence of man's moral actions is therefore his or her autonomy, or, in other words, man's independence of the effects of external influences or of biologically conditioned human desires. The issue raised here is that of the privilege of human spontaneity conditioning the sense of responsibility that has not been imposed upon the subject by virtue of previous agreements, or enforced upon him or her in the aftermath of arbitrary delegation of duties. Responsibility accepted knowingly is, in its essence, voluntary. If such a preliminary choice is made, the subject will gain the necessary "causal power of action" and thereby will determine the scope of his obligations on his or her own.[33]

Complementing Hans Jonas's theory of responsibility is the concept of "ethical anarchism" proposed by the French philosopher of dialogue, Emmanuel Lévinas. According to the latter, the concept of "ethical anarchy" precedes the political and anti-political (anti-systemic) senses of the term. In Lévinas's view, *an-archy* is what comes before *arché* – it is thus prior to *the principle*. It does not denote any specific political views, although it is a position which will, inevitably, discomfort institutions and individuals within them. It is a radical stance, which objects to the idea of an organizational whole that obliterates the variety of individual behaviors and ways of understanding the world. Such a stance prevents institutions from easing into the state of complacency and stagnation: it re-introduces the spontaneous and intuitive human factor to the life of the organization, and thereby distances itself from all mechanical procedures of operation. Ethical anarchy does not seek to reign over reality or to force it into rigid frames of some total order: on the contrary, it defends ambiguity and mystery. In this context, Lévinas uses the category of a "trace," which is more of a suggestion, a guideline, rather than an answer to the question of how do what is right.[34]

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32. See Hans Jonas, *Imperative of Responsibility. In Search of an Ethics for the Technological Age* (Chicago: The University of Chicago Press, 1984), 172–174.

33. See Jonas, *Imperative of Responsibility*, 176–178.

34. See Emmanuel Lévinas, *Otherwise Than Being or Beyond Essence*, trans. Alphonso Lingis (Dordrecht: Kluwer Academic Publishers, 1991), 169–171.

The fundament of ethical anarchism is conscious responsibility, unconditioned by any acts of prior imposition, compulsion, or any coercive institutional procedures. It is in an ethical situation that a supra-structural, supra-logical, and the refore also supra-algorithmic, beyond-*techne*, exhortation becomes manifest. The ethical stance of an-*arché* restores man's sense of agency in relation to his own actions. The sense of the "causal power" results from the experience of an autonomous conscience, in which an individual moral obligation arises. While conscience does not create rules of ethics, its very existence nonetheless confirms that in the process of their internalization, the principles adopted from the outside were granted a certain validity. According to Lévinas, ethics is not a technical construct – a code, or a set of procedures. Rather than that, it stands for a call to action that extends beyond the algorithmized areas of our reality, and is implemented within the quotidian practices of everyday life.[35] Ethical anarchism is an extension of the political idea of civil disobedience; it denotes resistance to subordination to political and institutional goals. In the context of the problems of the algorithms, the point of ethical anarchism is not to reject them, but to control them, to refuse to entrust them with power over ourselves or over our institutional structures. After all, it is we who create them, or at least, it is we who legitimize the validity of their power. It is thus not the algorithms themselves that are dangerous: the real peril lies in the uniquely human passivity – manifest in automatic thinking, in our inclination to embrace schematic behaviors and, last but not least, in the decline of individual moral responsibility in organizational structures.

The reflections above bring us to the question of how to weaken the power of the algorithm. In line with Lévinas's general message, one should not submit to the tyranny of "the whole" understood in the sense, in which Ellul conceived of the system of technology. It is important to appreciate the "multiplicity and diversity" and to fully recognize the advantages of uncalculated action. The ethical attitude is metapolitical, metasystemic, and, consequently, also anti-algorithmic. It is an anarchist moment of democratic resistance to the formation of ideally formulated rules and imposition of untenable demands on the employees of institutions and organizations; it is an attitude of protest against the strategies of nudging the employees into adopting impossible standards of flawless performance by means of institutionally condoned promotion of machine-like perfectionism.[36] Adopting the stance of ethical anarchism, one disperses the myth that the rules that serve the organization well automatically benefit the employee. As has been demonstrated, what ostensibly serves the institution, in fact effectively hinders the development of the employees' subjective moral competences, which, in the long

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35. See Simon Critcheley, *Infinitely Demanding. A Political Ethics* (London: Verso, 2007), 143–144.
36. See Critcheley, *Infinitely Demanding. A Political Ethics*, 148.

run, must prove damaging to the organization itself. In a sense, thus, the defense of subjective freedom is tantamount to the defense of moral responsibility, because both these values (and the rules of conduct founded upon them) complement each other both within the context of the life of an organization and outside of it.

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