

Automation and industrial objects: a simondonian reading of Karel Čapek's play Rossum's Universal Robots

Alex Calazans & Veronica Ferreira Bahr Calazans

Abstract

This text discusses Karel Čapek's play "Rossum's Universal Robots" from the perspective of philosopher Gilbert Simondon. It is the first work of fiction to use the term "robot," contributing to establishing a certain image of the machine in contemporary culture. Simondon's analysis of the play, according to the reading proposed here, points to a tension between the post-industrial technical mentality, defended by Simondon, and the consumer values strongly associated with the robot manufacturing process described in the play. The future, envisioned by the play, is presented not only as a scenario of extreme automation, but also of prioritization of profit, obsolescence, and disposability in the industrial process. Thus, beyond a reflection on the concept of "robot," this analysis points to an alternative regarding the way of conceiving industrial objects in general, in order to preserve both the technical essence of such objects and nature, which is considered one of the agents of technical networks and, therefore, cannot be ignored.

Keywords: Karel Čapek; Simondon; post-industrial; technical mentality; robot.

CONTACT: Alex Calazans, Federal Technological University of Paraná, alexcalazans@utfpr.edu.br

Veronica Ferreira Bahr Calazans, Federal Technological University of Paraná, vcalazans@utfpr.edu.br



Aion Journal of Philosophy and Science

© 2026 the Authors

This work is licensed under a

[Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International](https://creativecommons.org/licenses/by-nc-nd/4.0/) License.

Introduction

Science fiction, since its earliest manifestations, has been presenting projections of the future regarding technical objects. Much of it considers the clash between human beings and some type of machine capable of such a degree of autonomy that it allows it to manifest resistance, opposition, and even hostility towards its creators. Some attribute the adjective “Frankensteinian” to this type of narrative, recognizing the great influence of Mary Shelley’s work, *Frankenstein*; or, *The Modern Prometheus*, published in 1818. However, beyond the mere assumption that the future holds a machine revolution, science fiction works reveal conceptions about technology shared by those who lived in the context in which these works were written and, at the same time, influence those conceptions.

It is with this premise that I turn to a theatrical text, in order to investigate some hypotheses about how such a work of art may have influenced our culture during the 20th century. It concerns, specifically, to Karel Čapek’s text, *Rossum’s Universal Robots*, written in 1920. First staged in 1921 in the Czech Republic, the play achieved worldwide success in the interwar period, as the text was, already at the time, translated into more than 30 languages. It is well known that the word “robot” was introduced into culture from this text by Čapek. It is a Czech term (*robota*), meaning something close to “forced labor”.

From a philosophical point of view, the goal is to investigate some aspects of the “image of the machine,” as manifested in the play, and evaluate them based on some concepts provided by the philosopher of technology Gilbert Simondon. More specifically, we want to know if the concept of Robot, according to Čapek, fits the diagnosis made by Simondon, in his book, *On the Mode of Existence of Technical Objects* (*Du Mode d’Existence des Objets Techniques*) [MEOT] regarding the *myth of the Robot*. Thus, concepts such as *automatism*, and others derived from it, become central to the analysis.

However, we also want to explore a thesis that seems to have received little attention. This concerns the very concept of the *industrial object*. In the play, Rossum’s robots are produced in a factory. In this way, they are mass-produced artificial products. Thus, the question arises: more than influencing our understanding of what “robots” are, isn’t the play also conditioning us to think about what an industrial product is? Haven’t our values regarding what is “industrial” also been shaped by what was presented in Čapek’s work? Simondon again seems to provide us with powerful keys to understanding this, allowing us to consider some urgent contemporary issues, such as the environmental problem generated by waste disposal.

The images of the machine in the play written by Karel Čapek

In his book *AI Ethics*, Mark Coeckelbergh¹ summarizes the theme of Čapek's text. He states that the play deals with "robot slaves that revolt against their masters." This leads us to believe that it is a story about *competition*, in which leaders are threatened by their own revolted servants. This theme of rebellion is common to other narratives, such as that of Mary Shelley², in the book *Frankenstein*, in which the monster created by Victor Frankenstein violently attacks its creator because he does not meet its specific needs as a creature.

However, even if not wrong, the summary suggested by Coeckelbergh may indicate a partial view of the machine image involved. If we consider the theme of technique, it is possible to see an author's commitment to certain conceptions of the machine, even if they are implied and the author himself is not clear about them.

Therefore, considering Čapek's text, it seems misleading to say that the play addresses a single way of seeing the "robot," as Coeckelbergh suggests, assuming the theme of the robot rebelling against humanity. Instead, we suggest that there are five active machine images in Čapek's story. Let's look at them:

First image: it appears in the play's *prologue*. Right at the beginning, Čapek describes the office where the character Harry Domin (the factory's general manager) works. On the office's walls there are images with the following phrases: "The cheapest labor: Rossum's Robots"; "Tropical Robots, the new invention, US\$150 each"; "Buy your Robot now"; "Want to lower your product prices? Order your Rossum Robot". What these sayings present is *an economic image of the robot*. More specifically, it's the image that aligns with the business perspective, which, in a capitalist context, sees the robot as an asset capable of enabling economic maintenance, reducing costs and generating profit.

Second and Third Images: The following two images should be considered together, as they appear together in the narrative. Still in the Prologue, the director, Domin, describes the story of the invention of the Robots. He mentions two characters: Old Rossum and Young Rossum. The Old Man has a more academic attitude, focused on philosophical interests and understanding nature. He is the one who discovers the secret of how to manipulate matter and produce life. Driven by an anti-theological interest, Old Rossum sets himself the goal of building an artificial "human being," exactly like naturally constituted humans. Therefore, it is an organic being, just like a human, but artificial. His desire is to show the non-necessity of God in understanding the creation of humanity. Since Old Rossum's experiments failed, Young Rossum, whose academic background is in engineering, uses his predecessor's discoveries to direct the robot towards labor purposes. Instead of imitating nature, as the old man wished, Young Rossum envisions an artificial object

¹ Coeckelbergh, M., 2023, *Ética na inteligência artificial*, São Paulo, Ubu Editora, pp. 29–30.

² Shelley, M., 2021, *Frankenstein, ou o Prometeu moderno*, ed. bilingue português/inglês, São Paulo, Ed. Landmark [primeira versão publicada em 1818].

distinct from humans, but capable of performing human tasks. Therefore, we can name Old Rossum's image of the machine as the *classic organicist image of the machine* -something that is present, for example, in Ernst Kapp's³ - in the text *Grundlinien einer Philosophie der Technik*. Young Rossum, on the other hand, embraced the *organicist industrial image of the machine*. The basic justification for this lies in the fact that he envisioned building "working machines, alive and intelligent." By avoiding superfluous elements to perform specific functions, these machines would be mass-produced, much like a production line in the large factories of the early 20th century.

Fourth image: an other image concerns how the character Helena Glory (daughter of the president of Rossum's Robot Factory) interprets the robots. She visits the factory with the humanist intention of setting free the robots. She interprets the robots as individuals similar to humans, capable of suffering and having moral values. They could have a soul, and thus, forcing them to work would represent the same kind of aggression that humans could suffer. The machine image in question is *the humanized image of the machine*.

Fifth image: the last image to receive our attention is the one with which Karel Čapek himself seems to commit. At various points in his confrontation with Helena, Harry Domin rejects the fact that robots are human or that they can acquire moral characteristics such as *fear, courage, love, etc.* Because they possess a certain intelligence, robots would only know how to perform labor functions. However, it is curious that, in the *second and third* acts of the play, Čapek presents these robots as capable of human feelings, such as anger. This leads them to revolt against humans. What is at stake? We propose two theses: the first is the fact that, for Čapek himself, there is no work without human aspects. Only humans work. Thus, the development of an artifact that works means that, at some point, an artificial human being will be created. On the other hand, the second thesis concerns a metaphor. That is, once the robots revolt, they create manifestos ("robots of the world, unite!"). It seems that Čapek is describing the artificialization (in terms of dehumanization) of the working class. It appears to be a denunciation pamphlet that, through a metaphor, describes a real problem of the workers. Thus, his thesis is that an attempt to robotize the human is bad, suggesting that this always leads to social tensions and struggles for emancipation. Therefore, we can indicate that the 5th image is the *working machine image*.

Given these images, let's turn to some Simondonian concepts in order to understand the depth of such Robot approaches.

³ Kapp, E., 1978, *Grundlinien einer Philosophie der Technik: Zur Entstehungsgeschichte der Kultur aus neuen Gesichtspunkten*, Düsseldorf, SternVerlag Janssen & Co. [obra original publicada em 1877].

Simondon and the myth of the robot

Already in the introduction to MEOT, Simondon refers to the concept of a robot. However, his approach is aimed at constructing a critique of how culture has approached automated technical objects. In his vocabulary, the machine is part of one of the moments in the evolutionary process of technique. However, over the years, culture (understood as the world of meanings) has ceased to comprehend the nature of the machine, that is, it has ceased to understand its mode of existence and has begun to treat it based on external meanings to its technical reality. As an effect of this is an alienated culture that evaluates the machine based on its utility. The alienated culture from true technical reality creates fictions that either tend towards a hostile stance against machines (*technophobia*), or towards a defense of machines simply based on the exercise of power they allow (*technocracy*). To Simondon⁴, both stances point to a myth: *the myth of the robot*.

In this sense, Simondon refers to the “robot” as an object that is simultaneously a result of technical development – because it is a machine – and also a target of imagination, stimulation, *fiction*, *art*, and *illusion*. Culture fuels the idea of the existence of machines that would have the capacity for *interiority* similar to that of humans. What results from this is a new meaning for the concept of *slavery*. Man, influenced by the ambiguity of culture, wants to dominate the machine, being cautious that it does not acquire human characteristics that make it *hostile*, *aggressive*, and *rebellious* against humans.

For Simondon, the idea that a robot can acquire an interiority, like a human, is nothing more than a myth, an imaginary product. This means that such a robot has never existed; and suggesting its existence in the future seems to only fuel this myth.

What allowed the emergence of this concept of robots lies precisely in the misunderstanding of what *automatism* is. But what does this concept actually mean? Firstly, it is understood that automatism is something that must belong to the machine; that is, without automatism there are no machines. However, Simondon⁵ also states that, in the mistaken interpretation of automatism, “a true logical error is hidden.” The reason lies in the difference between the concepts of “open machine” and “closed machine.” The opening and closing of a machine are concepts presented to indicate the machine’s ability to exchange “information.” This exchange relates to the external environment, which includes humans and other machines. Thus, *technical perfection* presupposes that the machine opens up, that is, becomes sensitive to information coming from the outside. The logical error is to assume an increase in *automatism* (which points to the closing of the machine) and at the same time assume that it becomes autonomous enough to control other machines, which, in turn, requires communication with the outside world.

⁴ Simondon, G., 2020, *Do modo de existência dos objetos técnicos*, Rio de Janeiro, Contraponto, pp. 44–45.

⁵ Simondon, G., 2020, *Do modo de existência dos objetos técnicos*, Rio de Janeiro, Contraponto, pp. 45–46.

In summary, the following words from Simondon indicate what he understands by automatism: “A purely automatic machine completely closed in on itself in a predetermined way of operating would only be capable of yielding perfunctory results”⁶. This definition contains the idea that a machine possesses an internal functioning, that is, an internal causal regime that generates specific movements from one stage to another. This represents an aspect of determination, that is, a *programming*, allowing it to act and produce results. Esses resultados são “sumários”, porque eles estão previstos na cadeia causal programada. These results are “summary” because they are predicted within the programmed causal chain. Thus, *automatism seems to be seen as the ability of a machine to perform pre-determined movements that allow it to provide expected responses*. Therefore, increasing automatism means raising the capacity for autonomous action, which is, above all, determined and expected. This implies closure, since the results arise from something imposed internally on the machine and cannot be altered in a possible interaction with the outside world. It is contradictory, therefore, to want to build a “robot” that is the “machine of all machines.”

Now, the robot in the myth is the imaginary manifestation of a seemingly technically impossible machine. It represents a desire for pure automatism elevated to an absolute degree.

The myth of the robot, Rossum’s robots and the technical industrial

We can now ask ourselves how the images of the machine present in Karel Čapek’s play correspond – or do not correspond – to the myth of the robot.

We initially argue that only three of them approach the perspective proposed by Simondon. Explicitly, those that presuppose absolute autonomy, endowed with intentionality, are more immediately associated with Simondon’s critique. Thus, the images associated with Old Rossum (second image), Hellena (fourth image), and Čapek himself (fifth image) openly refer to automaton robots, representatives of the humanoid ideal, endowed with capacities that Simondon argues are only human. The very conception of revolt, present in the final perspective of the piece, would presuppose a notion of freedom and consciousness that Simondon would not be willing to assume as an attribute of the machines.

And what about the other two machine images, how do they relate to Simondon’s thinking? Unlike these three images, the concepts of robot – associated with the *economic image of the Robot* (first image) and the *organicist industrial image of the machine* (third image, as conceived by the Young Rossum) – do not approach the myth of the Robot. Although Simondon⁷ tends to reject the idea that the economic aspect is an intrinsic element (essential to the technical aspect of machines), he would not accuse the character Domin of adopting a mythical stance towards the robot. At various points in the play’s Prologue, this character rejects the existence of anything

⁶ Simondon, G., 2020, *Do modo de existência dos objetos técnicos*, Rio de Janeiro, Contraponto, p. 46.

⁷ Simondon, G., 2020, *Do modo de existência dos objetos técnicos*, Rio de Janeiro, Contraponto, p. 64.

human in robots: they would be machines, taken as commercial products, whose objective is to generate profit for both the seller and the buyer.

To support this, one only needs to refer to a part of the dialogue between two characters.

At one point⁸, Domin explains the following to Helena: “[...] manufacturing artificial workers is exactly like manufacturing diesel engines. Their production must be as simple as possible, and the final product, virtually the best.” Then he asks Helena: “Which worker do you think is virtually the best?” She, in turn, from her humanist perspective, replies: “The best? Perhaps the one who...who...who is honest...and dedicated.” Then, Domin quickly corrects her: “No, [the best worker is] the one who is the cheapest [...]”. Thus, it becomes evident that this image is not associated with a robot capable of intentionally hostile actions towards human beings.

Similarly, the concept of a robot associated with Young Rossum does not fit into the robot myth. What is at stake is the conception of an industrial object. Considering Simondon’s⁹ proposal, regarding the difference between handcrafted and industrial, it would be possible to say that Young Rossum conceives the production of the robot as a *standardized* technical object. Each robot would be built on a production line (something reminiscent of the Fordist conception of assembly line production), and, in the end, once built, it would serve to fulfill a function. Human replacement would not be at the level of intellectual activities linked to consciousness (such as decision-making based on its relationship with moral values). For Young Rossum, robots would do jobs that don’t require the presence of a “soul.” Like other machines, and unlike living beings, robots are equipment, industrially constructed objects that perform specific functions, just like tools.

Now, both images of the machine touch on another aspect of Simondon’s critique, which is the very concept of the industrial object.

In Chapter One of the MEOT, Simondon makes many references to the industrial technical object. For the purposes here, it is sufficient to understand it from what Simondon presents as *concretization*. In summary, Simondon¹⁰ presents this concept as being the way in which technical objects evolve technically. It is an *ontogenetic* process that indicates how the internal functioning relationships change, in order to establish more synergistic and stable internal regimes. It is a process that describes the internal unification of the operating scheme. The more unified and synergistic a technical object is, the more *concrete* it is. Conversely, the opposite of this is *abstraction*. Thus, in an evolutionary lineage, it would be possible to evaluate, through a comparative process, which object is more concrete and which object is more abstract.

⁸ Čapek, K., 2024, *R.U.R.: os robôs universais de Rossum*, São Paulo, Aleph, p. 32s

⁹ Simondon, G., 2020, *Do modo de existência dos objetos técnicos*, Rio de Janeiro, Contraponto, pp. 61–62.

¹⁰ Simondon, G., 2020, *Do modo de existência dos objetos técnicos*, Rio de Janeiro, Contraponto.

In the history of technique, Simondon¹¹ observes that industrial objects are more concrete than handcrafted objects. In the industrial context, for an object to be manufactured, it was necessary to achieve stability in its operational structure so that it could be mass-produced. Objects that reach this level are called “stable types.” In contrast, a handcrafted object would be abstract, as its components would be less synergistic, making it more susceptible to human needs and interests (which are external to technical aspects). For Simondon, this does not happen with industrial objects. In other words, it is human interests that adapt to the nature of objects manufactured in the industrial process: “needs mold themselves onto the industrial technical object, which in turn acquires the power to shape a civilization”¹².

Turning our attention to the “Rossum’s Universal Robots” text, we observe that the piece partly reflects the Simondonian perspective. The image of the machine with which Young Rossum engages manifests itself as a technical evolution, compared to the attempts at robots produced by Old Rossum. Young Rossum observed that attempts to imitate nature to build an artificial Man only generated robots defective in their internal operating schemes. The solution was to manufacture robots based on simplicity and stability in their operation. In Simondonian terms, this would have allowed for standardization and large-scale manufacturing.

However, the difference with Simondon arises when commercial interests begin to guide the construction of the robots. Young Rossum himself was also thinking about cost savings. The simplification of the robot is also committed to reducing manufacturing costs. For Simondon¹³, this economic interest is external, that is, not essential to the technical nature and which can hinder the very process of concretization. This becomes even more evident when the character Domin treats robots as consumer goods. As soon as a robot malfunctions, the character doesn’t hesitate to suggest destroying it so it can be replaced by another. Behind this lies the encouragement of consumption.

When viewed in a broader context, it becomes evident that this perspective on the industrial object, as presented in Karel Čapek’s play, manifests many problems. In particular, it is possible to associate it with the serious problems that characterize the period currently known as the Anthropocene. Environmental crises are a result of the industrialization process. More specifically, the major problem of environmental pollution caused by waste disposal reflects the damaging effect of this way of thinking about the production and consumption of industrial objects.

In light of these issues, we assert that Simondon can guide us in avoiding a technophobic solution to the problem. The philosopher points towards a technically evolved society. He would not advocate *deindustrialization*. But, instead of defending the use of an industrial worldview, as it appears in Čapek’s play, his thesis is

¹¹ Simondon, G., 2020, *Do modo de existência dos objetos técnicos*, Rio de Janeiro, Contraponto, p. 61.

¹² Simondon, G., 2020, *Do modo de existência dos objetos técnicos*, Rio de Janeiro, Contraponto, p. 62.

¹³ Simondon, G., 2020, *Do modo de existência dos objetos técnicos*, Rio de Janeiro, Contraponto, p. 64.

based on the constitution of *post-industrial* objects. However, it's possible to indicate that it's a way of treating a technical object, associating it with industrial properties while also incorporating some perspectives from handcrafted objects.

For the argument presented here, we can consider the main characteristics of this concept.

Simondon and the post-industrial technical objects

It is in another of his texts, *La mentalité technique* (1961?), that Simondon analyzes specific modes of thinking that result from the relationship with technical objects. This is the “technical mentality.” To address it, Simondon breaks it down into three modes of expression: *cognitive schemes*; *affective modalities*; and *norms of action*.

In the first mode, the technical mentality would express itself through schemes of intelligibility. An example of this would be what is present in both Cartesian mechanism and cybernetic thought. In this sense, for Simondon¹⁴, Cartesian mechanism adopted a criterion of “lossless transfer” to mechanize the “modes of reality.” As for cybernetics, Simondon¹⁵ highlights the operating regimes of machines endowed with self-regulation and capable of exchanging information with the environment.

In the second mode of expression, Simondon suggests that the technical mentality manifests feelings. His example concerns the antagonistic feelings that pitted artisanal and industrial modalities against each other. With the emergence of the industrial, there was a separation between energy and information channels, something that did not exist in the artisanal modality. This separation made the artisanal modality *desirable*. Regarding the artisanal, there was a manifestation of nostalgia which, in turn, caused the industrial to be perceived as *undesirable*.

Following this, in the third mode of expression, concerning the rules for action, Simondon presents a critique of industrial objects. More specifically, he denounces the way in which industrialization has established unbalanced relationships between technical objects and social values, leading to the concealment of the very technical nature of such objects.

On one hand, there is the effect of fragmentation “into diverse specialized groups”¹⁶. The people involved in the industrial process (such as masters, technicians, and workers) isolate themselves, failing to contemplate the technical object in its entirety, making it impossible to establish universalizable rules of action. This potentiates another aspect of industrialization: that which involves *consumption* practices, generating the *obsolescence* of technical objects. Technical objects begin to carry non-essential ornaments, in view of personal tastes that guide consumption. A “social game” occurs that causes technical objects to be constructed and evaluated

¹⁴ Simondon, G., 2014, *Sur la technique*, Paris, PUF, pp. 297–298.

¹⁵ Simondon, G., 2014, *Sur la technique*, Paris, PUF, pp. 299–302.

¹⁶ Simondon, G., 2014, *Sur la technique*, Paris, PUF, p. 306.

based on what is not essentially technical. There is an admiration, a valuation, of ephemeral criteria linked to consumption and to what is secondary in the technical object. With this, an overload with secondary accessories occurs, which can hinder what is essential in technical objects. This situation opens the possibility for technical objects to become “obsolete,” out of fashion, and discarded even if they are technically preserved:

[...] the social dynamic began to manifest itself in the form of obsolescence, a type of disuse linked to the aging of conventions and a transformation of social habits rather than to wear and tear or a loss of functionality of the technical object. A freight car or a locomotive tender ages less quickly than a passenger car, with its ornaments and inscriptions: the one most overloaded with inessential ornaments is the one that becomes outdated the fastest¹⁷.

Another example given by Simondon is what happens with the automobile. For an automobile to be manufactured, it needs to be purchased. Thus, fragmentation – which prevents a technical evaluation of the object in its entirety – seems to fuel the possibility of non-essential elements interfering with technical objects:

An automobile quickly becomes obsolete because it is not a single act of invention, construction, and production that simultaneously brings about the road network and the automobiles. Between the network—this functional harness of the geographical world—and the automobiles that travel on it, humankind intervenes as a potential buyer: an automobile is only deemed functional if it is purchased, if it is chosen, after it has been produced. A kind of recurrence is established from this mediation: the manufacturer, having to mass-produce, must calculate the chances of sales; not only can they not build the network and the cars simultaneously, but they must also anticipate this purchase option¹⁸.

However, when considering the problems that arose with industrialization, it is legitimate to ask about their solutions. What Simondon proposes as a way out concerns a type of technical mentality that is still under construction. This is the men-

¹⁷ Simondon, G., 2014, *Sur la technique*, Paris, PUF, p. 308.

¹⁸ Simondon, G., 2014, *Sur la technique*, Paris, PUF, p. 310.

tality that will be conceived from what he calls the *post-industrial technical object*. This new type of object, in a way, is already present, for Simondon, in the industrial era, when “networks” of technical objects emerge. Thus, such networked objects are those that, even though produced in factories, have been able to be introduced into interconnected structures, linking to other objects and, at the same time, establishing relationships with the locations (geographical aspect) where they are installed. The Eiffel Tower and the Garabit viaduct are two examples of these networked objects:

The Eiffel Tower and the Garabit Viaduct should be seen as heralding the end of industrial concentration around energy or raw material sources; that is, not as spectacular isolated centers and successes, but as the first link in a virtual network.

Thus, the post-industrial technical object needs to be evaluated from a new perspective. For Simondon¹⁹, it should be thought of as an “open” technical object, capable of receiving modifications to remain current for as long as possible. For this to happen, it must be assumed that they are objects with layers. One layer would be composed of *durable* parts, while the other layer would contain *adaptable* parts. The result of this new interpretation is the manifestation of a technical object with both industrial and artisanal characteristics. That is, the durable parts can still be thought of as concrete objects, capable of being produced in factories, based on an industrial model of standardization. The criterion for this manufacturing is functional durability. On the other hand, regarding the adaptable parts, the ability of such objects to meet external demands comes into play. It is only by being able to make these adaptations that such objects can be inserted into specific networks, responding to specific requests regarding users and geographical situations.

Thus, it becomes evident that, from the two layers of post-industrial objects, both the need for the search for “stable types” as human interests and proper harmony with the territory (*associated environment*) are present. Therefore, values such as the *practice of planned obsolescence* or the *irresponsible disposal of technical objects* (waste) become incompatible. In short, the production of post-industrial technical objects requires considering the values of life and how the technical objects themselves should be interpreted as signs of life: “the machine, being a work of organization and information, is, like life itself and together with life, that which is opposed to disorder [...]” (Simondon, 2020, p. 52). This will only be possible in a society where technical culture is not alienated from the *mode of existence of technical objects*.

¹⁹ Simondon, G., 2014, *Sur la technique*, Paris, PUF, p. 311.

Finally, turning our attention back to Čapek's text, we can ask ourselves: is the technical mentality suggested by the post-industrial movement compatible with any of the machine images presented there? The immediate answer is *no*. In none of the five images we suggested is there an evident attempt to resolve the emotional tension between what is artisanal and what is industrial. Moreover, as seen in the 5th image, the one that attempts to describe Čapek's own conception, the discomfort with the industrial is evident. Furthermore, it seems to imply a nostalgia for a pre-industrial era.

When we compare the concept of industrialization that emerges from Rossum's robot factory with the proposed technical mentality suggested by Simondon from the post-industrial perspective, it becomes possible to affirm that they are incompatible. What Čapek presents in the play reinforces the idea that industrial objects should be subject to consumer values. The robots themselves, when they manifest problems regarding the fulfillment of functions linked to human desires, become obsolete and are discarded.

Furthermore, it is also evident that Rossum's robots are built to generate profits, both for the factory that created them and for those who may acquire them for their businesses. Čapek's piece helps reinforce an image of the machine that is contrary to what Simondon defends with post-industrialism. In this sense, more than re-evaluating the concept of "robot," it is of great importance to question the concept of "industrial object" that Čapek's text promotes. By considering Simondon's thought, it is possible to find other ways of conceiving such objects. The post-industrial concept seems to present itself as a way out of current questions regarding the various problems generated by industrialization processes, whether they stem from pollution, given the disposal of industrial waste, or from the integrity of nature itself, when treated as a passive object that must be dominated. Specifically regarding nature, this would be related to a vision of domination, expressed by the "technocratic attitude." According to Simondon (2014, p. 306), such an attitude does not apply in the post-industrial era; therefore, it cannot be universalized as a rule of action. The attitude of domination, of the pure desire to exercise power, does not apply because nature must be part of networked thinking:

Here, the technical mindset culminates in success and reconnects with nature by culminating in network thinking, a material and conceptual synthesis of particularity and concentration, individuality and collectivity – for the network's full force is available at each of its points, and its meshes intertwine with those of the world, in the concrete and the particular²⁰.

²⁰ Simondon, G., 2014, *Sur la technique*, Paris, PUF, p. 307.

Therefore, in the post-industrial context, nature is not passive. The values that would guide this new technical mentality, in addition to respecting the technical essence of technical objects, must also assimilate nature as one of the agents of established technical networks.

Conclusion

From all this, what can we conclude? We point to two theses. The first is that which affirms the relevance of Karel Čapek's text for understanding what Simondon defines as the "myth of the robot." More than other great literary works, such as *Frankenstein*, written by Mary Shelley, we maintain that the play written by Čapek is much more illustrative of what Simondon describes as the *myth of the robot*.

The **second** thesis concerns industrial objects. It is necessary to consider that the robot figure present in the piece is, first and foremost, an industrial product. Thus, more than just a machine that replaces humans, it is associated with *a way of understanding industry itself*. For Simondon, a factory is a technical object, which must be understood as a technical whole. In other words, it is necessary to be aware of the negative aspects that Čapek associates with this level of technical development, in order to correct the distortions. However, for Simondon, the solution to the problems would not lie in abandoning what is industrial, but rather in adopting a balanced position that manifests itself from the technical mindset conceived in relation to technical objects in the post-industrial era.

Bibliography

- Abrantes, P. C., 2016, *Imagens de natureza, imagens de ciência*, 2nd ed., Rio de Janeiro, EdUERJ.
- Čapek, K., 2024, *R.U.R.: os robôs universais de Rossum*, São Paulo, Aleph.
- Coeckelbergh, M., 2023, *Ética na inteligência artificial*, São Paulo, Ubu Editora.
- Kapp, E., 1978, *Grundlinien einer Philosophie der Technik: Zur Entstehungsgeschichte der Kultur aus neuen Gesichtspunkten*, Düsseldorf, SternVerlag Janssen & Co. [original work published in 1877].
- Shelley, M., 2021, *Frankenstein, ou o Prometeu moderno*, bilingual Portuguese/English edition, São Paulo, Ed. Landmark [first version published in 1818].
- Simondon, G., 2020, *Do modo de existência dos objetos técnicos*, Rio de Janeiro, Contraponto.
- Simondon, G., 2014, *Sur la technique*, Paris, PUF.