"We are victims of one of the most brutal disinformation campaigns about the Amazon": an analysis of Jair Bolsonaro's speeches at the UN (2019– 2022)

"Somos vítimas de uma das mais brutais campanhas de desinformação sobre a Amazônia": uma análise dos discursos de Jair Bolsonaro na ONU (2019 – 2022)

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ABSTRACT

An aspect that drew attention during the Bolsonaro administration (2019-2022) was his anti-environmental rhetoric and policy. The central argument of this article is that by denying environmental sciences, Bolsonaro not only sought to dismantle an epistemic order based on mainstream scientific knowledge, but also to (de)construct a social order. To support this argument, we analysed his United Nations speeches from 2019 to 2022 using the notion of coproduction, as defined in Science and Technology Studies (STS) by Jasanoff (2004a, 2004b). The results show Bolsonaro's attempt to produce new representations for the Amazon and new identities for the media, science, foreign countries and a "new Brazil." We conclude that Bolsonaro sought to redefine the truth about environmental issues in the country to underpin and legitimise the dismantling of an institutional order of environmental protection built in Brazil over decades. Based on this conclusion, we critically reflect on the STS literature on the denialism of Jair Bolsonaro and his followers and on the concept of post-truth.

Keywords: Bolsonaro administration. Anti-environmental policy. Coproduction. Denialism. Environmental dismantling.

RESUMO

Um aspecto que chamou atenção no governo Bolsonaro (2019-2022) foi o seu discurso e a sua política antiambiental. O argumento central deste artigo é que ao negar as ciências ambientais, Bolsonaro não somente buscou desconstruir uma ordem epistêmica baseada no conhecimento científico mainstream, mas também (des)construir uma ordem social. Para sustentar esse argumento, realizamos uma análise

dos seus discursos na ONU entre 2019 e 2022 a partir da noção de coprodução, conforme a definição de Jasanoff (2004a, 2004b) no âmbito dos Estudos Sociais das Ciências e Tecnologias (ESCT). Os resultados mostraram a tentativa de Bolsonaro de produzir novas representações para a Amazônia e novas identidades para a mídia, para a ciência, para países estrangeiros e para um "novo Brasil". Conclui-se que Bolsonaro buscou nesses discursos redefinir o que seria a verdade sobre a questão ambiental no país de modo a embasar e legitimar a desconstrução de uma ordem institucional de proteção ao meio ambiente construída no Brasil ao longo de décadas. Com base nessa conclusão, refletimos criticamente sobre a literatura dos ESCT que tem se debruçado sobre o negacionismo de Jair Bolsonaro e de seus seguidores, e sobre o conceito de pós-verdade.

Palavras-chave: *Governo Bolsonaro. Política antiambiental. Coprodução. Negacionismo. Desmonte ambiental.*

1 INTRODUCTION

On the 17th of March 2019, at 8 pm local time, the recently elected Brazilian president, Jair Bolsonaro, was in Washington, D.C., USA, at the Brazilian ambassador's house, in a dinner with members of the Brazilian and US government and sympathisers, such as Olavo de Carvalho and Steve Bannon. In his speech, Bolsonaro said he was a president "anointed by the will of God" and reiterated that "Brazil is not an open land where we intend to build things for our people. We have to deconstruct a lot, undo a lot, and then start over"[1]. After four years, with the Bolsonaro administration over, it is clear that the environment was one of the areas most affected by this project of "deconstruction" and "undoing."

This article aims to analyse the four speeches given by Jair Bolsonaro at the opening of the United Nations General Assembly (UN) (2019–2022) and to show how the discrediting of traditional media and science in relation to environmental issues and the Amazon is linked to the construction of Bolsonaro's 'new Brazil', which is 'sovereign' and 'patriotic'. More specifically, we will seek to show, based on the notion of coproduction developed by Jasanoff (2004a, 2004b), a scholar in the field of Science and Technology Studies (STS), how the (de)construction of an epistemic order relates to the (de)construction of a social order.

In recent years, a body of literature is consolidating on the environmental dismantling that occurred during the Bolsonaro administration (Bonelli; Fernandes; Cavalcante, 2023; Bronz; Zhouri; Castro, 2020; Drummond; Capelari; Barros, 2022; Dutra da Silva; Fearnside, 2022; Fernandes *et al.*, 2024; Fleury *et al.*, 2022; Fonseca; Lindoso; Bursztyn, 2022; Giffoni Pinto; Malerba, 2022; Menezes; Barbosa Jr., 2021). Drummond, Capelari and Barros (2022) summarised four points in which environmental policy changed substantially during this period: 1) inaction by the Ministry of the Environment; 2) disconnection of environmental policies from civil society representatives; 3) loss of multilateralism; and 4) replacements of key appointed technical individuals for military personnel. In addition, it was a period marked by the strengthening of denialist influence at the upper levels of government (Behr, 2022, 2023; Fleury *et al.*, 2022; Hochstetler, 2021; Miguel, 2022; Rajão *et al.*, 2022). In this regard, it is important to highlight the intertwining of environmental dismantling and the anti-environmentalist and denialist discourses that supported and legitimised it.

To contribute to the debate on the relationship between discourse and environmental dismantlement, this paper is situated within the field of STS and is inspired by the notion of coproduction. According to Jasanoff (2004a, p. 2), "coproduction is a shorthand for the proposition that the ways in which we know and represent the world (both nature and society) are inseparable from the ways in which we choose to live in it." This implies that nature and society, both from the point of view of how they are represented and of their material dimensions, are coproduced by social relations. An important consequence of the notion of coproduction is that "when one defines which theories/representations are reliable and which are not, one also defines which institutions should be built/maintained. On the other hand, the stabilisation of certain institutions also stabilises certain ways of seeing the world" (Duarte, 2019).

In this paper, we focus on the discursive dimension of Jair Bolsonaro's effort to produce an epistemic order, more specifically, an anti-environmentalist and denialist discourse regarding deforestation in Brazil, which served as the basis and legitimisation for the environmental dismantling promoted by his government. The analysis of presidential discourse is a fertile field of study, especially in the United States. According to Campbell and Jamieson (2008), presidential discourse is a special source of power in relation to other political actors because of its representativeness and popular legitimacy, its ability to influence domestic and international affairs, and its greater reach – especially in the context of the advancement of electronic media[2]. The material analysed in this paper consists of the four opening speeches delivered by former President Jair Bolsonaro at the United Nations General Assembly between 2019 and 2022. There are two main reasons for using these speeches:

1. The environmental and Amazon issue was one of the most important topics addressed by Bolsonaro during his speeches, as it is a topic of global interest and one on which his government has been the target of criticism and pressure from the international community;

2. The UN General Assembly speech carries significant weight and visibility: it is one of the main geopolitical events of the year and an opportunity for leaders to present the current situation in their countries, gain international credibility, indicate directions and facilitate coordination among their members. For Brazil, in particular, this is a speech of greater prominence, as since 1947 it has been the country responsible for delivering the opening speech at the General Assembly, which gives the country greater responsibility and weight.

The four speeches transcribed were collected from the websites of Itamaraty (2019, 2020 and 2021) and Globo (2022)[3], Brazil's main media group. They were fully read, and the most relevant passages were classified based on four elements of social life suggested by Jasanoff as particularly salient for understanding coproduction: representations, discourses, identities, and institutions. Of these four elements, two appeared most frequently in the speeches and are therefore the focus of our analysis: representations and identities[4].

In this paper, we seek to show how, on these discourses, Bolsonaro aimed to "show the truth" about the Amazon that is opposed to the "truth" of traditional media and science, i.e., the Amazon was not on fire, and this misrepresentation was the result of economic and geopolitical disputes. In this sense, he put forward a number of *representations* about the Amazon that run counter to those dominant in the Brazilian media. On this "stage", Bolsonaro sought to construct the *identities* of the actors in his discourse: on the one hand, an unreliable media and science colluding with some colonialist foreign countries; on the other, a patriotic, sustainable "New Brazil" strongly supported by the agribusiness. Articulated with this discursive dimension is the coproduction of a third element, the *institutional*, since scientific data and theories (produced by science and propagated by traditional media) served as a basis and legitimised environmental policies established by previous governments – policies that have undergone extensive deregulation and dismantling during the Bolsonaro administration.

This article is divided into three parts: (1) the presentation of the theoretical-methodological approach based on the notion of coproduction; (2) the presentation of the results, which is divided into the analysis of the main "representations" and "identities" related to environmental issues in Bolsonaro's speeches at the UN; (3) and, finally, in the final section, we present the conclusions of this study and critically reflect on the STS literature on the denialism of Jair Bolsonaro and his followers, as well as on the concept of post-truth.

2 THEORETICAL-METHODOLOGICAL APPROACH

STS is an interdisciplinary field of study which focuses on "the diverse processes involved in the production, communication and legitimisation of scientific and technological knowledge" (Duarte;

Reyes-Galindo, 2019, p. 12), as well as its intertwining with the production of social orders (Jasanoff, 2004a). Thus, the idea that science stands at an "Archimedean point" capable of looking at reality in a neutral and impersonal way, producing knowledge of an extra-social nature (Kuhn, 2000, 2005), is rejected. The aim is, therefore, to study science considering social variables, understanding that scientific practices are performed and contested within networks of trust and conflict, plurality of worldviews, and power relations existing within the scientific community (Bloor, 1976; Collins, 1985; Latour, 2000)[5].

In this paper, the analysis is guided by the notion of coproduction, as conceptualised by Jasanoff (2004a; 2004b). This notion was developed based on the work of authors such as Foucault (2007) and Shapin and Shaffer (1985/2005), who, respectively, examined the intertwining of knowledge and power and of the history of science and the history of politics. Foucault (1995, p. 27) argued that "we should admit rather that power produces knowledge (and not simply by encouraging it because it serves power or by applying it because it is useful); that power and knowledge directly imply one another; that there is no power relation without the correlative constitution of a field of knowledge, nor any knowledge that does not presuppose and constitute at the same time power relations.". Shapin and Shaffer (1985, p. 332), in turn, in their important work *The Leviathan and the Air-Pump*, stated that: "solutions to the problem of knowledge are solutions to the problem of social order.". These two ideas were fundamental for Jasanoff to develop the notion of coproduction, which, as we introduced above, consists of the idea that the ways in which we choose to live in the world are inseparable from the beliefs we have about it, whether in the sphere of nature or the social sphere.

Jasanoff (2004a, 2004b), when developing the notion of coproduction, sought to achieve an interpretative synthesis that would overcome theoretical difficulties that STS had been encountering. Inspired by actor-network theory (Callon, 1986; Latour, 1994; Law, 1992), she sought to overcome the idea of a social construction of reality, attributed to the works of authors of the strong programme (Barnes, 1982; Bloor, 1976) and the empirical programme of relativism (Collins, 1981, 1985), which tended to overdetermine the role of the social in the construction of scientific facts, losing sight of the dimension of materiality. In addition, she sought to develop a theoretical framework that would analyse the power relations that permeate the relationship between science and society in order to articulate the micro and macro sociological dimensions. In this sense, the notion of coproduction seeks to account for the coproduction of phenomena such as representations, discourses, institutions, and identities.

This notion helps us understand, for example, why scepticism about the reality of climate change is stronger in some groups than in others. For example, the pursuit of a free market world, with minimal state restrictions, influences American neoliberals to understand and represent climate change with greater scepticism than other groups – or to argue that its solution lies more in private initiative than in state action (Dunlap; Mccright, 2015; Lahsen, 2008; Oreskes; Conway, 2010). A statement made by a participant at a meeting of the liberal-conservative *think tank Heartland Institute* on climate change illustrates well how coproduction works. The participant stated: "They [climate scientists] are putting our way of life at risk. The debate is not about climate change, nor about carbon dioxide. It is not about climate, nor science. It is about socialism versus capitalism."[6] In other words, how we know and represent the world (in this case, climate change) is inseparable from how we would like to live in it (in this case, under capitalism).

3 RESULTS

Bolsonaro's four speeches at the UN are strongly guided by an epistemic effort, insofar as the former president claims to be seeking to distinguish truth from falsehood and to present the true face of things beyond ideologies. Through this epistemic operation, it would be possible to build a "new Brazil," which would be morally superior to the "old" one. Thus, a new, superior social order would be established because it would be based on truth. In contrast, the old order would be worse because, being anchored

in untrue representations of the world, it would be corrupt and socialist. In the words of Jair Bolsonaro: "[thank you] for the opportunity to re-establish the truth, which is good for all of us" (2019)[7]; "I present to you a new Brazil, which is resurging after being on the brink of socialism" (2019); "With humility and confidence in the liberating power of truth, rest assured that you can count on this new Brazil that I present to you here" (2019); "the world needs truth to overcome its challenges" (2020); "Brazil is experiencing new times. [...] a new Brazil with its credibility already restored" (2021).

The 2019 speech is the one in which Bolsonaro most reinforces this dichotomy between the "new Brazil" *and* the "old Brazil" based on the opposition *between truth and ideology*: "During the last few decades, we have allowed ourselves to be seduced, without realising it, by ideological systems of thought that did not seek truth, but absolute power" (2019). For the president, these ideological systems of power have taken root both in family and in our private lives: "Ideology has invaded our homes to attack the *mother* cell of any healthy society, the family. They even try to destroy the innocence of our children, perverting even their most basic and elementary identity, their biological identity [...] Ideology has invaded the human soul itself to expel God and the dignity with which He has clothed us" (2019). From the perspective of presidential rhetoric analysis (Charteris-Black, 2011), Bolsonaro uses the metaphor of "invasion" to characterise ideology and to persuade and engage his listeners, as if they were facing a state of war. This metaphor also uses an analogy to a pathological situation, such as cancer, which, under the cloak of invisibility, spreads over time within the social body. At the same time, Bolsonaro appeals to biblical imagery, given that ideology operates a hidden seduction, promoting the corruption of the soul and the expulsion of God.

In relation to epistemological authorities, responsible for the production and dissemination of knowledge and information, such as the traditional media, scientists and universities, the following excerpt stands out: "ideology has taken root in the fields of culture, education and the media, dominating mass communication, universities and schools" (2019).

In the face of this social order taken over by ideology, Bolsonaro offers the path towards freedom, which necessarily passes through truth:

> On issues of climate, democracy, human rights, equal rights and duties between men and women, and many others, all we need is this: to contemplate the truth, following John 8:32: 'And ye shall know the truth, and the truth shall make you free'. All our instruments, national and international, must ultimately be directed towards this goal. (2019)

Environmental issues are set against this discursive backdrop of opposition between lies and truth, the old and the new. We look now at how Bolsonaro produces different representations of the Amazon and develops different identities for the media and science, foreign countries and Brazil, through a coproductionist analysis.

3.1 REPRESENTATION

The Amazon plays a central role in all of Bolsonaro's speeches at the UN. This is due to the significant increase in deforestation in the Amazon rainforest during his administration[8], which received considerable attention in national and international media. This resulted in pressure from foreign countries for policies to address the problem. In 2019, the situation was paradigmatic. According to the National Institute for Space Research (Inpe), there was a 278% increase in deforestation in July 2019, compared to the same month in 2018.[9] At the time, Bolsonaro questioned the data, stating that it was "a copy of previous years [...] which, based in our feeling, does not correspond to the truth" and accused Inpe director Ricardo Galvão of "being at the service of some NGO, which is very common"[10]. Galvão was dismissed from his position the following month. In August, with the increase in wildfires,

the Amazon was one of the most popular topics on Twitter, with the *hashtags* "#prayforamazonia" and "#actforamazonia" being shared by international celebrities, from footballer Cristiano Ronaldo to French President Emmanuel Macron. It should be noted that, along with the *hashtags*, it was common to see information (or images) stating that the Amazon is the lungs of the world[11].

Thus, in 2019, it was in this context of high media visibility and international pressure[12] that Bolsonaro arrived at the UN. In his speech, it was possible to perceive the construction of two different types of representations for the forest: as *an idyllic space* and as *a coveted space*. The representation of the forest as *a space of wildfire* was diminished and denied. He attributed the wildfire to natural, biological, and cultural events and, tangentially, to possible criminal acts: "At this time of year, the dry climate and winds favour spontaneous and criminal fires. It is worth noting that there is also fire set by indians (sic) and local populations as part of their respective cultures and means of survival." (2019); "Our forest is humid and does not allow wildfire to spread within it. Fires occur practically in the same places, on the eastern edge of the forest, where caboclos[13] and indians (sic) burn their fields to survive, in areas that have already been deforested." (2020). More emphatically, Bolsonaro stated that wildfires were exaggerated and the product of alarmism by the international media: "However, the sensationalist attacks we have suffered from much of the international media due to the wildfires in the Amazon have awakened our patriotic sentiment" (2019); "It is not being devastated or consumed by wildfire, as the media falsely claims." (2019); "Even so, we are victims of one of the most brutal disinformation campaigns about the Amazon and the Pantanal." (2020).

The representation of the Amazon that Bolsonaro strives to construct is that of an *idyllic* space, in the sense of natural preservation ("In the Brazilian Amazon, [...], more than 80% of the forest remains untouched" [2022]), grandiose ("I remember that the Amazon region is larger than all of Western

Europe" [2020]), natural beauty ("our Amazon, with all its vastness and natural beauty" [2019]) and abundant wealth ("the richest lands in the world [...] there is abundance of gold, diamonds, uranium, niobium and rare earths, among others" [2019]).

It is precisely in complementarity to this representation as an *idyllic* and naturally abundant space that Bolsonaro developed another representation of the Amazon: as a space *coveted* by foreign governments. For Bolsonaro, "foreign governments [...] [seek] to advance their interests in the Amazon" (2019) and, more explicitly, "are not concerned with the indian human being (sic), but rather with the mineral wealth and biodiversity existing in these areas [indigenous reserves]" (2019). For Bolsonaro, there are undisclosed interests of foreign and national organisations in the wealth of the Amazon: "The Brazilian Amazon is known to be extremely rich. This explains the support of international institutions for this campaign, which is based on shady interests that join forces with opportunistic and unpatriotic Brazilian associations with the aim of harming the government and Brazil itself." (2020).

Table 1 – Representation category

Representations	*Characteristics*
Amazon: idyllic space	Preserved, magnificent, rich in natural beauty, abundant in wealth
Amazon: coveted space	Coveted by foreign governments due to material and shady interests
Amazon: space of wildfire	Humid, not prone to wildfire, subject to sensationalist attacks and disinformation campaigns

Source: Made by the authors based on Bolsonaro's speeches at the UN (2019–2022)

3.2 IDENTITIES

In Bolsonaro's speeches, identities are built through contrasts between two blocs. On the one hand, there are the identities of the media, science and foreign countries; on the other, there is the identity of the "new Brazil".

A significant portion of the media and scientists are perceived as *unreliable*. This mistrust is based on allegations that the media and science produce a distorted reality about the Amazon. In his 2019 speech, Bolsonaro stated that ideology had taken hold in education, the media, and universities. Scientists are therefore presented as fallacious and mistaken, as they are responsible for claiming that the Amazon is the lungs of the world. In his words: "It is a fallacy to say that the Amazon is a world heritage site and a mistake, as scientists attest, to claim that our forest is the lung of the world" (2019).

The accusation against the media is more constant and severe in his speeches. The media is portrayed as *unreliable* because it spreads misinformation and distorts the image of Brazil and agribusiness. According to the president, the government and the country are "victims of one of the most brutal misinformation campaigns about the Amazon" (2020). This disinformation campaign is justified because there are undisclosed economic interests at stake to reduce the competitiveness of Brazilian agribusiness: "Brazil is emerging as the world's largest food producer. And that is why there is so much interest in spreading misinformation about our environment" (2020). For Bolsonaro, the media does not portray the country accurately: "I am here to show a Brazil that is different from what is published in newspapers or seen on television" (2021). In particular, the image of Amazon preservation: "more than 80% of the forest remains untouched, contrary to what is reported by the major national and international media" (2022).

The knowledge conveyed by the media and science is fundamental in international relations, as it is based on what it says about the Amazon that foreign countries base their foreign policies towards Brazil, such as the suggestion of economic sanctions. In this sense, if, on the one hand, Bolsonaro builds an identity of *unreliability* for the media and science, on the other, the identity built for some foreign countries is that of *colonialists*: "Taking advantage of these fallacies, one country or another, instead of helping, bought into the media's lies and behaved disrespectfully, with a colonialist spirit. [...] One of them, at the G7 meeting, dared to suggest imposing sanctions on Brazil, without even listening to us." (2019).

The construction of this *colonialist* identity is reinforced during the 2019 speech in three different ways. Firstly, the idea that these countries are *meddling* in national politics by allegedly pressuring the government to increase indigenous demarcations from 14% to 20% of the country's territory. Bolsonaro's logic goes as follows: if indigenous lands are already too extensive and sparsely populated, then the international pressure can be explained by their interest in dominating the area in the future:

> In these reserves [Ianomâmi and Raposa Serra do Sol], there is an abundance of gold, diamonds, uranium, niobium and rare earths, among other resources. Moreover, these territories are enormous. The Ianomâmi reserve alone covers approximately 95,000 km², equivalent to the size of Portugal or Hungary, although only 15,000 indians (sic) live in this area. This shows that those who attack us [such as some heads of state] are not concerned with the indian (sic) human being, but rather with the mineral wealth and biodiversity that exist in these areas. (2019)

Secondly, the *colonialist* identity is reinforced by the idea that *they manipulate* indigenous peoples. Bolsonaro claims that some indigenous leaders, "such as Chief Raoni, are used as pawns by foreign governments in their information war to advance their interests in the Amazon" (2019). Finally, colonialist identity is constructed by the notion of *hypocrisy*, that is, the idea that other countries pressure Brazil to defend the environment, but they themselves do not, reinforcing the image of privileged and hypocritical people: "France and Germany, for example, use more than 50% of their

territories for agriculture, while Brazil uses only 8% of its land for food production. Sixty-one per cent of our territory is preserved!" (2019).

In a significant passage, Bolsonaro mobilises both the notion of "manipulators" and that of "hypocrisy" at the same time, inferring that foreign governments exploit environmental issues for political and economic interests to disguise their true objectives: "We also reject attempts to exploit environmental issues or indigenous policy for external political and economic interests, especially those disguised as good intentions." (2019). In his 2020 speech, this idea is repeated: "The Brazilian Amazon is known to be extremely rich. This explains the support of international institutions for this campaign based on shady interests [...] to harm the government and Brazil itself" (2020).

In contrast to the identity of *unreliability* built around scientists and the media, and of *colonialists* for foreign countries, Bolsonaro's new Brazil is portrayed through three identities: as a *patriotic*, *sustainable* and *agribusiness-oriented* Brazil, as summarised in Table 2 below.

Table 2 – Identity categories

Identities	*Characteristics*
Scientists: untrustworthy	Ideological, fallacious, mistaken
Media: unreliable	Spreader of misinformation and lies
Foreign countries: colonialists	Intrusive, manipulative, hypocritical
New Brazil: patriotic	Sovereign, victim of unfair and sensationalist attacks
New Brazil: sustainable	Strict environmental legislation, clean energy, and low CO_2 emissions.
New Brazil: agribusiness-oriented	Productive, guarantor of the world´s food security

Source: Made by the authors based on Bolsonaro's speeches at the UN (2019–2022)

There are two pillars that underpin the *patriotic Brazilian* identity: the defence of *sovereignty* and the defence against *unfair attacks*. As the president stated, any aid for the preservation of the Amazon rainforest (which, as we saw above, can be disguised as "good intentions") "must be treated with full respect for Brazilian sovereignty" (2019). The theme of sovereignty also appears in the "open letter from Brazil's indigenous farmers" read during his speech at the UN. The letter seeks to "express the reality experienced by the Indigenous Peoples of Brazil and to bring to light the current framework of lies propagated by the national and international media" (2019). According to it, these lies serve to "turn the indigenous peoples of Brazil into an endless market reserve, serving the foreign interests of countries that still see Brazil as a colony without rules or sovereignty" (2019). The truth that the letter seeks to reveal is that "many communities are eager for the development of this part of Brazil to finally take place without ideological or bureaucratic constraints" (2019). In other words, it is possible to see how sovereignty here is in direct opposition to the notion of interference, manipulation and hypocrisy perpetrated by the supposed "lies" propagated by the media and the supposed "colonialism" of foreign countries, which in reality do not want to let the country and its indigenous peoples develop.

To a lesser extent, defending against unfair attacks is also related to the construction of a patriotic identity. As Bolsonaro stated, "the sensationalist attacks we have suffered from much of the international media due to the wildfire in the Amazon have awakened our patriotic sentiment" (2019). In addition to media attacks, there are also economic attacks, via sanctions from foreign countries, in response to scientific fallacies about the global importance of the Amazon as the "lung of the world and heritage of humanity." In other words, once again we see the coproduction between truth and identity: on the one hand, unreliable media and science; on the other, certain foreign countries with a colonialist identity that oppose Bolsonaro's new Brazil.

Much of Jair Bolsonaro's speech at the UN was dedicated to showing "a Brazil different from that published in newspapers or seen on television" (2021). An identity constructed for this new Brazil is that of a *sustainable* Brazil because it has the

> best environmental legislation on the planet. [...] we are leaders in tropical forest conservation. We have the cleanest and most diversified energy matrix in the world. [...] Even though we are one of the 10 largest economies in the world, we are responsible for only 3% of carbon emissions. [...] Numbers that no other country has. (2020)

In all his speeches, Bolsonaro reinforces the identity of Brazil as a global example: "In terms of the environment and sustainable development, Brazil is part of the solution and a reference for the world" (2022), while also criticising the media: "In the Brazilian Amazon, an area equivalent to Western Europe, more than 80% of the forest remains untouched, contrary to what is reported by the major national and international media" (2022).

Finally, linked to this identity of a *sustainable* Brazil, there is also the construction of an *agribusiness-oriented* Brazil. This identity is based on two pillars: (1) high *productivity*, despite severe legislative requirements and low land use; (2) and the importance of this productivity in ensuring *food security* for other nations, despite criticism from the media and foreign countries: "We must not forget that the world needs to be fed. France and Germany, for example, use more than 50% of their territory for agriculture, while Brazil uses only 8% of its land for food production. 61% of our territory is preserved." (2019); "if it weren't for Brazilian agribusiness, the planet would go hungry, [...]. Our agribusiness is a source of national pride" (2022).

4 DISCUSSION AND CONCLUSION

In this paper, we sought to understand, based on Bolsonaro's denialist and anti-environmentalist speeches at the UN annual assemblies, how he aimed to coproduce an epistemic order and a social order. It was possible to see how the construction of a new social order, in his words, "a new Brazil," is operationalised based on a logic of opposition to an old social order: the former would be on the side of truth, patriotism, sustainability, and productivity via agribusiness, while the latter would be on the side of lies, deception, ideology, and socialism. The environmental issue, in general, and the Amazon, in particular, are part of this clash.

Firstly, it was possible to see how Bolsonaro denies and minimises the representation of the Amazon as a place of *wildfires* – according to him, this representation is falsely portrayed by the media and scientists – and emphasises the representation of the Amazon as an *idyllic* and *coveted* place by foreign countries. It is in this dispute over representations on the Amazon rainforest that Bolsonaro seeks to (de)construct the identity of scientists, the media, and foreign countries and, based on this, build the identity of a "new Brazil" that would emerge with his government. Mainstream science, universities, and traditional media, responsible for the production and dissemination of knowledge about the Amazon, are portrayed as *unreliable*. Foreign countries that use supposed environmental fallacies reproduced in the media are *colonialist*. On the other hand, in contrast to these identities, Bolsonaro constructs the identity of the new Brazil as a *patriotic*, *sustainable* and *agribusiness-oriented* country, as summarised in Table 3.

Table 3 – Representations and identities

Representations	Identities		
Amazon	Media and Science	Foreign Countries	New Brazil
Idyllic Coveted	Untrustworthy	Colonialists	Patriotic, Sustainable, Agribusiness-oriented

Source: Made by the authors based on Bolsonaro's speeches at the UN (2019–2022)

Having summarised the main conclusions of this study, we now turn to a reflection on its contribution to the STS literature focused on Bolsonarism's denialism, whether in the environmental or public health sphere, as was the case with the Covid-19 pandemic. We will use two analytical approaches to engage with this literature. Firstly, we will engage with the various studies that have examined the relationship between Bolsonaro and his followers and science. Second, we will engage with studies on the notion of post-truth.

About the relationship between Bolsonarism and science, a convergence has emerged in a significant number of studies conducted in STS. Several authors (Castro, 2025; Cesarino; Silva, 2023; Costa, 2021; Duarte, 2025; Duarte; Benetti, 2022; Duarte *et al.*, 2025; Fonseca *et al.*, 2022; Nascimento *et al.*, 2021) have argued that Bolsonaro and his followers' denialism should not be understood as a rejection of science legitimacy to act as an important institutional actor. On the contrary, Bolsonarism does not deny that science is relevant, but seeks to redefine the boundaries of what constitutes scientific knowledge and ideology, carrying out what has become known in STS as boundary work (Gieryn, 1983, 1999). In this sense, whether in relation to the environment or to public health issues, such as in the case of the so-called early treatment for COVID-19, Bolsonarism sought to redefine who the real experts were and which statements should be taken as legitimate scientific statements.

In the case of environmental sciences, for example, Bolsonaro and his followers attacked the scientific mainstream, criticising it as "environmentalist psychosis" or calling it climatism, an ideology whose goal would be to increase state regulation of the economy, compromising the free market and the capitalist economy (Miguel, 2022, 2020). In this sense, environmental science discourses are distortions of reality constructed with the aim of overthrowing Western civilisation and its capitalist way of life.

Our study follows this same line of thinking by pointing out that Bolsonaro seeks to challenge the authority of experts who advocate for greater environmental protection in the Amazon, without, however, denying the possibility of establishing scientific truths about the environment. We therefore provide additional empirical support for the idea that Bolsonarism is not averse to the possibility of objective science; the issue lies in the rejection of science's institutionalisation and in the redefinition of the boundary between legitimate and illegitimate science.

Furthermore, this work makes a specific contribution to the ESCT literature that has focused on the environmental denialism of Bolsonaro and his followers by aligning itself with a few studies that have theorised the intertwining of criticism of environmentalism and the defence of a specific type of social order. Miguel (2022, p. 312) was one of the few who explicitly addressed this point:

> Based on the above, we argue that climate denialism goes beyond "post-truth politics," as it refers to a more heterogeneous set of political subjects formed through the activation of a conservative liberal strategic device. The perception that environmental governance represents the desecration of the free market, the right to private property, Christian spirituality and subjectivity, and Western civilisation are social meanings rooted in subjectively experienced realities.

Following Miguel's hints, and based on the notion of coproduction and on the analysis of Jair Bolsonaro's speeches at the UN, we sought to emphasise the inextricability of the epistemic and institutional effects of Bolsonaro's denialism. The anti-environmental social order that Jair Bolsonaro has strived to produce by dismantling public policies could only exist and persist over time if firmly grounded in an epistemic order. This order emphasises certain representations of the Amazon, challenges scientific consensus, and redefines the identities of both scientists and other key actors in international environmental policy in order to legitimise the institutional deconstruction of Brazilian environmental agencies.

In this sense, it is important to emphasise the *productive* effects of denialism. It not only denies scientific consensus but also produces epistemic and social orders. These new orders associated with Bolsonarism,

due to their authoritarian and anti-environmentalist character, seem clearly undesirable to us. However, they cannot be effectively combated solely through the defence of science. A coproduction effort is also needed to produce positive identities – political and institutional – that support mainstream environmental sciences. This implies the legitimisation of scientific institutions that produce cutting-edge environmental science, such as universities and research institutes, as well as science and environmental journalists who portray the Amazon issue responsibly and in accordance with the state of the art of scientific knowledge on the subject. In addition, it is important to produce and reinforce positive identities of other institutions that operate at the interface between environmental sciences and politics, such as environmental NGOs, and the state agencies responsible for producing environmental policies, such as the Ministry of the Environment and the Brazilian Institute of the Environment and Renewable Natural Resources (Ibama), institutions severely affected by the Bolsonaro administration.

Finally, the conclusions of this study indicate the importance of redefining the concept of post-truth as a future research task. It is noteworthy that STS, despite being particularly well equipped to produce rigorous definitions of this term, has so far made little progress in this direction. The term post-truth was popularised in 2016 when the Oxford Dictionary defined it as the word of the year. The dictionary conceptualised it as follows: "Relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief." Although this definition has appeal in explaining the period in which we live, as pointed out above, the STS literature has long criticised conceptions of scientific fact that treat it as autonomous from values, interests and emotions. This criticism has recently been extended to the Oxford Dictionary's definition of post-truth by authors in the field (Jasanoff; Simmet, 2017; Kelkar, 2019; Lynch, 2017).

Although STS has made little progress in redefining the concept of post-truth, we can point to two exceptions: the works of Fuller and Cesarino. Fuller (2019, p. 3) defines post-truth in the following terms: "the post-truth condition is all about going meta. You try to win not simply by playing by the rules, but also by controlling what the rules are"[13]. Cesarino's (2021, p. 77-78) cybernetic definition of post-truth goes in a similar direction:

> post-truth is an epistemic condition where any statement can potentially be contested by anyone at a very low cost – that is, where there is no longer control, in the sense outlined above. Different realities seem to proliferate in a context of profound epistemic disorganisation, where the scientific community, and the expert systems, more broadly, no longer enjoy the social trust and credibility they once had, thus significantly reducing their negentropic capacity.

Although we agree with the above authors that post-truth is a phenomenon with epistemic characteristics, based on the present study, we understand that this concept needs to be broadened to include not only an effort towards an epistemic reorganisation of society, but also a more comprehensive social reorganisation[14]. Denialists such as Jair Bolsonaro not only deny environmental sciences but also democratic social orders in which environmental sciences have a weight in establishing what knowledge should inform the formulation of public policies, the international climate regime, and an entire institutional order that has been built over decades in the country to deal with environmental issues. Thus, when he adopts a denialist stance towards science, he also denies an entire institutional framework that was coproduced with it. We therefore suggest that future studies seek to redefine the concept of post-truth based on the notion of coproduction in order to contemplate the scope and complexity of the phenomenon.

NOTES

1 | https://veja.abril.com.br/politica/temos-de-desconstruir-muita-coisa-diz-bolsonaro-a-americanos-de-direita/ (Accessed February 2023)

2 | Campbell and Jamieson (2008) point out that analyses of presidential discourse may vary according to style, substance, strategy, or audience (Congress, the population, journalists, the opposition, or other countries). For example, the article by Capella and Brasil (2022) analyses how the mandatory annual speeches of the "Messages to the National Congress" by Brazilian presidents are important indicators of government agendas and public policies that will be prioritised in each term of office. Charteris-Black (2011), on the other hand, focuses on the rhetorical aspect of former presidents, more specifically on how the use of metaphors is an element of potential persuasion and engagement of their audience.

3 | All speeches were found on the official website of Itamaraty, except for the 2022 speech, which was not posted there and was found on the Globo website: https://g1.globo.com/politica/noticia/2022/09/20/leia-a-integra-do-discurso-do-presidente-jair- bolsonaro-na-assembleia-geral-da-onu.ghtml (Accessed in April 2024). It is important to mention that on many websites, the first opening speech is incomplete, missing the opening sentence and the "Open letter from the indigenous farmers of Brazil," which was fully read by Bolsonaro. For the complete first speech, we recommend watching the video on YouTube. For the transcript of the "Open letter from the indigenous farmers of Brazil," visit: https://apublica.org/wp-content/uploads/2019/09/manifestacao-agricultores-indigenas-do-brasil- ysani-kalapalo.pdf (Accessed in July 2024).

4 | In Jasanoff's work (2004), the distinction between identities and representations is purely analytical, given that identities are a subgroup within the broader category of representations. They are taken as a separate concepts due to the relevance that identities have assumed in the field of ESCT, especially in work that deploys Actor-Network Theory (e.g. Callon, 1986) and in studies of controversies in the public arena in which the status of experts is in dispute (e.g. Epstein, 1995; Wynne, 1992).

5 | It is worth noting that the concept of social is not consensual in the field, with disputes over the relevance, for example, of including non-humans in its definition (Barad, 2003; Haraway, 2008; Latour, 1994, 2012).

6 | Available at: https://jamilchade. blogosfera.uol.com. br/2019/07/31/ leia-o-telegrama- confidencial- do-itamaraty-sobre-mudancas- climaticas/ (Accessed in May 2019).

7 | From here on, all quotes from Bolsonaro will be followed by the year in which the speech was delivered at the UN.

8 | INPE deforestation data can be monitored on its Terrabrasilis platform: https://terrabrasilis.dpi.inpe.br/app/dashboard/deforestation/biomes/legal_amazon/rates (Accessed in May 2024)

9 | https://www1.folha.uol.com.br/ambiente/2019/09/desmatamento-na-amazonia-em-agosto- cresce-222-em-relacao-ao-mesmo-mes-de-2018.shtml (Accessed in May 2024)

10 | This episode was significant enough that Bolsonaro's social media team reposted the video twice on his official Facebook page: on 19 July (https://www.facebook.com/watch/?v=2375548599369320) and again on 26 September 2019 (https://www.facebook.com/watch/?v=235119958595106). The first post received 87,000 likes, 15,000 comments and 1.8 million views. The second received 135,000 likes, 9,300 comments and 979,000 views (accessed in November 2021).

11 | This is misinformation, as algae are the main producers of oxygen. At the same time, the Amazon rainforest plays a more important role in capturing carbon from the atmosphere and transforming it into organic matter.

12 | https://www.dw.com/pt-br/pegue-essa-grana-e-refloreste-a-alemanha-diz-bolsonaro-a- merkel/a-50035007 (Accessed in May 2024).

13 | Caboclos are traditional mixed-race populations, i.e. a mixture of white and indigenous ancestry, who live in the Amazon

14 | This point is consistent with Cesarino's book (2022) O mundo ao avesso: verdade e política na era digital (The world upside down: truth and politics in the digital age), in which the author analyses Bolsonarism as an effort to profoundly reorganise society in both the political and epistemic dimensions. Nevertheless, in the book (Cesarino, 2022, p. 228) the author maintains the same definition of post-truth as in the aforementioned article (Cesarino, 2021).

STATEMENT ON THE USE OF ARTIFICIAL INTELLIGENCE

The authors declare that no generative AI or AI-assisted technologies were used in the creation, writing, or editing of this manuscript. The entire article was submitted to DeepL for linguistic editing and stylistic improvement.

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