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## **Systemic Tools Integration to Fight Fake News From a Posthumanist Perspective**

**Integração de ferramentas  
sistêmicas para combater  
fake news a partir de uma  
perspectiva pós-humanista**

**Integración de Herramientas  
Sistémicas para Combatir las  
Noticias Falsas desde una  
Perspectiva Posthumanista**

## ABSTRACT

A theoretical-practical framework is proposed for an understanding of fake news stories from an interdisciplinary, ecological and posthumanist perspective. Key elements of three systemic approaches to meaning are integrated that allow for a symmetrical account of human and non-human agencies in fake news as a phenomenon. The findings are descriptions of: fake news as systemic material-semiotic activity that emerges from algorithmic capture of human emotion and social-discursive degrees of freedom; how pre-conscious/emotional triggers can be hacked by informational patterns in fake news pieces; an "ontological syntax" of truthiness and falseness across institutional agencies in fake-news activity.

**Keywords:** fake news; posthumanism, ecosocial semiotics; cybernetics; ontology;

## RESUMO

Propõe-se um referencial teórico-prático para a compreensão das notícias falsas a partir de uma perspectiva interdisciplinar, ecológica e pós-humanista. Elementos-chave de três abordagens sistêmicas do significado são integrados, permitindo uma descrição simétrica de agências humanas e não humanas nas notícias falsas como um fenômeno. As descobertas são descrições de: notícias falsas como atividade material-semiótica sistêmica que emerge da captura algorítmica da emoção humana e graus de liberdade sociodiscursivos; como gatilhos pré-conscientes/emocionais podem ser hackeados por padrões informativos em notícias falsas; uma "sintaxe ontológica" de veracidade e falsidade entre agências institucionais na atividade de notícias falsas.

**Palavras-chave:** notícias falsas; pós-humanismo, semiótica ecosocial; cibernética; ontologia;

## RESUMEN

Se propone un marco teórico-práctico para la comprensión de las noticias falsas desde una perspectiva interdisciplinaria, ecológica y posthumanista. Se integran elementos clave de tres enfoques sistémicos del significado que permiten una descripción simétrica de las agencias humanas y no humanas en las noticias falsas como fenómeno. Los hallazgos son descripciones de: noticias falsas como actividad material-semiótica sistémica que surge de la captura algorítmica de la emoción humana y los grados de libertad social-discursivos; cómo los desencadenantes pre-conscientes/emocionales pueden ser jaqueados por patrones informativos en noticias falsas; una "sintaxis ontológica" de veracidad y falsedad a través de agencias institucionales en la actividad de noticias falsas.

**Palabras-clave:** noticias falsas; posthumanismo; semiótica ecosocial; cibernética; ontología

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## **Introduction**

Fake news stories have had more than trivial effects in such vital areas or civic life as national and regional elections, public health, social cohesion and financial markets worldwide. In Brazil, particularly, fake news have become so central in the political scenery that a congressional committee was called to investigate a notorious fake news operation known as the 'office of hate', allegedly led by President Jair Bolsonaro's family and close associates (MARI, 2019). This comes as a follow up on the 2018 elections, when massive dispatches of fake news sponsored anonymously by right-wing wealthy Brazilian entrepreneurs gave Bolsonaro's campaign a Herculean boost (AVELAR, 2019). The threat to democracy posed by fake news is, of course, not a Brazilian privilege. Nevertheless, fighting fake news has become a case of do or die for Brazilian democracy for a few reasons.

While the number of social media users has stabilized in developed economies, in Brazil, as in other so-called emergent economies, the number of smartphone owners and social media users is still on the rise, particularly among younger users (POUSHTER et al., 2018). This means the number of citizens expected to be exposed to fake news in the following years, and elections, is increasing, and so is the size of the

problem. Also, fake news sharing, in Brazil, is a systematic method of ultra-right digital populism (CESARINO, 2019) used to create animosity and justify threats of a crackdown on civil society (WATTS, 2019). Since one should not expect the Brazilian State to use government intelligence and security services to contain the systematic spread of fake news, researching and tackling the problem demands more creative strategies.

As well as other contemporary forms of systematic deception and disinformation through social media, the practice of producing and distributing fake news stories (henceforth FNS) dates back to Circa 44 BC, in Rome, when a smear campaign was launched against Mark Anthony through slogans etched onto coins (POSETTI; MATTHEWS, 2018). Current FNS's form and methods, however, are qualitatively, and quantitatively, unique. To begin with, present-day FNS come bundled in cyber warfare, boosted by powerful computational technologies and spread instantly through networked computerized communications on social media, a kind of massive media which allows consumers to also produce and distribute media content with no editorial supervision. The business of social media, in turn, is a poorly regulated operation that applies data science and artificial intelligence techniques oriented by principles of neuromarketing and psychological profiling. These techniques make the business of fake news incomparably more efficient than coins dispensed at random, pamphlets dropped out of a Piper Cub or even Orson Welles' radiophonic War of the Worlds. Therefore, a more sophisticated approach to research and restrain FNS is needed.

By 'sophisticated,' more precisely, I mean approaches based on three assumptions. First, that the

problem be conceived from a systemic-ecological perspective. Second, that the human and non-human agencies involved be treated symmetrically (LATOURE, 1993), allowing for a posthumanist view of human-plus-non-human cognition and embodiment (HAYLES, 2006, 2014). Finally, that an ontological stance be adopted which goes beyond interposing naïve realism (simple fact checking) to false assertions. Such ontological strategy is needed because, along with internet rumours and hoaxes, conspiracy theories, fringe theories, identity theft and other instances of post-truth ideology, FNS do not operate on hiding the truth, but on making truthfulness or falsity irrelevant (BUFACCHI, 2020). In other words, the strategy must assume that, like fake news, factual news, and (scientific) facts themselves can not be discovered: they have to be made (LATOURE, 1999). Consequently, the ethical difference between factual and fake news goes beyond alleged neutrality or transparency; it lies on the moral use of modes of veridiction (LATOURE, 2013).

These requirements considered, this paper proposes an initial exploration of a framework for researching and fighting fake news based on key elements of three systemic-ecological accounts of meaning-making, cognition and existence: Jay Lemke's (2000b, 2000a) ecosocial semiotics, Gregory Bateson's (BATESON, 1967, 1971, 1979) cybernetic explanations of mind and Bruno Latour's (LATOURE, 2013) research into modes of existence. Even though I will not explore the philosophy of posthumanism in depth, it is fair to say this work has a posthumanist inspiration because it will construe FNS as meaning-making trajectories across material, metaphysical-probabilistic and biopsychosocial agents defined by their performances, rather than by their ontological status as human or non-human.

This is obviously too ambitious a proposal to be developed in depth in one single paper by one individual proponent. Therefore, I am counting on the reader's resilience of both a certain density in the argument and a certain superficiality in my appropriation of the concepts from the theories invoked. My goal is simply to entice an exploratory dialogue among the theories, from a particular perspective, in the hope that it is found useful and pushed forward collectively.

### **Fake news: content, form and context**

Fake news stories represent but one of the various forms of blindness to evidence, mistrust of authority, and appeal to irrational arguments rooted in specific fears and anxieties of the users/readers which are captured by social media data analytics. To understand how FNS work, we must make a few important distinctions. First, we should distinguish between fake news and lies since those who lie are necessarily, even if ironically, honouring the truth while those who release FNS mean "to undermine the theoretical infrastructure that makes it possible to have a conversation about the truth", as Bufacchi (2020, p.3) puts it. FNS are not, Bufacchi explains, hiding the truth, but exploring gaps in the resources for collective interpretation that allow for a society to make sense of itself and act coherently.

Factual news stories, in turn, should not be seen as immediate expressions of truths, even though they are expected not to lie. This is because factual news is always written from a certain angle, in a certain language, by journalists that work for certain news companies that have certain advertisers and certain

adversaries or are loyal, or disloyal, to certain governments. All of these elements of mediation act in the process of turning the thread of experience of material events into lines in textual accounts, no matter how unbiased the process is meant to be. The benefit of factual news for democracy is, therefore, not the same as that of science, which seeks to produce the real by sustaining the stability of the inscriptions held together. The benefit factual news provide is to bridge the very gaps in the collective meaning-making infrastructure of democracy that FNS fill with toxic waste.

In practice, verisimilitude of content is not as important as likelihood of formal design in FNS, for while their content is geared towards impact, their formal design is meant to signal reliability. Impact is important because it prompts an immediate urge in the reader to forward the piece, before any rational considerations occur. That is why FNS usually elicit pre-existing social tension caused by sectarianism, racial, cultural and gender hate.

As regards their linguistic content, FNS tend to pack the main claim into the title, which is longer and uses more proper nouns and verb phrases than in official news. The text body, on the contrary, is less informative and has plenty of action verbs. It is also often incoherent with the headline and written in non-standard style, containing mistakes, misprints and mistranslations (KUMAR; SHAH, 2018). The neglect of the text body contrasts sharply with the careful visual design not only of the piece, but of the whole intertextual system of blogs, posts, videos and tweets built around and hyperlinked to the message, a design that matches the visual style of reliable on-line news sources.

Not only visually, but quantitatively, FNS producers try to create an impression of reliability, urgency and acceptance. They do so by deploying bot armies that substantially and constantly inflate the number of likes, shares and comments on in the piece's intertextual system (KUMAR; SHAH, 2018). Likewise, FNS's producers employ hashtagging and metatagging tactics to Trojan-horse the piece into social-networks and 'fool' recommendation and search algorithms to take them to a broader group of readers. This strategy works out because such algorithms measure the relevance of contents as redundancy, not importance, let alone truthfulness, falseness or moral imperatives, for deontic morality is hardly computable (BUZATO, 2016).

Regardless of how they gain initial momentum or make themselves credible and relevant for human and non-human interpreters, FNS spread more quickly in their early stages and, as they move across social media, they create a 'disinformation ecosystem' (KUMAR; SHAH, 2018). FNS are usually short-lived, although they might return from time to time, because, at some point, fact-checking agencies, official media or rational/critical readers will blow the whistle. However, refutations fed back into the social media ecology are of little effectiveness for two reasons: first, the denial will hardly ever penetrate the circuits where the fake story gained initial momentum, because the algorithms will not find enough redundancy of forwarding in those networks for the rebuttal pieces; second, shame and fear of losing social capital, plus diminished self-assurance, will make it difficult for a forwarder to take it back.

To sum it up, the meaning-making trajectory of FNS is made of trade-offs and transforms among content (referential meaning), formal or quantitative



features (information patterns), and material activity (emotional impact, impulsive reactions) performed by and between human and non-human cognitive and material activity. Next, I will suggest implications of this description of FNS systems we can derive from ecosocial semiotics, second order cybernetics and modes of existence theory.

### **An ecosocial perspective of FNS**

Ecosocial semiotics (LEMKE, 2000b, a) integrates elements from urban studies, semiotics and physics as an attempt to apply dynamical open systems theory to semiotics and semiotics to dynamical open systems. The idea was to explain how meanings are made out of (human, artefactual and natural) material interactions across time-space scales, from synapses to vocalizations, phonemes, utterances, texts, genres, registers, discourses, dialects and languages. Trajectories of meaning-making in the theory are conceived by analogy with developmental trajectories of organisms and environments in biology/ecology (SALTHER, 2008, 2009) and through principles of ecosocial theory in epidemiology, an approach for tracing diseases in communities to broader historical, sociological, economic and political factors, both geographically and historically (KRIEGER, 2001).

The three-level model of ecosocial semiotics asserts that each level of organization in a complex system embodies information (in the mathematical sense of possibilities of organization) needed to construct the system. The process starts with the initial emergence of any (sub)system that has enough autonomy or closure from what then counted as its environment – for instance, a subspecies of an animal species that

emerged on an island isolated from the continent by a geological event, a dialect emerging in a prison system or a specific variety of hate speech emerging in dark web forums where a collective of resentful, anti-social extremists spend most of their time together.

Each new level is not simply added to the top or bottom of the system hierarchy, though: it emerges between higher levels and lower levels, as a subspecies is below a species and above its individuals, a dialect below a language and above single speech events, a hate-speech digital militia above the level disorganized mobs occasionally shattering shop windows in violent street demonstrations and below the level of connected right-wing extremist think tanks and regimes. In the case of fake news systems, the level below is constituted of the exchanges of novelties, expectations and opinions about current states of affairs that enable us to sustain the weak social ties we need to cooperate and compete in our extended communities, exchanges that involve the use of our imagination and wishes, as well as our need to gossip, an evolutionary trait of the human species (HARARI, 2015).

The level above that where FNS thrive, according to the ecosocial model, must be comprised of more highly and broadly organized activity that captures the degrees of freedom available in the levels below and harnesses them to organize its own organic/environmental processes. I argue computerized social media plays that role.

Lemke (LEMKE, 1993) points out that the meaning made from, or the response to, a material interaction (say, reading a piece of fake news) by an interpretive system (say a human or group of human readers, a piece of software or a networked computational

system) is a function of not only the material properties of the reader (embodied humans, disembodied cybernetic agents), the object, but also of other phenomena in the environment and the history of the interpretive system itself, that is, the syntagmatic and paradigmatic contexts of the meaning making process. These interpretations must be learned or trained. By the same token, the system of interpretation constituted through these learned or coded rules must persist and extend far enough to be able to use the lower-scale interactions of its multiple constituents. Consequently, for a piece of fake news to reach a certain life span and reach a specific audience, it needs to use the paradigmatic (what kind of user is interested in this kind of text) and syntagmatic (what user it came from and to what user should it go) contexts provided by social media search and recommendation algorithms.

The power of a fake news story depends, therefore, not only on the ingenuity of those who create it or the lack of wit of those who read it, but on a network of heterogeneous agents and rules that work above the scale of the maker and the reader. FNS that get shared cross a gigantic cybernetic interpretive system in pretty much the same way a bad or distorted idea crosses a human mind. Therefore, individual writers and readers alone are not accountable for the damage FNS cause, but the whole interpretive system that produces and sustains it, which includes algorithms and robots who are delegates of other (human) agencies (LATOURE, 1992). Together these elements constitute a set of integrated mental processes that we can call a mind.

## **Fake news systems and the cybernetic mind**

Gegory Bateson was a leading scholar of so-called second-order Cybernetics (HAYLES, 1999), a version of cybernetics focused on sociocultural phenomena. Originally, Cybernetics was a branch of mathematics that dealt with problems of control and information in self-regulating mechanical systems, even though some first-wave cyberneticians thought it directly applicable to improving society by tightening the chains of control among human beings (WIENER, 1954). Bateson (1971), on the other hand, made it a point that cyberneticians include themselves in the systems they observed (hence a second order), taking responsibility for the social impact of the systems they devised and built.

Cybernetic explanations start with the possibilities of some course of action to occur and then look for the restraints that rule out some of those possibilities, making other courses of action predictable (BATESON, 1967). If we want to understand why a clearly implausible piece of fake is quickly and massively forwarded by readers, in good faith, we should think about what restrictors were (not) at play in the circuit where such readers are chained. We have seen that FNS use succinct textual content that impacts readers emotionally, but we must ask what restrictors make it likely for it to be believed and forwarded immediately and how they get to interfere in the meaning-making trajectory in the reader as interpretive system.

In cybernetics, the meaning of a message is information, in the mathematical, probabilistic sense, so it is not about reference, but about redundancy of signals that introduce predictability. In other words, making meaning, in cybernetics, is confirming the model of the

universe where message-plus-referent are supposed to exist (BATESON, 1967, p. 32). That is as true to redundancy detected by piece of running software as it is for a human subject who finds redundancy between a fake story and her existing opinions and world views, a case (neuro)psychology qualifies as 'confirmation bias' (CASAD, 2020). Along with the design of the fake news message, which is redundant with the look and feel of news coming from credible sources, and the redundancy brought by the intertextual network of fake blogs, tweets and videos that are linked to FNS, not to mention the fact that they often come from someone in the reader's social network, confirmation biases turn redundancy into reliability at no material cost. But how do FNS find readers with the confirmation biases needed for the piece to 'stay alive'?

Bateson (BATESON, 1967) explains that establishing a correspondence between message and referent is quite simple when the information fits a slot that it is supposed to fit according a the model (say, that 'd' fits after 'e' in the end of verbs when the sentence is in the past tense). However, creating location demands a second order set of meta-data which, in turn, is achieved by statistical induction from a larger more complex pattern (sentences that use verbs) or pattern of patterns (text genres in that specific language). This is also how social media algorithms help FND fit the slot that readers confirmation biases suggest, creating a more self-assuring world for them. Not only what the reader herself has accessed, liked, commented on and shared in the past, but also the patterns of access, liking, commenting and sharing in her social network, plus semantic-thematic patterns that fit the piece of fake news in the users range of probable

interests, provide the complex metadata that feeds back into the sender through the fake news piece.

In cybernetics, “any on-going ensemble of events and objects which has the appropriate complexity of causal circuits and the appropriate energy relations will surely show mental characteristics”, but “no part of such an internally interactive system can have unilateral control over the remainder or over any other part” since all parts must adapt their own present actions to the effects of their own past actions (BATESON, 1971, p. 4). For Bateson, consequently, a mind is not immanent in a human self, but in the circuits that contain it within cybernetic systems across scales. A mind is immanent in the brain only if the brain is the system. It is immanent in the brain-plus-body, if that is the system, or immanent in the brain-plus-body-plus-environment system, if we chose to conceive the system at that scale (BATESON, 1971, p. 4). Thus, it is not that social media systems know what users think, but users thoughts must constantly pass through the (environ)mental consequences of their past actions in the system.

In the various fake news circuits conceived as a system, the mind that interprets a piece of fake news is the whole circuitry of logic/computational (software), semiotic and material (hardware) and emotionally charged, socially bonded humans (the wetware, i.e. human beings considered solely with respect to their logical, informational and computational capabilities and vulnerabilities).

If FNS circulate long and far enough to cause damage, it is because the social media-plus-users system as mind finds ways to exchange transforms of physical power, cultural meaning and informational redundancy among its components. Every mind pro-

cess, however, requires collateral energy (BATESON, 1971) available in the environment that is turned into labour, by virtue of some constraint that separates noise from pattern. In a FNS system, besides food and electricity, energy boosts come from sudden, energy charged body processes called basic emotions such as fear, wrath and disgust, which emerge below the line of consciousness and organize a quick, instinctive material response: to share it as fast and as far as possible.

The labour produced by negative emotions elicited by FNS is captured by recommendation algorithms as metadata to determine the relevance of that piece of content for the user. The meaning of relevance, in this case, can only be informational redundancy, so the more frantically and repeatedly someone likes or forwards a certain kind of content, the more relevant it becomes, no matter the cultural meanings or matter-of-factness in it. Recommendations and search relevance become biased reassurance of the user's biases.

To sum up, Bateson's account of the cybernetic mind allows us to question the notion that FNS are simply interpersonal human misdeeds, and to consider the systematic release and distribution of FNS as a sort of intoxication of the social media mind. It is toxic because on integrating cultural meanings, material processes and informational patterns across people, software and machines, FNS turn human emotions into irrational material action, human self and social expression into illusory self-assurance and reprisal of poor past choices, and attachment into relevance. Telling this troubled mind the truth is too rudimentary a treatment. We need to investigate its modes of veridiction.

## The modes of existence in (fake) news stories

Modes of existence are the object of a collective research project led by Bruno Latour (LATOURE, 2013). The project is an expansion of his Actor-Network Theory of the construction of scientific facts and technological artifacts (LATOURE, 2003, 2005) aimed at reconciling the ontologies of science, technology, economy, law, religion, economy and moral philosophy in order to overcome sectarianism, revisionism and negationism in the interdisciplinary endeavours against world problems such as climate change.

Modes of existence refer to consolidated regimes of veridiction in those fields/institutions, which were created, paradoxically, in quest of universality. Latour argues that 'real world' is not a universal notion, but one particular mode of existence – that of science – among others. Even though all modes claim universality, they all must sustain themselves by 'passing through' other modes, thus producing 'ontological crossings'.

The key to finding and describing the modes is mapping institutional/disciplinary ontologies onto the immanence of language and its works (namely semiotics, pragmatics). Therefore, the beings produced by science, such as equations, x-rays, laws of nature etc. (which Latour calls 'beings of reference', henceforth [REF]<sup>1</sup>) can be considered on the same ontological

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<sup>1</sup> I will adopt the notation used by Latour (2013) himself, which goes like this: each mode, in itself, is indicated as an abbreviation in ALL CAPS inside square brackets "[MODE]". Crossings of one mode through another are indicated by the abbreviation of the mode's name in lower case, with a dot indicating the crossing with the next abbreviation. The order of the elements in the combo makes a difference, since the previous mode is interpreted through the next mode's means of veridiction and not vice-versa. Latour's investigation is open for as many modes as can be found by collective investigations of the project's collaborators, but, here, I am limiting my analysis to the modes already encoded in Latour (2013).



plane where one finds things/objects ('beings of reproduction', henceforth [REP]), technological artifacts ('beings of technology', henceforth [TEC]), laws, warrants, pleas and other 'beings of Justice' (henceforth [JUS]), narratives and works of art ('beings of fiction', henceforth [FIC]), or saints, spirits and other 'beings of religion' (henceforth [REL]), among other modes.

Much more than a silly bet on radical relativism, the modes are a tool for researchers to describe how truth or falseness is produced in particular institutions, disciplines and cultural practices ethnographically, that is, by tracing their particular kinds of action or operation in the practices of veridiction. Latour's inquiry can help us fight FNS, I argue, by helping us trace the articulation of the modes that make a piece of fake news pass as factual news and, consequently, facilitating the kind of interdisciplinary and cross-institutional work needed to minimize the problem or, at least, deploy some better forms of 'damage control'.

It is impossible to outline all the fifteen plus modes that have been identified by Latour's team so far, but a brief look at the basic ones should suffice here, beginning with the three metamodes (modes that articulate the other modes): 'network' (henceforth, [NET]), 'preposition' (henceforth [PRE]) and 'double-click' (henceforth [DC]).

[NET] is the ontological primitive that connects a series of heterogeneous undefined elements to produce a new being (classically a fact or machine, but it applies to any 'quasi-object'). [PRE] is a mode that defines one mode as the interpretive key to another, and allows us to identify when one truth value is judged using instrumentation from another, as in 'faith in science' ([REL] 'preposition' [REF]) or 'scientific proof

of a miracle' ([REF] 'preposition' [REL]). The third basic mode, 'double-click' [DC], inverts [NET] by skipping the material labour needed to achieve knowledge by producing and articulating reference taken from the thread of experience. [DC] is the mode of statistical forecasts, bar codes, algorithms, search engines etc. It is very popular because it saves labour and provides quick self-assurance; however, it is only reliable as long as the material-semiotic work that produced the knowledge it claims to access still holds.

Beyond these three metamodes, there are three 'regular' modes directly implicated in FNS, I argue: 'fiction' [FIC], 'technology' [TEC] and 'reference' [REF]. [FIC] is the mode that vibrates between forms and materials, promoting a suspension of disbelief if properly placed by [PRE] before other modes, for instance, when we enjoy a fairy tale or a horror movie. 'Technology' ([TEC]) sets up associations of agencies to redistribute resistances and overcome 'obstacles'. The beings of [TEC] become 'delegates' who perform actions on behalf of other beings faithfully, establishing chains of control. [REF] or 'reference' is, finally, the mode of scientific knowledge, which gives mediated access to the real by networking inscriptions, calculations, quotations, graphs, equations etc. and observing which entities remain constant across transformations in the process. Unlike [DC], [REF] is firmly rooted in experience and trials of strength.

Before we move on, it is important to explain that, as they pass through one another, the modes produce 'crossings', which, inspired in Latour's (2013) metalanguage, I will express using lowercase versions of the modes' names with a dot in between them. So, for example, the equations on the blackboard of a teen

movie about time travel are beings of science [REF] 'prepositioned' by the interpretive key of fiction [FIC], thus a beings of (fic.ref); conversely, the molecular model of DNA that Watson and Crick tinkered with toy balls and sticks is a being of fiction interpreted through the key of science, (ref.fic), that is.

Latour's team have not identified journalism as a mode of existence so far, nor have they classified factual news or fake news, but the definitions provided here allow us to infer that a factual news story is a crossing of at least three modes: it is a referential account of some experience ([REF]) subject to the mediations of imagination and narratology ([FIC]) bound to control mechanisms of production and powerful means of distribution that overcome temporal and spatial obstacles ([TEC]).

It is possible that [DC] crosses news veridiction in cases where the story, or warning, or novelty, or deviant event – which is what distinguishes news from plain facts – is retrieved from Twitter or found on Google Maps; but let us rule out this possibility for a moment, so as not to overcomplicate the argument. A piece of (real) news can be conceived, in sum, as a being of (ref.fic.tec) which [PRE] separates from the beings of science, fiction, double-click and technology themselves by pre-positioning the mode 'journalism', which Latour's team have not described yet. Theoretically, in (serious) journalism, 'beings of politics' (henceforth, [POL]) should join the assemble only in cases where it would come after [REF], as in (ref.pol.fic.tec) – meaning a piece of news about politics, but not politics as the interpretive key to journalism.

As a mode of existence, 'politics' is not about parties, speeches or ballots only, but about constantly

circumscribing and regrouping other beings by means of a continued reprise. The circle thus created should allow the beings gathered to see themselves as a/an 'we/us'. In [POL]'s mode of veridiction, Latour (2013, p. 134) explains, lying "does not mean refusing to talk straight, it means interrupting the movement of envelopment, suspending its reprise, no longer being able to obtain continuity." The beings introduced in the world by [POL] are, thus, fragile, like a piece of fake news: they depend on the continued reprise of the circle of entities it gathers.

We can now begin to define a fake news story using the same method used with factual news by simply using [PRE] to change the positions of 'reference', 'fiction' and 'politics', so that instead of (ref. pol.fic.tec) = (real) news, we have (pol.fic.ref.tec) = fake news. That is not enough, though, to understand how FNS work, for we know their believers need to be given a false interpretive key, a job [PRE] can not do, because it can not tell the truth or lie, but only define which mode should be the key to interpreting the next. Based on our discussion about the fake news system as a cybernetic mind, we can easily identify [DC] as the culprit, for it is informational redundancy and confirmation biases that make the reader use the wrong key, and thus, believe that fiction is reference or politics is journalism.

The trick used by fake news makers with the help of [DC] has a secondary ontological effect: it turns readers from citizens (beings of [POL]) into wetware, beings of [TEC], and creates a huge machine in order to overcome what fake news system leaders consider an obstacle: rational, open-ended, fact-based debate in the public sphere geared towards a sense of

'we/us' rather than a sense of 'us/them'. Not only is fake news an oxymoron, then, but fake news systems are machines aimed at making reality oxymoronic and politics a perpetual lie, in Latour's (2013) definition.

Research on modes of existence is an ongoing process and it does not focus journalism specifically, but this brief outlook should suffice to argue that, together with ecosocial semiotics and cybernetic explanations it usefully supports interdisciplinary collaboration towards combating FNS in particular and post-truth in general. The idea that FNS are effective because they explore the ontological arrogance of specific institutions/disciplines and use their modes of veridiction to fool one another should facilitate a sense of collective responsibility for the problem and make it harder for corporations, legislators and users themselves to weasel out by blaming it on one another. Likewise, the theory encourages disciplines/institutions to respect, learn and borrow one another's tools for producing and judging veridiction to stop FNS, just like fake news producers borrow and ensemble the modes for evil.

## **Conclusion**

This paper proposed an initial assessment of the explanatory power of three systemic-ecologic theories brought together for research and intervention on fake news as a systemic problem. A posthumanist perspective of social and cognitive agency was adopted, so that not only the interdisciplinary nature of the problem be highlighted, but also an alternative understanding of the agencies and accountabilities involved can be pursued, as strict ontological assumptions about humans and non-humans that hinder lateral thinking about the problem are kept at bay.

There are no permanent conclusions to take from this work, due to its exploratory and tentative nature, but we can highlight at least one consequence derived from each of the approaches discussed. From the ecosocial semiotics, it is implied that, despite the claim, by social media companies, that they are not content suppliers, but only provide a platform for content distributed by users, social media business models are clearly co-responsible for the emergence of fake news systems. From the notion of social media as a cybernetic mind, we can derive that each piece of fake news is a circuit of human and non-human agencies, some of which are below, and others beyond, an individual human reader's consciousness, and, therefore, fact-checking addresses but a very small part of the problem. Finally, the way fake news stories manipulate modes of veridiction suggests that if post truth is not about lies, but about making truthfulness or falseness irrelevant, to conceive of fake news as simply the opposite of facts is a much less powerful strategy than it would be to investigate what modes of veridiction matter for those who believe and share them. Finally, looking at human and non-human agencies symmetrically makes clear that fake news systems are turning fake news readers into devices for creating human divides.

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