



# Disinformation in the Age of Permacrisis: The Route to Lawlessness?

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## Abstract

Although disinformation has long been used to manipulate the political debate (e.g., the American Founding Fathers are now known to have spread disinformation to attack their opponents), it has gained particular attention recently, especially in the political domain. In the face of the recent technological developments, disinformationists have been offered sophisticated tools to spread disinformation quickly and more efficiently, while challenging mainstream media and spreading chaos. Consequently, the world has been dwelling with a (dis)information crisis, which cannot be dissociated from a more in-depth Democracy crisis. As democratic systems build upon the principles of free speech, little attention is paid to control mechanisms over the extended democratisation of information and knowledge sources, which enables disinformationists, typically akin to authoritarian regimes, to take advantage of that freedom. The known use of social media for spreading disinformation is now accompanied by sophisticated artificial intelligence (AI) tools [Sousa-Silva, R. (2024). *Fighting Cyber-malice: A Forensic Linguistics Approach to Detecting AI-generated Malicious Texts*. In R. Mitkov, S. Ezzini, C. Acarturk, T. Ranasinghe, P. Rayson, M. El-Haj, I. Ezeani, M. Bradbury, & N. Khallaf (Eds.), *Proceedings of the First International Conference on Natural Language Processing and Artificial Intelligence for Cyber Security (NLPAICS'2024)* (pp. 164–174)]. This context encourages the disinformation crisis, which is likely to increase in the future. Since large language models and generative AI operate as black boxes, not only is it impossible to control their output, but also an efficient use of prompt engineering enables users to produce disinformation instantaneously and massively. This presentation discusses disinformation in the age of permacrisis. It argues that contemporary disinformation takes on a cross-border threatening nature that has the potential to instigate an environment of lawlessness (and eventually further the Democracy crises) and concludes by showing how linguistic analysis has the potential to counter this progression.

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## 1 Introduction

The disinformation phenomenon has garnered significant attention in recent years, particularly following the election of Donald Trump in the United States in 2016 and his subsequent re-election in 2024. However, this phenomenon is not a recent occurrence. The generation and dissemination of disinformation have long been employed for various purposes, including—but not necessarily—to mislead or persuade audiences, particularly in political contexts. The American Founding Fathers, for instance, are known to have disseminated pamphleteering disinformation to manipulate the political debate by attacking their adversaries [1]. One of the main complexities underlying disinformation analysis is that disinformation does not manifest itself in a homogeneous text genre; instead, it has manifested in diverse forms over the years. Satire and conspiracy theories pertaining to celebrity rumours, scientific scepticism, satirical geography, and secret societies are among the types of disinformation that attract public interest less for their intention to influence social behaviour than for their potential to provide amusement. Nevertheless, not all types of disinformation are harmless, entertaining, or innocuous; some of them are harmful.

In an era characterised by disjointedness and disruption, where societal, political, and economic governance frameworks are increasingly fragmented, disinformation has emerged as a potent instrument for perpetuating a pervasive state of anomie and lawlessness [2, 3]. Given its potential to destabilise contemporary societies and democracies, disinformation has exploited crises and put citizens' lives at risk, by eroding trust in democratic institutions and mainstream media, manipulating the democratic electoral process, hampering citizens' ability to make informed decisions, and impairing freedom of expression. Disinformation has thus raised serious concerns and been framed as a threat to Democracy [4], given the nefarious, disruptive, and destructive potential of disinformative pieces in the context of social unrest.

The recent proliferation of disinformation tools and techniques has been facilitated by both a new paradigm in the production of news pieces and the technological advancements of the past decades. While media conglomerates have engaged in citizen journalism, which encouraged citizen involvement in news production and selection, this practice has enabled them to gradually replace trained journalists with ideologically engaged, yet untrained citizens in the production of news pieces [5, 6]. Simultaneously, the sophistication of newly developed algorithms allowed social media to replace traditional, mainstream media as producers and spreaders of news. As Facebook's founder, Mark Zuckerberg, has acknowledged, as social media evolves and becomes less social in nature, it increasingly resembles conventional media<sup>1</sup>. Nevertheless, in contrast to conventional, mainstream media, news disseminated through social media is meticulously curated by sophisticated algorithms that

<sup>1</sup> <https://www.newyorker.com/culture/infinite-scroll/mark-zuckerberg-says-social-media-is-over>, last accessed 24.05.2025.

prioritise user preferences and partisanship over objective information. In the realm of social media, ‘realities’ are shaped by the establishment of parallel metaverses. Within these metaverses, news feeds are designed to promote customization and affiliation, thereby restricting users’ exposure to alternative viewpoints. This is reinforced by the apparent presence of a pre-existing consensus among users, even before they post or share any content, in a process that involves tailoring news feeds to align with users’ affiliations [7, p. 270–271]. Collectively, these contextual factors have provided disinformationists with sophisticated tools to disseminate their disinformative pieces swiftly and effectively, thereby challenging the mainstream media and fomenting chaos.

Consequently, the world has been grappling with a (dis)information crisis, which cannot be separated from a deeper Democracy crisis. Democratic systems, founded on the principles of free speech, tend to place relatively little emphasis on regulatory and control mechanisms regarding the extensive democratisation of information and knowledge sources. This democratisation enables disinformationists, who are typically akin to authoritarian regimes, to exploit that freedom, by feeding on a context of interlinked, subsequent crises, known as permacrises.

This article thus sets to discuss disinformation in the age of permacrisis. It first investigates whether alternative sources of disinformation, and specifically conspiracy theories, reflect the impact of permacrises. It is posited that, given the interwoven complications that commonly characterise permacrises, disinformation can no longer be approached over-simplistically as a form of ‘fake news’, where fallacies and biased arguments can be debunked by fact-checking systems. Instead, it is argued that considering disinformation in all its complexity, in its multiple and diverse materialisations, is essential to be able to detect, identify and analyse disinformation. This implies investigating a core aspect of disinformation: language. The potential of linguistic analysis for detecting disinformation is thus revisited, to investigate whether such linguistic analysis, which has proven effective in detecting ‘fake news’ [6, 8], is also useful to detect alternative sources of disinformation, such as conspiracy theories.

The next section discusses disinformation in the age of permacrisis, as a route to lawlessness. Subsequently, the methodological approach is described, followed by the findings of the analysis and the discussion of the results. The article concludes by discussing the furthered potential and limitations of the forensic linguistic analysis in the increasingly sophisticated era of artificial intelligence.

## 2 Disinformation in the Age of Permacrisis: The Route to Lawlessness?

In its most basic form, the term ‘disinformation’ has been defined essentially as false information that is represented as genuine, factual news, and hence has been used as a synonym of ‘fake news’. Allcott and Gentzkow define the term as “news articles that are intentionally and verifiably false, and could mislead readers” [9]. In the same vein, Walters proposed a ‘consensus definition’, wherein fake news is defined as: “(a)

content holding itself out as a news piece (b) that makes objectively false assertions that given events have occurred (c) in a materially false manner” [10, p. 120].

This form of defining disinformation encapsulates the concept in its narrow sense, notably, information that is factually false and can be objectively verified through fact-checking mechanisms. However, in a broad sense, this definition presents two significant challenges. Firstly, not all forms of disinformation rely on factually false information, rather the opposite; as has been argued, the most severe forms of disinformation exploit the misrepresentation of factual information [6] to manipulate the audience using verifiably truthful details. Secondly, by restricting the concept of information to journalism and related texts, this conceptualisation overlooks alternative sources of information that currently enjoy widespread popularity among general audiences.

The ongoing crisis of the mainstream media and the predatory, manipulative potential of the alternative media, particularly social media, have long been the subject of discussion as key drivers of disinformation. The correlation between media credibility and the mainstream or alternative nature of the sources of information, which ultimately influences the dissemination and reliance on disinformation, is neither novel nor straightforward, although the debate has frequently been superficial. While mainstream media have traditionally garnered higher credibility ratings, built upon journalistic ethics, professional standards and media regulation, the reliability of both mainstream and alternative media sources has encountered scepticism from the audience. Perceptions of inaccuracy and a lack of professional standards in user-generated contents on digital media contribute to mistrust in alternative media sources, but the apparent lack of press freedom, largely driven by bias enforced by the owners of mainstream media, stands in contrast to trust in the traditional media [5]. Notably, alternative media sources are often perceived as advocates for press freedom, whereas mainstream media and their control over the information disseminated are viewed as possible contributors to disinformation [11].

As elucidated by Kenix [12], alternative media have historically played a pivotal role in driving social transformation, often drawing upon the professional standards of mainstream media rather than the subversive nature of the alternative sources of information. Consequently, the author posits that, despite offering distinct and unconventional forms of communication, alternative media have always been integral to the same continuum as mainstream media. Notably, in Kenix’s perspective, the two will continue to converge and eventually merge, as they are placed on a continuum rooted in what the author refers to as ‘commercial ideology’ (p. 138). This convergence is supported by the assertion that a significant portion of alternative media’s activities bears little resemblance to principles of the independent press, while communication techniques that are not tethered to financial gain become increasingly prevalent within the mainstream media. Although audience trust is largely correlated with the trust of news information, the trust of the source (i.e., in those who deliver the news), and the trust of media corporations [13], the audience credibility judgement will ultimately depend on the media they consume, trust and care about, and that align with their views, where frequent exposure correlates with content consumption [5]. In other words, traditionally the audience may tend to trust what is objectively true less than what they believe to be true.

In this scenario, disinformation remains “one of the greatest threats to civil political discourse” [10, p. 111], especially in the context of a permanent, long series of ongoing crises, or permacrisis [14]. Over the past few years, the world has experienced a surge in various of those world crises, including environmental, financial, health, climatic and energy-related crises, as well as recurrent wars, including in Europe. These crises are not only diverse in nature but also increasingly frequent, persistent and interlinked, with “extended spillovers” [14, p. 20]. Although subsequent crises are distinct, they feed into each other, challenging the resilience of citizens [15]. Consequently, citizens now reside in a post-normal era, “characterised by irreducible uncertainty and high stakes” [16, p. 1], which is fraught with uncertainty and contradictions, including in the scientific realm. These uncertainties, fuelled by a constantly evolving environment of permacrisis, introduce a ‘new normal’ with unforeseen consequences for mental and physical well-being [17] and beliefs, including in epistemic institutions. As a result of the loss of credibility of the institutional mechanisms underpinning the production and validation of truth (such as the mainstream media or the political system), and of the failure to meet general expectations, a ‘legitimation crisis’ emerges [18], which paves the way to an identity crisis. Further to the “institutional separation of secular and sacred powers” [18, p. 19], the erosion of public trust in traditional authorities creates a space for alternative, often deceptive, narratives to gain traction. This setting, by raising questions of legitimation, will eventually lead to a new group identity as a new form of legitimation, whereby action is guided by interest, rather than oriented by value.

This environment inevitably exerts an impact on the public sphere, as the permanent state of crisis fuels discontent and disillusionment, undermining trust, truth and knowledge, which are the fundamental principles of democracy [19]. The ‘crisis continuum’ thus engenders a crisis of trust in institutional reason and specialist’s expertise [19], culminating in a crisis of democracy [20]. Consequently, the context of permacrisis creates a conducive environment for populism [21] and has the potential to ultimately lead to the decline of democracy. Simultaneously, the collective global fatigue of successive, interlinked crisis and political upheaval has a serious impact on communication, which has to be conducted through a high degree of chaos, where established, democratic institutions and trust in sovereign entities are challenged, “and inclusive ways of living and being are coming into conflict with the privilege bestowed to those beholden to old systems” [22, p. 1]. In this context, Habermas’ [18] emphasis on communicative rationality and the public sphere for maintaining democratic legitimacy emerges as a precarious ideal amidst the breakdown of social consensus during permacrisis.

Trust and distrust in sources of information, whether originating from mainstream or alternative media, are fuelled by filter bubbles and echo chambers, whereby individuals are isolated from diverse perspectives, and information prioritises content that aligns with their past interests and narratives circulate within a particular target community with confirmatory intent, that have emerged as a result of media fragmentation [23]. These phenomena materialise both offline, through partisan news, and online, via hyperpartisan websites, algorithmically derived feeds on social media, and radicalised communities on messaging services. Consequently, the public’s belief in alternative sources of disinformation, including overt ‘fake news’, rumours,

propaganda, hyperpartisanship, and conspiracy theories, has been strengthened by a shared sense of ‘cultural schizophrenia’ [24], whereby individuals in postmodern societies experience reality as disjointed, with historical continuity and collective meaning severely eroded.

These forms of communicating all have the potential to deliberately undermine social cohesion and influence the democratic electoral process [25], although until now research has focused mostly on news pieces, while comparatively little research has been dedicated to alternative sources of (dis)information. In this context, disinformation has been more appropriately defined as the production of information “whose facticity is manipulated with a high intent to deceive the audience and thus obtain a financial and/or political gain” [6, p. 2416]. By that token, the primary challenge posed by rumours, propaganda, hyperpartisanship, and conspiracy theories lies in their deceptive nature.

In such a setting of ‘cultural schizophrenia’ [24], conspiracy theories deserve particular attention, as they emerge in response to opaque power, by emphasising denialism, conspiratorial beliefs, and (hyper)partisanship [26]. They serve as a form of ‘cognitive mapping’, a desperate attempt to make sense of complexities and chaos when established structures fail to provide meaning [24]. In the current era, characterised by permacrisis and informational overload, these tendencies intensify, contributing to the allure of conspiratorial thinking and the viral spread of disinformation as people search for coherence amid fragmentation. While conspiratorial texts may ostensibly present themselves as information sources, they rarely assume the identity of journalistic news pieces. Consequently, they are not expected to adhere to the journalistic genre conventions that are typically observed in news reporting, but instead, they adopt alternative post-truth strategies. Linguistically, this reflects in the employment of particular linguistic devices, such as appeals to emotion and personal belief, to exploit and manipulate their audience. These pieces feed on feelings of uncertainty, panic, and perceived loss of control to deny the existence of objective facts and assert that scientific knowledge and theories are more individual narratives, interpretations and perceptions than objective elements of factual reality [19, 27].

Conspiracy theories refer to “a proposed explanation of events that cites as a main causal factor a small group of persons (the conspirators) acting secretly for their own benefit, against the common good” [28, p. 2]. Conspiracy theorists thus posit that an event or situation is the result of a clandestine plot orchestrated by power elites “to commit an unlawful act, coupled with an intent to achieve the agreement’s objective, and (in most states) action or conduct that furthers the agreement” [29, p. 351]. Such theories, which are frequently produced with political motivations, challenge the existence of an objective truth, which conspiracy theorists claim is a mere construct of powerful elites to serve their own interests and reinforce their power. Instead, conspirationists assert that there are only individual narratives of subjective truths; that laypeople have the power to know and understand more than experts in the various fields, who have succumbed to financial interests; and that, as a consequence, epistemic and institutional authorities’ official narratives should neither be trusted nor accepted [19, p. 209]. In this context, conspiracy theories emerge as populist counter-narratives [30] asserting that the official narratives result from a group of conspirators, who act intentionally and secretly; therefore, conspiratorial counter-

narratives state that everything is interconnected, so nothing happens by accident, and that nothing is what it seems. In this bewildering scenario, where the public does not know what or whom to believe anymore, conspiracy theorists offer counter-narratives that pose themselves as the only truthful and unambiguous responses to crisis experiences [31].

In the face of a state of permacrisis, the human need for meaning often leads individuals to seek solace in readily available and easily comprehensible conspiracy theories and unfounded rumours where more plausible explanations are available. They thus search for alternative explanations that contradict the official narratives. Those counter-narratives, which are easy ways of telling complex stories, by offering a simplistic series of causes and effects to explain the inexplicable that dismiss the world's complexity [32], resonate with people's individual knowledge and facts, and with their perceived entitlement to their personal opinions. Simultaneously, technology facilitates the rapid dissemination of these narratives through curated selection algorithms targeting individuals within their own filter bubbles and echo chambers, where information remains unverified, yet is perceived as accurate based on the interpersonal truth of information shared by peers and the confirmation of one's own pre-existing beliefs [19, 27].

By fostering epistemic and institutional distrust, conspiracy theories and unfounded rumours undermine the very foundations of democracy, including transparency, rationality and trust, while leaving the audience vulnerable and uninformed [19]. They serve particularly well the purpose of undermining epistemic and institutional trust, by taking advantage of a perfect storm: permacrises, the decay of public truth and trust, and the technological developments, which contribute to the pervasiveness of these instruments of disinformation. The production and dissemination of disinformation are closely linked to the technological advances of the past few decades. These developments, coupled with the concept of 'doombehaviour' and 'cultural schizophrenia', have the potential to exacerbate the spread of disinformation. Doombehaviour has been defined as the frequent consumption and/or prolonged exposure to information about current, potentially critical events that the user finds distressing and that evoke a sense of impending doom, leading to depression or anxiety [33]. This sense of doom is largely dependent on two technology-driven behaviours: doomscrolling, which involves passively scrolling through social media platforms while attending to negatively valenced information, and doomsurfing, which entails intentionally engaging with negative and distressing content [33, pp. 184–185]. Given the social and legal implications of unfounded rumours, in general, and of conspiracy theories, in particular, the forensic nature of disinformation is evident.

Conspiracy theories, as explained by Butter [34], "assert the existence of a covertly operating group of people—the conspirators—who seek, from base motives and by underhand means, to achieve a certain end" (2020, p. 9) with the aim of discrediting other people's ideas and eventually tear civilisation apart. By feeding on scientific uncertainty and the contradictions within science [16], conspiracy theories "have begun to corrupt people's understanding of the world and their willingness to listen to experts and authorities in times of crisis (...), thus threatening (...) the very health and security of the communities they live in" [19, p. 215]. A defining characteristic of conspiracy theories is thus their ideological underpinnings [35], as a means of exert-



ing power and swaying the public opinion in a certain direction by placing agency on powerful and malevolent people, while delegitimising the authority of democratic institutions and disorienting the audience, who in face of cognitive exhaustion, no longer know what or whom to believe [36].

The consequence of this confluence of factors is a vicious cycle, wherein the frequency of crises escalates proportionally to the proliferation of conspiracy theories. Conspiracy theories are often associated with global ‘master conspiracies’ and local protests that are rooted in conspiracy theories disseminated through trending narratives at both local and regional levels [31]. Notably, these master conspiracies and the disinformation they generate and disseminate, which have the potential to instigate an environment of lawlessness and eventually further Democracy crises, possess a cross-border threatening nature, as they predominantly operate online, rather than in one particular jurisdiction at one given time. In this environment of global lawlessness, post-truth politics are certain to threaten the rule of law. However, the challenges for law extend far beyond this threat, as those sophisticated politics of conspiracy are introducing a new form of primitive law centred around the processes of othering, exclusion, and sacrifice.

The contemporary resurgence of conspiracy-infused politics does not simply undermine the modern rule of law; rather, it tends to reanimate older, more primal forms of legality structured around community, ritual, and exclusion. As Freud argues [37], the origins of law in primitive society lie not in codified statutes or rational principles, but in collective prohibitions and the symbolic function of the taboo. These early juridical structures build upon rituals of sacrifice and exclusion, in particular the expulsion or destruction of a scapegoated figure, to produce and reaffirm social cohesion. Freud’s foundational view is that the prohibition of violence is paradoxically grounded in a collective act of violence itself, mythologised and repeated to establish order. What we see in contemporary conspiracy politics is a setting where these mechanisms are strikingly echoed: a need to explain disordered realities gives rise to symbolic enemies, who become the focus of communal anxiety and ritualised denunciation.

Schmitt adds to this conceptualisation, by articulating the political as founded on the binary friend/enemy distinction, i.e. a dyadic opposition that defines the boundaries of a political community by identifying those who threaten its existence. Schmitt [38] posits that sovereignty ultimately rests on the decision about the exception—about who is the outlaw and who is inside the law. Conspiracyist worldviews often mobilise this logic in implicitly legalistic ways, by drawing sharp boundaries between ‘us’ (the enlightened, the patriots, the pure, the truthful, the righteous) and ‘them’ (the elites, the globalists, the deep state actors), constructing a form of informal law grounded in suspicion, loyalty tests, and ritual exclusion. This is a form of mythopolitical law, now rooted not in institutions or universal principles, but in belonging and affect, under the influence of myths and stories shared and lived by that community [39]. This dynamic is akin to Agamben’s [40] concept of the ‘state of exception’, whereby conspiratorial movements and authoritarian impulses produce parallel legalities based on exclusion and emergency. These movements invoke crisis narratives to legitimize acts that would normally be illegal or illegitimate, thereby creating zones of exception where rules are arbitrarily applied or discarded, reinforcing



ing the friend/enemy distinction and amplifying social fracture. This process underlines how the breakdown of consensus and institutional trust is not merely a loss of rule of law but a transformation toward exceptional, exclusionary modes of governance and social ordering.

Such dynamics can be seen in contemporary movements that attempt to reject or bypass formal legal systems, such as QAnon or Sovereign Citizen groups, who often generate their own pseudo-legal codes and appeal to a kind of primal justice that mirrors the very origins of law through acts of sacrificial exclusion that target epistemic authorities as corrupting forces, including doctors, judges, journalists, and minorities. Such alternative ‘legalities’ do not just reject state law; they create their own systems of meaning through the designation of enemies. The ensuing binary logic of ‘friend vs. enemy’ becomes internalised, operationalised, and directed toward moral purification rather than legal deliberation, consequently turning the law into an instrument of tribal affirmation. The ritual and psychological mechanisms underpinning this new ‘primitive law’ are further illuminated by Girard’s concept of scapegoating [41], wherein internal rivalries and tension are managed through the collective identification and sacrifice of a scapegoat, a figure blamed for communal ills and expelled or destroyed to restore harmony. This sacrificial logic deeply resonates with the mythopolitical law described by Schmitt and Freud, reinforcing social bonds through exclusion rather than inclusion. Girard’s views reveal the cyclical nature of this violence: as disinformation fuels paranoia and division, it perpetuates a mimetic cycle where new scapegoats are constantly sought, destabilising democratic pluralism and embedding exclusionary violence at the heart of contemporary discourse.

Those pseudo-legal codes contrast sharply with modern law. Whereas modern legal systems, drawing on Enlightenment rationalism, strive toward neutrality, procedural fairness, and universal rights, those primitive-legal imaginaries rely on emotional resonance, myth, and populist sovereignty. They do not seek to negotiate plurality, but rather to eliminate it and return to a state of clarified identity, cleansed of ambiguity or dissent. This tension between modern legality and primitive law resurfaces most powerfully in times of permacrisis, when institutional and epistemic authorities are distrusted and oversaturated information makes truth conditional. In such an environment, disinformation preys on the affective energies that seek certainty rather than legality. This certainty is most easily constructed through symbolic exclusions and simplified threat narratives.

The ethical stakes of these transformations are profound. As sacrificial logic resurfaces in political rhetoric and public discourse, now in digital form (through doxxing, cancelling, or mass online harassment), it challenges the very foundations of pluralistic legal orders. The politics of conspiracy thus does not merely bypass legality; it conjures a rival form of legality that is premodern in structure, collective in affect, and deeply exclusionary in practice. Recognising and analysing this pattern is essential to understand the contemporary mutation of the legal imaginary under the weight of ongoing social and epistemological crises. Consequently, jurisdictions are likely to face serious challenges in effectively combating conspirationist counter-narratives.

### 3 The Potential of Linguistic Analysis to Counter the Progression of Disinformation

The phenomenon of disinformation in the age of permacrisis is best understood as part of a longer intellectual trajectory that interrogates the status of truth, language, and communication. Theorists like Lyotard, Habermas, and Jameson [18, 24, 42], whose work straddles structuralism and post-structuralism from the 1970s to the 1990s, foreground the centrality of language and the conditions under which meaning is produced and sustained in postmodern societies. Their visions provide a fundamental lens for understanding the current landscape, where digital media technologies exacerbate the fragmentation of information and the erosion of consensus, allowing disinformation to thrive in a world increasingly unable to agree on basic facts. In this troubling scenario, the postmodern preoccupation with language, narrative, and legitimacy remains ever more urgent in this climate of ongoing crisis and uncertainty. As argued by Lyotard [42] in his conceptualisation of ‘language games’, the grand narratives, or ‘metanarratives’, that historically anchored knowledge and social cohesion have fragmented. In place of these ‘metanarratives’, society moved on to be governed by a multiplicity of smaller, localised narratives, each claiming its own criteria for legitimacy. This fragmentation destabilises the very possibility of shared truth, while creating fertile conditions for the proliferation of competing narratives, especially in environments marked by continuous crisis. The alternative, competing narratives include misinformation and disinformation.

Conspiracy theories have unsurprisingly attracted research in several different scientific areas, including in Psychology, Political sciences, Sociology, History, and Communication sciences [43], to name just a few, which is revealing of the multidisciplinary interest in the phenomenon. Additionally, since conspiracy theories usually employ multimodal approaches, including fixed and moving image, sound, graphs, and diagrams, different disciplinary fields have approached them from different angles. In this multimodal scenario, the linguistic analysis is crucial, given its potential to understand the linguistic processes involved in the production and spread of conspiracy theories, their underlying structures, and their communication patterns, all of which are vital to eventually assist the detection of alternative sources of disinformation.

Nevertheless, despite the inherent nature of disinformation as ‘language games’ [42], research on the strategies and means of production and spreading of conspiracy theories in the field of linguistics remains limited, although those narratives are still largely based on verbal language and produced in written form. Different linguistic approaches have been adopted to address different forms of disinformation. Some studies have focused on thorough established sets of grammatical features to identify differences in the linguistic structure of ‘fake news’ [11], while others have focused on methods of discourse analysis to detect and understand propaganda and to investigate fake news and disinformation in general [44, 45], on pragmatics to explore the concepts of framing, cognitive relevance, and argumentative fallacy of wrenching from context to investigate semi-fake news [46], or on the narrative structure, by investigating the power of metaphors to find a ‘solution’ to the narrative ‘problem’ [31]. Each of these studies has proposed an analysis of a specific linguistics feature

or set of features, and none of them have proposed an integrated linguistic framework to address disinformation detection. However, understanding the linguistic phenomenon of disinformation holistically is paramount to approaching disinformation in its multi-layered semiotic complexity, especially in relation to permacrises.

The analysis presented in this article builds upon close qualitative scrutiny of the linguistic features that are more salient in conspiracy theories, and which consequently are foregrounded, as compared to unmarked features found in mainstream, official information.

### **3.1 Conspiracy Theories Dataset**

The dataset used in this analysis of conspiracy theories consists of a corpus of 100 articles written in Portuguese, all of which were collected in 2022, within the scope of the research project [PROJECT NAME].

The selection and collection procedures were automated, and the data were not previously validated by humans. Instead, the processes followed an approach akin to a silver standard, wherein the data were sourced from the publication outlets where they were published. In this instance, all the articles were published in blogs and websites known for publishing conspiracy theories in Portugal, and this served as the main selection criterion. These articles encompass a diverse range of conspiracy theories, including those related to science and health, climate change, population demographics, and the COVID-19 pandemic. Such thematic diversity ensures a topic-independent analysis, where the findings are not contingent upon the topic addressed.

The articles within the corpus underwent human annotation, so each article was annotated by two distinct linguists. The annotation process was guided by the linguistic features described in the subsequent section.

### **3.2 The Analytical Methods**

Forensic linguistic analysis is particularly well-suited to address the phenomenon of conspiracy theories as tools of disinformation in its multifaceted nature. Forensic linguistics, the applied branch of linguistics employed in forensic contexts, frequently assists law enforcement agencies in investigations or facilitates scientifically informed decisions by courts in cases involving linguistic material. When conducting their analyses, forensic linguists typically approach the forensic issue comprehensively and subsequently determine which linguistics tools, from those available in the ‘linguist’s toolkit’ [47], are the most appropriate for the analysis. Consequently, they commonly employ diverse linguistic analytical devices, including over grammatical, discursive, pragmatic, and statistical features, individually or in combination, to approach the forensic problem holistically. This methodological approach is preferred over more granular, highly detailed analyses of individual linguistic features because it enables the linguist to make decisions based on a weighed analysis of multiple categories of parameters, rather than relying on a single parameter or category, whose findings may be biased towards a specific category or pattern.

The analysis presented in this article revisits the Disinformation Detection Framework (DDF), which has been developed to address ‘fake news’ detection, to investigate its robustness in the detection of alternative sources of disinformation, in this case, conspiracy theories. The analysis begins with an identification of the most salient features of disinformation that are frequently found in conspiracy theories in order to contribute to building the understanding of how conspiracy theories operate, notably linguistically, to help detect conspiracy theories and counter conspiratorial narratives, and eventually restore public trust in official authorities, both at the epistemic and at the institutional levels. An inductive approach to the data is adopted to identify the most salient features in the corpus: considering the features that are expected from—and typical of—official, mainstream pieces of information, only features that diverge from the ones commonly found in official information sources were annotated; conversely, features that are shared by both official and alternative sources of disinformation were discarded as potential features of conspiracy theories, since they are not relevant for distinguishing the two types of sources. This procedure, based on the principles of intra- and inter-group variation, is common, e.g. in cases of authorship analysis, where the most robust features are those that are consistent within the same group, and distinct across different groups (see, e.g. [48]). For annotation purposes, these features are distributed according to three different categories, following the DDF proposal: metadata, structure, and discourse.

Metadata, strictly speaking, are not linguistic features themselves but rather informational elements. However, they possess significant potential in disinformation detection and analysis due to their inclusion of relevant elements for establishing authorship, source, and credibility. Features of metadata include authorship, outlet ID, reference to supporting sources, date of publication, use of images, coding errors, or foreign language usage. These features are all pertinent in official sources of information, where the authors are expected to be responsible and accountable for the information that they share. Moreover, providing these elements enables readers to assess the credibility of authors, sources, and the information itself. Supporting sources are essential in this context, as they enable the audience to perform their own independent fact-checking. Similarly, the date of publication is also important, since it enables readers to establish the timeline of the information provided and identify instances where old content may have been decontextualised and republished to mislead readers.

The second category, structure, consists of features that are usually considered as part of grammar and punctuation. Features in this category include, among others, typography, orthography, punctuation, text statistics, grammar, morphology, or semantics. These linguistic features are all relevant since they allow a comparison between alternative and official sources of information. Although typos and odd spelling mistakes are expected in any text, including in official sources of information, typographical features such as bolds, italics, underlines, or uppercase text are not common in official sources of information. The use of punctuation is also potentially robust in detecting disinformation, since official sources tend to make a highly patterned and systematic use of punctuation, reflected in the usage of full stops. That is because official sources of information make statements, rather than asking questions (by using question marks), making exclamations (by using exclamation marks),

providing side information (by using brackets), or leaving information suspended (by using ellipsis). In addition, syntactic elements are worth exploring, especially considering that official sources of information tend to use a combination of unmarked, simple and complex sentences, whereas conspiracy theories will predictably use mostly simple sentences to enable an easier cognitive processing, as well as marked sentence structures that establish a dialogue with the interlocutor, by addressing them directly. As part of syntax, the use of passive voice is also worth exploring, given its potential to manage agency, by foregrounding the institutional and epistemic responsibility when events are represented as negative, and backgrounding their responsibility when actions may be framed as positive. Finally, the semantics feature focuses on the analysis of the vocabulary used, including terminology.

The third category, discourse, includes features such as markers of emotion, lexical items of polarity, persuasive devices, speech acts (pragmatics), representation of social events, representation of participants, and rhetorical devices. Unlike mainstream sources of information, alternative sources such as conspiracy theories aim to appeal to the audience, by building rapport with the reader. This implies appealing to emotions and persuading the reader to join their side. By asking the reader to take sides, conspiracy theories are expected to polarise the discourse, where the others are represented as accountable for the ongoing consecutive world crises.

The next section presents the analysis of the most salient features in the metadata, structure, and discourse categories.

## 4 Conspiracy Theories in Writing

The linguistic analysis of the data across the three linguistic categories, presented below, reveals that the most salient linguistic features identified across the three categories (metadata, structure, and discourse) reflect the potential of conspiracy theories as alternative sources of disinformation in the context of permacrisis.

### 4.1 Metadata

One of the fundamental tenets of information in democratic regimes is a marked plurality of views and opinions engaged in public debate. In the information arena, this plurality is typically reflected in the diverse range of authors contributing to the publications of each media outlet. Consequently, in official media outlets, different articles are expected to be written by different authors, who are held responsible and accountable for the information that they share. Furthermore, being aware of the identity of the authors of a text allows readers to assess the credibility, stance, potential biases, group affiliations, or partisanship of the authors, thereby establishing the credibility of the sources and of the information itself. The analysis of authorship in the corpus of conspiracy theories, however, reveal a markedly divergent pattern: most of the articles published in the same outlet (identified in the corpus by the outlet ID) are officially authored by the same person, either real or fictional. This suggests that each outlet is either managed by a single individual or by a group of individuals who assume the identity of a single author. In either case, single authorship enables

such outlets to establish themselves as a solid, unified authoritative voice against the opaque power of the elite responsible for the successive, interconnected crises. Simultaneously, this approach to authorship prevents the reader's attention from being diverted by the individual authors' circumstances and focus on the core element of the text: the message.

Another element of metadata that contributes to establishing the credibility of the sources is the inclusion of supporting sources. In media and communication, supporting sources are of paramount importance, as they facilitate the verification of information, the distinction of opinions from factual information, and even enable readers to conduct their own independent fact-checking. In traditional media, these sources are typically provided in the form of textual references, by citing the sources either through direct speech (marked by quotation marks) or reported speech, irrespective of whether the sources are anonymous or identified. Online media, conversely, provide content producers with greater flexibility in referencing supporting sources, given the diverse options offered by hypertext. Therefore, in addition to citing the sources using direct or reported speech, online media also offer hyperlinks to the sources. These hyperlinks can be either provided as ordinary URLs (in the format "https://..."), which readers can access by clicking or copying and pasting into their browsers, or alternatively embedded within the text. In the latter case, the URL is not explicitly displayed; instead, it is concealed behind the text, usually indicated by a distinct colour and underlined. Both these methods are usually employed by mainstream and alternative sources of information.

The texts within the corpus of conspiracy theories employ both methods, albeit URLs (both embedded and non-embedded) are considerably more frequent (approximately four times as much) than textual sources. Notably, conspiracy theories exhibit a preference for embedded URLs, while non-embedded forms are dispreferred. This preference is not surprising, considering that embedded URLs offer a more user-friendly and uninterrupted reading. However, it is worth noting that a substantial proportion of the URLs (both within the embedded and non-embedded categories) are either broken or non-functional. In certain instances, clicking on these hyperlinks results in an error message indicating that the page cannot be found, whereas in many other instances, clicking on the hyperlinks or the hyperlinked text directs the reader to other sources whose information is unrelated to the arguments offered within the conspiratorial texts. This *modus operandi* seems to rely on the assumption that for readers of conspiracy theories, the veracity of the sources is inconsequential to establishing the credibility of the text, provided that the statements (even if fallacious) are formally supported by external sources. In essence, conspiracy theories appear to assert that their readers are unlikely to engage in doomchecking [33] practices. Furthermore, even if readers undertake such doomchecking and discover that the hyperlinks redirect to the incorrect sources, they may be inclined to attribute this occurrence to a technical error, rather than to a motivated action of the authors.

Finally, another feature of metadata that is relevant when investigating disinformation is the date of publication. This date allows readers to initially verify the currency of the information, as well as to establish its timeline. In possession of this information, readers can identify instances where outdated content has been decontextualised and repurposed to mislead readers. In this specific corpus of conspiracy

theories, only roughly two thirds of the texts include the date of publication, while all others omit that information.

## 4.2 Structure

Typos, like grammar and punctuation mistakes, are common in any text, and can be found even in carefully crafted and (self-)edited texts. However, mainstream information usually goes through several levels of editing, which decreases the likelihood of the occurrence of mistakes. The analysis of the conspiratorial texts in the corpus, however, reveals a high frequency of errors and mistakes, including in grammar and punctuation. These texts also show errors and mistakes in the use of uppercase and lowercase typeface. Contrary to what was reported in other studies (e.g. [6]), the texts in the corpus do not reveal the use of numbers to replace letters (e.g. “1” for “i”) as a means to circumvent automated detection systems. This is likely due to the fact that this feature is now irrelevant, given their easy detection by computational systems.

Typography is also used idiosyncratically in conspiratorial texts. Official sources of information do not commonly use formatting e.g. bold, italic and underlined text or uppercase font for highlights. On the contrary, the conspiratorial texts in the corpus exhibit a frequent use of these strategies, which distance the alternative sources of information from official sources.

Similarly, the use of punctuation in the conspiratorial texts is also markedly different from the customary pattern observed in official sources of information. Mainstream media tend to make a highly patterned and systematic use of punctuation, with a pronounced inclination towards the exclusive use of full stops. This preference is understandably correlated with the purportedly informative nature of official sources, which prioritise the reporting of objective facts over the expression of individual opinions or subjective assessments of facts. By using predominantly full stops, mainstream media underscore their role as neutral sources of information. Conversely, conspiratorial texts employ a diverse range of punctuation marks, including question marks to engage the readers by asking them questions (even if the reader is unable to offer an answer), exclamation marks (primarily used to convey personal feelings of astonishment, disbelief, or indignation), brackets and dashes (intended to offer side comments that reinforce the author’s arguments), or ellipsis (to leave information suspended and encourage the reader to infer the underlying connections). The use of these punctuation marks in combination concurs to reinforce the expressive nature of the texts and establish rapport with the readers, thereby prioritising the appeal to emotions over the informational objectives.

The conspiracy theories in the corpus also exhibit a predominant use of syntactically marked sentence structures that contribute to establishing a dialogue with the interlocutor, the reader, by addressing them directly. It is worth noting, in particular, the very high usage of cleft and pseudocleft sentences, which change the unmarked word order to thematise the elements of the text that are more relevant to support the authors’ arguments. For instance, by formulating sentences as “IT WAS X that Y”, rather than “X did Y”, the conspiratorial texts foreground the details that interest them most to appeal to the readers. This feature is subsequently complemented by the



use of passive voice, which allows the conspiratorial texts to manage agency in a way that foregrounds the institutional and epistemic responsibility for negative actions, and backgrounds their acts when they have a positive assessment. It is worth noting that, contrary to what would be expected, conspiracy theories do not use almost exclusively simple sentences, which are usually associated with their potential to enable an easier cognitive processing by the reader. Instead, the analysis of the corpus texts reveals a high usage of subordinate clauses, especially subordinate adverbial clauses and non-defining relatives. The latter clauses are employed to offer additional information about someone or something, and although such information is not essential for understanding who or what the text is talking about, again it contributes to underscoring responsibility and agency. Subordinate adverbial clauses, conversely, are used to explain how, when, where, and why something happens, all of which are crucial elements in conspiracy theories. This use of syntax contrasts with the one employed by official sources of information, which tend to use a combination of unmarked, simple and complex sentences.

Finally, from a semantics point of view, a salient feature of conspiracy theories is the peculiar use of vocabulary. Whereas official sources of information tend to use standard varieties of language, and consequently common vocabulary, the use of non-standard varieties is frequent in conspiratorial texts. Vocabulary used frequently in conspiracy theories includes slang and informal language, jargon and technical or scientific terminology, neologisms, and swear words. This use of vocabulary contributes, once again, to establish rapport with the readers, by suggesting that the readers and the authors are part of the same group, ‘us’, in the fight against the elite, ‘them’. This discursive feature is discussed further in the next section.

### 4.3 Discourse

The features discussed in the previous subsections, related to metadata and structure, concur for the discursive construction of conspiracy theories. Particularly relevant discursive features include markers of emotion, polarity, persuasive and rhetorical devices, speech acts (pragmatics), representation of social events and representation of participants.

One of the core elements of conspiracy theories as alternative sources of (dis) information is their intention to engage with the audience by establishing rapport with readers and fostering a sense of shared belonging. Consequently, conspiratorial texts employ a range of figures of speech, including metaphors, hyperboles, irony, and euphemisms, to evoke emotional responses and, as an effect, create lasting impressions. By employing metaphors, the authors of conspiratorial texts creatively apply a word or phrase to an object or action that lacks literal correspondence. Similarly, the exaggeration offered by hyperboles allows conspiratorial texts to evoke strong feelings and create enduring impressions, even if, as a figure of speech, hyperboles are statements or claims that are not meant to be taken literally. The use of euphemisms, in turn, enables authors of a text to use innocuous words or expressions as a replacement for those deemed offensive unpleasantly suggestive. In the context of conspiracy theories, which as discussed in the previous subsection often employ derogatory language, the aim is not to replace offensive terms; rather, this strategy is used as

a discursive device to downplay the concepts approached. The use of euphemisms is complemented by the frequent use of irony to achieve emphatic effects. Overall, these figures of speech rely on the inference of the readers to encourage emotional responses and foster empathy for the underlying causes of the conspiratorial texts.

Conspiracy theories tend to polarise discourse by compelling readers to adopt a stance. Several different discursive devices are employed for this purpose, including persuasive and rhetorical devices and speech acts, all of which contribute to the representation of social events and participants. Lexically, polarity is constructed through the use of negative versus positive words. In conspiratorial texts, which aim to construct a negative image of the other, negative words are predominantly used (they are employed four times as much as positive words). Alongside polarity, conspiratorial texts predominantly use intensifiers and comparatively little hedging. By systematically employing this strategy, together with rhetorical devices such as repetition and anaphora, conspiracy theories make strong assertions, while showing little doubt, which operates as a strong counter-narrative against epistemic authorities. This counter-narrative is further reinforced through directive speech acts, which are employed to exhort the reader to undertake action against “them”, the powerful elite.

The analysis of the conspiratorial texts within the corpus shows a stark division of participants into two polarised categories: ‘us’, representing the virtuous individuals, and ‘them’, portraying the villainous ones. This process of othering emphasises our virtue and their villainy. Agency plays a pivotal role in this representation: when ‘they’, the others, are described as engaging in negative activities, their actions are foregrounded and explicitly attributed to them, thereby portraying those agents as actively malicious or deceitful. Conversely, any actions performed by ‘them’ that may be seen as positive are backgrounded or downplayed, thereby minimising their agency and undermining their credibility. This selective attribution of agency is further reinforced by the predominant use of negative language, which casts ‘them’ in a consistently unfavourable light. In contrast, ‘we’ are depicted as the enlightened and courageous group whose opinions are equally or more valuable than those of the epistemic and institutional authorities, united against the powerful elite. Rhetorical devices such as repetition and anaphora, along with strong, unhedged assertions and directive speech acts, further intensify this dichotomy and urge collective action. Through these strategies, conspiratorial texts not only polarise participants, but also construct a clear moral boundary, positioning ‘us’ as the righteous heroes and ‘them’ as the dangerous others.

## 5 Conspiracy Theories as Enablers of Permacrises

The linguistic analysis of the data across the three linguistic categories (metadata, structure, and discourse), as presented above, reveals that the linguistic production of conspiracy theories as alternative sources of disinformation not only resorts to strategies that are aligned with the theoretical underpinnings of disinformation in the age of permacrisis, but also that the identification of these strategies is robust to assist the detection of alternative sources of disinformation, such as conspiracy theories, which strictly speaking depart from traditional approaches to the detection of fake news.

Although this analysis has been conducted over data in Portuguese, the categories identified have the potential to be applied cross-linguistically, to other languages. This is particularly relevant in the current state, when conspiracy theories are not simply produced to be spread at local, regional, or national level, but are also cross-border, as part of master-conspiracy theories, and master disinformation in general. Given its cross-border threatening nature, contemporary disinformation has the potential to instigate an environment of lawlessness (and eventually further Democracy crises).

Disinformation has taken on new forms over time, and the constant need for research into the identification of these new forms raises significant challenges for the detection procedure. Furthermore, another layer of complexity is added by the technological developments, as the known use of social media for spreading disinformation is now accompanied by sophisticated artificial intelligence (AI) tools [49]. In the current era, the main challenge is the potential of generative AI, which enables anyone, anywhere, to instantly produce alternative forms of disinformation in virtually any language. This context encourages the disinformation crisis, which is likely to increase in the future, while remaining under the radar of the epistemic and institutional authorities that it targets. Indeed, since the large language models that are at the basis of generative AI operate as black boxes, it is (virtually) impossible to control their output. Additionally, an efficient use of prompt engineering techniques [50] enables users to communicate effectively with a language model to achieve the desired results. To ensure such effective communication, all that users need is to steer the model to generate useful output, try multiple formulations to get the best generations for their purposes, describe the task and the general setting to provide further details on what the output should look like, and show the model what one would like to see. These guidelines, which are reminiscent of Grice's maxims for effective human communication [51], encourage practices of 'dark side creativity' [52], as they enable users to produce disinformation instantaneously and massively, and spread it across different jurisdictions.

Given the demonstrated potential of generative pre-trained transformers to be valid generators of disinformation [53], their use has raised several concerns, including the uncertainty over the power of AI agents, the confidence in multiagent environments, AI alignment failures, and influence-seeking behaviour, in addition to the known oversight of AI decision processes [54]. As has been demonstrated, although generative AI shows some formal competence in language generation, by offering apparently correct text at the surface (in spelling, grammar, etc.), its functional competence is still flawed [55] and the production of hallucinations is significant. These aspects in themselves should be sufficiently robust to tell AI-generated texts from texts generated by humans. The question, however, when applied to disinformation production and spreading is whether a text needs to be human-like and fully formally and functionally competent to be taken to be true. As the analysis in the previous sections demonstrates, to be found credible, conspiratorial texts need neither to be fully competent linguistically, nor entirely coherent. In this sense, textual imperfections and hallucinations generated by AI systems can be taken as an approximation to alternative sources of disinformation, where it is difficult to tell truth from fabrication, and where accidental hallucination does not always depart from intentional manipulation.

However, because disinformation is largely a linguistic phenomenon, their analysis using forensic linguistics methods and techniques is likely to remain a promising detection method in the future. The DDF, a theoretically grounded and empirically robust framework, remains promising, revealing a significant potential to detect even AI-generated disinformation. Since AI-generated texts are a simulation of texts produced by humans, it is reasonable to believe that what works for the detection of human-generated disinformation, including alternative sources, also works for AI-generated disinformation detection.

## 6 Final Remarks

This article examined conspiracy theories from a forensic linguistics perspective, by arguing that conspiratorial texts are alternative forms of disinformation, alongside hyperpartisanship, rumours, or propaganda, all of which are distinct from conventional ‘fake news’. Conspiracy theories have attracted limited attention of linguists, although they have been the object of thorough investigation across different scientific fields, including computer sciences, social sciences and the humanities. However, given that disinformation is inherently a linguistic phenomenon, approaching it from a linguistics lens is pivotal. Indeed, considering the perfect storm offered by a combination of permacrises, the erosion of truth and public trust in epistemic and institutional authorities, and the technological advancements that facilitate their widespread dissemination, disinformation poses one of the most critical challenges to Democracy. Consequently, given its forensic nature, forensic linguistic analyses are particularly well-suited for combating disinformation, in general, and specifically conspiracy theories.

The analysis of metadata, linguistic structure and discourse within a corpus of conspiracy theories unveils the potential of forensic linguistics not only to detect, but also to empirically substantiate the theoretical underpinnings of disinformation as malevolent counter-narratives against the official narratives supported by institutional and epistemic authorities. Moreover, it is posited that linguistic analysis also has the potential to discern the rapid production and dissemination of disinformation facilitated by generative AI systems and curated selection algorithms, which target individuals within their filter bubbles and echo chambers. Therefore, forensic linguistic analysis of disinformation holds the potential to counteract this progression and disrupt the route to lawlessness.

In spite of these findings, as various alternative sources of disinformation adopt distinct forms and become more heterogeneous and sophisticated, further research is necessary, on the one hand, to keep pace with this evolution and, on the other hand, to investigate cross-sectional scenarios, where disinformation is employed in settings of crises, such as in health care systems and security, to promote hate speech against others.

Consequently, a more linguistically informed administration of Justice in the current era of permacrisis possesses not only the ability to provide a semiotic understanding of alternative sources of disinformation, but also the capacity to combat the inherent lawlessness.

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## References

1. Marantz, A. 2019. *Anti-Social: Online Extremists, Techno-Utopians, and the hijacking of the American conversation*. Viking.
2. Ben-Menahem, Y. 2022. Lawlessness. In Y. Ben-Menahem (Ed.), *Rethinking the Concept of Law of Nature: Natural Order in the Light of Contemporary Science* (pp. 323–345). Springer International Publishing. [https://doi.org/10.1007/978-3-030-96775-8\\_12](https://doi.org/10.1007/978-3-030-96775-8_12)
3. Wheeler, J. A. 1983. On recognizing 'law without law,' 'Oersted medal response at the joint APS–AAPT Meeting, new York, 25 January 1983. *American Journal of Physics* 51 (5): 398–404. <https://doi.org/10.1119/1.13224>
4. European Commission. 2025. Official Website of the European Union [Website]. *A Strengthened EU Code of Practice on Disinformation*. [https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/new-push-european-democracy/protecting-democracy/strengthened-eu-code-practice-disinformation\\_en#documents](https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/new-push-european-democracy/protecting-democracy/strengthened-eu-code-practice-disinformation_en#documents)
5. Salaudeen, M. A., and N. Onyechi. 2020. Digital media vs mainstream media: Exploring the influences of media exposure and information preference as correlates of media credibility. *Cogent Arts & Humanities* 7 (1): 1837461. <https://doi.org/10.1080/23311983.2020.1837461>
6. Sousa-Silva, R. (2022). Fighting the Fake: A Forensic Linguistic Analysis to Fake News Detection. *International Journal for the Semiotics of Law - Revue Internationale de Sémiotique Juridique* 35 (6): 2409–2433. <https://doi.org/10.1007/s11196-022-09901-w>
7. Carroll, B. 2023. *Writing and editing for digital media*. 5th ed. Routledge.
8. Moura, R., Sousa-Silva, R., & Lopes Cardoso, H. (2021). Automated Fake News Detection Using Computational Forensic Linguistics. In G. Marreiros, F. S. Melo, N. Lau, H. Lopes Cardoso, & L. P. Reis (Eds.), *Progress in Artificial Intelligence* (pp. 788–800). Springer International Publishing
9. Allcott, H., and M. Gentzkow. 2017. Social media and fake news in the 2016 election. *Journal of Economic Perspectives* 31 (2): 211–236. <https://doi.org/10.1257/jep.31.2.211>
10. Walters, R. M. 2018. How to tell a fake: Fighting back against fake news on the front lines of social media. *Texas Review of Law & Politics* 23 (1): 111–179.
11. Grieve, J., and H. Woodfield. 2023. *The Language of fake news*. 1st ed. Cambridge University Press. <https://doi.org/10.1017/9781009349161>
12. Kenix, L. J. 2012. *Alternative and mainstream media: The converging spectrum*. 1st ed. Bloomsbury Publishing Plc.
13. Williams, A. E. 2012. Trust or bust? Questioning the relationship between media trust and news attention. *Journal of Broadcasting & Electronic Media* 56 (1): 116–131. <https://doi.org/10.1080/08838151.2011.651186>
14. Lausberg, P., E. Maurice, and L. Rayner. 2024. *Making the EU fit for the permacrisis*. European Policy Centre.
15. Ladi, S., and L. Polverari. 2024. Reconceptualising the EU-member States relationship in the age of permanent emergency. *Comparative European Politics* 23 (1): 1–17. <https://doi.org/10.1057/s41295-024-00384-6>
16. Kovacic, Z., and A. Biggeri. 2023. Post-normal science 30 years on. Editorial introduction: Ongoing conversations about knowledge, science practices, integrity and quality through post-normal lenses. *Futures* 151:103183. <https://doi.org/10.1016/j.futures.2023.103183>
17. Grammatopoulos, D. K., W. Li, L. S. Young, and N. R. Anderson. 2023. UK diagnostics in the era of 'permacrisis': Is it fit for purpose and able to respond to the challenges ahead? *Clinical Chemistry and Laboratory Medicine (CCLM)* 61 (11): e225–e226. <https://doi.org/10.1515/cclm-2023-0450>
18. Habermas, J. 1973. *Legitimation crisis*. Cambridge: Polity.

19. Buluc, B. 2023. Conspiracy theories and unfounded rumours in contemporary democracies: Beyond truth and trust. In *Routledge handbook of disinformation and National security*, ed. R. Arcos, I. Chiru, and C. Ivan. 1st ed., 208–220. Routledge.
20. Gouga, G. 2022. Philanthropy, knife crime and the permacrisis: Diversity and social exclusion. *International Journal of Social Policy and Education* 4 (12): 1–6.
21. Karalis, T., and E. Panagopoulos. 2024. Case study: Populism in Greece. In *Populism and its impact on young people—Report of Working Group 4 of the Jean Monnet Network Project: Citizenship Education in the Context of European Values: CitEdEV*.
22. Comerford, C., and R. Middlemost. 2024. Theme: Communicating through chaos: Emerging research. *Communication Research and Practice* 10 (2): 125–128. <https://doi.org/10.1080/22041451.2024.2364968>
23. Wardle, C., and H. Derakhshan. 2017. *Information disorder: Toward an interdisciplinary framework for research and policy making*. Council of Europe.
24. Jameson, F. 1991. *POSTMODERNISM, or, the cultural logic of late capitalism*. Durham: Duke University Press.
25. Ainsworth, J. 2020. The toxic proliferation of Lies and fake news in the world of social media: Is it time for the law to ‘unfriend’ facebook? In *Social media in legal practice*, ed. V. K. Bathia, and G. Tessuto. Routledge.
26. Uscinski, J. E., A. M. Enders, C. Klofstad, M. Seelig, J. Funchion, C. Everett, S. Wuchty, K. Premaratne, and M. Murthi. 2020. Why do people believe COVID-19 conspiracy theories? *Harvard Kennedy School Misinformation Review*. <https://doi.org/10.37016/mr-2020-015>
27. Van Prooijen, J.-W., and K. M. Douglas. 2017. Conspiracy theories as part of history: The role of societal crisis situations. *Memory Studies* 10 (3): 323–333. <https://doi.org/10.1177/1750698017701615>
28. Uscinski, J. E., C. Klofstad, and M. D. Atkinson. 2016. What drives conspiratorial beliefs? The role of informational cues and predispositions. *Political Research Quarterly* 69 (1): 57–71. <https://doi.org/10.1177/1065912915621621>
29. Garner, B. A. 2009. *Black's Law Dictionary* (9th ed.). West.
30. Butter, M. 2023. Conspiracy Theories as Populist Counter-Narratives. In G. Mackenthun & J. Dosch (Eds.), *The Production of Popular Knowledge* (pp. 21–46). Transcript Verlag. <https://doi.org/10.1515/9783839461778-002>
31. Musolf, A. 2023. Permacrisis, conspiracy stories and metaphors. *Półrocznik Językoznawczy Tertium* 8 (1): 5–21. <https://doi.org/10.7592/Tertium.2023.8.1.246>
32. Brotherton, R. 2015. *Suspicious minds: Why we believe conspiracy theories*. Bloomsbury Publishing.
33. Neijzen, M. 2024. The epistemic value of doombehaviour: Beyond the prudential consequences of doomscrolling, doomchecking, and doomsurfing. *Synthese* 203 (6): 185. <https://doi.org/10.1007/s11229-024-04602-2>
34. Butter, M. 2020. *The nature of conspiracy theories*. Polity.
35. Oliver, J. E., and T. J. Wood. 2014. Conspiracy theories and the paranoid Style(s) of mass opinion. *American Journal of Political Science* 58 (4): 952–966. <https://doi.org/10.1111/ajps.12084>
36. Rosenblum, N. L., and R. Muirhead. 2019. *A lot of people are saying: The new conspiracism and the assault on democracy*. Princeton University Press.
37. Freud, S. 1919. *Totem and taboo: Resemblances between the psychic lives of savages and neurotics*. New York: Moffat, Yard and Company.
38. Schmitt, C. 1996. *The concept of the political*. Chicago and London: The University of Chicago Press.
39. Romanucci-Ross, L., and L. Tancredi. 2007. From Myth to Law. In *When law and medicine meet: A cultural view*, Eds. L. Romanucci-Ross and L. Tancredi, Dordrecht: Springer Netherlands. Retrieved from [https://doi.org/10.1007/978-1-4020-2757-4\\_3](https://doi.org/10.1007/978-1-4020-2757-4_3)
40. Agamben, G. 2005. *State of exception*. Chicago and London: The University of Chicago Press.
41. Girard, R. 1972. *Violence and the sacred*. Baltimore and London: Johns Hopkins University.
42. Lyotard, J. F. 1979. *The postmodern condition: A report on knowledge*. Manchester: Manchester University.
43. Douglas, K. M., J. E. Uscinski, R. M. Sutton, A. Cichocka, T. Nefes, C. S. Ang, and F. Deravi. 2019. Understanding conspiracy theories. *Political Psychology* 40 (S1): 3–35. <https://doi.org/10.1111/pops.12568>
44. Richards, J. 2023. The use of discourse analysis in propaganda detection and Understanding. In *Routledge handbook of disinformation and National security*, ed. R. Arcos, I. Chiru, and C. Ivan. 1st ed., 385–400. Routledge.

45. Sabbah, F. 2023. Critical discourse analysis approaches to investigating fake news and disinformation. In *The Routledge handbook of discourse and disinformation*, ed. S. M. Maci, M. Demata, M. McGlashan, and P. Seargeant. Routledge. <https://doi.org/10.4324/9781003224495>
46. Catenaccio, P. 2023. A model for Understanding and assessing Semi-Fake scientific news reporting. In *The Routledge handbook of discourse and disinformation*, ed. S. M. Maci, M. Demata, M. McGlashan, and P. Seargeant. Routledge.
47. Coulthard, M., and A. Johnson. 2007. *An introduction to forensic linguistics: Language in evidence*. Routledge.
48. Grant, T. 2021. Text messaging forensics—Txt 4n6: Idiolect-free authorship analysis? In *The Routledge handbook of forensic linguistics*, ed. M. Coulthard, A. May, and R. Sousa-Silva. 2nd ed., 558–575. Routledge.
49. Sousa-Silva, R. (2024). Fighting Cyber-malice: A Forensic Linguistics Approach to Detecting AI-generated Malicious Texts. In R. Mitkov, S. Ezzini, C. Acarturk, T. Ranasinghe, P. Rayson, M. El-Haj, I. Ezeani, M. Bradbury, & N. Khallaf (Eds.), *Proceedings of the First International Conference on Natural Language Processing and Artificial Intelligence for Cyber Security (NLPAICS'2024)* (pp. 164–174).
50. Marvin, G., N. Hellen, D. Jjingo, and J. Nakatumba-Nabende. 2024. Prompt engineering in large Language models. In *Data intelligence and cognitive informatics*, ed. I. J. Jacob, S. Piramuthu, and P. Falkowski-Gilski. 387–402. Springer Nature Singapore.
51. Grice, H. P. 1975. Logic and conversation. In *Speech acts*, ed. P. Cole, and J. L. Morgan. 41–58. Academic.
52. Jones, C. B. 2023. Creativity: The flawed Forge of tomorrows. *Futures* 150:103159. <https://doi.org/10.1016/j.futures.2023.103159>
53. Trandabăt, D., and D. Gifu. 2023. Discriminating AI-generated fake news. *Procedia Computer Science* 225:3822–3831. <https://doi.org/10.1016/j.procs.2023.10.378>
54. Kilian, K. A., C. J. Ventura, and M. M. Bailey. 2023. Examining the differential risk from high-level artificial intelligence and the question of control. *Futures* 151:103182. <https://doi.org/10.1016/j.futures.2023.103182>
55. Mahowald, K., A. A. Ivanova, I. A. Blank, N. Kanwisher, J. B. Tenenbaum, and E. Fedorenko. 2024. *Dissociating language and thought in large language models* (No. arXiv:2301.06627). Preprint at <http://arxiv.org/abs/2301.06627>

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