

“SAVING SCIENCE”: NARRATIVES OF SCIENTIFIC INTOLERANCE AND CULTURAL DENIAL IN BRAZIL

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ABSTRACT

This analysis aims to anthropologically explore the implications of anti-denialist reactions in contemporary Brazil. The rise of Bolsonaro's government intensified concerns within the scientific community about the dangers of denialist discourses from extreme-right political positions (Szwako; Ratton, 2022). The Brazilian scientific community has actively countered these narratives to uphold science and public health (Echazú Böschemeier; Almeida, 2023b). However, some reactions were unexpected. This article examines the 2023 book *“How Silly! Pseudosciences and Other Absurdities That Do Not Deserve to Be Taken Seriously”* by virologist Natalia Pasternak and journalist Carlos Orsi, which had a divisive impact. While claiming to “Save Science” from far-right denialists, it attacks various traditions and cultures, labeling them as “pseudo-sciences.” I question this approach by analyzing the promotion of “scientific intolerance” — a dogmatic rejection of ideas outside hegemonic scientific norms — thus reinforcing conservatism, authoritarianism, and colonialism, while denying plural realities linked to health and culture.

KEYWORDS

Denialism; Scientific intolerance; Far-right; Pseudo-sciences; Health and culture.

“SALVANDO A CIÊNCIA”: NARRATIVAS DE INTOLERÂNCIA CIENTÍFICA E NEGAÇÃO CULTURAL NO BRASIL

RESUMO

O artigo objetiva explorar antropologicamente as implicações das reações anti-negacionistas no Brasil contemporâneo. O avanço do governo Bolsonaro intensificou preocupações dentro da comunidade científica sobre os perigos dos discursos negacionistas provenientes de posições políticas de extrema-direita (Szwako; Ratton, 2022). A comunidade científica brasileira tem atuado contra essas narrativas para defender a ciência e a saúde pública (Echazú Böschemeier; Almeida, 2023b). No entanto, algumas reações foram inéditas. Examinam-se narrativas do livro de 2023 *“Que bobagem! Pseudociências e outros absurdos que não merecem ser levados a sério”*, da virologista Natalia Pasternak e do jornalista Carlos Orsi. Enquanto a obra afirma “Salvar a Ciência” dos negacionistas da direita, ataca sistematicamente várias tradições e culturas, rotulando-as como “pseudo-ciências”. Analisa-se o papel da obra na promoção da “intolerância científica” — como rejeição das ideias fora das normas científicas hegemônicas — reforçando o conservadorismo, o autoritarismo e o colonialismo e negando realidades plurais relacionadas à saúde e à cultura.

PALAVRAS-CHAVE

Negacionismo; Intolerância científica; Direita extrema; Pseudo-ciências; Saúde e cultura.

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“SAUVER LA SCIENCE” : RÉCITS D’INTOLÉRANCE SCIENTIFIQUE ET DE NÉGATION CULTURELLE AU BRÉSIL

RÉSUMÉ

Cet article explore, d’un point de vue anthropologique, les implications de certaines réactions anti-négationnistes dans le Brésil contemporain. L’ascension du gouvernement Bolsonaro a intensifié les préoccupations de la communauté scientifique face aux dangers du négationnisme d’extrême droite (Szwako ; Ratton, 2022). Depuis, cette communauté s’est mobilisée pour défendre la science et la santé publique (Echazú Böschemeier; Almeida, 2023b). Cependant, certaines réponses ont été inédites. L’article examine les récits du livre *“Quelle absurdité ! Pseudosciences et autres inepties qui ne méritent pas d’être prises au sérieux”* (2023) de la virologue Natalia Pasternak et du journaliste Carlos Orsi, qui, sous le prétexte de “sauver la science”, critiquent des traditions culturelles, les qualifiant de “pseudo-sciences”. Cette approche, analysée ici, illustre une forme “d’intolérance scientifique” — rejet dogmatique des idées en dehors des normes hégémoniques —, renforçant des postures autoritaires, colonialistes, tout en niant des réalités plurielles en matière de santé et de culture.

MOTS-CLÉS

Négationnisme ; Intolérance scientifique ; Extrême droite ; Pseudo-sciences ; Santé et culture.

“SALVANDO LA CIENCIA” : NARRATIVAS DE INTOLERANCIA CIENTÍFICA Y NEGACIÓN CULTURAL EN BRASIL

RESUMEN

El artículo explora antropológicamente implicaciones de algunas reacciones anti-negacionistas en el Brasil contemporáneo. El ascenso del gobierno Bolsonaro intensificó preocupaciones dentro de la comunidad científica sobre los peligros del negacionismo de extrema derecha (Szwako; Ratton, 2022). Desde entonces, la comunidad científica brasileña ha trabajado para contrarrestar estas narrativas, defendiendo la ciencia y la salud pública (Echazú Böschemeier; Almeida, 2023b). Sin embargo, algunas reacciones fueron inéditas. Este artículo examina narrativas del libro *“¡Qué tontería! Pseudociencias y otros absurdos que no merecen ser tomados en serio”* (2023), de la viróloga Natalia Pasternak y el periodista Carlos Orsi, donde mientras se afirma “Salvar la Ciencia”, se atacan tradiciones y culturas, etiquetándolas como “pseudo-ciencias”. Cuestiono este enfoque analizando su papel en la promoción de la “intolerancia científica” — como rechazo dogmático de ideas consideradas fuera de las normas científicas hegemónicas — reforzando posturas conservadoras-autoritarias— colonialistas, al tiempo que negando realidades plurales vinculadas a la salud y la cultura.

PALABRAS CLAVE

Negacionismo; Intolerancia científica; Extrema derecha; Pseudo-ciencias; Salud y cultura.

INTRODUCTION

In 2019, the rise of Bolsonaro’s government intensified concerns among anthropologists about denialist discourses emerging from extreme-right political positions that severely affect various aspects of social life: the pandemics, global warming, vaccine efficiency and even the ongoing Indigenous and Black people genocide. The rise of denialist discourses under Bolsonaro's government in Brazil serves as a poignant case study within the broader context of Latin America's political alternation between right-wing and left-wing projects. This phenomenon exemplifies the retrogression of democracy and the advance of neoliberal and neoconservative agendas, where denialism has emerged as a strategic tool utilized by the extreme right to undermine public trust in science, democratic institutions, and social justice initiatives. Contemporary denialist tendencies connect to historical processes of colonialism and epistemic injustice, as this case study reveals. Such discourses impact social categories, public institutions, and democratic structures. The Brazilian reaction against denialisms illustrates the delicate relationship between science and democracy, emphasizing the need for anthropological scrutiny to understand the operationalization and effects of these political dynamics².

Denying positions treat, in many ways, Brazilian democracy. They erode democratic norms, attacking key institutions, and spreading misinformation. These actions weaken public trust in democratic processes and institutions, stifle political opposition, and threaten electoral integrity (Tiburi, 2015). By rejecting democratic principles, such positions can pave the way for authoritarian practices, diminishing the core values of democracy and potentially leading to increased polarization and political instability.

Denialisms can take various forms, including denial of climate change, which rejects overwhelming scientific consensus on global warming; denial of historical atrocities, such as the Holocaust, which disregards established historical evidence; and denial of democratic processes, which undermines the legitimacy of elections and institutions. However, since they are so diverse, how can we see their connections?

There is a concept developed by a pair of Brazilian political scientists called “structural denialism” (Lynch; Paschoeto Cassimiro, 2022). This idea explores the notion that denialism is not a flat phenomena, but it is linked to the genealogies of social exploitation and epistemic injustice that arise from older social and historical processes, being colonialism a significant frame for the development of denialist tendencies. Today, denialism is linked to

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a specific side of formal politics: the discourses arising from the extreme-right. They have appropriated the idea of “cultural relativism” — an idea coming from the discipline of anthropology, used to explain and legitimate cultural diversity — to justify multiple forms of social negligence and abuse (Echazú Böschemeier, 2023a). Abused cultural relativism helps to instrumentalize perceptions of the world as a place where, since “everything is relative” and all voices are valid, people should embrace the louder voice in the current social scenario.

Anthropological theories on colonialism, evolutionism, and the imposition of science critically examine how Western knowledge systems have historically justified and perpetuated structures of domination. Evolutionism, particularly in the 19th century, framed non-Western societies as “primitive” stages in a unilinear progression toward civilization, legitimizing colonial expansion and cultural hierarchies. Colonialism, as both a political and epistemological project, imposed Western scientific paradigms as universal, often dismissing or erasing local knowledge systems.

In parallel, a cry for louder, harder, stronger voices can be heard: concepts from Latin-American appropriations of Darwinism as the “survival of the fittest” (Leys Stepan, 1991) seem to be reborn to explain science as a “narrative”, all discourses and forms of justice as relative, and people between the ones who have inherent rights to the others — the vast majority — who don't. My point in this work is not to search for the genealogical roots of denialism, nor to explore contemporary denialisms and our attitude as anthropologists towards such discourses (for this matter, please see Echazú Böschemeier e Almeida [2023b]) but to bring for discussion some particular and highly visible, anti-denialist reactions that denialist positions produced in contemporary Brazil.

In this proposal, I will analyze the case of one specific anti-denialist answer elaborated by a virologist and a journalist, who worked as coauthors (Pasternak; Orsi, 2023) in this book. The manuscript titled, called “*Que bobagem! Pseudociências e outros absurdos que não merecem ser levados a sério*”, published by Contexto editors, can be translated as “How silly! Pseudosciences and other absurdities that do not deserve to be taken seriously”. I choose to write “Science” with a capital S every time I need to represent a monolithic view that prioritizes certain ideas of science over others.

Methodologically, I took the cited book as a case study and a primary source to be scrutinized under the tools of discourse analysis in anthropology (Duranti, 1997). Using a single basic reference with a discourse analysis methodology is justified due to the interest of an in-depth examination of a particular text, looking for a comprehensive exploration of narratives, meanings, and power structures within the manuscript. This focused approach is particularly strategic since this source has divided opinions in the media (Dunker, 2023). In

this proposal, I delve into this piece as an illustrative case study that reflects broader discursive trends on denialism and hate discourse.

Let me offer some context about this book. During the COVID-19 pandemic, the government strategy was fueled by a confusing position from the political leadership, based on misinformation, the propagation of fake news, and the exploration of the socio-economic pressures of this challenging period under the most needed people in society (Santana; Voltz, 2020; Rochel de Camargo, 2024). President Jair Bolsonaro downplayed the virus, labeling it a “little flu” and opposing public health measures, stimulating the *laissez faire* of people dealing with the invisible hand of the State, and significantly undermining public trust in science-based State policies (Echazú Böschemeier; Nobre; Silva, 2023c). This environment allowed misinformation to flourish on social media, exacerbated by regional disparities in education and healthcare access faced by many Brazilians. Consequently, skepticism towards the pandemic and public health interventions grew, complicating efforts to control the virus.

Natalia Pasternak, a distinguished microbiologist and science communicator with her trajectories between the University of São Paulo (USP) and Columbia University, emerged as a leading figure against this new manifestation of denialism that Bolsonarism was embracing. Through her active public advocacy, Pasternak provided simple tips based on scientific evidence about COVID-19, debunked myths, and promoted the importance of vaccination and other structural public health measures. Her work with the Instituto *Questão de Ciência* (IQC) and collaborations with health authorities further bolstered her efforts. Pasternak's dedication earned her widespread recognition and trust, making her a prominent voice in the media and within the scientific community. Carlos Orsi Martinho is a science fiction writer and journalist specializing in science. He graduated in journalism from the School of Communication and Arts at the University of São Paulo. He is a co-founder and editor-in-chief of the magazine “Questão de Ciência”, and Natalia's husband.

NARRATIVES OF INTOLERANCE

“*Que bobagem!*”: this 360 pages textual piece exhibits no bibliographic references quoted in the end of the piece. It was written as a “science communication” initiative by two people who share a common passion in Science, and who are actively engaged against denialism. In this topic, I will take some narratives and analyze them. Authors state that “*having science on your side is almost synonymous with being right*”³ (Pasternak; Orsi, p. 9, my translation). This statement suggests that a scientific backing lends a high level of credibility and correctness to one's position or argument. It implies that scientific evidence and reasoning are powerful validators in debates or discussions. In this context, “being right” is

³ In the original: “*Ter a ciência ao seu lado é quase sinônimo de estar certo*” (Pasternak; Orsi, p. 9).

equated with being supported by scientific facts or consensus, reflecting the esteem and authority often attributed to science.

In the same section, they suggest that “*Like everything that is highly valued, science is also subject to falsification*”⁴ (Pasternak; Orsi, p. 9, my translation). This statement highlights that even highly esteemed entities, such as science, are not immune to misuse or distortion. Despite the high regard and credibility that science commands, it can be manipulated or falsified. And here we can detect one idea, the idea of *falsifiability*, which was brought by British philosopher Karl Popper and further explored by neo-positivists. When speaking about the place of culture in regimes of truth, authors sustain that:

There may be significant symbolic, political, and even ecological relationships encoded in cultural behaviors that ostensibly serve to heal the body, the spirit, and ward off death. However, identifying, understanding, and even respecting these social functions of tradition does not answer the question of whether it truly benefits the patient and alleviates their illness⁵ (Pasternak; Orsi, p. 11, my translation).

This article presents a critique that primarily focuses on the empirical and physical aspects of healing. To what extent can empirical and quantitative methods fully capture the effectiveness of cultural healing practices that address emotional, spiritual, and communal dimensions of well-being, which may not be easily measurable? Authors also comment:

[...] there is nothing 'racist' or 'supremacist' about this observation. Discriminatory practices based on 'traditional knowledge' or systems with no scientific basis have existed (and still exist) abundantly throughout European history and the colonization of the Americas, and they are common in contemporary Western society⁶ (Pasternak; Orsi, p. 11, my translation).

How is it possible to state that there is “no scientific” basis in traditional knowledge? This observation implies that recognizing the historical and ongoing presence of discriminatory practices linked to both traditional knowledge and non-scientific systems does not inherently imply a racist or supremacist viewpoint. Instead, it seems to emphasize the pervasive nature of such practices across different periods and contexts, including European history, the colonization of the Americas, and contemporary Western society. However, this

⁴ In the original: “*Como tudo que é muito valorizado, no entanto, a ciência também é alvo de falsificação*” (Pasternak; Orsi, p. 9).

⁵ In the original: “*Pode haver importantes relações simbólicas, políticas e até ecológicas codificadas em comportamentos culturais que, ostensivamente, servem para curar o corpo, o espírito e afastar a morte. Mas identificar, compreender e até mesmo respeitar essas funções sociais da tradição não responde à pergunta de se ela realmente beneficia o doente e alivia sua enfermidade*” (Pasternak; Orsi, p. 11).

⁶ In the original: “[...] Não há nada de 'racista' ou 'supremacista' nessa constatação. Práticas discriminatórias baseadas em 'saberes tradicionais' ou em sistemas sem nenhuma base científica existiram (e ainda existem) de modo abundante ao longo da história europeia e da colonização das Américas, e são comuns no Ocidente contemporâneo” (Pasternak; Orsi, p. 11).

affirmation relativizes the historical specificities of such processes, while is parallel to more attacks to different subjects such as psychoanalysis, decolonial theory, homeopathy and acupuncture. At the same time, since the important observations of Lévi-Strauss (1963) and many other health anthropologists (Langdon; Diehl, 2007) about “the science of concrete”, it has been accepted that traditional knowledge is a “patchwork” of practices and ideas who interact with scientific knowledge in complex, traceable, and demonstrable ways.

We might draw our critique to the author’s approach to traditional knowledge, psychoanalysis (Federação Brasileira de Psicanálise, 2023) and the diverse other systems they list, like acupuncture — a traditional knowledge developed since 1600 BCE in China — and homeopathy — an alternative medical system born in the XVIII Century in Germany. All of them have been put under the same dismissive category, labeled by Pasternak and Orsi as “pseudo-sciences”. However, I will focus now on their narratives related to the cultural aspects of health practices. Regarding this, authors suggest that:

If the goal is to solidify (or lubricate) social relationships, imbue tragic or mundane events with deep meaning, offer consolation, or reduce the existential vertigo inherent to the human condition, the menu of alternative knowledges, each with its own logic, is almost infinite — from animism to belief in salvation by UFOs. In the end, it is a matter of taste⁷ (Pasternak; Orsi, p. 12, my translation).

The statement suggests that the so-called “alternative” knowledge systems, ranging from animism to beliefs in UFO salvation, are essentially a matter of personal preference when it comes to addressing social, existential, and emotional needs. By framing these diverse belief systems as akin to personal tastes, the statement potentially diminishes the actual contribution of traditional and emergent knowledge systems.

This view of science and its concept of progress reflect a hierarchical understanding of knowledge, positioning Western scientific thought at the apex of human achievements. This perspective often frames other forms of knowledge, particularly traditional and Indigenous epistemologies, as inferior or outdated. By adhering to a linear model of development, the author’s approach dismisses the legitimacy of plural ways of knowing.

As a result, traditional knowledge systems are subjugated, despite their deep-rooted insights and relevance. This homogenization reduces them to a single category of “non-scientific” and, therefore, seemingly fake and questionable, which undermines their legitimacy and value, promoting a continuity of the social production of “indifference” (Herzfeld, 2016) and even of the “evilness” (Aguiar, 2022) towards such populations.

⁷ In the original: “*Se o objetivo é solidificar (ou lubrificar) relações sociais, imbuir acontecimentos trágicos ou mundanos de significado profundo, oferecer consolo ou reduzir a vertigem existencial inerente à condição humana, o cardápio de saberes alternativos, dotados de lógica própria, é quase infinito – do animismo à crença na salvação por discos voadores. Trata-se, no fim, de uma questão de gosto*” (Pasternak; Orsi, p. 12).

Authors go forward showing a very nitid position when describing public policy programs related to alternative and traditional health systems:

The “integration” of alternative practices, whether in public research funding programs such as the NIH or in public health systems like the SUS, confuses the population and can divert patients from their conventional treatments. There is no evidence that such practices save money for health systems, but there is certainly evidence that they consume public funds that could be better invested⁸ (Pasternak; Orsi, p. 59, my translation).

In Brazil, *Práticas Integrativas e Complementares em Saúde (PICS)*, or Integrative and Complementary Health Practices, are a set of alternative and complementary approaches officially recognized within the public health system. These practices began to gain formal recognition in the early 2000s, with significant policy advancements occurring in 2006 when they were incorporated into the Unified Health System (SUS). This process, noted, with others, as an emergent development of the SUS in Brazil (Santos, 2007), include a diverse range of therapies such as acupuncture, homeopathy, herbal medicine, and traditional medicine practices, aimed at complementing conventional medical treatments. They emphasize a holistic approach to health, integrating physical, emotional, and spiritual well-being. The incorporation of *PICS* into the public health system reflects Brazil's commitment to a comprehensive approach to healthcare that respects and utilizes a variety of therapeutic modalities.

The author's last comment overlooks the significant role that non-official health spaces and alternative practices can play in community health. In the Brazilian context, non-official health practices offer culturally relevant care, enhance community engagement, and contribute to a more holistic approach to health by addressing social and emotional aspects that the official health system might neglect.

How can we reconcile the apparent disconnect between the symbolic, political, and ecological roles of cultural healing practices and their empirical validation, ensuring that both the traditional and scientific perspectives are considered in evaluating their overall impact on health? And, in what ways might a strict focus on physical outcomes and empirical criteria for assessing healing practices inadvertently neglect or undervalue the broader benefits of cultural traditions, such as fostering community resilience and emotional support, which are integral to holistic health?

⁸ In the original: “A ‘*integração*’ das práticas alternativas, seja em programas públicos de fomento à pesquisa, como o NIH, seja na rede pública de saúde, como o SUS, confunde a população e pode desviar pacientes de seus tratamentos convencionais. Não há evidências de que tais práticas economizem dinheiro para os sistemas de saúde, mas há certamente evidências de que consomem dinheiro público, que poderia ser mais bem investido” (Pasternak; Orsi, p. 59).

THE DENIAL OF THE OTHER

“Fascism undeniably possesses an ideology: an ideology of denial. Everything is denied (differences, the qualities of opponents, historical achievements, class struggle, etc.), primarily, knowledge and, consequently, the dialogue capable of overcoming the absence of understanding”⁹
Marcia Tiburi (2015, p. 14, my translation)

What is the model of science that is being promoted in such narratives? It is possible to note in our chosen source some elements that show a propagandistic discourse — such as emotional appeals, selective fact presentation, and repetition to manipulate public opinion and reinforce specific ideologies. This type of discourse often simplifies complex issues, uses loaded language, and demonizes opponents to create a biased and persuasive narrative.

In the text’s discourse, we can also observe a reliance on “*todologia*” (an *ad hoc* term that refers to the tendency to explain everything with a single theory) and “*opinionologia*” (another *ad hoc* expression referring to the prevalence of one's opinion over evidence). This approach can lead to a limited assessment of cultural practices, potentially disregarding significant emotional, spiritual, and communal benefits that may not be easily measured.

The author’s contribution questions all forms of emerging and traditional sciences, which they have labeled as “pseudo-sciences.” By dismissing these practices as illegitimate, the term perpetuates epistemic colonialism, reinforcing Western scientific paradigms as the sole arbiters of truth. Such a stance not only undermines the richness and diversity of knowledge systems but also ignores the plural ways in which different cultures understand and engage with health, wellness, and reality.

Anti-denialist approaches can become intolerant by dismissing or devaluing perspectives that challenge mainstream scientific consensus, even if those perspectives, such as traditional healing systems, offer plenty of legitimate critiques to the official health system and to hegemonic science. And this is something that initiatives such as the “*Encontro de Saberes*” [Meeting of Plural Knowledge] project do: broaden our idea of science, highlighting the importance of a horizontal dialogue between plural knowledge that can potentialize the best aspects of both, traditional and institucional-academic-scientific worlds (Carvalho, 2018).

The concept of the “authoritarian personality” was developed by social psychologists Theodor W. Adorno, Else Frenkel-Brunswik, Daniel Levinson, and Nevitt

⁹ In the original: “*O fascismo inegavelmente possui uma ideologia: uma ideologia da negação. Tudo é negado (as diferenças, as qualidades dos oponentes, conquistas históricas, luta de classes, etc.), principalmente o conhecimento e, conseqüentemente, o diálogo capaz de superar a ausência de compreensão*” (Tiburi, 2015, p. 14).

Sanford in their 1950 study, "The Authoritarian Personality" describes a personality type characterized by a high degree of rigidity, a strong preference for order and authority, and a propensity for conformism and submission to established leaders or norms. In this sense, people with an authoritarian personality typically exhibit a high level of intolerance for ambiguity, a tendency to follow strict hierarchies, and a readiness to accept and enforce authoritarian practices.

A careful evaluation of the authors' narratives suggests that they might propose an "authoritarian anti-denialism," where their rigid adherence to a singular scientific paradigm mirrors the characteristics of an authoritarian personality. This approach emphasizes a narrow, top-down perspective that prioritizes Western scientific viewpoints while dismissing alternative forms of knowledge as "pseudo-sciences." By rigidly defining acceptable knowledge and marginalizing dissenting perspectives, this form of anti-denialism enforces conformity and suppresses intellectual and cultural diversity, as well as continues pushing marginalized populations to the margins of science discussion and the State production (Das; Poole, 2008).

From the perspective of epistemic colonialism, the Pasternak and Orsi's proposal can be interpreted as a way to reinforce the imposition of Western scientific viewpoints as the "gold standard" of knowledge. Anthropology has long studied that the dominant narrative that elevates Western science over other forms of knowledge perpetuates epistemic inequalities by marginalizing and invalidating ancestral, traditional and indigenous ways of knowing, healing and caring (Langdon; Diehl, 2007). This imposition not only reinforces existing power dynamics but also perpetuates a form of epistemic colonialism, where the knowledge systems of historically marginalized groups are disregarded in favor of Western-centric views.

Escobar's work, particularly in "Encountering Development" (1995), underscores how development discourses have been tools for imposing Western-centric knowledge systems and practices on non-Western societies, often under the guise of progress and modernization. From his perspective, the proposal by Pasternak and Orsi can be seen as perpetuating this dynamic by privileging Western scientific paradigms as the "gold standard," thereby marginalizing other epistemologies. This imposition should be seen not merely as a question of knowledge, but of power — the other side of the coin of knowledge dynamics. By framing Western science as universal and superior, such proposals contribute to what Escobar calls the "colonization of reality," where diverse ways of knowing, particularly those rooted in indigenous and local traditions, are systematically devalued. This idea can be traced to post-structuralist approaches to institutional practices. In "Discipline and Punish", French philosopher Miguel Foucault argued that power is not merely repressive but also productive, generating knowledge, subjectivities, and social norms. His interwoven concept of "power-

knowledge” (*pouvoir-savoir*) emphasizes that knowledge is not neutral, but a tool that legitimizes and sustains power relations. Through mechanisms or dispositifs — such as institutions, discourses, and practices — power operates subtly, shaping behavior and defining what is considered “true” or “legitimate” within a certain historical period.

Other concept may help us to frame the discourses under analysis. The idea of fascism, characterized by authoritarianism and the suppression of dissent, thrives on hierarchical and top-down structures that concentrate power and control in the hands of a few (Tiburi, 2021), and is framed under the cultivation of a certain “need for enemies” (Bailey, 1998) that brutalizes our relationship towards otherness. Verticalist approaches to science, which dictate a single, unquestionable truth and dismiss alternative forms of knowledge, align with these fascist principles. They perpetuate an authoritarian dynamic where expert knowledge is imposed upon the masses without room for dialogue or the recognition of diverse perspectives. This not only stifles intellectual freedom but also upholds a rigid social order that mirrors fascist ideologies, reinforcing the marginalization of those who do not conform to the dominant narrative.

The anthropological critique of modernity, initiated decades ago by scholars such as Hurston (2001), and Clifford and Marcus (1986), is being undermined by a recycled discourse that legitimizes “scientific evidence” as a monolithic concept. This discourse dismisses any methodology not rooted in the natural sciences and positions science as an unquestionable “mecca of truth” that the public is expected to uncritically accept and revere. In this context, Pasternak and Orsi’s proposal can be seen as a resurgence of authoritarian thinking, influenced by the Bolsonarismo movement, which seeks to reinforce hierarchical and exclusionary perspectives on knowledge. Sadly, such discourses reinforce a verticalist approach to scientific communication, which simultaneously brings up anti-democratic perspectives and a hidden dimension of guardianship (Pacheco de Oliveira, 1988) towards marginalized populations, the “wretched of the Earth” (Fanon, 1979).

In this sense, anti-denialism, when supported by non-inclusive perspectives, can become anti-democratic and, in a broader sense, anti-scientific because it undermines the relationship between science, culture(s), and society. When such “anti-denialism” is underpinned by a rigid adherence to specific scientific paradigms, it risks enforcing a narrow, hegemonic view of truth that invalidates diverse ways of understanding and addressing issues. This can lead to the exclusion of valuable knowledge from marginalized communities, undermine forms of pluralistic dialogue, and perpetuate epistemic inequalities (Carneiro, 2005). As a result, the commitment to combating denialism could inadvertently foster social and scientific intolerance, thereby reinforcing the power-knowledge imbalances already existing in society (Foucault, 2014).

CONCLUSIONS: REIMAGINING SCIENCE(S)

This article addresses the paradox between the need to “defend science” during the COVID-19 pandemics, the risks and excesses that some defenses may entail, and the traceable background of a particular expression of “science defense”. In this sense, we could ask ourselves a broader epistemological question: what is the role of our implicit political positions when we seek to “defend science”? Should we treat science as an unquestionable and unified set of institutions that must be “saved”? Is combating denialism, by itself, a sufficient attitude?

In order to continue exploring the complex relationship between science and politics, it is strategic to adopt an approach that extends beyond simplistic evidence-based frameworks. We must engage in imaginative thinking, connect diverse perspectives, and understand the historical processes that have shaped scientific thought. Furthermore, we must reconceptualize “Science” as “sciences” in the plural, recognizing the multiplicity of historically rooted knowledge systems. Scientific methodologies and communication strategies should be equipped to critically analyze such various forms of knowledge production.

For this sake, let me bring a drop of poetry. “*To imagine is to recall, to read is to recall*”, observed Jorge Luis Borges in the essay “The Analytical Language of John Wilkins” (1964). Inspired by this idea, I suggest that both imagination and reading are fundamentally processes of engaging with and reconstructing prior knowledge. Similarly, practicing “science” as a systematic way of reading and imagining involves more than merely acquiring new information. This process is deeply intertwined within our past, present, and future. Each act of doing, teaching, or communicating science involves activating and reinterpreting existing knowledge and experiences which can not be disregarded by instrumental approaches to science. Since knowledge is not just an individual construct, but is shaped by social, cultural and historic contexts, to maintain a healthy democracy means recognizing and validating the social and cultural dimensions of scientific knowledge is strategic, and just as important as to address and counteract the kind of denialism manipulated by extremist, right-wing ideologies.

More than merely “Saving Science,” we must continually reimagine science, incorporating into our discussion the diverse ways in which knowledge is produced across society. The anti-denialist approach stated by Pasternak and Orsi’s book “*Que bobagem!*”, since it highlights an up-to-down approach, and a flat idea of “evidence” seems to be in a close dialogue with authoritarian perspectives, risks becoming anti-democratic and anti-scientific itself by invalidating alternative knowledge systems long studied by anthropology. This rigid adherence to specific scientific paradigms dominated by a positivist view

marginalizes the valuable insights from traditional, Indigenous and alternative practices, fostering epistemic inequalities and undermining a plural dialogue that is needed in all levels of a healthy democracy. How can ancestral practices be set up as “outsiders” (Becker, 2009) of science and knowledge production? Is this not an act of epistemic violence?

This is an opportunity for our scientific community to face a basic discussion: how do we delimitate the concept of science? Is it a “machine of producing facts” completely external to us, or is it just the result of limited, settled and incomplete human work? It is important to observe that supporting a verticalist understanding of science communication ends up aligning our work as public intellectuals with elitist principles, stifling creative freedom to make science and reinforcing hierarchical power-knowledge ties between specialists and laypeople. To truly wrap knowledge and societal well-being together, it is important to foster a horizontal, caring dialogue that embraces the diversity of scientific and cultural understandings, challenging the monolithic views imposed by hegemonic, intolerant and exclusivist ideas of “Science”.

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