# Fake news, WhatsApp and vaccination against yellow fever in Brazil

## Fake news, *WhatsApp e a vacinação contra febre amarela no Brasil* [a]

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## ABSTRACT
This article adopts an ethnographic perspective to analyze how users of the Brazilian Unified Health System consume and share information about vaccination, as well as their level of trust in this public-health practice. During the end of 2017, we conducted several interviews with people who were in line to get vaccinated against yellow fever. By interviewing subjects in this particular situation, we noted some acute changes in the contemporary regime of truth. Our conclusion was that online communication networks hybridize with other existing socialization processes, especially religious beliefs, making trust in circulating information more reliant on conviction than persuasion.
**Keywords:** Fake news, post-truth, vaccine, health, media

## RESUMO
Este artigo tem como objetivo principal, a partir de uma perspectiva etnográfica, analisar como determinados usuários do Sistema Único de Saúde consomem e fazem circular informações sobre vacinação, e se confiam ou não nelas. Realizamos diversas entrevistas com pessoas à espera de se vacinar contra a febre amarela no final de 2017. Por meio das entrevistas numa situação tão particular, observamos algumas mudanças sensíveis no regime de verdade contemporâneo. Concluímos que as redes de comunicação on-line se hibridizam com outros processos de socialização existentes, especialmente com as crenças religiosas, o que nos fez entender que a confiança nas informações circulantes é mais da ordem da convicção do que da persuasão.
**Palavras-chave:** *Fake news*, pós-verdade, vacina, saúde, mídia

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## INTRODUCTION

AT THE END of 2016, with ever increasing cases of wild yellow fever, Brazil experienced the threat of an outbreak. According to data from the Yellow Fever Seasonal Period Monitoring, produced by the Brazilian Ministry of Health, between December 1, 2016 and June 31, 2017 there were 792 confirmed cases and 274 deaths attributed to the disease, with the period between July 1, 2017 and June 30, 2018 seeing 1,376 additional confirmed cases and 274 deaths. Between July 1, 2018 and January 18, 2019, these numbers decreased to twelve confirmed cases and five deaths (Ministério da Saúde, 2019). From April 2017 onwards, following the recommendation of the World Health Organization (WHO), the Ministry of Health adopted a single-dose vaccine with lifetime protection. Previous vaccines were able to protect patients for up to ten years. By 2014, the WHO fully understood that yellow fever vaccines should be taken in a single dose, eliminating the need for subsequent reinforcement. Even after this change, in face of the outbreak's growth and fearing a supply deficit, in January 2018 the Brazilian government decided to fractionate the vaccine's dose. It was the first decision of this kind by the Ministry of Health. The new fractionated dosage would provide immunity for no more than eight years. The official rationale was the insufficient supply to cope with the summer of 2017/2018 outbreak. The dosage changes, however, generated a significant circulation of rumors about the vaccine's effectiveness, the government's capacity to protect the population, and even the very need for vaccination (Bretas, 2018).

On January 15, 2019 the WHO released its 13th General Programme of Work, intended to remain in effect for the next five years (2019/2023). According to the programme, the period's main health challenges are the following: 1) air pollution and climate change; 2) chronic non-transmissible diseases (such as diabetes, cancer and cardiovascular diseases); 3) the influenza pandemic; 4) fragility and vulnerability scenarios; 5) antimicrobial resistance; 6) Ebola; 7) weaknesses of the primary healthcare system; 8) dengue; 9) HIV/AIDS and, finally, 10) vaccine hesitancy[1]. The underlying reasons for resistance to vaccination are described as follows: "a vaccine's advisory group for the WHO identified 'complacency', 'inconvenience' in access to vaccines and lack of confidence as the main reasons underpinning this hesitancy" ("Dez ameaças", 2019)[2].

The WHO's concern was such that the organization decided to put pressure on Facebook, demanding better control of the dissemination of fake news and misinformation about vaccines. On March 8, 2019, as reported by *Gazeta do Povo*, the company changed its algorithm in order to "provide people with more accurate information from vaccine specialist organizations at the top

[1] In 2014, a working group was set up to study vaccine hesitancy, the "delay in acceptance or refusal of vaccines despite availability of vaccine services". "Vaccine hesitancy is complex and context specific, varying across time, place and vaccines. It is influenced by factors such as complacency, convenience and confidence" (WHO, 2014, p. 7).

[2] This and other translations of the author.

of related search results, on pages that discuss the topic, and on invitations to participate in groups about the subject" ("Facebook vai combater", 2019, para. 4). In justifying the new policy, Facebook "pointed out that industry authorities, such as the World Health Organization (WHO), have identified rumors about immunizers" ("Facebook vai combater", 2019, para. 4).

On the other hand, many of the explanations provided by the Brazilian Ministry of Health (its minister, his representatives and associated researchers) referred to low vaccination adherence. This, in turn, was mainly associated to the spread of fake news. Two news articles make this quite evident. In an interview to G1 published on May 25, 2018, the French-American epidemiologist Laurence Cibrelus, the WHO's main yellow-fever strategist, said that "the situation in Brazil was very complicated. There was a lot of misinformation and false communication, intensified by the discussion around integral or fractional doses" (Costa, 2018, para. 5). Still according to Cibrelus, most of this misinformation was made possible by online social networks. The bulk of the fake news was able to circulate through them, spreading exceptionally fast, "with misinformation such as that the full vaccine was dangerous and the fractional doses were weak" (Costa, 2018, para. 6). Doctor Isabella Ballalai, then president of the Brazilian Immunization Society (Sibim), stated that the low demand for vaccines was partly due "to the huge amount of fake news stating that the vaccine was harmful or fatal" (Pains, 2018, para. 5). According to Ballalai, since the 1930s – when the first yellow fever vaccine was put into use – there have been only "sixty worldwide cases of serious vaccine-related adverse effects. In comparison, the vaccine has saved *millions* from the disease" (Pains, 2018, para. 5).

In the Ministry of Health's website, a page entitled "Saúde sem fake news" [*Health without fake news*] (2018) sought to guide the population and clarify questions about yellow fever vaccination from users of the Brazilian Unified Health System (SUS)[d]. The Ministry provided, moreover, a WhatsApp number meant not as a customer service or as way to clarify specific user questions, but rather as a space to veto viral pieces of information, to be cleared by technical experts and officially judged in regards to their veracity. This is a common practice by the Brazilian health sector: certain institutions and agents are authorized to determine what is true and what is false (Garcia, 2017). Thus, some aspects of the government's communication strategies seem to paint a wider picture.

The first aspect concerns the fact that the Ministry of Health seeks to "fight fake news", reaffirming the agency and its institutions' expertise and capacity to disseminate the actual truth. In this sense, the Ministry reproduces a very common procedure of public health communications: to act as a judge of veracity, reason and myth, information and rumor, true news and fake news (cf., for example,

[d] The Unified Health System (Sistema Único de Saúde – SUS) is one of the largest and most complex public health systems in the world, ranging from simple and primary care to organ transplantation. It aims to ensure comprehensive, universal and free access for the country's entire population, as determined by the Brazilian Federal Constitution of 1988 (T.N.).

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Speed & Mannion, 2017; Waszak, Kasprzika-Waszak & Kunbanek, 2018). As a method for asserting authority, this will at some point generate legitimacy (Sodré & Paiva, 2011). Increasingly, however – and the internet has played a crucial role in this development – paralel information and discursive practices circulate that compete with the official versions, proclaiming themselves as the real bearers of truth. Such practices lend themselves to an environment of generalized mistrust in institutions – government ones above all. There is a growing willingness to believe less in evidence- and science-based discourse and more in experience-based discourse (Pennycook & Rand, 2019).

Another aspect is the insistence on a unidirectional, not-quite-interactive relationship with the population. WhatsApp, for instance, is used to ascertain whether a given piece of news or information is true, but not as a means for direct user interaction. Its purpose is limited to maintain the Ministry of Health's role as an authenticator of information. In this way, while recognizing the need for providing the population with clarity in the midst of an information crisis, the Ministry's initiative also seeks to reaffirm its own institutional role. After all, the internet and online social networks, in particular, have conferred new materialities and visibilities to hearsay and rumors, making "otherwise silenced meanings emerge, now shared among interlocutors in an attempt to collectively form understandings about situations in which certainties are scarce" (Garcia, 2017, p. 213).

In this context, the formation of attitudes that were once regarded as a hallmark of critical thinking – now based on the productive cultivation of uncertainty and on the belief that the other may be deceiving us or that we may deceiving each other – becomes the post-truth's discursive environment, based on "circumstances in which objective facts have less influence in shaping public opinion than appeals to emotion and personal beliefs" (Dunker , 2017, p. 23). The current logic of online social-network grouping presents us with a significant change in social organization and in the latter's relationship with the truth: there is an "inclination to close on the supposed meaning too soon, to reach an understanding about the other too quickly, to alienate ourselves in the shelter of his/her image and thus protect ourselves from his/her words" (Dunker, 2017, p. 35). In these groups, gathered amongst their own people, sharing beliefs and opinions, individuals end up suspending censorship. Suspending the censorship barrier has become "the official form of entertainment in the post-truth" (Dunker, 2017, p. 36).

The main objective of this article is to present results of our research on forms of trust and production of behaviors regarding yellow-fever vaccination in Brazil, associated with the consumption of information by means of internet-enabled

devices (particularly through WhatsApp). In a first stage, we conducted interviews to try and understand the motivations and hesitations of users of the Brazilian SUS in two health centers in the city of Rio de Janeiro: the José Manoel Ferreira Municipal Health Center, in Catete, and the Dr. Albert Sabin Municipal Health Center, in Rocinha.

In each of these health centers, the interviews were used to comprehend which institutions and individuals were the recipients of the users' trust, based on our premise that understanding the cultural mediations involved in the trust-building process would help explain people's decisions regarding vaccination. Although we only interviewed people who had already opted for vaccination, our goal was to clarify why they had decided to do so even in the midst of a series of negative rumors about the vaccine. Above all, we wanted to understand how interviewees gained access to health information, on which sociocultural aspects of everyday life their systems of information validation/invalidation relied, and how these systems functioned in a practical sense.

The text is divided into three sections, in addition to this introduction and our final considerations. In the first section, we briefly discuss how post-truth and fake news phenomena – together with its associated notions – indicate a crisis of health expertise, especially in regards to vaccination. We then present our methodological approach. Finally, we provide a more in-depth analysis of the interviews, in order to understand current forms of health information circulation and consumption, as well as motivations and hesitations regarding vaccination.

## FAKE NEWS, POST-TRUTH AND THE CRISIS OF HEALTH EXPERTISE

Since Donald Trump's rise to the U.S. presidency, the issue of fake news has outgrown its initial form as a technical distortion of journalistic credibility to gain a political dimension amongst domestic and external threats against democracy, employed as a tactic in the construction and deconstruction of electoral images. Trump's election was institutionally placed under suspicion and subjected to legal investigation for reasons involving the dissemination of false information and electronic interference by a foreign power. On the other hand, the referendum that led England to leave the European Union (the Brexit), entering a protracted political crisis, was knowingly orchestrated by xenophobes and right-wing activists who disseminated outright lies. This information crisis reached its peak with the Brazilian presidential elections, when the far-right – relying on a playbook involving illegally-obtained lists of cellphone numbers, WhatsApp and the mass circulation of fake news – managed to subvert the

already fragile national democracy, a frailty that had become quite evident in the controversial impeachment process of President Dilma Rousseff, in 2016.

It is clear that the fake news phenomenon has several precedents. In any case, this issue now leads to two very different sets of questions – one relates to the degree of prevalence of the "false" within a social ambience marked by mediatization, and the second to the use of the term by governments to denounce other sources of information (Sodré, 2019). In line with the history of political deception, the Trump phenomenon may be more about false 'sentences' (or tweets) than about fake news. It is certainly deserving of the fake news label, however, when it comes to the use of false information as an (ultra)conservative's defense against scrutiny and criticism.

The practice of disinformation through the dissemination of false or deceitful representations of reality – a subject studied and practiced by governmental agencies in periods of military conflict – is, as a matter of fact, ancient (cf. Sodré, 2019; Sodré & Paiva, 2011). It is currently exacerbated by its incorporation into the social functioning of electronic networks, whose users, especially younger ones, are less and less likely to distinguish informative discourse from marketing discourse permeated by a broad and vague social imaginary. But this is not only due to reasons of a technical order: the phenomenon's driving force stems from a growing, generalized indifference to the reality of facts in favor of unbridled affections.

In the market's current logic, truth is a *reiterative product*, produced not by liberal consensus, but by the automatism inherent to the discursive circuit of media devices. Given its goal of inculcating a supposedly truthful point of view, the current, network-aware market game is made possible by the *technological amplification* of a given point of view – electronic devices and semiotic effects acting to redefine and widen the space of diffusion. Rather than simply hammered by brute force, such information is irradiated in the form of an atomic or viral contamination, spreading by contagion or by waves with a more sensitive, precise impact.

*Post-truth* is a self-conscious term referring to historical change in the forces driving public opinion, heavily reliant on assumptions about an "age of truth" that we apparently long for. As put forward by Philip Schlesinger (2017, p. 603), its rise as an idea "signaled a perception of change both in the form and in the public domain and in the conduct of major protagonists in the political-mediatic sphere". It is not surprising, therefore, that the term was considered the international word of the year 2016, according to Oxford Dictionary ("Word of the year 2016", 2016), which defined post-truth as an adjective "denoting circumstances in which objective facts are less influential in shaping public

opinion than appeals to emotion and personal belief" (para. 1). Such a change is, in fact, taking place.

Michel Foucault stated that truth is a thing of this world. What he meant is that truth is intrinsically related to the articulations between power and knowledge in a given society. Thus, for Foucault (1986),

> Each society has its regime of truth, its "general politics" of truth: that is, the types of discourse which it accepts and makes function as true; the mechanisms and instances which enable one to distinguish true and false statements, the means by which each is sanctioned; the techniques and procedures accorded value in the acquisition of truth; the status of those who are charged with saying what counts as true. (p. 12)

Contemporaneous society is undergoing a change in the regime of truth. When discussing the historical transformations of modernity, Anthony Giddens (1991) draws attention to what he terms a process of *disembedding* in social relations. Unlike traditional societies, in which contact occurred face to face, in this new context relationships take place at a distance and with interlocutors we often do not even know. Thus, the author points out a reconfiguration of daily life, based on another conception of time and space, whose functioning is related to the strong presence of abstract systems – such as symbolic tokens (money) and expert systems (transportation, judiciary, banking, biomedical, pharmaceutical, epidemiological). Giddens also states that the risk society has produced areas of relative security for the continuity of everyday life, using the abstract capacities of expert systems, which, as systems of technical excellence or professional competence, have their effectiveness associated with the trust conferred onto them by their consumers, who are mostly laypeople. This trust, then, is premised on "faith" in the "generalized competence" of the expert knowledge, as well as its authenticity and ability to control risks (Giddens, 1991, p. 35).

Risk control is an essential part of abstract systems' operation. Therefore, every action is, in principle, calculable, in terms of risk, according to the competence of each of the systems involved. Trust is both a precondition and a consequence of these systems' performance. It is reaffirmed by meetings between laypeople and representatives of expert knowledge (doctors, engineers, lawyers). Trust operates from regularity and can provide reliability characteristics associated with friendship and intimacy, for example in the case of a doctor, dentist or travel agent with whom one deals regularly over a period of years (Giddens, 1991). There is also a validation of trust by surveillance bodies or expert systems, which

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serve as guarantors of the proper functioning of products, technologies, services and institutions according to technical-scientific criteria. Surveillance is, thus, a way of ensuring, through direct supervision, that the conduct of the expert system and its representatives continues to be efficient (Giddens, 1991, 2002). Hence, trust in the system ends up being configured not only from its practical operating experience, but also from the existence of "regulatory agencies over and above professional associations designed to protect the consumer of expert systems – bodies which license machines, keep a watch over the standards of aircraft manufacturers, and so forth" (Giddens, 1991 , pp. 36-37).

Trust mechanisms are present not only in abstract or expert systems, but also materialize themselves in the means, codes and procedures that govern class behavior, mitigate mistrust, and promote reliability or (internal) control among peers. Even those who are bound to abstract systems, according to Giddens (1991), still need to establish face-to-face commitments, because such links can generate continuous reliability, making such a reintegration or reinsertion of special importance in the time-space-dilated connections characteristic of contemporaneity itself. One's trust in expert systems initially takes on the form of a faceless commitment, of faith in their functioning, because in most cases the user is completely oblivious to the system's inner workings – he or she is admittedly devoid of technical knowledge and feels powerless. However, face-to-face contact reappears as a means of reinforcing user-system bonds, since facial and bodily expressions are sought after as indicators of integrity and subjective characteristics, allowing one to form an opinion about a given offer. Thus, reinsertion consists of faceless commitments that are later consolidated by face-to-face interactions with the potential to subvert the modern order. It seems to us that this has been a key element in the current institutional crisis of trust.

In contemporaneity, we are moving from a regime of truth based on trust in institutions to one regulated by dogmas, intimacy and personal experience. A radicalization of "seeing is believing" – a phrase attributed to the biblical character Thomas that has become a centuries-long popular saying – anchors our current regime of truth, establishing even more demanding paradigms we could maybe identify as "living is believing" or even "experiencing is believing". In this context, experience is well on its way to becoming the singular legitimate source of knowledge about the truth. In the same direction, another type of authority is intensely valued: the experiential authority. It emphasizes the testimonial character – I lived, I know – enunciating in the first person (I am the one who saw, who lived, who felt) the experience and narrative of a given event, establishing itself as the origin of a truth or as a document attesting that the narrated experience actually happened.

Experience in this sense evokes a participatory presence, a sensitive contact with the world one aims to make intelligible, a relationship of emotional affinity, a concreteness of perception. The word also suggests a cumulative knowledge, which deepens over time. Contemporary culture's subjective turn – according to Beatriz Sarlo (2007) – is more akin to this concept of experience, as it relies on the formation of an enunciative production system as well as on the belief in the contiguous relationship between personal experience, narrative and truth.

Regarding the circulation of discourse and intersubjective relations characteristic of post-truth, it is necessary to recognize that its nodal point is "to require a refusal of the other or at least a culture of indifference which, when seeing itself as threatened, reacts with hatred or violence" (Dunker, 2017, p. 28). For Dunker (2017), "it is increasingly difficult to listen to the other, to assume his/her perspective, to reflect, to resituate himself/herself and to establish a convergence over differences" (p. 28).

The refusal of the other can also be observed in the logic of recognition prevailing under the post-truth paradigm. Gaining visibility and recognition, "our ways of thinking and practicing relationships between genders, classes, races, ethnicities, consumption patterns or religions cultivate values of diversity and tolerance to the point of their inversion into practices of segregation and identity violence" (Dunker, 2017, p. 16). As we are witnessing today, internet and social-network groups based on common objectives have an inclination towards suspending moral censorship. Such suspension of the moralizing barrier (at the consciousness level) ends up releasing primeval impulses and animality. According to Dunker (2017), it is this suspension of reason as an ethical-moral activity that has ensured a diminished coexistence with difference and an impaired self-control of such animalistic impulses.

As a fictitious identifier of a type of fraudulent media product, fake news are able to aggregate people much less by means of philosophical baggage than by systems of conviction. For Paul Ricoeur (1976), belief is an act of spirit corresponding to the moment when a relationship between spirit and truth (the object of belief) is established. In other words, belief is "a mental attitude of acceptance or consent, a feeling of persuasion, of inner conviction" (p. 26). On the other hand, trust, when built on the basis of certain rules of inference (centered on the notion that the past ensures we can predict the future actions of an agent), stands out from the bottomless pit of uncertainty and doubt. Although as an intrinsically relational phenomenon trust cannot be reduced to individual cases or to insular consciousnesses, it is defined as openness to the other by means of one's trust in oneself or one's own convictions. In any case, the

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topicalization of belief is privileged by Ricoeur (1976) over that of trust, probably because absolute, total trust, in oneself or in others, remains entirely impossible.

Similarly, it seems easy to confuse conviction and trust, but they do maintain a dynamic relationship of distance and closeness. Ricoeur (1983) articulates the epistemological conflict between conviction and argumentation, projecting it into a complex relationship of mutual inclusion. Argumentation is a critical arrangement that allows conviction to emerge from within, rather than as an external instance, overcoming or correcting beliefs. This is the reason why, according to Ricoeur, conviction and argumentation belong to the same order – that of knowledge, of the speakable – and are resolved in a conflicting synthesis. At the same time, trust is a mixture of saying and doing, of articulation and sensitiveness, as much as a function that operates the passage from reason to feeling.

The issue of fake news and post-truth seems somewhat structured by the changing relationships between belief and conviction. The act of believing and the belief's object, the *believed*, dilutes the boundaries between belief and truth. The opinion, the *belief that something is true*, has an intense relationship with that in which one believes *in*. This intrinsic property of conviction immerses the subject in a commitment to a symbolic system that explains the world while providing him/her with the ontological security, certainty and confidence required to deal with one's existence.

The debate on fake news has become an opportunity for journalists to promote and improve the integrity of responsible professional journalism, while also attempting to strengthen journalistic authority (Corner, 2017). Underlying much of what is happening today are the changing socioeconomic conditions experienced by populations worldwide, fostering perceptions of suspicion in regards to the *official* and the *established*. Such suspicion can foster democratic change, but also present an opening to new modes of unreliable or deliberately false enunciative production.

Journalism can certainly be regarded as a *discourse of power*, and thus any approach to journalistic practice also necessarily entails discussing the *power of discourse*, that is, "the power that a speech has to occupy a certain place in society, to exert a given effect on the public, as expected or desired" (Lopes, 2009, p. 245). In this sense, it is important to recognize that the ability of journalistic rhetoric to seduce, convince and exercise power rests on its modes of legitimation as a discourse that exposes truth and reality – regardless of journalism's attempts to distance itself from its representation as a persuasive discourse about the real. For Lopes (2009), the game of hide-and-seek behind journalism's reality-building practices and routines is integral to its seduction, and given strength

by the power of its discourse, which can often function as a discourse of power. In this sense, the cultivation of the idea that complete objectivity is possible can generate "a feeling of reliability and provide support to the belief that the journalist is a competent and welcome professional mediator between the public and the facts of the world" (p. 253). Moreover, the matter of fake news also needs to be placed within the context of the media research that has so far been done on the central problems of truthfulness in journalism and on the long-standing question of exactly what the term *news* entails or does not entail. The long pedigree of "falsehood" needs to be emphasized (Corner, 2017, p. 1116).

In the current media scenario, in which mostly anybody has access to a smartphone, the individual and instantaneous traits defining the patterns of information consumption and production mean that what we have is not *inculcation* of content proper (except in deliberate disinformation strategies), but rather *self-deception* through subtle mechanisms of *exposure*: it is no longer about the truth supposedly inscribed in a fact as an unquestionable essence – the premise that gave rise to the technical and ethical ideology of journalistic objectivity. Rather, it is about the *desire for a fact* (i.e., for the *one fact* the consumer wishes to receive), as articulated within the market's segmented logic, much distanced from the political ideal of popular sovereignty.

In fact, inculcation can be seen as an active process of introjecting intellectual content into individual or collective consciousness. Exposure to such content can lead to the creation of an ambience or atmosphere (comprised of ways of feeling and living) that is virtually hegemonic and guided by an emotional and performative logic, or by the subconscious more than the conscious. In this sense, the act of capturing the interlocutor or reader's attention has always underlied the logic of facilitating the comprehension of newspaper texts (brevity, conciseness, techniques for paragraph organization etc.) and the profusion of posters and advertisements, which cannot be defined as much more than propaganda in a broad sense, but are always anchored in inculcable argumentative content. On the other hand, exposure relegates this argumentative rhetoric to the background while seeking the interlocutor's immediate acceptance by way of *entanglement*. In this scenario, there seems to be less and less room for persuasion to supplant conviction, even when the topic is a matter of life and death, or of public health, such as in the case of the yellow fever outbreak in Brazil.

A common approach to the vaccination problem regards it as a matter of hesitancy, caused by a decision-making process involving two very different groups: firstly, people with little knowledge and indifferent to vaccination issues who have erratic vaccination behaviors; secondly, people who are very interested and committed to learning about vaccination issues, prone to researching

information by themselves and to patient and balanced decision-making (Larson, Jarrett, Eckersberger, Smith, & Paterson, 2014). From a psychological point of view, this axis of indifference/commitment echoes the notion of differentiated loci of control: some people believe that they have agency over events related to their lives (internal locus of control), while others endorse a more fatalistic attitude, tending to believe that their lives are directed by forces external to themselves (external locus of control – represented by other people, fate or luck, for instance) (Wallston & Wallston, 1982).

Vaccination hesitancy is defined as delay in acceptance or even refusal to take medically recommended vaccines, despite their availability in health services. It poses the challenge of instilling hesitant individuals with confidence on vaccines. Although there are still few Brazilian studies on vaccine hesitancy, this debate has been particularly intensified by the online circulation of information on vaccine effectiveness since the end of the 2000s (Lerner & Sacramento, 2012; Sacramento & Lerner, 2015; Sato, 2018; Succi, 2018). Through the internet, people involved in anti-vaccine movements organize themselves into groups and communities spreading information about the risks associated with vaccination (adverse effects, many purported as fatal, greater benefits to the pharmaceutical industry than to citizens, more effective and natural forms of health protection and so on) (Dubé, Vivion & Macdonald, 2015).

Individuals in contemporary societies are encouraged to exercise autonomy over their own lives, making use of the specialized knowledge available to remain continuously aware of the risks and opportunities presented by their daily lives. They are also encouraged to assess risks and benefits in order to secure their future. Authorities promote the culture of risk because it is easier to govern rational and autonomous individuals, as their rationality makes them more predictable (Foucault, 2008). This is especially true in regards to health, which has become a focal value: the rhetoric of self-qualification conveyed by health promotion praises entrepreneurial individuals who exercise control over their own behaviors and use the information disseminated by authorities to maximize their life expectancy, making health an imperative (Lupton, 1995). Thus, the aforementioned axis of indifference/commitment can also be seen as a measure of the degree to which individuals are committed or indifferent to health.

Issues of trust are also crucial in Beck's (1992) analyses of contemporary risk societies, especially when it comes to science and knowledge. According to him, our societies are characterized by a reflexive scientificity: scientific skepticism turned its gaze to science itself, fueling scientific disenchantment. The result is a process of demonization/feudalization of scientific knowledge, with conflicting tendencies towards the equalization of specialists and laypeople

in the gradient of rationality. Sciences, quasi-sciences and pseudosciences thus become competing sources, producing a flood of overspecialized, hypercomplex and contradictory discoveries. Consequently, mistrust regarding science is no longer a sign of ignorance or even obscurantism, but rather a trait endorsed by highly educated individuals. Beck (1992) also pointed out the increasingly important issue of conflicts of interest, that is, situations in which scientists or specialists are considered untrustworthy due to their financial links with industries. In this context, people who endorse the culture of risk and decide to take health in their own hands are confronted with dissenting sources of knowledge: they may mistrust "official" sciences and specialists and place their faith on "alternative" sources of information or medical practice (such as homeopathy, acupuncture and veganism) (Goméz, 2018).

According to Giddens (1991), the contemporary individual is exhorted to become the "entrepreneur" of his/her own life, but must do so in a context characterized by myriad issues of trust, since many aspects of our daily lives – if not all – depend on machines or systems that lie beyond our understanding. Giddens's analysis (1991), in this sense, is based on a specific concept of trust, in which our reliance on people/things that are not under our direct scrutiny or are not fully understandable is anxiety-inducing, as this trust in an entire expert system can only come about as the result of an enormous leap of faith. Since our societies are characterized by overspecialization and disconnected social relationships, trust issues have become crucial. Moreover, from Giddens' perspective (1991), contemporary controversies about vaccination or other health-related matters are not the causes of mistrust, but merely the consequences of a broader structural phenomenon.

## METHODOLOGICAL APPROACH

It has been common to associate low immunization demand to the circulation of fake news over the internet. In recent years, this has been one of the most frequent explanations for the yellow fever outbreak (Eichler, Kalsing & Gruszynskig, 2018; Henriques, 2018). In our investigation of the movement against H1N1 influenza vaccination in 2010 (Lerner & Sacramento, 2012), for example, we pointed out that there were numerous analyses intent on asserting that rumors prevented the population from attending the vaccination campaigns. The issue with this type of explanation is its excessive bet on a stimulus-response relationship, or on the effects and influence of the media, without considering "the place of culture in a society in which the technological mediation performed by communication ceases to be instrumental and becomes

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structural" (Martín-Barbero, 2004, p. 129), introducing new meanings of the social and new social uses of the media.

The perspective inaugurated by Martín-Barbero (1997) differentiates between the study of effects – in which, on the basis of some empirically derived association, the researcher works out the connections between the impacts of messages among certain audiences – and the study of mediations. Its main concern is to transition from media to mediations, that is, from a study centered on the media and its capacity for influence and domination to the observation of the sociocultural aspects intertwined in the production, circulation and consumption of cultural products. The communication process is thus no longer divided into poles or stages. Martín-Barbero (1995) proposes reception/consumption as the epistemological and methodological place wherein a consistent reflection on the communication process can be elaborated:

> I assume that reception is not only a step within the communication process, a separable moment, in terms of discipline, methodology, but a kind of other place, where the entire process of communication is reviewed and rethought. (p. 40)

In this sense, reception is emphasized by analyzing the constitution of the cultural out of communicative mediations. The mediations that permeate the receiver's relationship with media do not exist outside this relationship: social classes, gender, ethnicity, family, school, groups of friends and individuals are all remodeled by media culture.

Furthermore, the debate on fake news is, in general, fundamentally associated with the crisis of trust in public institutions, science and journalism. This goes hand in hand with profusion of social groups and practices marked by the production, circulation and consumption of highly segmented information (Marchi, 2012; Otto & Köhler, 2018). What are the cultural mediations involved in the processes of circulation and consumption of health information? Why do some people trust certain pieces of information about vaccination but not others? From a cultural standpoint, what explains such dispositions, behaviors and practices?

Our observations are focused on mediated social practices, dissolving interpretations based strictly on audience response. This perspective is underscored by an understanding of the media as part of the web of complex culture (Bird, 2003). As such, in the context of the health-related social network posts[e], we aim to explore the fact that, in a culture saturated by the media, it is no longer possible to "separate the effects of a particular media (if that was feasible at any time)" (Bird, 2003, p. 93). During these observations, then, our concern

[e] Primary health care public providers within Brazilian communities (T. N.)

will be to find out "what kind of things people do with the media" (Couldry, 2004, p. 120), but also question "how the media is incorporated into everyday communicative and cultural practices" (Bird, 2003, p. 90).

In this sense, we aim to gather an anthropological understanding of how the media participates in the standardization of world views and how it is inserted in the daily decision-making on whether to get vaccinated or not. In a context of intense information consumption, we are not interested in establishing a separation between the online and offline worlds, but rather our research should point out how, via the media and with its participation, health meanings circulate throughout social life. Moreover, while considering the singular dynamics established between socioeconomic asymmetries and cultural bonds, we will describe how SUS users are encouraged to assume an active role in the circulation of health information.

From an ethnographic perspective, we seek to analyze how certain users of the SUS consume and circulate information about vaccination through devices connected to the internet and other personal interactions (conversations, information sharing, medical consultations), attempting to explain what makes them trust or mistrust information during the vaccination decision-making process. In this sense, we aim to better understand the configuration of communication networks that hybridize forms of media socialization with other existing socialization processes (Sodré, 2002).

The ethnographic perspective is going to allow us to peek into different spaces of meaning production about vaccination in order to understand the different forms of social use of digital media in the context of broader social relations and practices. Thus, we will study the social uses of the media in the health field by analyzing the complex dynamics established between online digital ambiences and the social practices of SUS users. In this sense, our investigation should provide relevant insight on the reasons why interviewees get vaccinated or not; the cultural cosmologies involved in the processes of meaning production, consumption and circulation of information on vaccination; and, finally, where SUS users place their trust when they seek information for vaccine-related decision-making, and why[3].

In this sense, we are placing our study in the context of what has been called *digital anthropology* (Miller & Horst, 2012). The term, according to these authors, can refer to the consequences of emerging digital technologies for certain populations, to the use of these technologies as analyzed by anthropological methodology, or to the study of specific digital technologies. It can also, however, raise broader questions about the status of anthropology in contemporaneity: both what it means and how it should, as a discipline, incorporate universes

[3] We are aware of the limitations of qualitative research in terms of data generalization. However, the contribution of ethnographic research confers existential quality, concreteness, to social indicators that are otherwise strictly quantitative and external to the empirical reality of the subjects. In this sense, we agree with Cecilia Minayo (2004), according to whom participant observation in the health field makes it possible to understand "the relationships that take place between social actors within the scope of institutions and social movements both ... for the evaluation of public and social policies from the point of view of their formulation, technical application, and the users to whom they are intended" (p. 134).

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that did not exist or were not possible in the past. Anthropology began with the study of small-scale societies, regarded as traditional or primitive and often interpreted as prone to a slow pace of change when compared to "complex societies"[4]. In contrast, the advent of digital technologies is usually regarded as a kind of acceleration of the world, a deluge of all that is new, breathless and relentless. Thus, a digital anthropology can provide an understanding of the digital world as part of our own world.

This article presents the analysis of the interviews conducted during a participant observation routine lasting three months – September, October and November 2017 – at the José Manoel Ferreira Municipal Health Center, in Catete, and at the Dr. Albert Sabin Municipal Health Center, in Rocinha (Catete and Rocinha are two neighborhoods of Rio de Janeiro). Observations occurred on random weekdays: once a week, we would visit one of the health centers and talk to people who were near the vaccination points or waiting in lines. All the names used here are fictitious, so as to maintain the anonymity of interviewees and interlocutors.

The conversations yielded much more than initially expected: they encompassed topics such as politics, religion, fake news, social networks, family life, routine, work, children, public health, unemployment. For this article, we selected only statements focused on the consumption of health information and especially trust/mistrust regarding the yellow fever vaccine.

## "MY NEWSSTAND IS WHATSAPP": THE INTERNET AND HEALTH INFORMATION CONSUMPTION

On September 24, 2017, Mrs. Maria, a 68-year-old woman, told us that for a long time she sought information from newspapers and magazines displayed in newsstands. Nowadays, however, she gets "*everything from zapzap. My newsstand these days is WhatsApp*". Zapzap is a common nickname given in Brazil to the popular messaging app, a way to make it more intimate and familiar. Zap, in this colloquial language, refers to a message sent via WhatsApp. When we asked her if she still read newspapers, she was categorical: "*I don't need them anymore, I have everything here*", showing us her cell phone. She told us that WhatsApp chat groups were her main source of information.

Mrs. Maria worked as a housemaid in the neighborhood of Leblon and lived in Caxias[f]. She was encouraged by her employer to get vaccinated. Somewhat against her will, she went to the Municipal Health Center Dr. Albert Sabin, in Rocinha: "*My daughter sent me a zap in which a doctor said the* [yellow fever] *vaccine was bad for health, because it has many terrible things in it, like lead*". She

also reported that her boss called her ignorant and said it was very important to get vaccinated. "*I came so I wouldn't lose my job. She* [the boss] *got angry, said my video was fake news*". We then asked about the video. She showed us.

It was a YouTube video from the channel "Fogo Vivo" [Live Fire] (http://bit.ly/2WdYKvY). Published on April 27, 2017, the video sought to debunk a report by TV Globo's *Jornal Nacional*[g]. Using simple editing techniques, the original images were overlaid with white letters on a black background, exhibiting phrases such as "This guy told the whole truth! However, the media is once again going to argue that vaccines are safe", which questioned the reported information. This text referred to Beppe Grillo, a comedian, blogger and Italian politician, leader of the country's anti-vaccine movement. In the news report, Grillo declares that vaccines have side effects that are not recognized by health institutions and their representatives. While watching the video with us, Mrs. Maria commented: "they deceive us".

The channel on which the video was published, Fogo Vivo, has a religious background. It deals with various themes from a Christian neopentecostal perspective. In the description of the video, the following stands out:

> Reflect about the content of this video, have love for yourself, the greater defense we have against diseases comes from the Lord Jesus Christ, by having trust in Him one does not need to resort to the means of modern medicine that are actually full of uncertainties, remedies that heal but also that kill if there are reactions. BE CAREFUL!

Mrs. Maria's speech is indicative of two phenomena that are worth emphasizing: 1) transformations in the forms of information production and the crisis of journalism; 2) religiosity as a fundamental mediation in the process of trust. Regarding the first, the entire conversation made evident the value of personal reporting and a personal relationship with whoever forwards the information. She remarked a few times that she had received the video from her daughter. She also commented that other friends and colleagues had shared the video. We asked for her thoughts on information provided by the Ministry of Health or newspapers. She told us it was not a good idea to trust a corrupt government. She also reiterated that Rede Globo[h] was complicit with the government: "*you can't believe it*".

The second aspect is articulated to the first. She is evangelical and a member of the Universal Church (Igreja Universal). When it comes to television, she told us she preferred to watch Record[5] – a television station owned by Bishop Macedo, also the leader of the church – because it was in better alignment with her faith. Here, once again, the post-truth characteristics of health information

[g] *Jornal Nacional* is the main Brazilian newscast, shown on primetime television from Monday to Saturday (T. N.).

[h] Rede Globo is the biggest Brazilian open commercial television network (watched daily by over 200 million people) and the second largest TV network worldwide, after second to ABC – American Broadcast Company (T. N).

[5] Record TV is the second biggest open commercial Brazilian television network (and the 28th globally), owned by the Bishop Edir Macedo – founder and leader of the Universal Church of the Kingdom of God (T. N.)

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consumption become evident. Even though an overwhelming amount of circulating information regarded the yellow fever vaccine as the main form of disease prevention – instead of a health risk – she chose to believe in an alternative discourse. This preference was indicative not only of mistrust regarding the vaccine, but also of a deep trust in a specific belief system:

> Post-truth discourse [usually] equates to a complete suspension of reference to objective facts and verifications, replaced by opinions made credible only on the basis of repetition, without source confirmation. However, I believe the phenomenon is more complex, involving a calculated combination of correct observations, plausible interpretations and reliable sources in a mixture that is, on the whole, absolutely false and self-affirmative. (Dunker, 2017, p. 38)

The sharing of information through online social networks obeys a desire borne out of conviction: "to always strive to take advantage of others in the incessant search for the establishment of a single truth or at least a higher truth" (Seixas, 2019, p. 136). However, as we have already discussed, for Paul Ricoeur (1976), belief does not only refer to a high subjective degree of conviction, but also to an internal commitment and, so to speak, to an investment of one's whole being in what or whom one believes (p. 173). In other words, when someone believes in something – the veracity of a strong idea, for example – the person's investment in their own intention is much more important than their investment in the idea itself. This is true, for instance, when we have a personal belief in a complex ethical standard. This goes far beyond cold reasoning: it implies values loaded with emotions, a world view, an identity. Such a belief, which is not only rational, makes sense on a profound level. Ricoeur's definition of belief (1976), cited above, has a second fundamental element: belief is always accompanied by a feeling of conviction. Conviction-bound ideas are true and real to the believers and their groups. After all, "belief is about propositions or statements that are considered true. It is, undoubtedly this 'to keep for the real,' which constitutes at the same time the core of the notion of a belief's meaning and the reason for its plurivocity" (Fontaine, 2003, p. 7).

In the context of post-truth, there would be, therefore, an increasingly broad "overcoming of the 'truth of the facts' by the establishment of conviction as an argument's validity criterion" (Seixas, 2019, p. 133). This link between conviction and belief in contemporaneity is marked by familiarity. Increasingly it seems that "only what is familiar, in other words, what has identity to my values and, consequently, what incites common passions among equals, will be susceptible to belief" (Seixas, 2019, p. 136). A conviction's familiar character

is fully coupled to the "identification between the subject, his/her values and passions with the arguments that reveal themselves familiar in terms of their positioning" (Seixas, 2019, p. 133).

Moreover, the lack of trust in science in favor of religious conviction originates in mistrust regarding anything that is foreign, strange or exogenous to a certain belief system that gives us anchoring and security. As Ricoeur (2006) states, the passions of identity are deeply rooted (p. 272). In this sense, we are often led to question the reasons for trusting others but not ourselves, our group, our own people. Hence, in the interviews it was fairly common for people to state that they believed more in their family, church ministers or friends than in science. It seems to us that trust has been fundamental in the process of production, circulation and consumption of fake news. These discourses, although questionable for certain social groups, are repeatedly validated by others, based on cultural mediations that inform their individual and collective experiences.

The interviews were conducted in 2017, still in the midst of a great surge of wild yellow fever cases in the country – many leading to fatalities. Brazil, based on the WHO's recommendation, began to prescribe the single-dose vaccine with lifetime protection. Until then, the Ministry of Health had made it clear that the vaccine only lasted ten years, after which a new dose needed to be taken. On October 17, we spoke with Agenor, a 22-year-old who came to the Catete Health Center to get vaccinated. He was planning to travel to Australia and needed the international yellow fever vaccination certificate. He said he had never taken the vaccine before. A young woman, Carla, 18 years old, was in the same situation, and told us that her mother said that she had been vaccinated, but since they were unable to find the certificate, she had decided to get vaccinated again. Both believed that vaccines were good and offered protection, although they did not trust the government, since politicians were "*all corrupt*", as the young man summarized.

No more than one fieldwork trip was necessary to ascertain that WhatsApp was our interlocutors' main source of information. Facebook followed closely. Older and poorer users mainly used Facebook. Those who identified themselves as middle or upper class tended to use WhatsApp strictly for conversations: although they also reported exchanging information there, Facebook was said to allow easier access to news "*inside the bubble*", as Agenor put it. Carla added: "*I prefer Facebook to get news, info about events, parties. It's easier, it's all there, according to our interests, beliefs. Sometimes things that have nothing to do with us come up, but there are options to mute or stop following. There's a lot of spam on WhatsApp*".

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A few days later, on November 8, still in the Catete Health Center, we talked to two young residents of the Tavares Bastos favela, in the same neighborhood. Julia, 18, and Amanda, 19, were accompanied by their mother, Susana, 34. They were there to get vaccinated and were aware of the vaccine's importance. Their concern about the news on yellow fever deaths made them want to protect themselves. Susana also said she would ask her daughters to get other vaccines. Her trust was closely associated with fear: "*Many old diseases are coming back. We need to take care of ourselves. I'm afraid of vaccines, there's a lot of bad stuff about them, but I saw a video by Drauzio Varela*[i] *which convinced me. I shared it in the family group*", Amanda said. One of the daughters went on to say she could not remember the last time she had been vaccinated. The mother answered: "*You were a baby*".

Many of the people we spoke to claimed to only have been vaccinated in childhoold, or to have never vaccinated their children after childhood. Some were forced to do so by the vaccination requirement for enrollment in public schools, others remembered campaigns for child vaccination. There were those who thought the flu vaccine was for "*killing the elderly*" and those who, like Susana, believed it was necessary to get children vaccinated only "*when they are little*".

Mrs. Jurema, 56 years old, another interviewee from the health center in Rocinha and a resident of the neighborhood, said that there were not enough campaigns for adulthood vaccination. "*Another problem is also that there are a lot of campaigns on television. I use WhatsApp more and more*". We then asked what it was like for her to get information via the app. She commented that she liked to receive the news from acquaintances: "*people I know and trust ... My niece is a nursing technician at HCE* [Hospital Central do Exército]. *She always corrects me in the* [family] *group. I don't always believe in her, but she is more up-to-date than I am*". Mrs. Jurema completed elementary school. She was unable to continue her studies because she "*needed to help at home*".

When asked if she read all the texts she received and whether she verified the information using other websites, she said, "*Look, in general, I see only what appears in the app, I don't click, since it uses a lot of data*". At this point we gained insight on a very important issue for the dissemination and consumption of information in the current context: internet access and data-package restrictions. Mrs. Jurema's was concerned with excessive data usage causing her to "*have to pay more*". When she wants to read something, she asks someone in the group to copy and paste the content.

Listening to our conversation, the construction worker Antonio, 28 years old, said he often used the WhatsApp service provided by the *Extra* newspaper[6]. "*I solve all my questions there. These days there's a lot of fake news*". Mrs. Jurema

then asked him: "But do they answer?". Antonio replied emphatically: "*Yes! They always respond. The problem is that they often answer with links. It is not always possible to open them*".

In the Brazilian context, it is important to consider that only 15.3% of the population has college degrees and only 64.7% has internet access ("PNAD Contínua", 2018). Social inequalities in the process of information interpretation should be taken into account. Although we have so far highlighted the issue of trust, other issues such as income inequality, formal and permanent education, access to diversified cultural goods and the digital barriers posed by telecommunications companies' data packages are also structuring dimensions of information consumption processes.

WhatsApp – which the last government survey (2015) had already earmarked as a potential communication tool with an unknown capillarity – has been playing a central role in information consumption and online communication. Usage-wise, it ranked second among digital social networks (58%) and messaging (58%), only behind Facebook[7].

Information consumption via cell phones coupled with online social networks has definitively shaped journalistic production. The dissemination of information – fake news or otherwise – in WhatsApp has reached immeasurable levels: Twitter, Instagram or Facebook 'likes' cannot be used to determine information diffusion with any degree of accuracy, and it is also not possible to monitor what is being shared in a private messaging app. Thus, journalistic production has been attempting to make inroads into these new forms of content difusion. This was pioneered by the popular newspaper *Extra*, owned by Grupo Globo de Comunicação (Globo Communication Group), which created a newsroom to produce news from materials – photos, videos, text and audio – sent by its readers. *Extra* has been in the vanguard of the journalistic use of this platform: at some point, it had two full-time reporters to capture, check and edit the information received from 5,000 readers-reporters throughout the city ("WhatsApp do Extra", 2014).

With the success of the newspaper's strategy, several other vehicles started reproducing the formula, and audience-mediated production became a fever. However, throughout the last year, *Extra*'s production by way of WhatsApp has had a precipitous fall, as readers migrated to television or radio as recipients of choice for their productions, since these vehicles can act as pathways towards greater visibility, allowing these amateur reporters to obtain projection in their respective groups. Currently, whatever fact, event or development is taking place is certain to be reported by numerous anonymous reporters, encouraged by professional news vehicles that then select and display this amateur production.

[7] More information can be found at: Secretaria de Comunicação Social (2014).

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This type of production has become more accessible to the reader, who needs only film a video or record an audio clip and send it to the station, the latter being responsible for writing the bulk of the information. As broadcasters are unable to cover the entire territory, reader productions end up being used as material in news development, often constituting the main source of information disseminated by the media. This scenario of absorption of unqualified labor for the production of news, intensified by the use of WhatsApp as a platform, has led to numerous critical reflections on the current stage of journalistic production in the country. It certainly corroborates the assumption that fact-checking, one of the main stages of the journalistic workflow, is increasingly becoming an afterthought, reinforcing a process of degradation constituted by the tripod of increasing professional precariousness, entry of unqualified labor, and mass use of informal sources. To say the least, this points to the burying of any possibility of investigative, interpretative, critic journalism by the mainstream media in Brazil.

In this sense, fact-checking services were launched to try to reestablish journalistic authority, adopting new practices while advancing traditional newsroom standards. Journalistic companies have created numerous initiatives to combat misinformation and improve media literacy, with fact-checking capabilities, collaborative quality controls, greater transparency and so on. Even the much-criticized social media platforms, seen as fundamentally responsible for the spread of misinformation, are becoming more aware of the problem and attempting to combat it in various ways, including raising audience awareness.

Currently, journalists' perception of their societal roles is informed by a context in which the legitimacy of factual accounts of current events is increasingly questioned. Mrs. Maria, for example, chose to believe a YouTube video over *Jornal Nacional.* Journalists (and institutions) have become increasingly concerned about the diminishing trust of the public in media organizations. As a result, they are urged to adopt stricter fact-checking techniques, their allegedly crucial role as information watchdogs disputed by other groups and individuals.

## FINAL CONSIDERATIONS

The fake news phenomenon is indicative of a contemporary process where formally produced news are undermined and replaced by the formation of new belief dynamics. These developments attest to a novel chapter in the old struggle for standards of truth. The conventional notions of news and truth journalistic practice could previously rely on are no longer widely recognized and legitimized, causing a destabilization in the hierarchical order of informational authority. Recently, the term *fake news* has been used primarily to refer to content that

features a conventional news format, but is deliberately intended to misinform. On the one hand, this phenomenon is certainly symptomatic of the collapse of the old news order and the chaos of contemporary communication (Waisbord, 2018); on the other, we did observe that some people still understand journalism as a form of information checking, but also use it as a way of gaining legitimacy in blogs, videos, reports and news on websites that are independent from large communication companies. In this scenario of discursive competition, it seems to us that journalism seeks to configure itself as an expert system, evaluating the veracity and quality of information and offering online services, especially via WhatsApp. We understand that, in some way, journalism is seeking to assert its authority by fostering a communicative dimension that is both normative and interactive. Since restoring the hierarchical order of the past seems impossible, it seeks to assert itself as a fact-checking agency.

Understood as information divorced from reality, fake news is hardly a novelty. Fraudulent information in the form of news has a longer history than news as a conscious representation of real events (Sodré, 2019). However, what seems to be fundamental to the public is the "maintenance of the flame of their conviction" (Seixas, 2019, p. 134). In this sense, the sharing of a "common language", of a "set of values, the grammar that organizes my syntax" (Seixas, 2019, p. 134) seems more important than an extraneous process of scientifically validated rational elaboration. Our observations seem to confirm that people are more willing to believe in what they already believe: the familiar, not the strange.

A belief implies a *presumption* of truth. Conviction relies on what one believes *in*, rather than on *believing that* (a specific assertion is true). While *believing that* corresponds to opinion as an orientation, a particular stance in the world*, to *believe in* is akin to trusting a testimony, the word of a witness; one's belief *in* such a witness is necessarily mediated by what is already known and believed.

The contemporary regime of truth includes forms of knowledge that are radically heterogeneous (science, governance, religion, politics, common sense) and rely on different modes in the production of power relationships. Moreover, as we have seen, these forms of power/knowledge are not separated, but increasingly imbricated, juxtaposed and hybridized. The interlocutors' speeches allowed us to observe that the resurgence of trust in religion, especially in the form of neopentecostalism, is related to a process of passage from the modern to the contemporary. Thus, with changes in the relations between reason and faith, comes a transition from a communication culture (in which foundation, reality, truth and meaning are structuring values) to an information culture (in which efficacy, virtuality, simulacrum and consumption assume centrality) (D'Amaral, 2004). Religion, as such, seems to place itself as an anchor of security and

protection in the face of myriad paradigms, conflicting information, truths and lies in permanent profusion.

Based on an ethnographic research, this article aimed to articulate concepts useful in the understanding of the phenomenon of vaccine hesitancy, which is gaining dramatic proportions not only in peripheral countries, such as Brazil, but also in countries of the Northern Hemisphere, such as the United States. This research is certainly in an initial phase of systematization, since we still need to consider other aspects, from the refusal of scientific information in favor of the familiar (information provided by friends, the religious community and the family itself) to the social inequalities involved in this process (social class, educational level, as well as social, political and economic development, the exercise of citizenship and social participation). Other dimensions could be mentioned, and the analysis of case studies such as the one we have brought forward here does allow for the inclusion of new thematic axes regarding the understanding of vaccine hesitancy in contemporary Brazil. As we have seen, this is not merely a question of truth or falsehood, but a matter of belief and conviction in the context of a constantly changing and risk-bound society. **M**

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