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# COVID-19, Wikipedia, and the World Economic Forum: Knowledge Construction through a Scientism Network

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**Abstract:** *This paper looked into the knowledge construction network of scientism as manifested in the Wikipedia page of COVID-19 posted on April 10, 2023. Looking at the reference list of the selected page, the researcher identified the publishers (companies and owners) and other important persons leading them and mined for their university, media, and government connections to the World Economic Forum (WEF). The study revealed that the US plays a major role in constructing knowledge about COVID-19 and spreading scientism through the power of the US National Institutes of Health, its global affiliates through the World Health Organization and the United Nations, its top ivy league schools and those in the UK and France, and mainstream media companies – all of which have direct and indirect connections with the WEF. Thus, the WEF lies at the core of the network of scientism connected to COVID-19, with US playing a major role in its spread.*

**Keywords:** *Scientism, COVID-19, Wikipedia, World Economic Forum, Knowledge Construction*

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## I. Introduction

The COVID-19 pandemic presented humanity with unprecedented challenges, but it also sparked a remarkable search for knowledge. In the face of uncertainty, scientists, researchers, and the global community embarked on a relentless pursuit of understanding the virus, its transmission, prevention, and treatment. Markhortykh, Urman, and Ulloa (2020) wrote, “Access to accurate and up-to-date information is essential for individual and collective decision making, especially at times of emergency” (para. 1). They found that:

... different search engines prioritize specific categories of information sources, such as government-related websites or alternative media. We also observed that source ranking within the same search engine is subjected to randomization, which can result in unequal access to information among users (para. 1).

In addition, Damstra and Hameleers (2021) wrote that “News exposure did not lead to more accuracy, in fact, a negative relation was found. The impact of digital news use weakened as the crisis continued” (para. 1). This means that information sources could bring disservice to the community suffering from confusion. Toney and Ishack (2020) clarified that confusion arising from conflicting messages is characteristic of past disease outbreaks. Thus, established sources of information have the moral responsibility to help prevent confusion by providing accurate information that allows people to make sound decisions during a pandemic.

Encyclopedias are known to be collections of “concise, factual and accurate background information on a topic” (Eastern Illinois University, 2022, para. 1). General and specialized subject encyclopedias constitute the two major forms of encyclopedias that are written and reviewed by knowledge area experts to guarantee “accurate, complete, and useful” (para. 3) information. The publishing of new editions of printed encyclopedias

took years and never less than a year (Cauz, 2013). However, it only takes three to six months for a new page to be uploaded to Wikipedia, according to Wki Professionals, Inc. (n.d.), a company not related to Wikipedia that provides writing services. Thus, Wikipedia is the quickest way to get information about COVID-19 during the pandemic given that "it is a very large online encyclopedia, providing information on a multitude of subjects" (Eastern Illinois University, 2022, para. 2).

Unlike printed encyclopedias, Wikipedia pages arise from crowd sourcing that cannot ensure complete and accurate information because they do "not go through a formal editorial process" (Eastern Illinois University, 2022, para. 4). Wikipedia, already averaging 18 billion monthly page views in 2015 (Anderson, Hitlin, & Atkinson, 2016), however, explains that it depends on multiple editorial approaches involving both experts and casual readers that "overlap to provide more robust coverage and resilience" (Wikipedia, 2022). Wikipedia, "protected through a combination of machine learning tools and rigorous human oversight from volunteer editors" (Borak, 2022) added:

Some mechanisms help community members watch for bad edits, a few hundred administrators with special powers to enforce good behavior, and a judicial-style arbitration committee that considers the few situations remaining unresolved, and decides on withdrawal or restriction of editing privileges or other sanctions when needed after all other consensus remedies have been tried (para. 18).

Wikipedia's page on COVID-19 was last updated on May 2023 and has 500 items in its reference list, three recommended items for further readings, and links to health agencies (3), directories (4), medical journals (7), and treatment guidelines (6). Borak (2022) wrote that Wikipedia "has transformed itself into a source of trusted information" (para. 1), at a time when "Facebook, YouTube, and Twitter have struggled with the onslaught of fake news, disinformation, and bots (para. 1). Hern (2022), nevertheless, pointed out that Wikipedia has had its share of myths turned into facts" and while "Wikipedia community is efficient at identifying hoax articles... that there is also a small number of carefully crafted hoaxes that survive for a long time and are well cited across the Web" (Kumar, West, & Leskovec, 2016, p. 10).

Two previous articles by the author revealed that knowledge about COVID-19 is directly and indirectly shaped by the World Economic Forum's network. Bantugan (2022), looking at Coursera and its COVID-19 course offerings, found that:

... what educators learn online about vaccines, COVID-19, and COVID-19 vaccines are shaped by top-tier universities, mostly in the US, and in part by a few in the UK. These all have links to the WEF, mostly through their top leaders' educational and professional affiliations, institutional partnership and agenda alignment with WEF, and individual contributors to the WEF agenda from said institutions. This setup provides a condition where hegemony is most likely to happen concerning vaccines, COVID-19, and COVID-19 vaccines globally. It allows WEF to construct an ideology that serves its interest in the context of the pandemic and the roll-out of COVID-19 vaccines (p. 161).

Investigating an article on COVID-19 in The Lancet journal, Bantugan (2022) wrote:

... all (authors of the article) were educated in universities and institutions that are currently working with the WEF. It is not impossible to think that the other four authors whose data are not accessible online may have also been similarly educated. Put together with the data in Tables 2 and 3, one can infer that the WEF has penetrated all the institutions that shape the minds of people, through their policies and programs. The top executive editors of The Lancet, its owners, and funding agencies aside, the WEF has undeniably positioned itself to influence future leaders, policymakers, and knowledge

gatekeepers like The Lancet, especially those in prestigious schools that can only be accessed by the privileged and the wealthy. It is not difficult to think that the interest of the WEF would be top-of-mind among the students and graduates of such universities compared to the multitude who have no interest in the workings of the WEF at all (p. 71).

To date, the origins of COVID-19 remain questionable. Whether the virus jumped from animals to humans or escaped from a lab leak in Wuhan, China, is a question that continues to be politicized (Zhu, Chen, Rizzolo, & Li, 2023). How was knowledge about COVID-19 constructed in Wikipedia, then, given that knowledge construction about COVID-19 has been challenged with government accusations of misinformation and censorship (Amnesty International UK, 2021)? Lost in confusion, people are forced to align with government declarations or risk being stigmatized as "conspiracy theorists" (Barkun, 2016). This has led to a push for scientism or "the view that the hard sciences—like chemistry, biology, physics, astronomy—provide the only genuine knowledge of reality" (Moreland, 2018, para. 6) at the expense of the practice of scientific skepticism. Skepticism, "an act of suspending judgment the opposite of jumping to conclusions when evaluating an explanation or claims" (Climate Science Investigations, 2023, para. 1) "... helps scientists to remain objective when performing scientific inquiry and research... (and) forces them to examine claims (their own and those of others) to be certain that there is sufficient evidence to back them up" (para. 2).

The two previous papers of the author revealed that the World Economic Forum (WEF) is implicated in the construction of knowledge on COVID-19 in Coursera and the scientific journal called The Lancet. This paper, thus, explores how the WEF is likely behind the knowledge construction in Wikipedia, especially because most knowledge on COVID-19 was advanced by the World Health Organization (WHO), which is a part of the WEF network.

## **II. Philosophical Underpinning**

This study was guided by the notion of "scientism", defined by Philosopher Tom Sorell as "a matter of putting too high a value on natural science in comparison with other branches of learning or culture" (Burnett, 2012, para. 3). Going as far back to the early 17th century Europe known as the Scientific Revolution, it underscored the value of the natural sciences and became known as positivism, and later, logical positivism, that claimed science should entirely rely on facts. Hutchinson (in Burnett, 2012) asserted:

The health of science is in fact jeopardized by scientism, not promoted by it. At the very least, scientism provokes a defensive, immunological, aggressive response from other intellectual communities, in return for its own arrogance and intellectual bullying. It taints science itself by association. (para. 13)

Burnett (2012) clarified that the assertion that natural science is the only foundation of human knowledge (scientism) is a philosophical position that "cannot be verified, or falsified, by science itself... (hence,) unscientific." (para. 23). To attribute all of human knowledge to the natural sciences is to mandate scientism in a complex world that they cannot fully account for. Thus, the goal of any scientist should be to disentangle science, "an activity that seeks to explore the natural world using well-established, clearly-delineated methods (para. 21), from scientism.

### III. Statement of the Problem

This study uncovered the network of scientism in Wikipedia's "COVID-19" page which is constituted by scientific knowledge claims of various players, namely institutions of higher learning, media companies, and inter/government entities. by unraveling the knowledge construction network that is documented in its reference list.

### IV. Methodology

This paper is the result of the investigation of Wikipedia's "COVID-19" page. As a case study, it considered the said page as a unique layman's reference for understanding the disease and the virus that causes it. The page, analyzed last April 10 (4 days after an official update), had 478 references that underwent textual analysis. By identifying the editorial and economic links of each reference and determining their connection to the WEF via content analysis, the study established the network of connections of the selected page to the WEF. The results were discussed from the lens of scientism.

### V. Results

Data are presented to reflect the connections references have with the WEF in terms of higher educational institutions, media companies, and inter/national units.

#### Educational connections to the WEF

Data show that most universities that have links to the WEF come from the US, followed from a far distance by those from the UK and France. More than a quarter (26.3%) of all connections made with educational institutions are with the University of Oxford and the University of Cambridge in the UK. The majority or 14 out of 16 (87.5%) are with the US. One (6.3%) connection is with France. These connections were found in relation to the academic backgrounds of editorial heads and institutional affiliations of particular publications. Ten out of 16 educational institutions (62.5%) are classified as WEF organizations.

Table 1

*Summary of Wikipedia reference list connections to the WEF-linked higher education institutions*

Schools (11.2%)	Frequency	Percentage	Rank	WEF Organization Link	Class	Country
University of Oxford	11	19.3	1	<a href="https://www.weforum.org/organizations/university-of-oxford">https://www.weforum.org/organizations/university-of-oxford</a>	Organization	UK
Stanford University	9	15.8	2	<a href="https://www.weforum.org/organizations/stanford-university">https://www.weforum.org/organizations/stanford-university</a>	Organization	US
Harvard University	8	14.2	3	<a href="https://www.weforum.org/organizations/harvard-university">https://www.weforum.org/organizations/harvard-university</a>	Organization	US
University of Washington	6	10.5	4	<a href="https://www.weforum.org/agenda/authors/university-of-washington">https://www.weforum.org/agenda/authors/university-of-washington</a>	Author	US
Johns Hopkins University	5	8.8	5.5	<a href="https://www.weforum.org/organizations/johns-hopkins-university">https://www.weforum.org/organizations/johns-hopkins-university</a>	Organization	US
University of California	5	8.8	5.5	<a href="https://www.weforum.org/agenda/authors/university-of-california">https://www.weforum.org/agenda/authors/university-of-california</a>	Author	US
University of Cambridge	3	7	7	<a href="https://www.weforum.org/organizations/university-of-cambridge">https://www.weforum.org/organizations/university-of-cambridge</a>	Organization	UK
Columbia University	2	3.5	8	<a href="https://www.weforum.org/agenda/2010/07/training-for-leadership-at-columbias-school-of-the-arts/">https://www.weforum.org/agenda/2010/07/training-for-leadership-at-columbias-school-of-the-arts/</a>	Activity Partner	US
University of Pennsylvania	1	1.8	9.125	<a href="https://www.weforum.org/organizations/university-of-pennsylvania">https://www.weforum.org/organizations/university-of-pennsylvania</a>	Organization	US
Emory University	1	1.8	9.125	(individual author links to WEF)	Individual Authors	US
Princeton University	1	1.8	9.125	(individual author links to WEF)	Individual Authors	US
Yale University	1	1.8	9.125	<a href="https://www.weforum.org/agenda/authors/yale-university">https://www.weforum.org/agenda/authors/yale-university</a>	Author	US
University of Chicago	1	1.8	9.125	<a href="https://www.weforum.org/organizations/university-of-chicago">https://www.weforum.org/organizations/university-of-chicago</a>	Organization	US
University of Georgia	1	1.8	9.125	<a href="https://www.weforum.org/organizations/university-of-georgia">https://www.weforum.org/organizations/university-of-georgia</a>	Organization	US
Milken Institute	1	1.8	9.125	<a href="https://www.weforum.org/organizations/milken-institute">https://www.weforum.org/organizations/milken-institute</a>	Organization	US
INSEAD	1	1.8	9.125	<a href="https://www.weforum.org/organizations/insead">https://www.weforum.org/organizations/insead</a>	Organization	France

Schools classified as ‘Authors’ (18.8%) have written articles on the WEF website. Those classified as ‘Individual Authors’ (12.5%) have persons affiliated with them writing for the WEF. Columbia University, classified as an ‘Activity Partner’ (6.3%), works with the WEF only on a specific project. Hence, 11.2 percent of references that connect more immediately to schools are all affiliated with the WEF.

### Media connections to the WEF

Some references (14.5%) in the Wikipedia article on COVID-19 were published in mainstream media outlets. These media outlets connect to the WEF in various ways. Some are connected via WEF organizations like the New York Times, the University of Oxford, Google, and YouTube, the University of California-San Francisco, Harvard University, Georgetown University, BBC News, The Economist, Walt Disney Company, Bill and Melinda Gates Foundation, and LexisNexis. Others are linked directly through their heads who are also considered WEF ‘People’, ‘Agenda Contributors’, and/or ‘(Institutional or Individual) Authors’.

Table 2

Summary of Wikipedia reference list connections to the WEF-linked media companies

Media (14.5%)	Frequency	Percentage	Rank	WEF Organization Link	Class	Country
New York Times	12	16.2	1	<a href="https://www.weforum.org/organizations/the-new-york-times">https://www.weforum.org/organizations/the-new-york-times</a>	Organization	US
The Guardian	9	12.2	2	Head Anna Bateson liked to University of Oxford, Google, and YouTube	Organization	US
Science Magazine	7	9.5	3	Publisher AAAS President Keith Yamamoto - UCSF's first vice chancellor for Science Policy and Strategy UCSF faculty member Adam Abate, PhD, was one of WEF's exceptional Young Scientists AAAS elected 505 scientists, including 10 from NIH. <a href="https://nihrecord.nih.gov/2023/03/03/10-nihers-s-among-newly-elected-aaas-fellows">https://nihrecord.nih.gov/2023/03/03/10-nihers-s-among-newly-elected-aaas-fellows</a>	Organization	US
Reuters	6	8.1	4	Reuters partners with WEF for exclusive content distribution on Reuters Connect Center of Creative Leadership (with WEF author) Head Kai Jacobsen <a href="https://www.reuters.com/article/tpb-wef-davos-agenda-connect-idUSKBN29U0Y3">https://www.reuters.com/article/tpb-wef-davos-agenda-connect-idUSKBN29U0Y3</a>	Organization and Individual Authors	Canada
The Atlantic	4	5.5	5	Publisher Atlantic Media by David G. Bradley from Harvard University, Georgetown University	Organization	US
Wall Street Journal	3	4.1	6.5	Editor-at-Large Gerard Baker - Editor-at-Large <a href="https://www.weforum.org/people/gerard-baker">https://www.weforum.org/people/gerard-baker</a>	People	US
CNN	3	4.1	6.5	CNN VP and Managing Editor Eliana Lee <a href="https://www.weforum.org/people/eliana-lee">https://www.weforum.org/people/eliana-lee</a> CNN Bureau Chief Dubai Carolyn Faraj - <a href="https://www.weforum.org/people/caroline-faraj">https://www.weforum.org/people/caroline-faraj</a>	People	US
BBC	2	2.7	8.3	<a href="https://www.weforum.org/organizations/bbc-news">https://www.weforum.org/organizations/bbc-news</a>	Organization	UK
National Geographic	2	2.7	8.3	Publisher Walt Disney Company (WDC) owned by The Vanguard Group (7.4%) BlackRock (6.2%); WEF Partner Organization <a href="https://www.weforum.org/organizations/blackrock-inc">https://www.weforum.org/organizations/blackrock-inc</a> WEF Partner Author Tim Buckley is CEO of the Vanguard Group <a href="https://www.weforum.org/agenda/authors/tim-buckley">https://www.weforum.org/agenda/authors/tim-buckley</a>	Organization and Author	US
Washington Post	2	2.7	8.3	Publisher Nash Holdings owned by Jeff Bezos of Amazon - <a href="https://www.weforum.org/organizations/amazon-web-services">https://www.weforum.org/organizations/amazon-web-services</a>	Organization	US
Today	1	1.4	10.2	Author Joanne Lipman was Chief Content Officer of publisher Gannett, and Editor-in-Chief of USA TODAY - <a href="https://www.weforum.org/agenda/authors/joanne-lipman">https://www.weforum.org/agenda/authors/joanne-lipman</a>	Agenda Contributor	US
The Independent	1	1.4	10.2	Publisher Independent Digital News & Media Ltd owned by Evening Standard and ESTV (with WEF authors) owner Evgeni Lebedev	Individual Authors	UK
The Economist	1	1.4	10.2	<a href="https://www.weforum.org/organizations/the-economist">https://www.weforum.org/organizations/the-economist</a>	Organization	UK
ABC News	1	1.4	10.2	WDC	Organization	US
The Advocate	1	1.4	10.2	Editor-in-Chief Neal Broverman article hosted in the Bill and Melinda Gates Foundation website - <a href="https://www.discovergates.org/exhibition/throughpositiveeyes/blackvoicesandhiv/banishing-stigma-black-voices-and-hiv-take-action-toolkit/">https://www.discovergates.org/exhibition/throughpositiveeyes/blackvoicesandhiv/banishing-stigma-black-voices-and-hiv-take-action-toolkit/</a>	Organization	US
Associated Press	1	1.4	10.2	Head Daisy Veerasingham worked in marketing jobs at WEF Partner Organization LexisNexis - <a href="https://www.weforum.org/organizations/lexisnexis-risk-solutions">https://www.weforum.org/organizations/lexisnexis-risk-solutions</a>	Organization	US

New York Times, The Economist, and BBC News are journalistic media ‘organizations’ of WEF. The Walt Disney Company, co-owned by a WEF organization (BlackRock), operates another news agency, ABC News. CNN, Wall Street Journal, and Today are headed by WEF People. The National Geographic, Washington Post, and the Associated Press are owned by WEF Organizations, namely, Walt Disney Company, Amazon, and LexisNexis, respectively. The remaining in Table 2, (Science Magazine and The Advocate) are connected to the US National Institutes of Health (a WEF Organization), formerly headed by Anthony Fauci (one of many WEF People), and the Bill and Melinda Gates Foundation (another WEF Organization), respectively. Thus, mainstream media companies that contribute to the Wikipedia COVID-19 reference list are all connected to the WEF.

## VI. Inter/National Connections to the WEF

The majority of the references in the selected Wikipedia page come from the US (78.1%), primarily from the US NIH which maintains and supports the PubMed Central (PMC) that serves as a repository of many health journals cited in the page. The World Health Organization (WHO) follows the US from a far distance (12.85%) with its informative releases and updates, including health mandates. The UK is a distant third (3.4%), not far from greater Europe (via the European Commission or EC at 2.8%), and individual European countries like Italy (0.8%) and France (0.3%). China is at 1.1 percent and Canada follows at 0.6 percent. All the European countries in Table 3, including the EC, are all documented as WEF affiliates, classified as an 'organization' (EC), or through their leaders considered as WEF 'People'. China is documented in the WEF as an 'Agenda Author'. Like the EC, the World Health Organization is a WEF Organization. Thus, all entities in Table 3 are connected to the WEF.

Table 3

*Summary of Wikipedia reference list connections to the WEF-linked inter/national government units*

Media (74.3%)	Frequency	Percentage	Rank	WEF Organization Link	Class
US	278	78.1	1	US Centers for Disease Control and Prevention (Anthony Fauci) - <a href="https://www.weforum.org/people/anthony-s-fauci">https://www.weforum.org/people/anthony-s-fauci</a> National Institute of Health - <a href="https://www.weforum.org/organizations/national-institute-of-health">https://www.weforum.org/organizations/national-institute-of-health</a> Joe Biden - <a href="https://www.weforum.org/agenda/authors/joe-biden">https://www.weforum.org/agenda/authors/joe-biden</a> US Food and Drug Administration - <a href="https://www.weforum.org/organizations/us-food-and-drug-administration">https://www.weforum.org/organizations/us-food-and-drug-administration</a>	People, Authors, and Organization
World Health Organization	46	12.9	2	World Health Organization - <a href="https://www.weforum.org/organizations/world-health-organization-who">https://www.weforum.org/organizations/world-health-organization-who</a> United Nations - <a href="https://www.weforum.org/organizations/united-nations">https://www.weforum.org/organizations/united-nations</a>	Organization
UK	12	3.4	3	United Kingdom - <a href="https://www.weforum.org/agenda/united-kingdom/">https://www.weforum.org/agenda/united-kingdom/</a> British Broadcasting Corporation - <a href="https://www.weforum.org/organizations/bbc-news">https://www.weforum.org/organizations/bbc-news</a> National Health Services England - <a href="https://www.weforum.org/organizations/nhs-england">https://www.weforum.org/organizations/nhs-england</a>	Agenda Contributor and Organization
Europe	10	2.8	4	European Commission - <a href="https://www.weforum.org/organizations/european-commission">https://www.weforum.org/organizations/european-commission</a>	Organization
China	4	1.1	5	China Government (Xi Jinping) - <a href="https://www.weforum.org/agenda/authors/xi-jinping">https://www.weforum.org/agenda/authors/xi-jinping</a>	Agenda Contributor
Italy	3	0.8	6	Italy Government (Sergio Mattarella) - <a href="https://www.weforum.org/people/sergio-mattarella">https://www.weforum.org/people/sergio-mattarella</a>	People
Canada	2	0.6	7	Canada Government (Justin Trudeau) - <a href="https://www.weforum.org/people/justin-trudeau">https://www.weforum.org/people/justin-trudeau</a>	People
France	1	0.3	8	France Government (Emmanuel Macron) - <a href="https://www.weforum.org/people/emmanuel-macron">https://www.weforum.org/people/emmanuel-macron</a>	People

## VII. Discussion

PMC, providing 278 out of 478 references in the selected Wikipedia page creates a knowledge network heavily reliant on positivism. The positivist paradigm is supported by the US government through the NIH and a global network of governments through the WHO. This positivist network constitutes 74.3% of references listed on the selected Wikipedia page. As such, journals in the PMC may be considered co-opted into the international positivist agenda on COVID-19 attached to the WEF. Defining COVID-19 from a dominantly, if not exclusively, positivist lens necessarily brings about a call for dominantly, if not exclusively, positivist courses of action, leading to a scientism that marginalizes other scholarly voices that can help shape understanding about COVID-19 and the formulation of holistic solutions, even while its origin remains a matter of speculation, especially as it must be necessarily subjected to scientific skepticism.

Mainstream media outlets help expand the reach of COVID-19 scientism. The data point to the WEF as the common connection between these companies. This also magnifies the value of COVID-19 scientism as these companies can mainstream current positivist ideation of COVID-19 to various areas of life and make them relevant to a variety of human concerns outside of the medical or health-related fields. The role of the US as a cultural influencer is highlighted here and underscores the role of mainstreaming scientism in the lives, not just of Americans, but other audiences who consider the US a reliable source of knowledge about COVID-19. English, being the lingua franca or knowledge dissemination globally, makes these mainstream media outlets even more powerful than government institutions, the influence of which is limited to their respective countries.

Academic institutions, mainly the most elite in the world, render positivistic assertions about COVID-19 with credibility and prestige, especially among follower universities all over the world. These universities and learning institutes feed the policymakers of countries with data coming from the PMC journals, thereby strengthening the voice of the US in shaping and constructing knowledge about COVID-19. In all situations, whether through the network of academic institutions, media outlets, or inter-/government bodies, all connected to the WEF, scientism is reified through the cultural influence of the US. The Wikipedia page on COVID-19, then, is a platform of scientism, essentially owned, shaped, and managed by the US, particularly by the NIH, and is reinforced and magnified by its knowledge-driven institutions. This position of the US in the knowledge construction of COVID-19 in Wikipedia brings to light its power of propagating scientism that not only marginalizes other players in knowledge construction but dims a greater understanding of its origins and consideration of other viable holistic actions on future pandemics.

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