DISCOURSES OF PUBLIC HEALTH-RELATED CONTROVERSIES
A Comparison between the Conspiracist Video *Plandemic* and the VIOXX Medical Scandal

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Abstract – Conspiracy theories related to public health have been proliferating since the outbreak of the 2020 COVID-19 pandemic. The release of the viral *Plandemic* video interview, where former National Cancer Institute scientist Judy Mikovits alleges that US public health institutions have planned and profited from the pandemic, falls within this phenomenon. The appeal of *Plandemic* potentially draws on documented episodes of unethical behaviour on the part of scientists and health institutions, raising questions as to what analogies and differences may exist between the representation of public health conspiracy theories and that of actual cases of medical science misconduct. To address these questions, the present study applies a qualitative, discourse analytical approach to compare *Plandemic* with a 2005 PBS interview to FDA Associate Director of Drug Safety-turned-whistleblower David Graham, whose work was instrumental in uncovering serious and sometimes fatal health risks linked to the use of painkiller Vioxx, withdrawn in 2004. Drawing on the assumption that both Mikovits and Graham used language to promote their standpoints, which inevitably involves a degree of persuasion and ideology, the analysis focuses on linguistic and textual features that can be used to convey ideological messages – such as lexical choices, actor representation, recurring themes, coherence and evidentiality – identifying and comparing them across the two interviews. Results reveal some points in common, for instance in the representation of involved actors, as well as profound differences involving, for example, argumentation and evidentiality strategies. The concluding section thus elaborates on how these results raise further questions concerning how close and credible the two interviews may be perceived by recipients who do not engage in fact-checking.

Keywords: Health communication; Conspiracy Theories; Discourse analysis; Scientific Misconduct; COVID-19.

1. Introduction

Misinformation and disinformation have become a major challenge in our globalised and hyper-connected societies. Although the production of inaccurate and/or false information has always existed in human communication, the way people produce, share and consume information over the internet – and particularly through social media – has contributed to

creating an environment where large amounts of information, both accurate and inaccurate, spreads rapidly and widely. Verifying this information has thus become less and less feasible, favouring the circulation of unverified rumours, inaccurate messages and misleading claims, which can have serious societal consequences. For example, mis- and disinformation are thought to have played a role in the outcome of the 2016 Brexit referendum in the UK, as well as in the 2016 US presidential elections (Rose 2017). Conspiracy theories (henceforth CTs) constitute an important component of the misinformation and disinformation we are potentially exposed to through our online interactions. Douglas *et al.* define CTs as

> […] attempts to explain the ultimate causes of significant social and political events and circumstances with claims of secret plots by two or more powerful actors […] While often thought of as addressing governments, conspiracy theories could accuse any group perceived as powerful and malevolent (Douglas *et al.* 2019, p. 4).

As forms of unverified, misleading information, CTs can deeply affect the societies where they spread. They were, for instance, at the basis of the infamous Capitol Hill riot on 6th January 2021, where protesters alleged, among other things, that the outcome of the 2020 US Presidential elections had been massively rigged (Williamson 2021). CTs often underlie anti-vaccination beliefs too, which pose serious threats to public health (Lazić, Žeželj 2021). Yet, the impact of misinformation and disinformation on public health has become even more evident since the outbreak of the 2020 COVID-19 pandemic, still ongoing at the time of writing this paper. The pervasive scientific uncertainty around the disease and the novel coronavirus which causes it gave rise to several controversies about the nature of the emergency and the best ways to respond to it. Conspiracist accounts, challenging mainstream discourses produced by institutions and scientific communities, flourished in this context, contributing to the polarisation of ongoing debates and to the creation of powerful counter-discourses that had an impact on, among others, COVID vaccine hesitancy rates, as well as on the perceived gravity of the emergency and the consequent adoption of preventive behaviours (van der Linden et al. 2020, p. 2).

A glaring example of pandemic-related CTs is the *Plandemic* video, a 26-minute documentary/interview that centres around "the notion that the COVID-19 pandemic was planned or fraudulent" and draws on claims by "discredited former National Cancer Institute scientist Dr. Judy Mikovits" [1]

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[1] In 2006, Mikovits was research director at a US private research centre called Whittemore Peterson Institute (WPI). That year, she co-authored a paper in *Science* which was, however, retracted in 2011. In the same period, WPI filed suit against Mikovits for allegedly removing laboratory notebooks and keeping other proprietary information. She was later briefly arrested

(Kearney *et al.* 2020), cast as "a brave insider claiming to lay bare corporate power corrupting the US government" (McGreal 2020; more on the content of this interview is specified in Section 3). *Plandemic* was posted on several platforms including Facebook, YouTube and Vimeo on 4th May 2020 by its creator, Mikki Willis, a little-known film producer who also appears in the video as Mikovits's interviewer. Although YouTube and Facebook had removed the video by 5th May (Culliford 2020), new copies of it continued to be posted there and elsewhere online.[2] In the following week, it gathered more than eight million views and generated countless posts on social media, becoming a mainstream phenomenon with a large following (Frenkel *et al.* 2020).

In the video, Mikovits is represented as a heroic whistleblower, with scientific expertise and first-hand experience of the public health and drug industry systems, whose generalised corruption and criminal conduct she is courageously determined to expose and fight against. While it may be popular among conspiracy theorists, this type of narrative pattern is by no means exclusive to them. In fact, accounts of people calling out corruption, abuse or malpractice within powerful organisations do appear in the media (see, for example, Cohen 2013). The Me Too movement, for instance, went viral after a group of women dared to speak about sexual harassment episodes on the part of influential film producer Harvey Weinstein, who was then found guilty of rape and criminal sexual act (Donegan 2020). More closely related to public health is the story of Jeffrey Wigand, a US biochemist who in the 1990s disclosed damning information about health-damaging practices by tobacco company Brown & Williamson, which filed a lawsuit against him and wrongly discredited him (see Brenner 2004).[3] More in general, claims about corruption, abuse and malpractice in public health institutions cannot be completely dismissed. In the US, for example, the corruptive influence of the drug industry over public health and government institutions has played a key role in the rise of the opioid crisis (McGreal 2020). These and other episodes in more and less recent history testify to the actual existence of secret plots, corruption and criminal behaviours within systems with a large influence on the lives of many people.

Providing deeply rooted precedents in the public opinion, these episodes may contribute to making CTs easier to accept and believe.

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on felony charges apparently related to the WPI lawsuit, but all criminal charges were eventually dropped by prosecutors (Enserink, Cohen 2020).

[2] The video used in this analysis was retrieved from https://www.bitchute.com/video/TsbMDWB6R98v/ (27.09.2021).

[3] Wigand's story became internationally known when it was told in the 1999 movie *The Insider*. The dossier produced to discredit him was proven to be false (Levin, Weinstein 1999). The lawsuit against him was dismissed as a condition of a historic 1997 settlement whereby cigarette makers agreed to economically compensate 40 US states for smoking-related illnesses and radically change the way cigarettes are marketed in the US (Broder 1997).

Accordingly, it might be possible that products like *Plandemic*, conceived of as a challenge to mainstream discourses on health and science, somehow draw on the representations of episodes of actual corruption and/or whistleblowing as they are presented in the media. The possible elements of comparability between the languages used in these domains has been, to my knowledge, under-investigated so far. The primary aim of this exploratory study is thus to compare, from a discourse-analytical perspective, *Plandemic* to media coverage of a verified public health scandal. A specific case study, namely the Vioxx scandal, was chosen for this comparison, since it features both scientific misconduct and a whistleblower who exposed some wrongdoing by public health institutions and the drug industry. Vioxx (commercial name for rofecoxib) was an anti-inflammatory drug produced and marketed by pharmaceutical giant Merck & Co. It was heavily advertised in the late 1990s-early 2000s, and became extremely popular in the US, but its use turned out to increase the risk of dangerous cardiovascular events such as strokes or heart attacks. Merck removed Vioxx from the market in 2004 (Solomon 2009), but studies indicating its extremely dangerous side effects had emerged way before then (Horton 2004). In fact, the company had promoted studies containing skewed data to make the drug appear safe; moreover, leaked documents suggested that Merck executives had tried to prevent knowledge of the cardiovascular effects from going public. The US Food and Drug Administration (FDA), which had initially approved the drug and should have monitored its safety, was also guilty of a deplorable delay in taking action: prior to the withdrawal of Vioxx, epidemiologist David Graham, Associate Director of Drug Safety at the FDA, had conducted a study that showed the dangers connected to the drug. But when he warned of those risks, his senior managers within FDA tried to discredit and silence him, essentially protecting Merck (Wilson 2016). As the company's legal liability grew – it ended up facing almost 30,000 lawsuits over the concealment of the adverse effects of the drug (McGoey 2009) – two federal investigations were conducted to find out whether Merck had violated criminal laws (see PBS 2004), and the FDA's failure to prevent numerous cases of cardiovascular problems was denounced by Graham's Senate testimony in 2004.[4] Graham released an interview to the *NOW on PBS* TV program, which aired in January 2005[5], where he answered host David Brancaccio's questions on his experience as an FDA whistleblower.

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[4] A transcript of the testimony is available at https://www.finance.senate.gov/imo/media/doc/111804dgtest.pdf (27.09.2021).

[5] Although the video of the interview is not available online, a transcript of it was retrieved at https://web.archive.org/web/20160304210442/https://www.pbs.org/now/transcript/transcriptNOW101_full.html (27.09.2021). Moreover, short clips of the interview, broadcast within a subsequent *Now on PBS* report, can be seen as part of a video uploaded on YouTube – see https://www.youtube.com/watch?v=YdVAglcQcLI (27.09.2021).

In comparing discursive features characterising this interview (henceforth the Vioxx interview) to those found in *Plandemic*, neither the truthfulness of Graham's claims – supported by scientific evidence and US federal investigations – nor the groundlessness of Mikovits' claims – exposed by various debunking efforts (e.g., Enserink, Cohen 2020) are being questioned. Instead, the two interviews are considered and analysed as representations of the public health-related controversies they are part of. Against this backdrop, the following research questions were formulated:

- RQ1: how are the people identified as whistleblowers and their claims discursively constructed in the two interviews?
- RQ2: what similarities – if any – and differences – if any – can be identified between the above-described discursive practices in the two interviews?

In the following section, an overview of the background supporting the present analysis is provided, and the concepts and methods underlying it are outlined in Section 3. Section 4 features the results of the analysis, discussed in Section 5 to provide some preliminary answers to the RQs above; further research questions arising from the discussion are also suggested.

2. Background for the analysis

This study explores possible analogies and differences between the reporting of scientific misconduct and the communication of public health CTs, as they appear in popular media products. For the purposes of the study, this subject matter can be situated at the intersection of multiple themes and phenomena.

One is the public communication of controversial scientific knowledge, when a conflict is created or perceived between actors involved in the production and reception of this knowledge. In the case of Vioxx, the scientific knowledge produced about it by its manufacturer Merck was made to certify that the drug was safe, and this was further sanctioned by the FDA. Graham and his studies challenged that established knowledge, and were in turn criticised and discredited, until Graham's results, ultimately validated, emerged in the public sphere as well as in federal investigations. This prompted doubts about the scientific conduct and reliability of Merck as well as of the FDA. In *Plandemic*, Mikovits challenged established scientific knowledge regarding a series of medical science issues, including AIDS treatment, COVID-19 treatment and vaccine production. Her message spread virally online, possibly eliciting suspicion and utter distrust in public health institutions and personalities. In both cases, concern is raised over the reliability and authority of long-standing scientific institutions, and the whistleblower is shown questioning that authority through their own

expertise and knowledge. As disputes over controversial scientific knowledge unfold it is not only scientific concerns which are at stake; economic and political interests are also implicated. In this sense, both Graham's and Mikovits's claims and stances, along with the self-image they promote, are, at least in part, political.

The fact that their interviews are published as a TV product and web video respectively, both aimed at lay audiences, calls for the acknowledgement of an important phenomenon which often affects the public communication of controversial scientific knowledge, namely science mediatisation. Mediatisation entails the adoption of strategies to attract the audience's attention, and may allow communicators to advocate their views in ways that would not be possible in specialised communication, especially during highly politicised debates (Konkes 2021, p. 476). For example, they may use multimedia content that is more evocative and entertaining rather than suitable to visualise technical data in an accurate way; or they may be able to express ideas or provide information about their work before it undergoes peer review.

Another element worth considering in relation to these debates, where conspiracist attitudes can flourish, are the communicative features of CTs. In their extensive literature review on CTs, Douglas *et al.* (2019, pp. 13-17) point out that these theories may represent a coping strategy for some groups during important, potentially threatening events, which favours CT communication and circulation. As for conspiracist communication itself, the authors found it to be characterised by a mostly negative sentiment and an extreme polarisation – which also emerges when CT supporters and opponents interact. Basically, conspiracist communication is mostly focused on arguing against those regarded as conspirators than on proposing solutions to the issues addressed. Douglas *et al.*'s review suggests that communication within conspiracist communities is more civil but not necessarily rational. At the same time, CT promoters "are careful to appear rational and open minded" (Douglas *et al.* 2019, p. 16), and their voice can be perceived as more authoritative, confident and manipulative than that of CT opponents.

Most of the above-mentioned research on CT communication attempted at identifying features of conspiracist messages by means of comparisons with anti-conspiracist ones – two opposed views which seem impossible to reconcile. Given how polarised conspiracy-related topics are, it might thus be argued that opposite factions respond to opposite notions of knowledge and knowledge production. Hence the idea, also relevant to the present study, that conspiracism exists as part of a particular type of knowledge that challenges official accounts and is generally stigmatised, despite having become increasingly mainstream in recent years (Barkun 2016), as also shown by *Plandemic*'s success. Lakoff (2015) wrote about a subset of this counter-knowledge, namely that kind developed by parents who

refuse to vaccinate their children. He did not describe this knowledge as an utter, irrational rejection of science, but rather as a multiplication of sources of authority besides traditional scientific institutions, whereby traditional knowledge gatekeepers disappear. Lakoff attributed the emergence of this counter-knowledge to the relatively recent acknowledgement of the threats posed by the very same scientific and technological innovation that was supposed to solely improve human life standards, but sometimes does the opposite. This can lead to distrust in official experts' authority, capacity – and I would add willingness – to manage those threats. This distrust clearly emerges both in Graham's and in Mikovits' messages (see Section 4). Indeed, Lakoff's account problematizes the distinction between scientific discourses and conspiracist counter-discourses, which is also a major concern in this study.

Whistleblowing is another key theme in both the episodes analysed in this study, and is closely linked to distrust in scientific institutions. The concept of whistleblowing began to emerge in the 1970s and has received attention in various scholarly fields, including law, management, public administration, sociology, psychology and health sciences (Gagnon, Perron 2019, p. 1). Ash (2016, p. 29) defined whistleblowing in health and social care as "acts of speaking out to raise concerns about the standard, legality and probity of practice in health and social care, […] whether these matters are raised inside or outside the organization." Gagnon and Perron (2019, p. 1) claimed that whistleblowing is "a challenge to the authority structure of the [target] organization, but it is not deviance per se"; they point out that whistleblowing "usually provides valuable information to improve organizational effectiveness and public safety" (Gagnon, Perron 2019, p. 1). Indeed, whistleblowers enjoy legal protection in a number of countries, including the US.[6] In the public sphere and through the media, they can be perceived as heroic figures, standing out from the crowd to defend good causes against powerful oppressors, although they often experience life-long damage to their professional and personal lives, often being discredited and suffering profound isolation especially before their claims prove to be true (Ash 2016, pp. 11-13). This compelling narrative of heroism appears in both Graham's and Mikovits's (self-)representations. In this sense, this study is not so much an assessment of how different science-based discourse against scientific misconduct and CT-based discourse are, as it is an attempt to juxtapose the two. By comparing them, it seeks to problematise the boundaries between them, highlighting similarities and overlaps – which seem to have been so far overlooked – as well as differences. This comparison aims at showing how a story of actual wrongdoing in the US public health system may have discursive features that are taken up by public

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[6] See https://oig.justice.gov/hotline/whistleblower-protection (28.09.2021).

health CT supporters to reinforce their views. It is indeed argued here that conspiracist claims might draw part of their appeal and communicative success from the existence and public representation of acknowledged cases of misconduct; developing an understanding of the possible connections between the discourses under examination might thus foster our awareness of such phenomena and provide a starting point to develop tools to address the spread of false information about science and public health.

3. Methodology

In approaching these two case studies from a discourse analytical perspective, it is important to note that independently of how reliable or well-founded a message is, the language used in it can never be considered completely objective nor neutral. Rather, it is the result of linguistic choices which necessarily select some aspects of reality and understate others (Stubbs 1998). In fact, any communicative event – including the communication of scientific information – needs to be regarded as a social practice which takes place in a specific social context: it thus becomes "a tool for social action" (Bhatia *et al.* 2008, p. 1) and therefore plays a role in people's way to understand and act within the world. With the aid of their hosts and external excerpts shown during the interviews, both Graham and Mikovits use language to cast themselves and their claims as trustworthy, coming from expertise, authority, and the willingness to speak the truth and protect public health against powerful corrupted organisations, accused of neglecting and damaging people's health without scruple.

More specifically, in *Plandemic* Mikovits accuses Anthony Fauci, Director of the National Institute of Allergy and Infectious Diseases (NIAID), together with other high profile public health officials and their institutions, of colluding with the drug industry to prevent the research on and spread of effective treatments for various diseases, including AIDS and COVID-19, to profit from patents for their own treatments. She moreover claims that people have been deceived on the origins and nature of the pandemic by the US government. In contrast, the *PBS Now* interview with Graham starts after a short introduction by the host and brief excerpts featuring other people involved in the scandal; according to the transcript, external clips featuring Brancaccio or other speakers adding details to the story are interposed between different parts of the interview. During the interview, Graham talks about his study on Vioxx and the damage caused by the drug to the health and life of many people; he describes the attempts by the FDA to prevent him from making his results public and elaborates on his status as a whistleblower; he also claims that the FDA sees the drug industry, rather than

US citizens, as their "client", whereby drug safety is systematically overlooked in favour of quick drug approval.

Both speakers defend themselves and promote their own set of beliefs in a politicised, high-stake conflict within a mediatised context. An ideological component can therefore be identified, especially concerning the ideas the two interviewees articulate about the way some US public institutions operate. Consequently, the language used in the two interviews was used not only to inform, but also to persuade and – in some cases – manipulate recipients.

Considering these aspects, van Dijk's account of how language structures can serve as a tool to promote ideology (van Dijk 2003) seemed to provide a suitable starting point for the analysis. Van Dijk defined ideology as a system of fundamental beliefs held by a social group and its members, which they use to give meaning to the world and as the basis of their social practices; ideologies affect people's use of language, and at the same time language use affects how people learn and modify ideologies (van Dijk 2003, pp. 14 -17). As they affect and are affected by ideologies, linguistic structures and choices can reflect a speaker/writer's intention to influence – and sometimes bias – people's understanding of an event, an action or a piece of communication. According to van Dijk, this happens at a cognitive level, when the speaker/writer targets recipients' mental models – individual schematic structures that form the basis for people's interpretation of reality – and makes them more coherent with certain interests and values. If this process is repeated, systematised and wide-ranging, as can happen in mass media online and offline environments, then what is affected is not simply personal mental models, but social representations – that is, stable, general and socially shared beliefs such as knowledge, attitudes, ideologies, norms and values (van Dijk 2006). According to van Dijk, attempting to influence someone's understanding of reality may take the form of persuasion, when interlocutors are free to accept or not the persuader's arguments. However, when interlocutors are unable to understand – typically because they lack the necessary knowledge – the real intentions and beliefs held by the speaker/writer, who acts upon them and against their interest to promote his/her own interests, then manipulation, rather than persuasion, is taking place (van Dijk 2006). The boundary between persuasion and manipulation is fuzzy and context-dependent. Accordingly, the two can be carried out through similar discursive strategies, with extremely different outcomes. While persuasion is undoubtedly present in both the Vioxx interview and *Plandemic*, Mikovits made various misleading claims exploiting her authoritative position as a member of the scientific community. These claims are likely to have skewed some viewers' interpretation of the pandemic in a way that may make Mikovits appear as a heroine, but did not certainly aid

public health, especially amid the pandemic. I therefore argue that manipulation is more clearly at play in *Plandemic*.

Van Dijk (2003) describes various linguistic features that tend to be used to convey ideological messages. These operate at different levels – e.g., meaning, clause structure, sentence structure, text structure, and rhetoric strategies. Accordingly, an analysis of and comparison between the transcripts[7] of the two interviews was performed by considering these features. The transcript of *Plandemic* includes 4,036 words; the transcript of the Vioxx interview consists of 3,539 words including speaker names introducing turns. Both full texts were manually scanned for each of the features considered (see list below), which were identified, classified and described, and subsequently compared across the interviews. Due to space limitations, the results described below cover a selection of potentially ideological linguistic features which includes:

- A polarising opposition between "us" (which groups the speaker and the people who support their ideology) and "them" (those who oppose the speaker's ideology).

- Consequently, an ideological square, whereby the positive aspects of the "us" group and the negative aspects of the "them" group are emphasised, while the negative aspects of "us" and the positive aspects of "them" are de-emphasised.

- The lexical choices made by the speakers (e.g., whether a recurring reference to specific semantic fields, such as murder, money or corruption, was observed).

- The presence of recurring themes, possibly relying on prominent lexical choices (see above) (e.g., the idea that the drug industry and/or public health institutions prioritise profit over public safety).

- The way social actors involved in the stories are mentioned and represented. To explore this aspect, van Leeuwen's system to describe the representation of social actors (van Leeuwen 1996) was used as a reference. This system provides a sociosemantic inventory of a set of possible choices speakers of English can make to refer to people. It incorporates sociological and critical aspects – for instance, how personal/impersonal or how generic/specific the reference is – as a starting point, to then explain the ways in which choices are realised linguistically – by assessing, for instance, whether an indefinite pronoun, a proper noun or a professional title are used. One of the aspects addressed by van Leeuwen is the role social actors are given – namely,

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[7] While the Vioxx interview transcript was retrieved online (see Footnote 5), the *Plandemic* transcript was obtained through a speech recognition and transcription software called Dragon Professional and then manually revised.

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"who is represented as 'agent' ('Actor'), who as 'patient' ('Goal') with respect to a given action?" (van Leeuwen 1996: 43). In articulating this point, the analysis also draws upon Systemic Functional Linguistics (Halliday, Mathiessen 2004) by referring to its participant roles, since they offer a comprehensive and detailed set of categories which I found could be effectively combined with social actor representation categories.

- The way sentences and concepts are made coherent and connected through more or less logical links (e.g., the use of conjunctions such as *so*, *if*, *because* to express cause-consequence links; or the juxtaposition of statements to implicitly suggest some kind of logical connection).

- The way speakers provide evidence to support their claims (for instance, by quoting relevant documentation, by showing clips external to the interview, or by relying on the speaker's authority).

- The use of ambiguous and/or vague language (e.g., generic quantification through words such as *many*, *thousands* or *millions* rather than providing a specific number; reference to people whose identity or specific responsibility is not spelled out; or the omission of agents when passive verbs are used).

These items do not represent completely separate categories but rather interconnected ones, as reflected by the results detailed below.

4. Results

4.1. Polarising categorisation and characterisation of actors involved

A basic distinction is created in both interviews between Graham/Mikovits, portrayed as positive/good, and those whom they denounce as wrongdoers, and who (allegedly, in the case of *Plandemic*) tried to silence them, portrayed as negative/bad. In the Vioxx case, wrongdoers are mainly FDA officials and members of Merck; in *Plandemic*, they include a wider network of US public health institutions – mainly the NIAID – and some of their high-profile officials and researchers – in particular Anthony Fauci. While conflicts and significant differences between whistleblowers and wrongdoers do exist in both cases, they nonetheless appear to have been cast in a somewhat simplified and polarising way, and thus portrayed as stable, without accounting for complexity nor ambiguousness in their behaviour. Occasionally during the interviews, the whistleblower's positive categorisation extends to people who were damaged by the wrongdoers or agree with and/or support the whistleblowers, including the audience, who is invited to sympathise with them. This type of grouping is comparable to an

"us vs them" dynamic, in line with the above-mentioned ideological square: "us" is represented by whistleblowers and their supporters and "them" stands for the wrongdoers. In the examples below, the use of pronouns emphasises this contrast.

(1) CAROLINE NEVELS [mother of a woman who died from Vioxx side effects]: All Merck cared about was what they were making. They made billions of dollars off of Vioxx. And billions of dollars would never bring my daughter back. They got money for that. And I lost my daughter. *(Now on PBS)*

(2) GRAHAM: […] So I was putting them in a bad position by saying that something more needed to be done. *(Now on PBS)*

(3) MIKOVITS: Uhm, for, for five years if I went on social media, if I said anything at all, they would find new evidence, and, and put me back in jail. (*Plandemic*)

4.1.1. Representations of whistleblowers

In the Vioxx story, Graham is introduced by the host of the program as "the whistleblower at the Food and Drug Administration with a civics lesson from hell". This defines Graham's heroic and virtuous character since the beginning of the interview, and projects a teacher's role onto him, so that the audience can expect not only to be informed by him, but also to learn from him about shady ("from hell") details over those he blames. Later in the introductory part of the interview, Graham's professional identity is revealed with some detail:

(4) BRANCACCIO: […] Doctor David Graham has been working at the FDA for 20 years. He's a senior official in the FDA's Office of Drug Safety […]. *(Now on PBS)*

His full name and title are provided, and his long experience at FDA ("20 years", "senior official") is mentioned to signify authority as a high-profile scientist. Throughout the interview, he is generally referred to as "Graham", a formalising reference (i.e., consisting of surname-only, van Leeuwen 1996, p. 53) that conveys a respectful and detached attitude towards him. From a systemic functional perspective, Graham is attributed active Actor, Sayer and Senser participant roles (Halliday, Mathiessen 2004, p. 260) in several clauses, being the subject of predicates such as "was finishing up his own Vioxx study", "told his managers" and "wanted to tell the world". This underlines his agency as a critically-thinking individual with specific competences and the courage to voice his concerns. In other cases, he is passivised (van Leeuwen 1996, p. 44) by being attributed Goal participant roles (Halliday, Mathiessen 2004, p. 180) as the FDA, it is said, "went after

him", or "warned him" in response to his objections to Vioxx safety. Passivation is also applied to Graham's claims (e.g., his "presentation" and "concerns" in Example 5): this, together with the remark, later in the interview, that Graham "began fearing for his job", emphasises the professional, rather than personal, aspect of the whole story.

> (5)   BRANCACCIO: Graham's bosses tried to tone down his presentation. Internal FDA e-mails, obtained by *NOW*, called Graham's concerns, "unnecessary," and, "particularly problematic," and warned him about his study's, "strong language." *(Now on PBS)*

Mikovits is generally referred to as "Dr Mikovits"; the repeated inclusion of the professional title together with the formal reference enhances Mikovits' status as a scientist, thus contributing – even more than in the Vioxx interview – to the construction of her authority. The opening of *Plandemic* places great emphasis on her professional achievements:

> (6)   WILLIS: Dr. Judy Mikovits has been called one of the most accomplished scientists of her generation. Her 1991 doctorial [sic] thesis revolutionized the treatment of HIV-AIDS. At the height of her career, Dr. Mikovits published a blockbuster article in the journal *Science*. (*Plandemic*)

The agent-less passive verb "has been called" makes the ensuing characterisation appear more objective and impersonal, although also vague, since it does not specify its source. The superlative "one of the most accomplished", the verb "revolutionise", and the expressions "at the hight of her career" and "blockbuster article" all create an image of unquestioned academic excellence and success – a much more markedly positive depiction than Graham's. On the one hand, she appears as the Actor or Sayer in structures like "you made a discovery", "you sit here [in this interview]", "you are naming names", framing her as a strong, fearless, heroic figure. On the other hand, she appears in passivising Goal roles such as "you were arrested", "you were put under a gag order", "I was held in jail" and "their attempt to silence you". It can be observed that these processes overall refer to more extreme intimidations than in Graham's case; these are furthermore directed at Mikovits as a person rather than a scientist. This can also be observed when Willis utters (7) while introducing Mikovits; he then tells Mikovits that "they did everything in their powers to destroy your life" and asks (8).

> (7)   WILLIS: For exposing their deadly secrets, the minions of big Pharma waged war on Dr. Mikovits, destroying her good name, career and personal life. (*Plandemic*)

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(8)   WILLIS: […] I have to ask, how do you sit here with the confidence to
       call out these great forces and not fear for your life […]? (*Plandemic*)

Again, these strong remarks concern Mikovits as a person more than her scientific contributions, and may sound like an extreme version of those made about Graham's situation.

4.1.2. Representations of Wrongdoers

Reference to the wrongdoers is overall less specific in the Vioxx case than in *Plandemic*. Apart from the appearance of Merck chairman Raymond Gilmartin, shown before the interview announcing the withdrawal of Vioxx in a press release, no other Merck nor FDA representative is directly mentioned. Proper names are never used for these people, and the plural is preferred, so that people in FDA who opposed Graham's work are generally called "managers" or "FDA officials". As with Graham's representations, these lexical choices reflect their professional activity rather than any personal trait. On one occasion (9), nominalisation ("reaction", "rejection", "criticism") is combined by Graham with objectivation, the metonymic representation of an actor by means of an object (van Leeuwen 1996, p. 59) – in this case the actor's utterances ("response") and activity ("management"). He uses this combination to describe how his managers at FDA responded to his willingness to share information on the dangers of Vioxx.

(9)   GRAHAM: The response of management was just one of negative
       reaction. And rejection. And criticism. *(Now on PBS)*

Furthermore, collectivising references (van Leeuwen 1996, p. 49) were often used, framing the FDA and Merck as homogeneous entities, as in "FDA" or "agency" and "Merck", "company" or "drug maker" respectively. These entities are mostly activised through the attribution of Actor roles in various processes, as in (10) and (11).

(10)   BRANCACCIO: […] the company [Merck] introduced Vioxx with great
       fanfare, hailing it as one of a new generation of remarkably safe and
       powerful painkillers. *(Now on PBS)*
(11)   BRANCACCIO: […] the FDA continued to refuse to release the full text
       of his study. But the agency did share it with Merck […]. *(Now on PBS)*

Overall, these types of reference and transitivity structures allowed Graham and other speakers in the interview to avoid directly mentioning personal responsibilities, as well as to stress the idea that the problems exposed characterise the entire drug market, approval and safety systems, whose organisations are directly responsible through their deliberate actions.

Lingue e Linguaggi

Likewise, *Plandemic* contains some collectivising references referring to wrongdoers. Abstraction, i.e., the representation of an actor by means of reference to a quality (van Leeuwen 1996, p. 59), also appears, as in (8) with "these great forces" and (12), with "propaganda". This allows the speaker to be less specific about the identity of the wrongdoers while conveying a powerful message about their homogeneity and their negative qualities, in line with the ideological square.

(12) MIKOVITS: It's beyond comprehension how a society can be so fooled that the types of propaganda continue to where they're just driving us to hate each other. (*Plandemic*)

However, *Plandemic* also contains individualised and nominated (van Leeuwen 1996, p. 52) reference to some wrongdoers, identified with their proper name. This is particularly frequent with Anthony Fauci, at the centre of Mikovits' allegations. He is nominated and semi-formalised – (with both first name and surname, cf. van Leeuwen 1996, p. 53) when first introduced by Willis in (13).

(13) WILLIS: Anthony Fauci […] the man who is heading the pandemic task force was involved in a cover-up." (*Plandemic*)

There is no reference to Fauci's professional background – no professional title is uttered before his name and he is referred to as "the man", rather than "the scientist" or similar functionalising options (van Leeuwen 1996, p. 54), which would draw attention to his scientific/institutional activity. This semi-formalised de-titulated reference is maintained by both Willis and Mikovits throughout the interview, as opposed to the formal titulation used for Mikovits (See Section 4.1.1). As in the Vioxx interview, wrongdoers are mostly attributed Actor roles, which underlines their direct responsibility in misconduct. On more than one occasion, Mikovits builds associations of actors, grouping them as if they acted together, but mentioning them separately, as in (14) and (15).

(14) MIKOVITS: Heads of our entire HHS colluded and destroyed my reputation and the Department of Justice and the FBI sat on it. (*Plandemic*)
(15) MIKOVITS: […] that virus was spread through, because of the arrogance of a group of people, and it includes Robert Redfield, who is now the head of CDC, right along with Tony Fauci […]. (*Plandemic*)

Plandemic is thus characterised by a mixture of specific and vague references to wrongdoers, represented as colluding in various ways. The variety of actors and collaborations mentioned is much wider here than in the Vioxx interview.

Some lexical choices made to represent wrongdoers are similar between the Vioxx interview and *Plandemic*. One of these choices relies on the fact that wrongdoers are deemed responsible for the death of large numbers of people (although no individual member of this category directly committed any murder). Consequently, the semantic fields of death and murder are used to express their culpability. For instance, the adjective "deadly" is used in reference to the consequence of wrongdoers' actions (16) by Brancaccio and to wrongdoers' "secrets" (7) by Willis.

(16) BRANCACCIO: When government regulators cozy up to the industries they regulate, the results can be deadly. *(Now on PBS)*

Likewise, "guaranteed homicide", uttered by Graham in (17), is in a way mirrored by the recurring allegation Mikovits makes in utterances like (18) and (19).

(17) GRAHAM: It's guaranteed homicide, because you're going to hurt thousands, tens of thousands, of people. It's a mathematical certitude. *(Now on PBS)*

(18) MIKOVITS: What he [Fauci]'s saying is absolute propaganda, and the same kind of propaganda that he's perpetrated to kill millions since 1984. (*Plandemic*)

(19) MIKOVITS: And they'll kill millions, as they already have with their vaccines. There is no vaccine currently on the schedule for any RNA virus that works. (*Plandemic*)

As observed elsewhere in the analysis, linguistic choices in *Plandemic* appear amplified and less specific than in the Vioxx interview, as shown in this case by the difference in the number of victims, larger and vague in *Plandemic*. Moreover, although strong expressions are used by both Graham and Mikovits, the former does not directly attribute "homicide" to wrongdoers, while the latter directly assigns the Actor's role to the wrongdoers.

Another lexical domain associated with wrongdoers in both interviews is that of moral failure and unethical behaviour, whereby whistleblowers and, occasionally, other actors aligned with them, take on the role of moral judges. (20) and (21) exemplify how this judgement is carried out in the Vioxx interview, with "cynical and untruthful" in (21) bearing some resemblance to Mikovits's "arrogance" in (15).

(20) BRANCACCIO: […] an insider says the FDA has formed an unholy alliance with the very industry it's supposed to regulate. *(Now on PBS)*

(21) GRAHAM: It [adding precautionary language on serious side effects to the Vioxx package insert] had zero impact. So every time FDA says 'we have managed the risk of a drug by labeling, by instituting a labeling change', FDA is being, I think, in my view, cynical and untruthful with the American people. *(Now on PBS)*

Lingue e Linguaggi

In a key point in the interview, shown in (22), Graham recalls an anecdote to juxtapose his own work ethics with his manager's mentality, thus supporting the ideological square and emphasising the moral distance between him and the wrongdoers.

> (22) GRAHAM: A former manager of mine from the Office of Drug Safety told me that industry was our client. And when I said to him, 'No, the public is my client,' he said I was wrong and it was industry. And my response back to him was, 'Industry may be your client but it will never be my client.' *(Now on PBS)*

The theme of moral failure is tightly connected to that of corruption and greediness, particularly because in both stories wrongdoers are said to make big profits from their misconduct. Merck's strong marketing campaign and its earnings from Vioxx sales are mentioned in the initial part of the interview segment. For instance, (23) combines specific reference to the sums of money involved with the use of "blockbuster", at the same time a specific drug market term and a recognisable informal word indicating success in the book or film industry. Additionally, a metaphorical definition of "blockbuster drug", namely "a cash cow", is provided, clearly pointing to economic interests. Statements like (23) thus contribute to constructing the company as a greedy actor with no interest in patients' safety.

> (23)   BRANCACCIO: "Drug maker Merck was spending over $100 million a year marketing Vioxx, hoping to make it what's known in the trade as a "blockbuster drug"-in other words, a cash cow. […] Those efforts paid off. It wasn't long before Vioxx became one of the most widely prescribed drugs in the world, ringing up 2 ½ billion dollars a year in sales." *(Now on PBS)*

Similarly, in *Plandemic*, Fauci and other actors are accused of profiting from their misconduct. In (24), for example, the adverbial "big time" is repeated twice in combination with the noun phrase "millions of dollars", reiterating the idea of a wide-ranging, massive conspiracy that involves large sums of money. As opposed to the Vioxx case, no specific estimate is provided, and the circumstances of these fundings are also vague. Rather, a generic "everybody else" and "the investigators that committed the fraud" are said to have received and still receive funds indefinitely.

> (24) MIKOVITS: "He [Anthony Fauci] directed the cover-up, and in fact everybody else was paid off, and paid off big time, millions of dollars in funding from Tony Fauci, Tony Fauci's organization, National Institute of Allergy and Infectious Disease. These investigators that committed

the fraud continued to this day to be paid big time by the NIAID."
(*Plandemic*)

One more theme appearing in both stories and relating to the wrongdoers' side of the ideological square consists in remarks about current legislation which is deemed by the whistleblower to both prove the existence of and contribute to wrongdoers' corruption. (25) shows how these remarks appear in the Vioxx interview, with Brancaccio introducing the Act in question, followed by Graham's interpretation of it.

> (25) BRANCACCIO: "[…] the "Prescription Drug User Fee Act." The law was passed in response to industry complaints that the FDA wasn't approving drugs fast enough. Part of the deal? The drug companies agreed to start paying the FDA to speed up the approval process.
> GRAHAM: It worsened a culture within FDA that was already bad to start with, that said, 'We will approve drugs, and we will approve them quickly and we won't pay attention to safety.' *(Now on PBS)*

In *Plandemic*, Mikovits calls for the repeal of the 1980 Bayh-Dole Act, which "provided blanket permission for performers of federally funded research to file for patents on the results of such research and to grant licenses for these patents, including exclusive licenses, to other parties" (Mowery *et al.* 2001, p. 102). In the interview, Bayh-Dole is said to have "destroyed science" and favoured conflicts of interest. This is overall a hyperbolic statement, especially when compared to (25). At the same time, Mikovits' appeal and (25) may fulfil a similar function in attributing to existing legislation, and thus indirectly to those who approved it, a key role in the process of systemic corruption at the centre of their story.

4.2. Coherence and argumentation

The way the two interviews seem to construct the effectiveness and appeal of the message they deliver does not only involve the polarisation of actors and the themes associated with them; the arrangement of sentences, the connections established between them and the way they are constructed as believable and true also play a role.

   The Vioxx interview is overall coherent: the story is built as a linear sequence of events, where causes and consequences are generally made clear to the audience through the use of items such as conjunctions. For instance, the exchange in (26) features several connected events with a subsequent explanation of the underlying logic provided by Brancaccio and Graham together. The use of conjunctions such as "so", "but", "if", "then" and specifications such as "that would be the goal" guides the audience in their interpretation of the events. Moreover, Graham reproduces his own version of FDA officials' line of reasoning through direct speech at the end of (26),

as he does elsewhere in the interview. This strategy allows him to effectively convey his message by actively constructing wrongdoers in a way that, although possibly simplistic, is unequivocally in line with the ideological square.

> (26) BRANCACCIO: Graham began fearing for his job. So he got a lawyer through a whistleblower protection group called the Government Accountability Project. But that didn't stop the FDA. Soon his lawyer was getting calls from anonymous FDA officials warning that Graham wasn't to be trusted.
> GRAHAM: My understanding is that they were representing themselves as whistleblowers to blow the whistle on me as a whistleblower.
> BRANCACCIO: So the whistleblower protection people maybe might not help you or something. That would be the goal.
> GRAHAM: If we can knock the Government Accountability Project out so that he doesn't have a lawyer, well, good, then we're going to be able to fire him as quickly and as easily as we want. *(Now on PBS)*

In few cases, Graham's replies are strategically not fully coherent with Brancaccio's questions. In (27), for instance, the host points out a common complaint over the FDA's *modus operandi*. Graham seems at first to confirm Brancaccio's observation ("Right"), but instead of saying whether the complaint is in fact justified, he simply re-states Brancaccio's message ("that is a complaint"). He then proceeds to give his own explanation about the origin of that complaint, which reframes it as expressing the drug industry's interest. This reframing makes the complaint irrelevant to public health and strengthens Graham's position. However, Brancaccio insists: he makes his original interpretation of the complaint more specific by mentioning its possible consequences for cancer patients, and asks his question explicitly ("It's not true though?"). Once more, Graham reformulates the whole scenario ("let's put it this way"): he avoids directly addressing Brancaccio's example and question, placing the focus on a different problem, which supports his concerns over the FDA.

> (27) BRANCACCIO: […] I read articles that say that the FDA is slow in approving drugs, that the big problem that you all have over there is bureaucratic foot dragging, keeping important new treatments away from people who need it desperately.
> GRAHAM: Right, that is a complaint. I think where that complaint originates from is probably from the pharmaceutical industry.
> BRANCACCIO: It's not true though? Even cases of drugs that might be necessary to help someone's cancer from progressing?
> GRAHAM: Well, let's put it this way. If you look at most of the drugs that get approved on the marketplace, most of them aren't offering a true therapeutic advance. *(Now on PBS)*

On the whole, *Plandemic* approaches coherence in a very different way from the Vioxx interview: its amplified, emphatic claims and the multiplicity of plots allegedly exposed set a clearly polarised scene, where it is easy to distinguish between good and evil actors. However, the basis upon which such distinction relies are less clear: *Plandemic*'s accounts are articulated with little argumentation and coherence; some key logical links, definitions and explanations are omitted, which means it is up to the audience to work them out. (28), uttered by Mikovits in response to the question reported in (8) above, clearly conveys a sense of urgency through simple cause-effect links expressed by "because" and a conditional sentence, where the effects expressed in the main clause build up to an all-encompassing, apocalyptic scenario ("we can forget humanity").

> (28) MIKOVITS: because if we don't stop this now, we cannot only forget our Republic and our freedom, but we can forget humanity, because we'll be killed by this agenda. (*Plandemic*)

However, such far-reaching assertions are not discursively substantiated: in the interview, Mikovits never establishes a connection between what she reports and the US republic; nor she indicates which type of freedom and whose freedom is at stake, nor addresses how "humanity" as a whole may be at risk and killed. The use of the semantic domain of murder combined with the inclusive use of "we" in a Goal participant role in (28) is never elaborated on; the noun "agenda" is vague, as are Mikovits's further explanations of it within the interview. Thus, the audience is potentially left with a strong sense of threat and little information on where exactly that threat comes from. (30) features the story at the basis of one of Mikovits's accusations against Fauci. Considering the overall unfolding of the story, Mikovits' claim that Fauci and Gallo despotically pursued their own interests emerges clearly. However, whether the episode really took place or not, incoherence can be observed if Mikovits's account is examined in more detail. The adversative "but", connecting the beginning of the story with "Tony Fauci and Robert Gallo were working together…", does not really reveal much of Fauci and Gallo's goals and how they diverged from the study Mikovits took part in. Moreover, it is not explained what a "confirmatory" study is, nor what that study was supposed to confirm. Therefore, the audience is not made aware of what "all the credit" obtained by Gallo is about. Most interestingly, the clause "and of course patents are involved" is vague enough to strongly associate the theme of greediness to Fauci and Gallo, framing it as obvious ("of course"), without revealing any information about which patents were involved.

> (29) MIKOVITS: […] I was part of the team that isolated HIV from the saliva and blood of the patients from France, where Luc Montagnier had originally isolated the virus. […] This was a confirmatory study, but

*L*ingue e
*L*inguaggi

> Tony Fauci and Robert Gallo were working together then to spin the
> story in a different way. At that time Dr. Ruscetti was out of town and
> Tony Fauci says, uhm, you know, 'we understand that you have a paper
> in press and we want a copy of it' and I said 'yes, there is a paper in
> press and it's confidential, and no I will not give you a copy of it' and he
> started screaming at me. Then he said 'give us the paper right now or, or
> you'll be fired for insubordination' and I just said 'I'm sure when Dr.
> Ruscetti gets back you can have a conversation' and so Frank comes
> back, you know, several weeks later and is really bullied into giving
> Fauci the paper. Fauci holds up the publication of the paper for several
> months while Robert Gallo writes his own paper and takes all the credit,
> and of course patents are involved. This delay of the confirmation, you
> know literally lead to spreading the virus around, you know, killing
> millions.

4.3. Evidence

Evidence for the claims made in the Vioxx interview often appears to be
based in official and/or solid data: for example, Brancaccio gives specific
information on Merck's spending and earnings concerning Vioxx (see
Example 23); Merck's internal documentation is cited to show that the
company was aware of the risks connected to Vioxx well before it was
withdrawn; internal FDA emails dismissing Graham's concerns are
mentioned (30) and quoted (see Example 5). In some cases, Graham uses
direct speech to recall words he was told by FDA managers (31).

(30) GRAHAM: […] it [the FDA's negative reaction] was present in the e-
mails and everything else I received […]. *(Now on PBS)*

(31) GRAHAM: […] a week before Vioxx came off the market, senior
managers within FDA were saying to me, "Why on earth did you study
Vioxx and heart attack anyway?" *(Now on PBS)*

At one point, shown in (32), Brancaccio introduces a survey suggesting that a
number of other scientists – like Graham – have concerns over FDA policies.
This represents another piece of evidence in favour of Graham's credibility.
External clips featuring other speakers interposed between different parts of
the interview are also shown as supporting evidence (see Example 1).

(32) BRANCACCIO: […] he [Graham] sure has a lot of support. This is a
survey recently released by the Department of Health and Human
Services […]. It found 2/3's of FDA scientists have concerns about the
agency's efforts to monitor the safety of drugs once they're on the
market.

External clips are also found in *Plandemic* as supporting evidence for
Mikovits's claims. Some of them are recognisable as excerpts from press

conferences held by the White House on COVID-19 during the pandemic, or as speeches given by Fauci on other official occasions; some seem to come from TV news reports; some possibly come from the web, and mostly show people presenting themselves as medical staff. However, whereas information on the sources used and the people appearing in external clips is found in the Vioxx interview, it is never provided in *Plandemic*. Therefore, although its conspiracist message is confirmed in its external clips, recipients cannot access any further information on their context and reliability. As in the Vioxx interview, moreover, reference is made to other medical professionals who share Mikovits's views – specifically, on COVID-19. In (33) and (34), Mikovits and Willis speak as direct witnesses of this; the reliability of their claims ultimately depends on how much viewers trust them, since they do not provide any way to verify these statements nor the external clips supporting them.

> (33) MIKOVITS: So if you're not testing and you don't have evidence of infection, and if you walked in there today, you know, they'd call it COVID-19, and, and we hear this from the doctors and nurses who are upset. (*Plandemic*)
> (34) WILLIS: I've seen so many doctors online that have made their own webcam videos, just perplexed by the protocol that the CDC had given them. (*Plandemic*)

(35) shows the only instance when Mikovits refers to a published scientific paper (whose front page, title and author appear on screen), using it as evidence that influenza vaccines favour COVID-19 infections, although any such effect was excluded by the author of the paper (Wolff 2020).

> (35) MIKOVITS: A publication last year with the military who had been vaccinated with influenza were more susceptible to coronaviruses. Coronaviruses are in every animal. So if you've ever had a flu vaccine, you were injected with coronaviruses.

Lack of cohesion as well as coherence can be observed in the absence of clear logical and referential links between the three sentences in (35), which are nonetheless uttered as if the third one was a natural conclusion of the previous ones. Firstly, the presence of coronaviruses in flu vaccines, mentioned in the third sentence is not explained by the previous ones, despite the use of the conjunction "so"; secondly, the relevance of animals and their coronaviruses to flu vaccination is not indicated. As for the use of direct speech to provide evidence, it was also found in *Plandemic*, as shown in (29). In general, neither Mikovits nor Graham reveal much about the context of the reported conversations. As shown elsewhere in the analysis, however, *Plandemic* offers an amplified, extreme perspective on its story. The episode

recalled in (29) features a magnified portrayal of Fauci as a wrongdoer through direct speech, which is quite far from the less explicit remarks reported in (31). Fauci indeed explicitly gives orders ("give us the paper right now"), makes a threat ("or you'll be fired for insubordination") and does that while "screaming" at Mikovits.

Both interviews – *Plandemic* more often than the Vioxx interview – feature claims whose credibility is taken for granted, as it derives from the scientific authority the interviewees are entrusted with since they are first introduced. One example of this from the Vioxx interview is the beginning of (21), where the statement "It had zero impact" is not hedged nor mitigated in any way, and does not follow from any argument. Another example is (36): "I guarantee you" at the beginning indicates Graham's competence and confidence; "any company" extends his statement to a universal scope; what follows is more of a political and moral judgement than a scientific one, without hedging or mitigation. The final metaphor ("the FDA […] has become a factory") takes the theme of public corruption to its extreme. Hedging does, however, take place elsewhere the interview – see, for example "I think" and "in my view" in (21) and (27).

> (36) GRAHAM: I guarantee you that any company faced with the prospect of being brought out into the public as not being in favor of product safety after the FDA thought there was a problem, they would capitulate. You have the bully pulpit. The FDA won't use that bully pulpit because FDA views industry as the client. FDA is there to serve its client industry, and it is not there to serve the public. FDA is an institution that has become a factory for the approval of new drugs and safety is not a consideration. *(Now on PBS)*

Unhedged, categorical statements are extremely frequent in *Plandemic*. Note, for instance, (19), where Mikovits declares with extreme confidence that millions of people have been killed by "their vaccines" (again, without specifying which vaccines she is referring to). The consideration she adds about vaccines against RNA viruses is also not accompanied by any hedge nor reference. (37) is another example of how she shows confidence ("I'm sure") exploiting her status as a scientist to confirm the laboratory origins of the novel coronavirus. Later in the interview, Willis asks her about the possibility that wrongdoers are preventing effective COVID-19 treatments in order to push their own patented remedies and profit from them. Her answer, shown in (38) appears beyond criticism, thanks to "absolutely", "that's fair to say", and "exactly".

> (37) MIKOVITS: Oh yeah, it… I'm sure it occurred between the North Carolina laboratories, Fort Detrick U.S. Army Research Institute of Infectious Diseases and the Wuhan laboratory. (*Plandemic*)

(38) MIKOVITS: Absolutely, that's fair to say, and that's exactly what's going
      on in COVID-19. The game is to prevent the therapies until everyone is
      infected and push the vaccines knowing that the flu vaccines increase the
      odds by 36% of getting COVID-19. (*Plandemic*)

Although some similarities emerged in the way evidence is provided in these
two interviews, profound differences are also there; these and the other
findings described in Section 4 are further discussed in relation to the
research questions in Section 5.

5. Discussion and conclusions

In response to RQ2, the analysis detailed in Section 4 uncovers several
common elements as well as some marked differences between the Vioxx
interview and *Plandemic*. Considering that – beyond the relation they bear to
reality – neither of them can be considered completely neutral nor free from
ideology, the first common aspect observed is a polarised representation of
the actors involved in the stories, which partly answers RQ1. In this
representation, two categories of actors are identified, namely positive/good
actors – mainly the whistleblower and their supporters – and negative/evil
actors – the wrongdoers called out by the whistleblower. Therefore, a sort of
ideological square (see Section 4.1) to sustain this actor characterisation is
built. In both interviews, whistleblowers are represented from the start as
knowledgeable and authoritative, thanks to their scientific background. Their
self- and overall representation is in line with the positive image
whistleblowers enjoy in the public sphere, that of heroes who pursue the truth
and public interests and suffer retaliation and silencing for doing so. As
knowledgeable and authoritative individuals with a strong sense of social and
medical ethics, they are given the power to express valid judgements on
scientific issues – which makes them the main knowledge providers during
the interview – as well as on the moral and political questions comprised in
their stories. Whistleblowers also acquire these roles and qualities through the
representation of wrongdoers as homogeneous, powerful and corrupted
entities, completely uninterested in public safety and health (in the case of
Plandemic, in freedom and humanity itself), responsible for the death of
many people, and greedy for more power and money.

      These features reflect several themes, which can be subsumed under
the idea of vested interests preventing public health to function properly
because of powerful elites deliberately acting against public interests. This
notion has considerable appeal in the public sphere, and may therefore form
part of long-standing social representations (see Section 3), which the two
interviews – each in its own way – may have affected in their audiences, in

both cases making health institutions and drug makers appear less trustworthy. This polarised representation of involved actors is necessarily simplistic, as it can only consider some aspects of more complex realities. What also seems to emerge from this polarised, simplified view in both stories is an idea of scientific research as mostly leading to unambiguous, indisputable conclusions – facts which had always been there for science to uncover, and which the whistleblower dares to reveal. In cases such as the Vioxx investigation, Graham's conclusions did end up being accepted as accurate by the scientific community; what's more, concerns over the drug turned out to have been raised before his study, and to have been secretly acknowledged by Merck too. This does not imply, however, that research results can always only be interpreted in one way, and that whether an interpretation is commonly acknowledged always depends on the scientists' skills and integrity, or on vested interests getting in the way of truth. While this way of conceiving of science is in keeping with stories like *Plandemic* and the Vioxx case, it can be misleading. Uncertainty and debate are in fact essential and unavoidable in science, as are human factors such as mistakes, inherent limitations in our way to experience reality, as well as personal interests and power dynamics (Latour 1987). However, the way scientific knowledge develops and is validated within the scientific community is not usually included in the public image of science. This may contribute to major issues when it comes to distinguishing claims made by scientists like Graham from those made by conspiracy theorists like Mikovits who, incidentally, bases her own authority upon the very same scientific education, training and research system she despises.

Going back to the level of discourse and representation, despite sharing some elements, the two interviews are also profoundly different. Firstly, they differ in the scope and intensity of their polarising actor representation, as well as in the way whistleblowers' claims are put forward. On the one hand, the Vioxx interview tends to deliver contextualised and overall specific information; although strong and direct claims are made, hedges are also used, and while Brancaccio is generally in accord with Graham's account, on occasion he monitors and checks Graham's statements (see Example 27). On the other hand, *Plandemic* offers an extreme, overstated and at times hyperbolic perspective on its story: from the "great forces" being unleashed against "our Republic", "our freedom" and "humanity", to the "millions" killed by Fauci and the NIAID, *Plandemic* producers craft its message in apocalyptic tones. At the same time, speakers do not hedge, mitigate nor contextualise much of what they say, often offering what appears to be a vague and superficial representation of events. Moreover, Willis never questions Mikovits's claims.

Secondly, the two interviews differ in the way stories and observations unfold. The Vioxx interview overall features coherent explanations. On the contrary, *Plandemic* tends to overlook coherence: compelling messages on wicked conspiracies are thrown at the public without much attention to how events and actors are connected within the story. On the whole, *Plandemic* appears to be much less informative than it claims. Rather, elements of manipulative discourse emerge, given that a type of communication which is carried out in unclear or abstruse ways on topics that are not familiar to the recipients may be geared towards impaired or partial understanding, which is an indicator of manipulation (van Dijk 2006, p. 366). Differences also emerge in the way evidence is provided to support Graham's and Mikovits's claims, which is closely linked to specificity, contextualisation and coherence. The Vioxx interview generally features information on the sources of evidence used, be it a survey, an FDA internal email, words uttered by Merck's CEO, etc. Evidence is not provided for some of Graham's claims, since his authority is constructed as an indicator of reliability. The same happens with Mikovits in *Plandemic*, although to a greater extent, given the frequency of unsubstantiated claims promoted by her. Moreover, *Plandemic* does not feature information on the sources of evidence it uses, making them hardly retrievable and thus relatively difficult to verify.

In conclusion, the above-described analogies and contrasts identified between these two representations of scientific misconduct provide a preliminary and partial answer to the research questions asked in the introduction, as discussed in this section. Since the present analysis consists in a qualitative investigation of verbal language as applied to two case studies, it has clear limitations: its results cannot be generalised to the representation of scientific misconduct or CTs in medicine as a whole; it does not take the non-verbal, multimodal aspects of the interviews into account; and it only comprises a fraction of all the discursive features that could potentially be analysed. However, it hopefully shed some light into the connections existing between the discourses surrounding the two stories. It certainly may raise questions on how similar or different the two interviews would appear to recipients who do not engage in fact-checking – the default situation when people are exposed to media content. Another set of questions may be asked about the possibility, if any, that the analogies between the representations of the two stories stand out more than their differences in the mind of recipients, so that they are perceived as comparable and maybe related.[8] Although the present study cannot provide an answer to these questions, it may favour a more informed approach to them, calling attention

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[8] It is worth mentioning that the video containing clips from the Vioxx interview mentioned in Footnote 5 was published on a YouTube channel called "Vax Not", which also features antivaccination and conspiracist content.

to how more or less tenable challenges to hegemonic actors in public health are articulated in powerful counter-discourses, whereby CTs may exploit actual public health scandals.

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