Introduction: The Interdependence of Interests, Managed Truths, News, and Facts

Manfred Max Bergman

1. Types of Fake News

Fake news, often based on fake facts, is usually understood as misleading information presented as news. Fake news is frequently divided into misinformation (fake news without harmful intent) and disinformation (fake news with harmful intent) [1]. Intent, however, is a problematic classifier: a newscaster may initially use a story without harmful intent (for example, as a parody), but upon discovering its serendipitous effect on their audience, they may subsequently repeat the story with the intent to mislead. According to this dichotomy, the same story represents both misinformation and disinformation. Conveying the story, now classified as disinformation, to unsuspecting members of the newscaster's audience, who then repeat the story as news but without harmful intent, transforms the same story yet again from disinformation into misinformation. Recently, the term malinformation (genuine news with harmful intent) was introduced (Wardle, undated). Examples of malinformation are revenge porn or the publication of studies on the potential health risks of the COVID-19 vaccine, which are intended to harm the reputation of a person or the rollout of a health program, respectively. However, Mir [2] raises important concerns about the classification of malinformation, i.e., "wrong truths", as fake news, referring to the "Censorship-Industrial Complex", especially in contexts where persons or organizations have the power to shape informational content in their favor through sponsorship or censorship, irrespective of factual content.

Dozens of typologies of fake news have been proposed. For example, Wardle [3] suggests seven "information disorders": satire or parody, misleading content, imposter content, fabricated content, false connection, false context, and manipulated content. Reviewing

34 academic articles on fake news, Tandoc, Lim, and Ling [4] propose an alternative typology: news satire, news parody, news fabrication, photo manipulation, advertising and public relations, and propaganda. It appears that older typologies tend to focus on different ways to diverge from the truth, while recent approaches include the manipulation of truth itself. As such, an understanding of what fake news is and what its consequences are requires a clearer understanding of truth, from which fake news and fake facts diverge.

2. Types of Truth

Truth has been a scholarly subject for thousands of years, and the following does not do justice to this scholarship. Instead, what is presented here is an abbreviated reflection on truth from a social science perspective, which owes a great debt to philosophy, social theory, and science studies.

Factual truth: Possibly the most classical and dominant proposition about truth is that truth statements (sometimes referred to as truthful propositions or true beliefs) directly relate to facts. In other words, this type of truth necessitates the existence of an objective reality made up of facts that exists irrespective of how humans think of or act toward it. The problem here is that this proposition requires the definition of a fact, which leads to an unavoidable tautology, namely, that a fact, here an organizing principle of reality, is that which is true. According to the World Health Organization, for example, "Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus" [5]. Five facts are necessary to render this statement factual: the factual existence of COVID-19, the factual existence of infectious diseases, the factual classification of COVID-19 as an infectious disease, the factual existence of the SARS-CoV-2 virus, and the factual existence of the causal link between the virus and the disease through infection. If all these are factually established, then the statement by the WHO is factually true. But from a factual truth perspective, this statement can only be true if all elements in the statement are factual. I have no reason to doubt the veracity of this statement, given that I have read countless scientific and journalistic articles on COVID-19. I have been infected with the virus multiple

times and observed it infecting others, and I have listened to scholarly exchanges between virologists on this matter. Furthermore, this statement also makes sense to me, as it does to the great majority of members of my peer group. However, none of these reflections and experiences renders my belief in the truth of this statement a factual truth.

Data-centric truth: There is a large toolbox of methods with which to investigate truth through evidence. While data-centric truth is often equated with factual truth, especially since evidence is incorrectly understood as indicative of truth, it is at best an approximation. Sometimes, data are imperfect indications of truth (and, sometimes, they lead away from truth or are nothing but "noise"), and even the "right" data can be (mis)interpreted in a variety of ways. Empirical methods themselves are subject to multiple biases that thus further obfuscate direct access to factual truth. Data-centric or evidence-based truth statements are limited by multiple assumptions and limitations imposed through the very activity of empirical inquiry. Truth statements based on rigorously applied empirical methods *may* come close enough to factual truth, but it is rarely possible to measure the exact difference between data-centric truth and factual truth. For example, many studies have examined the national or global prevalence of COVID-19 infections. Understandably, these numbers vary widely depending on how COVID-19 prevalence is defined, identified, and measured (e.g., extrapolation from sample populations with antibodies or via statistical modeling) and the inferences drawn from subpopulations assessed with different degrees of rigor. Based on a specified set of data and methods and within their corresponding limitations, empirical evidence will provide nothing but an estimation of factual truth based on imperfect data and imperfect methods. The resulting prevalence cannot be understood as factual truth but merely an approximation.

Deliberative truth: Expertise has an interesting status in relation to truth. While most believe that experts have privileged access to knowledge and thus truth, we also have developed a healthy doubt about expertise. Furthermore, in some applications, we are increasingly recognizing the expertise of lay persons. Accordingly,

deliberation among experts, among lay persons and experts, or among lay persons is often used in think tanks or transdisciplinary research approaches to improve on the limits imposed by conventional researchers or experts.   As part of co-designing research and co-creating knowledge, deliberation, participation, and, to some extent, democratic decision making during the investigative search for truth become part of the production of truth statements. In this sense, truth is not merely extracted from data using scientific methods but instead negotiated with significant stakeholders by employing various participatory techniques, which may or may not include data and methods. From a deliberative truth perspective, the "best" mode of a COVID-19 vaccine rollout may be identified based on what a heterogeneous group of relevant stakeholders judges to be best. While this approach to truth makes, in particular, knowledge-to-practice economically viable, politically defensible, and culturally acceptable, we may never know if what the group decided at a specific place and time was indeed the "best" method for the rollout. In other words, how many Katalin Karikós and Drew Weissmans, the discoverers of nucleoside base modifications that enabled the development of mRNA vaccines against COVID-19, need to be in the room to negotiate the right approach to mRNA vaccine development?

Systemic truth: Truth may also be understood as system-specific such that a truth statement is true if it coherently relates to other truth statements within a particular system. In this variant, truth is derived from the coherence it forms with other truth statements within a system, and no external references to facts are necessary to maintain the veracity of systemic truth. As stated earlier, the majority of my peers and I believe in the infectious properties of SARS-CoV-2 and the adverse health outcomes that this virus can cause, especially in vulnerable populations. There must be hundreds of overlapping and confirmatory beliefs that I hold that make me consider the WHO's statement a statement of truth. However, the architecture of truth statements shared by other communities may be as well supported as mine, except that their system-specific truth statements make members of this community doubt that such a virus exists or believe that if it exists, it is no more harmful than the common cold.

Holistic truth: Instead of multiple truth systems that may overlap or even compete with each other, a wider understanding of truth would include the entirety of all existing truth statements, irrespective of their relation to so-called facts or reality and regardless of their degrees of coherence with each other. Truthfulness in this sense is not attributable to singular statements but to the entirety of all existing statements. Truth statements associated with the existence or inexistence of COVID-19 are part of a discursive environment that does not necessitate evaluation criteria beyond their existence or their coexistence with other truth statements. Thus conceptualized, holistic truth is generated as a cacophony of truth statements, and its product is the entire collection of truth statements, as illustrated by the content of various social media channels.

Egocentric truth: Egocentric truth systems do not refer to the entirety of possible truth statements within a system. Egocentric truth may be nothing more than truth statements uttered by an individual in a specific time and place. Such truth statements may or may not form relations with each other or coalesce with truth statements made by significant others. Instead, they may merely reflect an agential insistence of the self as the ultimate judge of truth. Someone believing in the power of numerology could claim that COVID-19 emerged in 2019, numerically corresponding to 3 (2 + 0 + 1 + 9 = 12, i.e., 1 + 2 = 3), which, to this person's understanding, represents the number of divinity. Given the perceived upheaval associated with COVID-19 in 2019, this person may realize, based on evidence gleaned from his environment in conjunction with numerological exegesis, that the spiritual power behind the pandemic is the Antichrist. Facial masks, according to this person, are ineffective attempts to ward off Satan, while a COVID-19 vaccination is nothing less than the "mark of the beast" or formal allegiance to Satan. This individual supports this truth with evidence gleaned from the Book of Revelation. While this example seems far-fetched, it is nevertheless striking how egocentric truth statements about COVID-19's origins, physiological effects, or consequences have mutated even in relatively homogeneous populations.

We can draw three insights from this brief and incomplete sketch of truth from a social science perspective: First, this concept of truth is more complex (composed of many parts) and complicated (associated with many extraneous elements) than the one implied by factual truth. Second, if we could identify factual truth, then mitigating fake news would be relatively easy. Third, all types of truth outlined here tend toward making factual claims about truth, whether they are produced by means of data, deliberation, systemic coherence, etc. In the end, it is no longer the fakeness of news or facts, i.e., the distance between a truth claim and factual truth, that is the main cause of concern; instead, it is the factualness of facts.

3. The Interdependence of Interests, Managed Truth, News, and Facts

Two of the most important institutions charged with investigating, protecting, and even defending truth are science and the news media. In my faculty, for example, doctoral candidates have to swear an oath, wherein they must promise "to always regard the scientific investigation of the truth as a sincere and fundamental task, to promote this goal to the bests of my abilities, and to always act responsibly, conscientiously and impartially in all scientific activities" [6]. Only after this oath is taken will the successful doctoral candidate receive their degree. While this oath is not in any way representative, many institutions of higher learning would subscribe to norms and values similar to those implied here.

High professional norms and values are also embedded in PBS News Anchor Jim Lehrer's Harvard commencement address from 2006. He proposes the following nine rules for good journalism: "(1) Do nothing I cannot defend. (2) Cover, write, and present every story with the care I would want if the story were about me. (3) Assume there is at least one other side or version to every story. (4) Assume the viewer is as smart and caring and good a person as I am. (5) Assume the same about all people on whom I report. (6) Assume personal lives are a private matter until a legitimate turn in the story mandates otherwise. (7) Carefully separate opinion and analysis from straight news stories and clearly label them as such. (8) No one should

ever be allowed to attack another anonymously. (9) I am not in the entertainment business" [7].

As different as both institutions may be in terms of their institutional histories, purpose, function, funding, and societal roles, we can nevertheless find many overlapping lofty goals associated with both science and journalism, many of which relate to an uncompromising commitment to the exploration and unfettered reporting of truth. But how does this truth fare beyond decontextualized promises and mission statements? While science and the news media indeed present themselves as the guardians of truth (even as the guardians of multiple and sometimes incommensurable truths), their interdependencies with other institutions and the thus developing institutional arrangements make it difficult to maintain the standards to which these institutions aspire (see Figure 1).
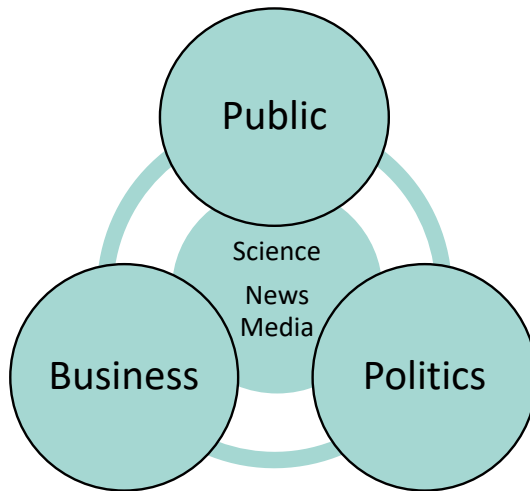

Figure 1. Interdependencies between science, the news media, the public, politics, and the business sector. Source: Figure by author.

Most universities, public or private, are funded in ways that require them to be accountable to their funders. However, funding dependencies also place increasing pressures on universities to acquiesce to demands and conditions that may have implications for their once lofty missions. For example, a professor may have

received some bad press due to the content of a lecture or interview, putting political or public pressure on the institution to act in a way that signals to the public, business, or political actors the rigor with which the professor has been dealt with. Or, for similar transgressions, a university may be forced to rid itself of a university president in order to prevent a private donor from withdrawing a significant bequest. While these two examples seemingly deal with only two individuals, the involved universities are sending a strong and clear signal about acceptable and unacceptable work and conduct, thus creating an expectation filter that will influence truth work and truth statements regarding the respective subject and conduct arenas.

In a similar vein, a state-funded university may be judged ideologically inadequate by a political body. By withholding funds or guiding funding toward appointments or units that rectify this perceived inadequacy, the university and its members receive a strong and clear signal about the kind of truth statements that are incentivized or discouraged. Such (dis)incentivizing is not an invitation to create fake news or fake facts. Instead, it is an invitation to adjust discourses and activities associated with potentially harmful or pleasing truth statements. Simply deleting courses from syllabi, cancelling lectures and debates, rescinding invitations to collaborate, or keeping quiet when certain topics arise may already achieve the desired result. Similar mechanisms exist in association with the funding of scientific units, personal chairs, or institute directors, especially if such funding comes with ideological strings attached. Even in these situations, universities and their members may be free to search for truth, as long as they do not jar with relevant public, political, or business interests. Going one step further, many successful universities may elect to arrange their pursuit of truth in line with public, political, and especially business interests. Merely a disinvestment in the humanities in favor of more life science funding may find stronger support among the three institutions. Accordingly, the lofty mission statements of universities are bounded by the interdependencies that provide opportunities to some and impose limits on others. Overall, however, such interdependencies signal to the institution and its members the value of different types and pursuits of truth.

The news media, despite its many differences from universities, is in a similar position. Ruled by complex management and ownership structures and dependent on an often declining readership and advertisement base, conventional news outlets have difficulty maintaining research and reporting staff to cover news as envisioned by Lehrer. Furthermore, considerable competition from social media channels and influencers, increasing legal threats from powerful opinion leaders or the billionaire class, and an increasing pressure to adjust the degree and kind of reporting of personae, organizations, and events in ways that are conducive to news makers, advertisers, or politically dominant ideologies may not necessarily lead to producing fake news or facts, but these factors do create incentives to adjust truth statements to either please or not jar unduly relevant members of the public, political system, or business.

Attenuating, embellishing, negotiating, aligning, and carefully managing truths as a function of interdependencies can translate into opportunities for some and burdens for others. Such interdependencies have contributed to what Wardle refers to as information disorders. The pursuit of any type of truth has never been easy and unconstrained. However, we are not only experiencing a massive surge in fake news and fake facts, which are increasingly difficult to detect and mitigate; more importantly, we have entered an era in which facts and news no longer need to be fake to detract from the truth. According to Mir [2], we are experiencing an "epistemological shift from absolute truth to negotiated truth... The cultural and generational consequences will be much deeper. The next generation will not challenge or bypass the absolute truth; they simply will not know what it is."

Conflicts of Interest: The authors declare no conflicts of interest.

References

1. APA. Topic: Misinformation and Disinformation. Available online: https://www.apa.org/topics/journalism-facts/misinformation-disinformation (accessed on 28 December 2023).

2. Mir, A. 'Malinformation' and the Wrong Truth. 16 March 2023. Available online: https://www.discoursemagazine.com/p/malinformation-and-the-wrong-truth (accessed on 28 December 2023).

3. Wardle, C. The Age of Information Disorder. Available online: https://datajournalism.com/read/handbook/verification-3/investigating-disinformation-and-media-manipulation/the-age-of-information-disorder (accessed on 28 December 2023).

4. Tandoc, E.C., Jr.; Lim, Z.W.; Ling, R. Defining "Fake News". *Digit. J.* **2018**, *6*, 137–153. [CrossRef]

5. World Health Organization. Coronavirus Disease (COVID-19). Available online: https://www.who.int/health-topics/coronavirus (accessed on 28 December 2023).

6. University of Basel. Ordnung der Philosophisch-Historischen Fakultät der Universität Basel für die Promotion, 446.540 9. 2017. Available online: https://www.unibas.ch/dam/jcr:73d7f4b6-8a5d-4ea5-af79-5727917155ec/446_540_04.pdf (accessed on 28 December 2023).

7. Jones, J. Jim Lehrer's 16 Rules for Practicing Journalism with Integrity, Open Culture. 2020. Available online: https://www.openculture.com/2020/01/jim-lehrers-16-rules-for-being-a-journalist-with-integrity.html (accessed on 28 December 2023).