

Transversal: International Journal for the Historiography of Science, 2023 (14): 1-11
ISSN 2526-2270
Belo Horizonte – MG / Brazil
© The Author 2023 – This is an open-access journal

Bruno Latour – Special Issue

Ontology of Technique in Bruno Latour’s Thought: On the Mode of Existence and Non-Human Actors

Veronica Ferreira Bahr Calazans¹ – <https://orcid.org/0000-0001-8274-5935>

Abstract:

Bruno Latour’s line of thinking is marked by the Actor-Network Theory (ANT), which contemplates the relationships between humans, non-humans and other actors. Among the non-human elements are the technical artifacts or, in other words, technical objects. In Latour’s thought, this article aims to explain what concerns the ontology of such objects. Through the analysis of some of the texts that the author dedicated to this topic and by comparing it with Simondon’s ontology of technique, we arrive at the hypothesis that, in Bruno Latour’s line of thinking, the question of ontology does not directly apply to technical objects, but to the relations that establish them and by which they affect the other elements of the network.

Keywords: Bruno Latour; Gilbert Simondon; Technical object; Relational ontology

1

Received: May 1, 2023. Reviewed: May 24, 2023. Accepted: June 19, 2023.

DOI: <http://dx.doi.org/10.24117/2526-2270.2023.i14.02>



This work is licensed under a Creative Commons Attribution 4.0 International License

Introduction

The Actor-Network Theory (ANT),² assumed by Bruno Latour as the theoretical foundation of his concept of collective, establishes that non-human elements are also active³ in this network. It should be noted that even non-material elements are admitted, such as theories, arguments and concepts. That is, what we commonly consider as “social” goes far beyond the set of human individuals. Thus, the complexity of the various relationships is significant. We do not intend to consider it in its entirety but to shed light on one of the aspects of the great network: the participation of technical objects and non-human actors of the collective. It is an attempt to extract, from the author’s work, the particularities of the insertion of technical objects in the network, and, therefore, it is characterized as a task that touches the field of ontology.

To achieve this goal, we will focus mainly on two texts. The first is an article published in 2010, “Prendre le pli des techniques”. The second is the well-known book *Pandora’s Hope*,

¹ Veronica Ferreira Bahr Calazans is a Professor at the Federal University of Technology – Paraná – UTFPR. Address: Av. Sete de Setembro, 3165 – Curitiba – PR. 80.230-901, Brazil.

E-mail: calazansveronica@gmail.com

² We do not dedicate part of the text to Bruno Latour’s ANT, as we consider it to be the common basis of the author’s thought. For an in-depth look at this topic, cf. HARMAN, 2009.

³ Latour uses the term “actant”, for non-humans, in the sense of “actor”, for humans.



published in 1999,⁴ in particular the chapter entitled “A collective of humans and non-humans. Following Daedalus’s Labyrinth” (author’s translation). When selecting these texts, we aim to explore Latour’s thought regarding the ontology of technique, considering, initially, the technical objects and the relationships they establish in the collective.⁵

By comparing his project with other authors, such as Gilbert Simondon and Étienne Souriau,⁶ Bruno Latour offers us some essential elements to systematize his line of thought regarding the ontology of technical objects. In this way, the task of going through the central points of this comparison constitutes an intermediate objective, and quite relevant, of the route proposed here. It is, therefore, not a question of establishing a symmetrical dialogue between the authors considered here but of resorting to specific elements that, by comparison, make Latour’s approach more explicit.

The central concept evoked by Latour to deal with technical objects is the already established mode of existence. According to the author (Latour 2010), there is a tradition around this term called “relational ontology”. In this tradition, the non-reductionist perspective stands out because it does not simplify reality in the binomial subject and object. However, Latour does not take this approach in its entirety and makes his ontology of technique explicit by identifying and criticizing the limitations he attributes to Simondon’s work, for example. Thus, even though he recognizes the merits of this tradition and, in some way, considers himself a participant in it, Latour intends to extrapolate his predecessors. Our main reading hypothesis is that, although Latour and Simondon share a commitment to what could be called a “relational ontology”, the radical nature of Latour’s thought leads to displacing the issue of ontology. We hope to show that, in Latour, the question cannot be about the mode of existence of the technical object, as in Simondon’s line of thought, but about the mode of existence of the technique itself.

On the Mode of Existence of Technical Objects and Technique: A Dialogue Between Latour and Simondon

The dialogue between Latour and Simondon regarding the mode of existence of technical objects is permeated by agreements and criticisms. There is a common commitment to an ontology that, instead of reducing the understanding of the world to a reality divided between subjects and objects, considers a plurality of modes of existence and establishes the need to respect each one of them “by itself”.

Simondon understood that the ontological question could be separated from the research of a substance, the fascination for a single knowledge, the obsession with the bifurcation between subject and object, and rather be put in terms of vectors. For him, subject and object, far from being at the beginning of reflection like two indispensable hooks to which it is convenient to attach the net that could put the philosopher to

⁴ Even though it is a text prior to the article mentioned above, chapter 6 of *Pandora’s Hope* (1999) can be read as a text that concentrates Latour’s thoughts on the role of technique in the collective. We subvert the chronology of publication of the texts by understanding that the 2010 article provides the theoretical, ontological bases to understand the 1999 chapter, which presents a more general scope of Latour’s thought on the technique. With this, we intend to highlight the conceptual unity, present throughout Bruno Latour’s work, regarding technique.

⁵ We will also resort to the book *Enquête sur les modes d’existence. Une anthropologie des Modernes*. (2012), in which Latour resumes and deepens elements presented in the 2010 article.

⁶ Souriau published, in 1943, *Les différents modes d’existence* (*The different modes of existence*; authors translation), which did not have an external repercussion in France, in the same proportion as Simondon’s works, but influenced several French authors, among them Bruno Latour.

sleep, are just the very late effects of a true history of modes of existence. (Latour 2010, 16) (Author's translation)

However, Latour assesses that this plurality – in the way it is considered by Simondon – through the genetic method, is ultimately misleading: “Multi-realism, deep down, would be just a long detour to return to the philosophy of being” (Latour 2010, 16) (Author's translation). In view of this, it is first necessary to explain the content of the criticism toward Simondon to lay the foundations of Bruno Latour's proposition regarding the mode of existence of technical objects. The central point of the criticism concerns the notion of unity: both the original unity, magic, and the future unity, becoming.

Simondon considers a primordial magical unit in which the subject and the object would be unified. As the subject manages to perceive itself as something separate from the world, it also starts to highlight some objects. The magical unity begins to break down when the figures start to be detached from the background, that is, the objects are different from the subject and also different from the world, dividing reality into these three categories: the world, the subject and the object. The first objects to stand out are the technical objects. Based on this aspect, Latour questions Simondon's supposed multi-realism. There is a commitment to a notion of unity, and reality receives a very restricted categorization (world, subject and object), even if only initially. The various modes of existence of being are deduced from the original mode, which does not eliminate the restriction, it just postpones it.

To define the contours of this critique, Latour resorts to another author who precedes Simondon and who treats the ways of existence in a perspective that would be, effectively, multi-realist: Étienne Souriau. According to Latour, Souriau has the merit of shifting the issue from “ways of existence” to “ways of being” (Latour 2010, 16), almost in the sense of “good manners”, “protocol”, “etiquette”. Although the assumption of a “being” is assumed, it is not the nature of being that the question is directed at, but relations:

[...] we can seriously ask about relationships, as has been done for much time on the sensations without forcing them to line up immediately in the same and only direction of having to lead either towards the object (away from the subject), or for the subject (moving away from the object)? (Latour 2010, 17) (Author's translation)

In this perspective, Souriau adopts the concept of “instauration”, and Latour opposes it to the concept of “construction”: the establishment can abdicate the metaphorical character that associates construction with a single act of creation and extrapolate to a broader and more complex vision. This concept, initially thought of in the context of the arts, reaches a more general level. When we say that a work of art has been established, it does not just mean that it was created but that it was welcomed, prepared, explored, and invented. The role of the one who establishes it is not to create *ex nihilo*, especially not to create by an isolated act. On the contrary, it is a dynamic process in which numerous factors interfere (the artist himself, the material, the public, and the cultural context).

The question about this network of relationships, set in the establishment process, is more important, for Latour, than the questions that intend to investigate the being as something presupposed or prior to the thing itself. Likewise, this approach does not depend on establishing an originating unit or any equivalent principle. The multiplicity of relationships becomes the most relevant element for the analysis so the question about the supposed principles loses its importance.

However, by adhering to Souriau's approach, Latour does not completely distance himself from Simondon. On the contrary, these authors share a central point of their respective thoughts about technology: the diagnosis that modernity largely ignores technology. Furthermore, they agree on the main reason for this abandonment: the reduction of technical objects to their functions. In his complementary thesis, *On the Mode*

of *Existence of the Technical Object*⁷ (1958), MEOT, Gilbert Simondon presents the opposition between culture and technique that, according to him, was established within the culture from the industrial age: culture starts to consider technical objects as foreign, in which it recognizes nothing human.

Historically, during a process of alienation, the human individual, as a technical individual, loses his centrality in technical action and begins to play the role of servant of the machine that replaced him. This human individual who, before, was the bearer of the tools and kinesthetically passed through himself, in a kinesthetic way, the technical action, sees himself alien to the new technical action and, consequently, starts to understand the technical progress only by an abstraction based on the exteriority, regarding the technique itself. In summary, technique ceases to be an integral part of the culture, in a homogeneous way, to elicit different relationships and reactions. The worker is no longer the one who dominates technical action and therefore experiences technical progress. Appears then the figure of the engineer, who, although he does not operate the machine, is capable of theorizing about technical progress since only he understands its operation. In this way, most of the culture becomes alienated from technical progress.

The Simondonian diagnosis exposes this culture's attitude, which is positioned in a dubious and contradictory way, in relation to the technical object. The human individual, alienated from technical action, without adequately understanding technical progress, interprets the machine sometimes as a mere material arrangement that provides a utility, sometimes as a being endowed with intentionality, capable of rebelling against human beings. This imbalance, endowed with two faces, ranges from a significant reduction to a mythical interpretation. The technical object gains interiority in the representation of the robot, and at the same time, raises fear in the face of a foreign object – on the part of a large part of the culture that is unaware of its functioning – and the impetus for expanding power, projecting onto the machine the desires of domination – especially in the case of those with technical knowledge.

According to Simondon, the objective of MEOT is to raise an “awareness of the meaning of technical objects” (Simondon 1989, 9) (Author's translation), precisely with the purpose of undoing this imbalance established in culture, in relation to technical objects. “Easy humanism”, which ignores the human reality contained in technology, gives rise to this false and unfounded opposition between culture and technology, between man and machine:

The opposition brought between culture and technique, between man and machine, is false and baseless; it just covers up ignorance and resentment. She masks behind an easy humanism a reality rich in efforts human and natural forces, and which constitutes the world of technical objects, mediators between nature and man. (Simondon 1989, 9) (Author's translation)

By neglecting technical objects in its world of meanings, culture reduces its scope, as it leaves out an important part of the human enterprise. The technical objects, characterized as mediators between the human being and the environment he inhabits, are the result of the efforts and history of this same humanity that, alienated, sees them as foreigners and feeds xenophobic feelings against them. Thus, culture suffers from a self-amputation that makes it inconclusive, incomplete. The de-alienation movement, proposed by Simondon, does not simply intend to change culture, but to expand it, so that it resumes the completeness that belonged to it.

⁷ Original title: *Du Mode D'Existence des Objets Techniques (Mode of Existence of the Technical Object; author's translation)*. The 1989 edition in French is used here, with its own translation of the quoted passages.

From what was exposed above, an important question emerges: why is this awareness so necessary for the author? Why is it so important for culture to reincorporate technical objects into its universe of meanings? The answer lies in the way in which Simondon defines and characterizes the concept of culture, namely, eminently, in terms of its regulatory role. Culture regulates the relationship between human individuals and, more broadly, regulates relationships in a society composed of a set of human individuals, added to technical individuals (machines). Even though alienation is present regarding technical objects, culture remains regulatory. However, alienation does not allow the regulatory function of culture to be exercised in a balanced way.

For this reason, Simondon focuses the purpose of his philosophical project on this movement towards awareness of the meaning of technical objects; therefore, only by reconstructing the integrality of culture can it reestablish its balanced regulation. While this project is not carried out, technical objects continue to play their structural role as mediators between man and his environment. On the contrary, this mediation takes care of all aspects of human life, especially in its social relations.

We conclude, therefore, that culture not only regulates technical objects – as well as all other elements of human life –, but regulates through technique, understood as a privileged scope of mediation. This means that the technique serves the interests of the groups that hold power over it and, in the context of the characteristic imbalance of alienation, its representation incorporates the impetus for domination and the will to power, elements of the so-called “technocracy”.

Still, in his text “Prendre le pli des techniques”, Bruno Latour presents a development very close to Simondon's, regarding the false opposition between technique and human realities. The expression that marks Latour's critique of modernity's disregard for technology is “lack of ontological generosity” (Latour 2010, 22). The idea of a Homo **Faber**, who transforms his needs into tools, molding them through an “effective action on matter”,⁸ leads to the reduction of technique to a materialization of functionalities. This reduction can be exploited in several aspects that, however, are interconnected.

First, the reduction prevents the identification of the knowledge that permeates the technique. It promotes an emptying of the term “technology”, which, in its original meaning, should designate this knowledge about technique, like “epistemology”, a word that designates knowledge about knowledge:

We have no hesitation in asserting, of the humblest machine, full of chips, that she is a “technology”, but we don't expect any lessons from her; to one “technologist”, we only ask him to come and repair this machine, but not that he offers us a knowledge. what would we do with it [knowledge]? There is nothing to think about in technique. she is just one heap of complex media. Everyone knows this. (Latour 2010, 20) (Author's translation)

This reduction manifests itself as mutilation.⁹ It is about denying the transformation that goes beyond the mere function of technique. The function of a technical object is, supposedly, the invariable element, carried with the object. However, according to Latour, everything indicates that the technical act does not support a simple transport of identity, without transformation (Latour 2010, 21). By stating, for example, that the identity of the car corresponds to its function (displacement), all the technical transformations that took place

⁸ Latour regrets that this expression is authored by Leroi-Gourhan, whose work, in general, helps to recognize, in technique, its intrinsic value.

⁹ Latour resorts to the myth of Procrustes, who imposed the penalty of being able to fit in his bed, so that the bigger ones were cut, and the smaller ones stretched out. In the same way, we mutilate the technique so that it corresponds to the place we assign to it.

to make this usefulness possible are forgotten and emptied by simplification. This is, in general terms, the lack of ontological generosity, pointed out by the author.

A single emblematic passage would be enough to summarize this point: "It is not the technique that is empty, it is the philosopher's gaze" (Latour 2010, 22) (Author's translation). This statement concentrates on a position very similar to Simondon's, considered above: modernity let escape the humanity present in technology. In this way, that occultation, once attributed to nature, fits perfectly into technical reality. It is there, in front of us, but we do not attribute to it any meaning in terms of its being, only in terms of its function. The being of the technique remains hidden.

However, even though their respective diagnoses regarding the concealment of the technique present such similarities, the referral for overcoming this concealment finds different developments in each of the authors. Naturally, the main difference is related to the radical commitment to what Latour calls multi-realism, as already pointed out above. We will see, then, that this radicalism calls into question the very conception of the object. Therefore, it will be necessary to investigate the ontological status of technical artifacts.

The Technical Object and the Collective: Between the Black Box and Pandora's Box

From what was developed above, we can conclude that Latour's criticism of Simondon does not exactly reach the Simondonian¹⁰ project – to a large extent, shared by Latour –, but what he considers as a limit. In the book *Pandora's Hope*,¹¹ the question of realism in traditional ontologies is approached: Plato, Aristotle, Kant... What is characterized as substance, or equivalent, is considered as an ultimate stratum of reality or, using Latour's analogy, a black box that cannot be opened. Although Simondon also criticizes such ontologies and shares with Latour the claim to escape the subject-object scheme, the adoption of an originating unit is considered, as in the case of other philosophers, a limit.¹²

Thus, the radical nature of the criticism of Simondon offers the parameters to analyze the radical nature of Latour's proposal regarding ontology, in general, and, specifically, to the ontology of the technical object or technique. Traditional realism considers that there is an ultimate reality in the world, such that it is possible to separate it, without mistake, from the perception of this reality or from the thought about it. Such separation does not take place in ANT. This does not mean that Latour is an anti-realist, but that his conception of reality is based on relations and not on things, properly speaking¹³: each actor is not constituted as a previous unit that will then be put in relation, but his constitution – or establishment, to use Souriau's term – takes place in/through the relationship. All actors, whether human or not, material or not, are in a constant resistance test with the others.

This "tension game" between the actors depends on the premise that there is no hierarchy that submits them. For example, there is no ontological distinction between objects given in experience and those that are conceptual elaborations. When trying to divide reality and relationships, one arrives at the division – wrong, according to the author – between human and world, nature and culture, as well as other similar binomials. For Latour, such divisions would reserve for man the exclusive power to interpret and assign values since objective reality is exclusive to the world. Thus, we arrive at one of the most striking elements of Latour's ontology: the non-centrality of the human.

If each actor is not constituted as a substance but as a game piece that tests the resistance of the others (exploring what resists and what does not resist their actions), the

¹⁰ On Simondon's relational thinking, cf. (Debaise 2004).

¹¹ This book brings together some articles that were reformulated, written between 1993 and 2001, in addition to unpublished texts.

¹² For a "defense" of the criticisms leveled at Simondon by Bruno Latour, cf. (Ferreira 2017).

¹³ Cooren (2018) deals with this point using, directly, the term "relational ontology".



technical objects are inserted in such dynamics. As stated above, when dealing with non-human actors, Latour prefers to use the term “actant”. The sixth chapter of *Pandora's Hope* describes the complexity of the relationships between actors (and actant), with regard to technical objects, initially resorting to an analogy with the Greek myth of Daedalus¹⁴.

The central idea of reading this myth concerns the type of intelligence, or subtle cunning, typical of the engineer. Through this cunning, Daedalus is able to deceive even his king. In one of his ruses, he solves the challenge of threading a thread through a shell. The nonlinearity of the shell will serve as an image for Latour to refer to the complexity of the technique. For the same reason, the author will criticize the attempt to reduce the technique to linear explanations.

The text begins by pointing out two of these reductions, distinct and diametrically opposed. The case of firearms is just an illustration, but the same explanatory patterns could be applied to other technical objects. On the one hand, those who defend the control of the sale of guns claim that they kill people. On the other hand, those who support the sale of weapons say that they are neutral objects and that only people are capable of killing other people. In both cases, it is a reduction because, for Bruno Latour, neither the weapon, by itself, nor the unarmed person, manages to complete the action: it is necessary that the two elements are united.

With this simple example, Latour presents the bases for thinking about technique based on the actor-network theory, and the concept of technical mediation is central in this path. It is important to note that, although technical mediation has its peculiarities, the category of “mediators” is not, for Latour, exclusive to technical objects. On the contrary, in a certain way, every relationship is a mediation. However, regarding technique, the author specifies four distinct but complementary meanings of this concept: interference, composition, interweaving of time and space and crossing the border between signs and things (delegation).

At this point, it is worth returning to the notion of concealment attributed by Latour to the technique mentioned in the previous section. The consecrated term “black box” refers to forgetting its configuration and the objectives there involved, reducing the artifact to its function. The more developed the technique in question, the more this forgetting becomes the pattern of the relationship with the artifact. But what is it that we ignore or forget about technique? This question could be reformulated in another way: what does the ontology of technique consist of for Bruno Latour?

It seems that these questions are linked to another: what does this cleverness of the engineer, described in the figure of Daedalus, which is present in the artifacts, consist of? In other words, what we ignore in the technique goes as much through artifacts as through technical knowledge. Mainly, according to Latour, we ignore the symmetry between the human and non-human elements involved in the technical action which, like the shell of the challenge carried out by Daedalus, in the myth, is far from being constituted in a linear way. To consider the technique in its complexity, Latour presents the concept of technical “mediation” based on its multiple meanings.

In the example of weapons, the human element can be considered Agent 1 and the weapon, Agent 2. A third agent appears, Agent 3, which is the result of the fusion of the others. Responsibility for killing is not attributed to either of the first two agents – which could be understood in the traditional subject-object dichotomy –, but to the hybrid agent. Depending on the perspective, it is the actor (object, Agent 2, weapon) who acts as a mediator for the actor's objective (human, Agent 1, shooter). This is the most common view; it even matches the simondonian classification. However, Latour presents the possibility that

¹⁴ Daedalus was the architect of King Midas, who built his labyrinth. Both the labyrinth itself and the challenge (issued by the king and resolved by Daedalus) of threading a thread through a shell serve as a metaphor for the technique in this chapter of *Pandora's Hope*.

the opposite may occur, that is, that the shooter is the mediating element to fulfill the objective (script) of the object. A third approach could assume that there is a new objective when considering the hybrid agent. Extending the analysis further, it is possible to consider objectives that go beyond the agents in question. For example, there are objectives of the institutions involved (government, arms industry). This is the meaning of technical mediation as interference. This change, considering the variety of objectives involved in technical action, is “translation”.

The second meaning of mediation concerns the composition of these objectives. The objectives are also called “program of action”, which can be divided into subprograms. Some technical actions can only be carried out by an association of agents, as there are several action programs and subprograms involved, which presupposes the composition of objectives. The example evoked by Latour is that of aviation. The action of flying cannot be attributed to either the human actor or the plane in isolation. Flying can only be owned by an association of actors, which comprises not only the two elements mentioned but a complex network.

The third meaning of technical mediation is the one that points most directly to the question of obscuration. It is about the interweaving of time and space. The internal complexity of a machine, for example, is forgotten when it works properly. The projector used in the lecture is reduced to its function of projecting images until, without warning, it stops working and, as a result, promotes the engagement of technicians who are committed to repairing it. At that moment, the parts that make it up “come into existence again”, as the relationship between them is called into question, as only the part responsible for the defect will be replaced. So, this obscuration is reversible. The numerous artifacts that remain “invisible”, however, continue to play their role as actors and mediators.

Finally, the fourth meaning of mediation is presented as “crossing the border between signs and things”, or, to use the consecrated term, “delegation”. Here, an example is a speed bump on a university campus. Initially, its objective could be thought of as slowing down so as not to run over the students. However, for the driver, it is shifted to the goal of not damaging the car's suspension. Differently, from the example of the weapon, this displacement of objective manifests itself in a concrete object since a sign, for example, could have the same initial objective (to reduce speed). In order not to use a term that would emphasize human action in building the speed bump, Latour calls this special type of translation “delegation”:

In the case of speed bumps, the displacement is “atorial”: the “sleeping guard”¹⁵ is not a traffic cop, or at least he doesn't look like one. Displacement is also spatial: the campus streets now house a new actuator that slows down cars (or damages them). Finally, displacement is temporal: the speed bump is there day and night. However, the enunciator of this technical act disappeared from the scene – where are the engineers, where is the traffic cop? – while someone or something confidently acts as a legacy, taking the place of the enunciator. (Latour 2001, 216) (Author's translation)

With the description of the four senses of technical mediation, we can finally begin to answer one of the proposed questions: what is it that we ignore in technique? Basically, we ignore the symmetry between actors and actants, between the human and the non-human. We ignore that the dynamics of the technique is complex to the point of not being possible to fix the roles of the actors and divide them between, for example, world, man and object, as is the case with Simondon's approach. We ignore it, even though the role of mediator does not belong exclusively to one type of actor, but, on the contrary, it is a prominent

¹⁵ In France, the speed bump is also called the “sleeping guard”, as if there is a traffic cop controlling the speed, but he is sleeping on the asphalt.

characteristic of the relationships themselves (every relationship is mediation). Since we ignore all this, we intend to establish an anchor point in this complexity in order to find an ultimate foundation of reality.

Abdicating this last foundation, what remains for technique is the condition of an adjective: “‘Technical’ is a good adjective; ‘technique’ is a vile noun” (Latour 2010, 219). This means that the mediation is technical, that is, the relationship is technical, since there is not, exactly, a thing-in-itself where this adjective can rest. So, it can be said that the term “technical object” is just a simplified way of naming the non-human element of technical mediation, but the noun “object” should not be taken in a strong sense. In the book *Investigation on modes of existence* (2012), Latour presents a chapter entirely dedicated to the way of existence of technique and resumes this contrast between his proposition of a multiple ontology and the traditional ontology of modernity. About the technical object, as it is considered by Simondon, Latour states: “Contrary to the title of Simondon’s book, it is not the mode of existence of the technical object that must be addressed, but the mode of existence of technique, of human beings, technicians themselves” (Latour 2012, 225) (Author’s translation). This mode of existence of technique can only manifest itself in the collective.

The four meanings of mediation, presented above, show us that each technical action is inserted in a broader context. This context encompasses a chain of action, involving the collective, which is characterized by the constant exchange of human and non-human properties. In a movement of composition, the chain of action mobilizes the collective and expands it, by going beyond its limits. Latour calls the process by which this limit is extended “displacement”:

[...] first, there would be translation, the means thanks to which we articulate varied species of matter; later (borrowing an image from genetics), what I would call “permutation”, which consists of exchanging properties between humans and non-humans; thirdly, the “recruitment”, whereby a non-human is seduced, manipulated or induced to the collective; fourth, [...], the mobilization of non-humans within the collective, which brings fresh and unexpected resources, resulting new and strange hybrids; and finally the displacement, the direction taken by the collective after its form, extent and composition have been changed through the recruitment and mobilization of new agents. (Latour 2001, 223) (Author’s translation)

In current times, this permutation of qualities between humans and non-humans is so narrow and the number of translations so high, that it becomes very difficult to isolate objects or subjects, to register and analyze. Those hybrids, as in the example of the set “man and weapon” (Agent 3), serve only for explanatory purposes insofar as the hybrids that participate in modern collectives are, undeniably, much more complex. The relationships that constitute the network are multiple and the complexity of the mediations prevents the project of an ontology of the object:

Everything in the practice of artisans, engineers, technologists, and even Sunday “bricoleurs”, highlights the multiplicity of transformations, the heterogeneity of combinations, the proliferation of cunning, the delicate assembly of fragile “savoir-faire”. If this experience remains difficult to register is because, remaining faithful to it, it will be necessary to accept its rarity, its dazzling invisibility, its profound and constituent opacity. Is that it always oscillates between two lists of elements contradictory: rare and banal, unpredictable and predictable, elusive and constantly retaken, opaque and transparent, proliferating and dominated. (Latour 2012, 223) (Author’s translation)

We have, then, a brief overview of the radicalism assumed by Latour, regarding relational ontology. There is no definitive black box, the last one, the one that cannot be opened. Faced with what we call an object, we will find its reality not in something static or subjacent (like its substance, essence, or ultimate reality). On the contrary, the question about its ontology encounters the disconcerting multiplicity of transformations. Even so, this question should not be abandoned: it is necessary to continue opening the black boxes and revealing the relationships, mediations, that pass through them.

Although our main conclusion has already been announced – that ontology applies to the technique itself, as a relation, and not to the object –, some important points remain to be resumed.

First, it seems paradoxical that the distancing of ontology from the object does not lead to the ontological emptying of technique. However, this distancing is accompanied by a radical commitment to the reality of relationships. The ontological generosity, which Latour points out as lacking in the moderns, is the result, precisely, of an ontology that reduces the technical object to the subject-object binomial and, by conferring stability to the object, makes the multiple transformations that pass through it invisible. So, the movement that removes the ontological weight of the noun – technical object – to attribute it to the adjective – technique – does not empty the reality of the technique, it only displaces it.

As a second point, we point out the consequences of the divergence between Latour and Simondon, for their respective projects. If, as we said, these authors share the diagnosis regarding the concealment of technical reality and the false opposition between the technical and the human, adopted by culture/modernity, their different schemes for explaining technical reality led to different paths to overcome such opposition.

In the Simondonian project, the opposition is overcome by the process of awareness. Although Simondon highlights the role of education in this process, and its general nature, since it is an expansion of culture, awareness evokes a certain individual character. At the very least, even if it can be objected that this occurs in a context of psycho-collective¹⁶ individuation, it must nevertheless be admitted that the individual element remains as an ontological unit. In this way, the limits of multi-realism, pointed out by Latour, reflect on the path to promote de-alienation: it can only occur in the individual context and propagate throughout the collective.

For Bruno Latour, the only possible scope to overcome traditional ontology lies in politics.¹⁷ Although actors and actants have goals and properties – which they share and transfer between them –, intentionality is reserved only for institutions.¹⁸ In the model of radical multi-realism, proposed by Latour, only institutions are able to catalyze objectives, transforming them into intentionality. So, for there to be a shift in the way a certain collective relates to technology, it will be necessary to mobilize political forces.

Finally, as a third element, the role of man in relation to technology is quite different when comparing the two authors. This same individual character pointed out above regarding Simondon's line of thought, results in the conception that man is a kind of “master of machines” and that, therefore, he occupies a position, in a certain way, privileged, while technical objects are, permanently, mediators. We say, “in a certain way”, because Simondon intends that the position of man, in relation to technical objects, is neither that of master nor that of servant. However, this position is certainly asymmetrical: man is the conductor and machines are the instruments that lead and are led by him, but these roles are not interchangeable.

In Latour's case, the relational ontology decentralizes the figure of man, by attributing to the human and non-human elements a total symmetry regarding the objectives and

¹⁶ Simondon assumes several levels of individuation: from the physical, through the biological, psychic and, finally, collective.

¹⁷ More precisely, cosmopolitics, which even questions traditional political boundaries.

¹⁸ Latour evokes Foucault's concept of device.

responsibilities of technical action. The complexity of relationships does not allow attributing the character of mediator only to (non-human) actors. Every relationship is mediation, and therefore, everyone is a mediator. This non-centrality of man is a very important element in Latour's work, taken in a broad sense.

The vastness and conceptual complexity of Bruno Latour's work are notorious, so establishing a cut is always a great challenge. We hope that the path chosen here has been enough to shed light on the dynamics that drive technical relations, aware that it is only a part of the great network that establishes what we call "reality".

Conclusion

In this article, we address the ontology of technical objects in the line of thinking of Bruno Latour. From a counterpoint with the ontology of technical objects of Gilbert Simondon, we conclude that Latour shifts the question of ontology to the plane of relationships. Such displacement does not result in the ontological emptying of the objects in question. On the contrary, insofar as it decentralizes the figure of the man, it assigns a symmetry of importance to technical objects as part of the network.

References

- Cooren, François. 2018. "Bruno Latour ou les exigences de l'irréductionnisme ontologie relationnelle et étude des phénomènes communicationnels". *Symposium* 22 (1): 6-21.
- Debaise, Didier. 2004. "Qu'est-ce qu'une pensée relationnelle?" *Multitudes* 4(18): 15-23.
- Ferreira, Pedro. 2017. "Reticulações: ação-rede em Latour e Simondon". *Revista Eco-Pós* 20 (1): 104-135.
- Harman, Graham. 2009. *Prince of Networks: Bruno Latour and Metaphysics*. Melbourne: re.press.
- Latour, Bruno. 2001 [2001]. *A esperança de Pandora: ensaios sobre a realidade dos estudos científicos*. Bauru, SP: EDUSC.
- Latour, Bruno. 2010. "Prendre le pli des techniques". *Réseaux* 5(163): 11-31.
- Latour, Bruno. 2012. *Enquête sur les modes d'existence: Une anthropologie des Modernes*. Paris: La Découverte.
- Simondon, Gilbert. 1989 [1958]. *Du mode d'existence des objets techniques*. Paris: Albier.
- Souriau, Étienne. 2009 [1943]. *Les différents modes d'existence*. Paris: PUF.