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Research Article

When did post-truth begin? From climate change denial to war-mongering nationalism

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This article argues that the media structure created by the framework of climate denial in the 2000s was foundational in the subsequent systematic use and diffusion of fake news and 'post-truth', culminating around the Copenhagen agreement in 2009. The article therefore places the negation of climate change at the roots of the persisting appeal of fake news.

The shell-shocking discovery that fake news travels much further, and faster, than real news (Vosoughi, Roy et al. 2018) has thus deeper social, political, economic, health, medical, and life-changing implications than everything else that has been said about these fields taken together: All societies are based on trust and the circulation of reliable information. If systematic misinformation prevails, societies tend to break down at various levels, from the individual to the national and the supranational.

On the other hand, few have speculated on how the phenomenon was shaped by nationalist ideology, even though it was clearly identified as originating from far-right agendas.

I therefore argue that <u>two variables</u> must be jointly investigated to explain the appearance of nebulous post-truth politics: the denial of climate change and state-led nationalism, the former supported by the latter.

Thus, the origin of post-truth needs to be connected to the campaign of misinformation initiated with climate change denial around the Copenhagen accord — and, earlier in the USA.

This approach brings us nearer to finding a series of solutions for rebuilding public trust: if trust in science is not promptly re-established, then the very basis of modern societies can easily collapse bringing down with them everyone else.

The discovery by MIT scholars that fake news travels much further than real news on social media should have changed the way we think about information — and democracy itself [1]. There should be a before, and an after, the findings. It confirms that the notion of '*post-truth*' [1][2][3][4] has tangible dimensions and real consequences and is not the continuation of political 'business as usual'. More specifically, the study found that 'falsehood diffused significantly farther, faster, deeper, and more broadly than the truth in all categories.' [1]. While limiting its investigation to Twitter accounts, it found that false news were was "70% more likely to be re-tweeted" than genuine and accurate news. Should we consider this a temporary lull or a long-lasting trend?

Moreover, false claims tend to travel six times faster, and wider, than true facts and scientifically verifiable information [5]. In addition, while the top 1 percent of false news reached up to 100,000 people, each item of verifiable news rarely reached over 1,000 readers. Furthermore, Twitter falsities were 70 percent more likely to be re-tweeted than truths [1]. The effect of the overwhelming dominance of fake news over verifiable facts points to an incomparable amplification of obliviousness and manipulation. Most of this occurs, and it should be added on the heels of the destruction of public broadcasting by neoliberal (de)regulation [6]. Some scholars openly speak of a *post truth era* [2], while others focus on the *age of post truth politics* [4]. Which are the broader implications? Although the notion of 'post-truth' has been criticised as a 'failed concept' [7], similar findings have been confirmed by other research, particularly concerning the danger of spreading deceitful information on the climate crisis and other environmental problems [8]. With the spread of distorted information, societies become inhabited by ignoramuses unable to perform the simplest intellectual task or, as in Mike Judge's science fiction dystopian comedy *Idiocracy* (2006), having lost all contact with nature to the point of forgetting that they can drink water, since this is wholly replaced by a 'popular' soft drink. One could barely argue that it is a road travelled before. Walter Lippmann [9] described society as a beast to be tamed or ready to befell to the 'herd instinct' [9]. Like Plato, he saw the public as a great beast "floundering in the chaos of local opinions" [10][11][12]. Yet, the impact of pre-modern or early modern ignorance pallidly resembles the widespread, long-term consequence of erroneous, iniquitous information in a world assailed by multiple crises. Although fake news may not be 'new' in the sense of historical novelty, a new digital information framework characterised by the prevalence of circumstantially circulated, yet deliberately mistaken, information does change the picture. While the notion of 'post-truth' should not be discarded altogether, another concept, such as the notion of

'nebulous politics' [13], can be used in order to connect more clearly fake news to the second article's main variable, <u>nationalism</u>. This form of semi-hidden, ubiquitous, 'irresponsible' nationalism [14] has become the hallmark of the digital age.

Knowledge and information refer to two distinct processes: knowledge refers to something more comprehensive, ranging from the wisdom accumulated by personal experience to the capacity to accumulate and elaborate a great deal of information. But information itself can also include misinformation, propaganda, denial, fake data, and the deliberate distortion of reality – as massively experienced online. Contemporary examples include *Cambridge Analytica* data mining [15][16][17][18][19] [20][21][22][23], Facebook manipulation [24], cyber-spying [25][26][27], rigged elections [28][29][30][31], climate change denial [32][33][34][35][36][37] and the frontal attack on science [38][39][40][41][42][43][44]: these have all brought into question the internet's capacity to serve as a tool for the dissemination of knowledge. Thus, knowledge should be distinguished from mere information and rather related to political power: knowledge is not power, but it is empowering; lies can be powerful, but are disempowering. Scientific knowledge, in particular, is supposed to travel faster than before, but, at the same time, new findings struggle to transcend the small circles in which they originate and develop. This has immediate consequences for the notion of trust.

Post-truth or post-*trust*?

Trust is at the foundation of every social system throughout human history, not excluding the animal world [45]. As its consequences pervade the very practice and experience of democracy, a question arises: while fake news become more widespread, can its recipients, or those who convey them and are complicit in their diffusion, be either individually or collectively trusted? In particular, can they be entrusted with the means of choosing government? Should we attend to the choices of people who are systematically fed with misinformation? How can these people's judgement, however distorted, still orientate, or even become a basis of, effective government? In this context, d*emocracy* is at stake. Once the *demos* is hijacked by improper, mistaken, iniquitous, manipulated, wilfully dishonest information, the suffix -*cracy* becomes detached from the prefix *demos.*

Nevertheless, we are still confronted with sectors of public opinion, and even scholars, who deny the novelty of such a dramatic change in global communication, political life and the very essence of our societies. The idea that the notion of *'post-truth'* is sometimes sternly resisted on the ground that,

since the times of primeval tam-tams, gossip and rumours, news has *'always'* been distorted or even fabricated in order to maintain hegemony and power. The concept of *'post-truth'*is often aligned with other empty '*post-*' concepts like post-modernism and similar [1], and its semantic elasticity and suppleness can easily cause perplexity [3].

It should be added that disinformation has been present in various guises in mainstream discourse, spreading further with the privatization of national media and the global policy of media deregulation since the 1980s [46]. Yet, the new data confirm that the trend has become more widespread, threatening, haphazard and unpredictable than previous notions of communication control, 'manufacturing consent' and even censorship [47]. We are, in short, faced with a new grey area of mass communication characterised by a lack of national and international regulations in which both extreme nationalism and denial of science can prosper.

When, and where, did this new turn of global misinformation, begin? Various perspectives can be used to reply to this broad question.

This article identifies a particular inflection point that may signal the more recent origins of 'post-truth' politics in 2008-2009 converging around home politics in the USA [48] and, subsequently, global politics surrounding the failed Copenhagen accord (2009). In both cases, the goal was to stop on its track any national or global policy which could have halted climate change. It was thus part of a broader set of corporate political choices that have been identified as the "war on climate" [49]. This became connected in a multifaced way with post-truth as it "challenges political responses to any topic face where the objective truths are being undermined" [50]. The article connects this with the message, rather than the medium: the focus is on what is, or can be, conveyed by the very notion of *post-truth*, rather than how it is conveyed (via social media, the internet, fake accounts, right-wing groups, Russian cyber-attacks, and so on). It locates its origins in the disinformation and denial campaigns that surfaced when particularly important decisions had to be taken to halt the *climate breakdown* on its track, namely the discussion preceding and accompanying the failed Copenhagen Accord (18 December 2009) signed at the United Nations Framework Convention on Climate Change, yet not legally binding [51][52][53][54].

Early steering of post-truth: the 2009 Copenhagen Summit

The Copenhagen Summit, 7-18 December 2009 (*aka* 15th session of the Conference of Parties -COP-15 **or** United Nations Climate Change Conference) has been perhaps one of the most dismal failures in the long and winding road to avoid climate change catastrophe. A broad and coordinated disinformation campaign emerged before and during the summit, resulting in a weak, empty, not legally binding agreement to avoid effective measures to reduce global CO_2 emissions [51][55][56][57][58] Among the main global powers, only the European Union committed itself to implementing binding legislation.

Is there evidence affirming that a new campaign of disinformation was initiated around 2009? As is known, documents leaked by Edward Snowden revealed that, through the National Security Agency (NSA), the US government had eavesdropped on delegates, both prior to and during the Copenhagen meeting [59][60][61][62]. By using subterfuge to protect the interests of gigantic fossil fuel corporations, the Republican party-dominated/ conservatively leaning and business-friendly US Department of Defense heavily damaged the residual trust which was, and remains, essential to any multilateral agreement, especially if the destiny of humanity so much depends on its depth, openness, and completeness -that is, those features which make, generally, mutual trust.

The indignation and stir caused by secretive US activities reached the four corners of the world, a feeling of global deception clearly expressed by President of Bolivia Evo Morales: "The meeting has failed. It's unfortunate for the planet. The fault is with the lack of political will by a small group of countries led by the US" [63][64]. This happened in a context in which entire countries and their 'civil society organizations were disenfranchised' [65], although poor planning was also to blame. In the wake of this global deception, an international movement to fight climate injustice took shape and consolidated [66].

The internet disinformation campaign did not emerge in a void. The neoconservative syndicated columnists reached a broad swath of the American public peaking their propaganda activities around Copenhagen. They played a central role in amplifying the denial machine. According to one analysis, 'Copenhagen received as much attention in 13 months (December 2009 and all of 2010) as the Kyoto Protocol did over the entire 48-month span' [67]. the bulk of the work was carried by neoconservative columnists and their outlets, who openly used nationalism by poising as defenders of American national sovereignty [67] – indeed the very idea of participating in international treaties was systematically painted as an infringement on the sovereignty of the United States. These voices were a

deliberate attempt to hinder President Obama's presence in Copenhagen, but the neoconservative media also used them 'as an opportunity to challenge the legitimacy of climate science' [67]. Samuel Johnson's (1709-84) famous aphorism that 'patriotism is the last refuge of a scoundrel', becomes a palpable fact in climate negotiations.

Nationalism, boundaries and the territoriality trap: Revival of an eighteenth century *Weltanschauung*

The above examples tie in with the core argument of this article: that the all-pervasiveness of business pressures was concealed as a defence of so-called 'national interests' and nationalism' was used for these purposes. Yet, nationalism wasn't there for anyone to see. Rather, its subterranean presence was hardly visible or questionable. In more academic terms, the territorial trap of 'banal nationalism' was at play behind the scenes, acting as a legitimating framework for global deception. For those who are unfamiliar with the term, Michael Billig [68] identified the practice and ideology of 'banal nationalism' as a set of attitudes and behaviours publicly assumed by citizens in their daily practices, experiences and whereabouts through the subconscious or semi-conscious adoption of patriotic discourses and nationalist narratives. National 'belonging' remains thus the subtext that organises encounters, conversations and fantasies, both at the national and international levels. Thus, international meetings cannot be wholly exempted from the intrusion of national preferentialism, bias and favouritism insofar as nationalism remains the dominant ideology of the modern age [69][70] [71][72][73][74]. The problem lies in nationalism's strong, but ambiguous, relationship with modernity, at a moment when this is increasingly questioned as a *Weltanschauung* suitable for the vital challenges of the Anthropocene.

The modern age

We are still paying the consequences of Rene Descartes' idea that animals are mindless automata lacking in sentience. Overcoming the Cartesian paradigm has therefore become a key challenge for human and non-human societies. The idea that the two are sharply divided needs to be tackled ahead in order to grant the survival of both of them [75][76]. We therefore enter into new uncharted territory, well beyond *modernism* as an ideology and as a set of bureaucratic and scientific practices. What we are envisaging is not the vacuous, empty, ambiguous notion of post-modernity, but something truly and

all-comprehensively radical. Since Cartesianism, with its sharp distinction between humankind and nature, has led us to the edge of precipice, it has failed to fulfil its own predictions, ambitions and its entire *raison d'être*. Of course, this in itself may not seem to be a radical departure, as a such model has been under attack since its very existence, so that we are not the first to challenge it. Only, this time the challenge no longer belongs to the usual philosophical disquisitions or controversies amongst philosophers, but to a radical reshuffling of social, human and all sciences. It doesn't belong to the same revolt against Cartesianism as the Romantic Movement, existentialism and other literary or artistic trends. It belongs to the very science that has made possible the scientific revolution, since it is from scientific knowledge that we now can advance dire predictions about the very future of life on earth [70].

But why is this new attitude so urgently required? The reason is simply that Cartesianism has experienced a powerful, albeit unconscious and undeclared, rebirth due to the shattering revolution brought about by new technologies, most importantly artificial intelligence (AI) [77]. For some sections of the population, most dangerously for political and business elites, all contemporary problems seem to be a resolvable solution through some new technology. This dogmatic belief easily percolates throughout the general population every time new software, electronic tools or other new technology makes it into the daily life of ordinary citizens. The results can be confusing.

For instance, the dramatic impact of fossil fuels through the massive usage of cars and other private vehicles is superficially addressed. The emphasis on electric vehicles (EVs) may omit the economic, ecological and human costs of shifting production strategies and outputs. Many promote, and believe in the feasibility of, electric cars, but they usually postpone the crucial issue of mass consumerism as the key variable and cause of climate change and environmental degradation [78][79][80][81][82][83][84][85][86][87].

Donaldson and Kymlicka present a new vision in which animals are endowed with citizenship rights, and where the new polity is configured as a *Zoopolis* [88]. This means endowing animals with specific rights that have been withheld from them in *most cultures* and human societies, particularly in the modern age. In several religions, Animal Rights are fully endorsed as intimately linked with human existence. For instance, in Jainism "intentional non-violence" (*Ahiṃsā*) is practiced as the vow to cause no harm to all living beings. The agenda of a future Zoopolis focuses however on the relational obligations arising from the many ways in which animals relate to human societies and institutions [88]. Here the authors introduce an important distinction between *domesticated* and *wild*

animals, each with a specific relationship to political communities. *Domesticated* animals should be seen as 'full members of human-animal mixed communities, participating in the cooperative project of shared citizenship. *Wilderness* animals, by contrast, form their own sovereign communities entitled to protection against colonization, invasion, domination and other threats to self-determination' [88]. The second community is of particular importance for the scholar of the anthropogenic climate change since the latter is largely caused by human practices that enslave billions of animals to exploit them while destroying the environment. In fact, domestic or domesticated animals, including livestock, forcefully participate in the human-led process of environmental destruction.

As a broader global framework, Edward O. Wilson's famous *Half-Earth* proposes of reserving half of the planet's space for untouched wilderness [89][90][91][92]. The goal is not to expand human-centered notions of citizenship to animals, but 'to stave off the mass extinction of species, including our own'.

Nationalism and modernism

Nationalism plays a key role in this massive decline in the transmission of knowledge. The term 'nebulous nationalism' has been suggested to indicate a galaxy of ambiguously patriotic and/or xenophobic movements gravitating around US exceptionalism [13].

Is it possible to speculate that nationalism will continue to remain, perform and be experienced in the same way as it has in the previous 200 years? How much has nationalism changed, how much is it changing, and how much will it change in the future? No answer is possible without first considering the new scenario that presumes a radical change in the conception of nations and nationalism beginning with the twenty-first century.

The antiquated notion of 'national interests' seems to be particularly resistant to compromise. It is often presented as a prerogative of specific nation-states or specific bureaucratic domains within their layers of government. This presupposes that state actors are bound to justify their choices and policies on the basis of a vaguely perceived idea of common, but nation-specific, interests. However, it is far from clear what this means in times of emergency such as those clearly highlighted by climate scientists. Some governments face a difficult choice between canonical western-style economic development and the broader well-being of present and future generations. These governments are tempted to shortcut by restricting the notion of national interests to more manageable issues of linear economic growth and 'business as usual''. Paradoxically, the very survival of the nation is excluded

from the purview of national interests. Nations may well disintegrate and disappear, but nationalism looks destined to hold on. For most nationalists, citizens are easily manipulable in so far as they remain stuck on continuous economic growth, but become dispensable once economic growth is only feasible at the expense of human survival. Thus, governments may use nationalism as a shortcut to staying aloof from international commitments while obscuring citizens by withholding the increasingly hard-to-accept data confirming the cataclysmic advance of climate change. The 'territoriality trap' lingers on as climate change negotiators are called to represent territorially bounded constituencies at a time when all human-made frontiers are being erased by climate change.

Initially, the campaign of disinformation launched could find its route through the mass media and all their available feeds, fora, platforms, or open discussion threads. For instance, *The Guardian* became a privileged target of the first internet bots being inundated by outbreaks of sceptical posts by anonymous users repeating over and over the same messages of orchestrated denial with barely different words [93].

As in the case of post-truth, the falsification of facts went hand in hand with a demolition of public trust in international institutions, as the extent of infiltration of corporate interests was being revealed. Trust, the essential component of every local or global agreement, indeed the very fabric of society, was being systematically sabotaged by a government clearly associated with the fossil fuel industry: "The UN climate talks are supposed to be about building *trust* – that's been under threat for years because of the US backward position on climate action – these revelations will only crack that trust further," said Meena Raman of Third World Network. "Fighting climate change is a global struggle, and these revelations" clearly showed a US government more focused on crassly protecting a few vested interests rather than their own people's welfare (Brandon Wu of ActionAid) [94][95].

For Bill McKibben, founder of 350.org, during the Copenhagen Accord the American government, jointly with the fossil fuel industry, actively scorned the latest scientific research findings [96][97][98] [99][100][101][102][103][104][105] Bill McKibben's article for *Rolling Stone*, 'Global warming's terrifying new math' [99], has become one of the most cited pieces written by an NGO activist. that divest to include a shift in the social and political discourse [103]. ...The road from Copenhagen: the experts' views [106]

Why did climate change provide the battleground where falsity and truth converged and contrasted each other?

Precursors of post-truth: mass media as the usual suspects

'Post truth', as we know, seems to be intrinsically related to online communication [107]. But was it? did it really begin on the Internet?

For some authors, post-truth and fake news signal a new phase in the history of journalism and the media. Sufficient evidence has been collected about the existence of a 'Fifth Estate comprised of bloggers, columnists and fake-news organizations worked to relocate mainstream journalism back to within its professional boundaries' [108].

We should remember how such denial was first aired and took shape within the mainstream media, from CNN o Fox News, and even the BBC, where scientists were called to openly discuss their scientific findings as if they were personal opinions and had to face-confront impromptu 'experts', media mavericks, unprofessional journalists, TV anchor-men, newscasters, and 'reality' stars --active emotional manipulators and producers of vacuous controversies/distorted discussions as a device to bemuse and confuse public opinion (about the reality of climate change). Indeed, as it has been repeatedly observed, the media 's mockery of democracy through a hypocritical pretence of 'equidistance' masked as fair play mixed with relativism offered equal time allocation to scientists and 'sceptics' in primetime view. This resulted in questioning scientific evidence through rhetorical attacks and other manipulation strategies. Television and radio airtime bestowed the spokespersons for the fossil fuel corporations with an unprecedented launching pad to delete public access to knowledge of science, a key component of what we normally identify as truth.

Recent media history research based on computer-assisted content analysis and qualitative analysis of popular news headlines on the election of the 2016 U.S. presidential election, revealed a 'close intermedia agenda-setting relationship with fact-based media in covering Trump', so that 'rather than playing a unique agenda-setting role in this emerging media landscape, fake news websites added some noise to an already sensationalized news environment' [109]. This confirms previous research that 'fake news has an intricately entwined relationship with online partisan media, both responding and setting its issue agenda' [110]. Let's not forget that Trump was the executive producer of an NBC 'reality' television show, *The Apprentice* (2003 to 2015) in which he could detect and measure popular reactions to his interventions as a leader: contestants had to compete for a one-year job with the Trump Company and he enjoyed shouting the losers: "You're fired!" [111] the show working 'as a stirring advertisement for Wall Street as a meritocracy' [112]. So, before Trump became a

Twitter troll, he was part of a long series of male working-class buffoons appearing on television sitcoms while creating and re-creating/ turning 'politics into spectacle' [113]. Also, through the persisting power of radio's conservative talk show, Donald Trump rose as a popular star thanks to the 'the defiant reassertion of white male authority' a-la Rush Limbaugh [114]. Indeed, the rise of Trumpism would be unthinkable and cannot be understood without considering three long decades of TV presence in a long string of gross, exhibitionist and grotesque, *Idiocracy*-style television and film cameos since the 1980s, including *Sex and the City* and *The Little Rascals* [115]. That is when Ronald Reagan's deregulation made the explosion and omnipresence of commercial television unescapable. Since NBC was essential in launching Trump, it shouldn't be forgotten that, until very recently, it also consistently hosted climate science deniers [116], until by the end of 2018 it decided to 'fire' them [117]. As for the radio and TV, the crucial role played by conservative American journalism in spreading false information through innuendos, half-truths and 'scepticism' is very well documented [118][119]. Particularly central in the climate change denial machine have been the conservative syndicated columnists with their "echo chambers" reaching a broad segment of the American public thus amplifying the denial machine [67].**(1)**

Recent research has recollected that the oil industry was well aware of the threat and had monitored the increase/expansion of climate change for many years [120].

The unlikely attempt to seize the Internet

While the early relativistic discourses of climate denial were first aired on TV, they reached wider audiences via the internet as part of an even more coordinated campaign of fake news.

The Observer and *The Guardian* were the first to identify in 2015 the (ab)use of millions of Facebook users' data, after insolvency proceedings of Cambridge Analytica's revealed the consultancy firm's role in advocating nationalist propaganda in the run-up to Brexit as previously did with climate change denial [23][121][122][123][124][125]. (See the first piece in the Guardian in December 2016).

The latter revealed the central role played by the US hedge fund billionaire Robert Mercer, near to Putin [126] and subsequently Trump's single biggest donor [125], as one of the funders of the denial think-tank Heartland Institute[127][128]; Public perceptions of global climate change is strongly influenced by media distortions of scientific knowledge [129]. Pitiable US press reports on *climate thresholds* might be understood not only as acts of self-censorship, but as "false negatives", test

results that erroneously show that a specific situation or quality is absent [129]. The relationship between climate change and media coverage across the world has been well documented [130]. Since the public understanding of the climate emergency heavily relies on faulty or absent media coverage, the media plays a crucial role in the way we can tackle it [130].

The goal was, and still is, to seize control of the news through the new technologies in 'what is maybe the ultimate rich man's plaything – the disruption of the mainstream media' [131]. But it is very hard to control the news on the Internet, if not impossible. The Internet is not centralized and it is hardly centralisable, as it is made up of many interconnected autonomous nodes and points. The strategy of global control, therefore, no longer achieves the monopoly of news by attempting to emulate the Murdoch empire and its likes [132]. The goal is rather to systematically disseminate false and faulty information at critical junctures in time and points, such as elections, referenda and crucial international meetings. Data mining algorithms able to access Facebook profiles and other social networks [133] became increasingly essential to the ensconced, but thriving, global capitalist elite. In other words, while the public services and media private media tycoons like Murdoch were pandering to climate change denial, the Internet was being subject to a massive intrusion targeting specific portions of the population in election times. The funding of the Media Research Center, focusing on climate change denial, was a keystone step in this direction [134]. Steve Bannon was Mercier's close associate, as well as Trump's campaign manager and later chief strategist [135][136][137].

Climate change denial

Climate change denial was, and still is, a deliberate campaign carried out by mega-corporations, big businesses and lobbyists linked to the fossil fuel and automotive industry [138]. It began in the USA possibly in the 1980s under Ronald Reagan's administration and peaked at the Copenhagen meeting. Several corporations had invested vast amounts of money to disseminate contusion, fake news and hoaxes about the extent of climate change and, in particular, their role in its causes [128]. They did so in a variety of ways, including paying cash for improvised experts and Internet hackers.

The former acted openly in the mass media spotlight, the latter acted anonymously and secretively by hacking servers or using- hosting fake accounts, sending email bombs and creating fake profiles.

The immediate result was an unprecedented disorientation and confusion among the broader public about the scientific evidence of climate change. Consequently, the border between merely fabricated

opinion and information supported by the burden of proof was dissolved: both were treated similarly as respectably 'informed' opinions, while biased news was broadcasted to larger and larger audiences, often in the guise of neutral debates between equally valid 'parts'.

In other words, as I argue, the practice of post truth largely originated in the corporate fight to deny climate change. Indeed, fake news and climate change denial cannot be disjointed and scholarly attempts to locate the origins of post-truth should also investigate the politics, psychology, and media manufacturing of climate change denial.

The so-called climate 'debate' was initiated in the late 1990s early 2000s under the nominal principle of democracy and 'free speech' [119][127][134]. It was soon transformed into a ritual opposition between distinctly incompatible opinions and beliefs, both 'worth' of equal consideration. Lies and truth, falsehood and verifiability became equally acceptable as two sides of the same coin. The 'debate' assumed the deceptive and misleading spoils of 'controversy', turning into a contrast between incompatible viewpoints, followed then by confrontation, and subsequently a conflict between sharply polarised interests and fields, moulded into a public 'us' and public 'them' clash. 'Othering' began to become habitual, but this time the various 'others' targeted by the media represented public knowledge, professional journalism and scientific research. All of them were associated with a partisan 'side' of the so-called public 'debate'.

In the process, the term 'sceptic' was soon hijacked. It no longer referred to scientific questioning of established truth, but to denial of scientific evidence. Fabricators of fake news became 'climate sceptics'. Most importantly, this semantic shift occurred in the footsteps of what had previously occurred to the equally shadowy notion of *'Eurosceptics'*: behind the veil of a pretentiously balanced detachment, *Euroscepticism* hides the trappings of a quite extreme variety of nationalism alternating between empire-building and xenophobia --and even racism. So, the previously neutral term 'sceptic' was one of the first casualties in the war on truth.

The deliberate destruction, minimising, weakening, massaging, relativisation and hiding of scientific data became a kind of battle of ideas to confuse public opinion under the banner of democracy.

Could one insist that this is something that has shown up since time immemorial? This apparently important question fades into irrelevancy once one considers how rapidly public opinion has been swung off by fake news, often via Facebook accounts. Early warnings from critical media, such as *The Guardian*, had alerted about the existence of an 'army of trolls' presiding highly manipulated

information centres in Russia [139], from where professional hackers moved to influence public opinion and swing elections in favour of fabricated political leaders, as in the case of Brazil [140][141] [142][143][144][145][146][147][148]. The capital success of this 'war on truth' was the election of Trump as US President [149][150][151]. The Russian weaponization of information has been identified as the "menace of unreality" [152].

While algorithms *per se* can spread both true and false news 'at the same rate', we are confronted with a clear instance of human data manipulation. Thus 'humans, not robots, are more likely responsible for the dramatic spread of false news' [1].

As we know, the effects of fake news have led to wide-ranging consequences in human relations, such as the increase in ethno-racial attacks. Facebook has been at the centre of criticism for its role in spreading national hatred [153]. The links between Facebook usage and attacks on refugees "begin with the algorithm that determines each user's newsfeed, built around a core mission: to promote content that will maximize user engagement" [154]. But algorithms are built and conceived by humans and these agents of mass hatred are ultimately responsible for the consequences.

Human intervention is anyway more directly linked to atrocities than algorithms: The methods used in anti-refugee posts include tapping into negative emotivity causing anger, instilling fear, highlighting us-vs-them dichotomies, and most of all, scoring the maximum number of 'likes' [155] [156][157][158]. In climate change denial, it is mostly the fear of social change which is associated with the abjuration of science.

Influencers play a crucial role in prescribing the newsfeeds' content by convincing or switching over the more apathetic or indifferent of their viewers. After being purchased by Facebook, WhatsApp has been systematically used to engender rumours to the point of initiating, shaping and mobilising lynching mobs [159]: Indian science historian S. Irfan Habib stated: "Today you don't need to refer to history books. You write your own history on WhatsApp". This form of self-taught 'WhatsApp scholarship' is simultaneously posing a serious challenge to historians in nationally-embedded policies such as India and Brazil [154][160][161][162][163][164][165]. The spread of hatred and venom via Facebook has been so pervasive that it lead to at least one instance of genocide [166].

All these examples can be classified as forms of ultra-nationalism. The centrality of nationalism resides precisely in its underlying and readily mobilizable emotional foundations, in the predominance of non-rational inclinations —while non-rational does not necessarily mean

irrational, as Walker Connor pointed out [167][168]. Emotionally triggered responses do not need verification or validation by objective external agencies, such as experts and the academia. This emotional leaning places nationalism in direct opposition with science, which is based on testable and identifiable evidence that scrupulously avoids emotionally-laden generalisations. In an age characterised by the preponderance of fake news, it is useful to remember that more banal and simpler forms of nationalism have often been prone to distort reality by stressing relativism. But are emotions a sufficient explanation for the rapid diffusion of fake news and post-truth? Agency needs to be placed at the centre of research and has indeed been identified within a series of prominent economic actors.

The corporate nationalism-industrialism nexus

An increasing number of scholars has linked the climate denial campaigns of the fossil fuels industry to the antecedent pro-smoke canvasses of the tobacco industry, while forms of mutual cooperation between the two have been well documented [128][134]. In fact, through powerful political contacts, the tobacco industry 'attempted to dismantle public health safeguards …while magnifying scientific uncertainty and doubting consensus on basic health issues' [169]. The executives, consultants and CEOs of both the fossil fuels and the tobacco industry manufactured health controversies as their main products, even perhaps more important than cigarette or oil production itself. By systematically instilling doubt wherever possible, they could publicly slant, twist and skew scientific evidence, while gaining access to manufacturing media and influencing law-making and policy decisions. The result was the 'white murder' of people from all social classes, particularly lower classes and low-income sections in poorer countries, where legal health safeguards could more easily be bent [170]. The gap between poor and rich countries and poor and rich within the same country is widening [171]. For instance, in Bangladesh 'average male cigarette smokers spend more than twice as much on cigarettes as per capita expenditure on clothing, housing, health and education combined' and 'the poorest (household income of less than $24/month) are twice as likely to smoke as the wealthiest (household income of more than $118/month) [170]. Tobacco consumption statistics show a clear trend in this direction [171][172][173]. Yet, this has become a pervasive phenomenon in economies based on mass consumption. Similarly to tobacco manipulation, the denial of harmful corporate consequences has become systematic in the food industry, notably so for fast food [173][174]. These include the denial machine of the *sugar industry* [175], meat [176][177], wheat [178][179], pesticides and fertilizers [180], and a

host of chemical products and other corporate interests that are destroying the global food chain [181] [182][183][184].

Conclusion

The shell-shocking discovery that fake news travels much further and faster than real news has deeper social, political, economic, health, medical, and life-changing implications than everything else has been said about all these fields together. All societies are based on trust and on the circulation of reliable information. Where systematic misinformation prevails, societies can break down at various levels, from the individual to the national and the supranational. I have argued that two variables must be jointly investigated to explain the appearance of nebulous post-truth politics: climate change denial, supported by state-led nationalism. Thus, the origin of post truth needs to be connected to the campaign of misinformation initiated with climate change denial around the Copenhagen accord and, in the USA, earlier.

The structure created by the initial framework of climate denial was easily exploited by far-right nationalism, with the help of data mining firms and organisations whose identity has been largely post facto identified.

This approach brings us nearer to finding a series of solutions for rebuilding public trust: if trust in science is not promptly re-established, then the very basis of modern societies can collapse bringing down with them everyone else.

Footnotes

(1) This phenomenon has transcended US politics and news organizations in the UK are at the vanguard of 'climate feedback loops' narratives[129]

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Declarations