

Coursera as the World Economic Forum's Ideological (Trans-)State Apparatus towards a Global COVID-19 Vaccination Hegemony

Brian Bantugan

Abstract: *The study looked into the Coursera courses that cover COVID-19, vaccine, and COVID-19 vaccine, and their links to the World Economic Forum (WEF). Guided by Althusser's 'ideological state apparatus' concept, the study ideated the concept of the 'ideological trans-state apparatus' operationalized through WEF-linked universities providing 'COVID-19-', 'vaccine-', and 'COVID-19 vaccine'-related content in Coursera (where the WEF is the trans-state entity seeking Gramsci's hegemony towards global mandatory COVID-19 vaccination). The study implemented a combined data mining and case study approach through a review of online literature, using the WEF website, Coursera website, and Google search engines to purposively sample information related to the WEF, its affiliated universities and their top leaders, and supporting data that can assist in the critical data interpretation. The findings suggest that the universities linked to the WEF serve the interest of the WEF and its partners, including the top 10 pharmaceutical companies of 2021 through their Coursera courses. The top-tier universities, mainly from the US and other developed countries, serve to advance structures of support that manufacture consent to WEF interests during the COVID-19 pandemic. It also showed how a seemingly neutral online learning platform could become an instrument for global hegemony toward mandatory COVID-19 vaccination.*

Keywords: *World Economic Forum, Coursera, Universities, Vaccine, COVID-19*

I. Introduction

The World Economic Forum (WEF) (2022) or The Forum describes itself as an organization that “engages the foremost political, business, cultural and other leaders of society to shape global, regional and industry agendas” (para. 1). Founded in 1971 as a non-profit organization named initially by Prof. Klaus Schwab as the European Management Forum, and now based in Geneva, Switzerland, it professes that it is “independent, impartial, and not tied to any special interests” (para. 2). However, it is reported as pushing for a new world order with its “The Great Reset Initiative” (WEF, 2022) given its statement “To improve the state of the world, the World Economic Forum is starting The Great Reset Initiative... (in an attempt to respond to an) urgent need for global stakeholders to cooperate in simultaneously managing the direct consequences of the COVID-19 crisis” (para. 1).

In 2020, seven months into the COVID-19 “pandemic”, Schwab published the book *The Great Narrative (The Great Reset)* with Thierry Malleret. Schwab, quoted saying “You will own nothing and be happy” (Schoen, 2021, para. 1), has referred to technologies such as artificial intelligence, robotics, and the Internet of things as manifestations of the fourth industrial revolution (Papadopoulos, 2022) that will lead to “a fusion of our physical, digital and biological identities” (Nal, para. 29). The WEF is a key supporter of the

European Union-backed Environmental, Social, and Governance (ESG) criteria which is a social credit scheme applied to organizations composed of “a set of standards for a company’s operations that socially conscious investors use to screen potential investment” (Nightingale, 2022).

Born to German parents allegedly affiliated with the Nazis (Vedmore, 2021) and a German citizen (Müller& Maurer, 2021), he earned his bachelor's degree in mechanical engineering at the Swiss Federal Institute in Zurich, Switzerland (World Economic Forum, 2022) and master's degree in economics from Harvard University in the US (Harvard Kennedy School-Institute of Politics, personal communication, March 27, 2014). He was awarded a doctorate in economics by the University of Fribourg (n.d.) in Germany. In 2004, he founded the Forum of the Young Global Leaders. Later in 2011, he founded the Global Shapers (GS) Community. Alumni of the Young Global Leaders who are in government include Angela Merkel (Germany) (WEF, 2022), Vladimir Putin (Russia) (Sifert, 2022; Nordangard, 2022), Tony Blair (United Kingdom) (WEF, 2022), Jacinda Ardern (New Zealand) (WEF, 2022), Sebastian Kurz (Austria) (WEF, 2022), Justin Trudeau (Sifert, 2022; Nordangard, 2022), Emmanuel Macron (France) (WEF, 2022; Nordangard, 2022), Boris Johnson (United Kingdom) (WEF, 2022), Mauricio Macri (Argentina) (WEF, 2022), and Volodymyr Zelensky (Ukraine) (WEF, 2022). Filipino Henry Motte-Muñoz, the founder of Edukasyon.ph, is also a graduate of the Youth Global Leaders (Levin, 2020).

WEF supporters playing important roles in the world's economy are Bill Gates (WEF, 2022), Mark Zuckerberg (WEF, 2022), Jeff Bezos (WEF, 2022), Richard Branson (WEF, 2022), and George Soros (US) (WEF, 2022). Federal Chancellor of the Federal Republic of Germany, Olaf Scholz (WEF, 2022), gave a special address at Davos 2022 focusing on upholding a global rules-based order. China President Xi Jinping and The United Nations Secretary-General António Guterres addressed The Davos Agenda (WEF, 2022) in 2022 (They were also in attendance the previous year). Prince Charles of the United Kingdom delivered a speech during the launch of The Great Reset (Inman, 2020) while Tesla's Elon Musk gave a talk on sustainability and the need for a world government at the WEF last January 2022 (Roszell, 2022). European Commission President Ursula von der Leyen and World Health Organization Director-General Dr. Tedros Adhanom Ghebreyesus attended The Davos Agenda in 2021 were brought together with different heads of state (WEF, 2021), the President of European Central Bank (Christine Lagarde), the Managing Director of the International Monetary Fund (Kristalina Georgieva), the Governors of the Central Bank of France (François Villeroy de Galhau) and the Bank of England (Andrew Bailey), and the President of the Inter-American Development Bank (Mauricio Claver-Carone) (WEF, 2021). Philippine President Rodrigo Duterte attended the WEF on the ASEAN in 2017 together with other leaders from Cambodia (Prime Minister Hun Sen), Lao (People’s Democratic Republic Prime Minister Thongloun Sisoulith), and Vietnam (Prime Minister Nguyen Xuan Phuc) (Department of Foreign Affairs, n.d.).

WEF partners in business and technology like Cisco (WEF, 2022), Comcast (WEF, 2022), Hewlett Packard Enterprise (WEF, 2022), Nasdaq (WEF, 2022), Boston Consulting Group (WEF, 2022), Intel (WEF, 2022), and Qualcomm (WEF, 2022) sponsored the 2017 Code Conference that featured Chief Executive Officers from Apple (WEF, 2022), Google (WEF, 2022), Amazon (WEF, 2022), politicians like Gavin Newsom (WEF 2022) and Pete Buttigieg (WEF, 2022), and teleconferencing giant Zoom (WEF, 2022). CES, “the most influential tech event in the world” (CES, 2022, para. 1), brings together WEF partners like Abbott (WEF, 2022), Amazon (WEF, 2022), Google (WEF, 2022), Microsoft (WEF, 2022), Sony (WEF, 2022), AARP (WEF, 2022), Brunswick (WEF, 2022), Volkswagen (WEF, 2022), Hyundai (WEF, 2020), Lenovo (WEF, 2022), Panasonic (WEF, 2022), Procter & Gamble (WEF, 2022), Qualcomm (WEF, 2022), and Verizon (WEF, 2022).

Coursera, a global massive open online courses platform developed by Daphne Koller and Andrew Ng, is a WEF partner with more than 200 of the world's universities participating as content providers (WEF, 2022). It seeks to "empower over 44 million learners around the world to achieve their career goals" (para. 1) One of its

two articles on the WEF website talks about the need to upskill the workforce towards the growing digital economy, especially after COVID-19, by -

Creating pathways to future jobs through skills training; Upgrading the higher education system to improve youth employability; Establishing a learning ecosystem with universities and NGOs to promote local business growth; and (e)xpanding digital inclusion to advance workforce development for underserved populations. (Maggiocalda, 2022, para. 8, 11, 15, 19).

In response to the COVID-19 pandemic, the WEF, together with the London School of Economics and AstraZeneca, initiated the Partnership for Health System Sustainability and Resilience (PHSSR) to build resilient and sustainable health systems through and beyond the COVID-19 pandemic (World Economic Forum, 2022). Together with the World Health Organization and countries badly affected by the COVID-19 crisis, the WEF launched the COVID-19 Action Platform, composed of 35 projects, that "call on governments and international organizations to contribute knowledge, know-how, and insights on the collective response and actions towards the COVID-19 pandemic, ranging from healthcare delivery and vaccine innovation to supply chain network and financial services response" (WEF, n.d., para. 5) with the help of more than 350 public and 850 private organizations all over the world. Anthony Fauci, Director of the National Institute of Allergy and Infectious Diseases (NIAID) of the US, took part in the Davos Agenda 2021 (WEF, 2021).

Coursera, as a WEF partner, meanwhile, offers 71 COVID-19-related courses. With 87 million users in 2021 (DMR, 2022), Coursera is expected to shape knowledge about COVID-19 at the upper echelons of education all over the world. Through Coursera, the WEF is also expected to advance its agenda for the fourth industrial revolution through and beyond pandemics. This paper seeks to see the ideological power of Coursera COVID-19-related courses to establish the web of influence of the WEF in the construction of COVID-19-related knowledge by looking at the institutional, professional, and disciplinary affiliations of heads of schools that offer these courses, and examine the manner they help promote COVID-19 vaccination around the world through networks of knowledge they help shape.

This paper posits the notion of an **Ideological "Trans-State" Apparatus**, adapted from Louis Althusser's "ideological state apparatus" (Althusser, 1970), where the WEF serves as a proxy for the state, gaining authority over various states by co-opting a global network of educational institutions through a global instructional platform accessible to all and thereby achieving Antonio Gramsci's 'hegemony' on mandatory COVID-19 vaccination. In this study, the ideology is the "good" of the COVID-19 vaccination, and the Trans-State power behind it is the WEF operating through the Trans-State educational authority, Coursera, with its content providers.

II. Methodology

This study investigates Coursera as a WEF-affiliated learning platform for COVID-19-related courses. To describe the courses vis-a-vis the links of the delivering institutions to WEF and vaccination, the study used data mining and case study approaches via a systematic review of the literature. To sample Coursera courses relevant to the investigation, the study used the Coursera search box and keywords like "COVID-19", "vaccine", and "COVID-19 vaccine" to arrive at relevant samples (purposive sampling) between April 11-17, 2022. The number of courses available under each keyword was counted and the course pages were broken down with the help of an analytical matrix looking for content providers, course titles, and course content details relevant to vaccination. Once the courses were identified and the details categorized, a second online search via Google was done on delivering institutions that were identified as members of the WEF's Global University Leaders Forum (GULF) or in WEF's own words "the world's leading universities... committed to supporting the Forum's mission of improving the state of the world... (on) matters of common interest, including trends, challenges and

best practices in higher education, research and societal impact" (WEF, 2022, para. 1) or other WEF partners and affiliates. These educational organizations were further analyzed by identifying their university presidents, directors, rectors, or chancellors, and their respective WEF affiliations through all related websites. Delivering institutions not reported as part of GULF were searched online, as well, using the name of the institution and the "World Economic Forum" in the WEF search engine to find out other possible links to WEF. If none on the WEF website appears, Google searches were done to find any other possible links to WEF, including links established by their faculty, members, researchers, scientists, writers, and the like. The data from the above were interpreted according to the principles that allow for Gramsci's hegemony.

III. Results

Links of COVID-19-related Coursera Courses to WEF

As of April 18, 2022, 71 courses appeared after a Coursera search using "COVID-19" as a search term. They were delivered by 28 educational organizations, eight of which (above 25%) are directly affiliated with WEF through GULF (Johns Hopkins University, Stanford University, Imperial College London, Princeton University, and University of Pennsylvania), or as an official partner (University of Amsterdam, Coursera, and Google). However, the remaining content providers in Coursera also have other WEF links. For example, the University of Geneva (delivering two courses - see Table 1), while not part of GULF, was the location of the WEF when it was founded in 1971. The University of Toronto in Canada (delivering three courses), Northwestern University and University of Florida (both one course), University of Michigan in the USA (four courses), and the University of Copenhagen in Denmark (one course) are all institutional 'agenda contributors'. These are universities that contribute articles (posted on the WEF website) that are aligned with WEF's agenda.

There are also individual WEF agenda contributors coming from delivering educational organizations. The Icahn School of Medicine at Mount Sinai, University of Colorado-Boulder, University of Illinois at Urbana-Champaign, Pennsylvania State University, University of California-San Diego, Universitat Autònoma de Barcelona, and University of Iceland, on the other hand, have individual agenda contributors posting on the WEF website. Meanwhile, the WEF has graduates coming from Rice University, University of Houston, Universidad de Chile, and Xi'an Jiaotong University. The University of California-Irvine has an established WEF Global Shapers community. The Institute for the Future is linked to the WEF through its Director for Strategic Partnerships (John Clamme) who was previously the Director of Corporate Partnerships at the Haas School of Business at University of California-Berkeley (a GULF member). Osmosis (from Elsevier) was founded by Ryan Haynes and Shiv Gaglani who were medical students at Johns Hopkins University. Finally, LearnQuest is a strategic partner of Microsoft, IBM, Google, and Apple (all WEF partners).

This shows that all COVID-19-related courses in Coursera are linked to the WEF as (1) 'program partners (courses offered in Table 1)', (2) 'organization partners' (via GULF) (courses offered in Table 2), (3) 'program graduates' (Courses offered in Table 3), (4) 'direct agenda contributors' as institutions (courses offered in Table 4), (5) 'indirect agenda contributors' through their individual contributors (courses offered in Table 5), and as (6) 'affiliates of partners' (courses offered in Table 6).

Table 1. COVID-19-Related Course Offerings List of WEF GULF Members in Coursera

Content Provider	Courses
The Johns Hopkins University	COVID-19 Contact Tracing
	Design and Interpretation of Clinical Trials
	Fighting COVID-19 with Epidemiology: A Johns Hopkins Teach-Out
	Measuring and Maximizing Impact of COVID-19 Contact Tracing
	COVID Vaccine Ambassador Training: How to Talk to Parents
	International Travel Preparation, Safety, & Wellness
	Rastreo de los contactos de la COVID-19
	Strategies for Assisted Living Communities during COVID-19
	The People, Power, and Pride of Public Health
	Strategies for Senior Housing Communities during COVID-19
	Rastreamento de contato da COVID-19
Stanford University	COVID-19 Training for Healthcare Workers
	Capacitación sobre COVID-19 para trabajadores de salud
	AI in Healthcare Capstone
	Formation COVID-19 pour personnels de santé
	Formação sobre a COVID-19 para Profissionais de Saúde
	स्वास्थ्यकर्मचारियोंकेलिएकोविड -19 ट्रेनिंग
Imperial College London	Science Matters: Let's Talk About COVID-19
	Foundations of Public Health Practice: Health Protection
	Interventions and Calibration
	Introduction to Digital Health
	Introduction to Participatory Approaches in Public Health
Princeton University	Bats, Ducks, and Pandemics: An Introduction to One Health Policy
University of Pennsylvania	Omnichannel Retail Strategy Specialization
	Retail Marketing Strategy

Links to WEF GULF Members. There are officially 29 WEF GULF members. Five of the 29 deliver COVID-19-related courses (linked to vaccine, COVID-19, and COVID-19 vaccine) in Coursera. Of the five, the majority (or four) are universities from the USA, and only one is from the UK. There are 11 American universities in GULF; thus, more than a third of them construct knowledge via Coursera. Meanwhile, Imperial College London is just one of three GULF member universities in the UK. As such, a third of them are also constructing knowledge in Coursera. Hence, Anglo-universities play a key role in constructing knowledge about COVID-19 in Coursera.

Johns Hopkins University, founded in 1876 and named after its first benefactor, entrepreneur and philanthropist Johns Hopkins, is currently headed by Ronald J. Daniels (since 2009), a Yale University and University of Toronto alumnus. It is a private university considered the first research university in the USA. It requires "all university faculty and staff will be required to be vaccinated against COVID-19... in order to promote public health on university campuses and support university operations" (with medical and religious exemptions) (Kirk, 2021, para. 1).

Yale University is a member of the WEF GULF and is represented by its President, Peter Salovey, a WEF agenda contributor who graduated in psychology from Stanford University. Established in 1701 in Connecticut, Yale University is the third oldest university in the USA. It "requires all students, faculty, staff, and postdoctoral/postgraduate trainees — other than those with an approved medical or religious exemption — to be fully vaccinated and to obtain a booster shot within 14 days of eligibility" (Yale University, 2021, para. 1)

Stanford University, founded in 1885 as a private university in California, is also a WEF GULF member and is currently represented by its President, Marc Tessler-Levigne. The university president since 2016, Tessler-Levigne earned degrees from McGill University (physics) and Oxford University (philosophy and physiology), both WEF GULF members. He is a WEF agenda contributor. Stanford University mandates full vaccination to "all undergrad, graduate and professional students on campus" (Catania & Hsieh, 2021, para. 1).

Imperial College London, established through a royal charter in 1901, is a public research university in London. It is represented by its President, Alice Gast, in WEF's GULF. Gast is a WEF agenda contributor who graduated (with a degree in chemical engineering) from Princeton University, a WEF GULF member. She is a professor at Stanford University and is also affiliated with the Massachusetts Institute of Technology (another WEF GULF member). It is "very strongly encouraging vaccination, including boosters" (Imperial College London, 2022, para. 1).

Princeton University, represented by its President, Christopher L. Eisgruber, in the WEF's GULF, was founded in New Jersey in 1746. Eisgruber is a graduate of physics at Princeton University and politics at the University of Oxford, both WEF GULF members. He is a WEF agenda contributor. The university "requires all students, faculty, and staff be vaccinated for COVID-19" (Princeton University, 2022, para. 1)

The University of Pennsylvania, established in 1740, is a private research university. It is represented by its President, Amy Gutmann, in the WEF GULF. Gutmann is a WEF agenda contributor who is a Ph.D. alumna of Harvard University (another WEF GULF member) and is also affiliated with Princeton University. Like most of the above universities, the university also requires "all students, faculty, and staff...to receive a COVID-19 booster shot... (and) anyone who is not yet eligible for the booster must receive the shot within 30 days of becoming eligible" (University of Pennsylvania, 2022, para. 1)

Links to WEF Partners. Coursera and Google are declared WEF partners on the latter's website. While the University of Amsterdam is not found in the list of WEF partners on its website, it declares itself as a partner of WEF by saying: "The Amsterdam Centre for Business Innovation is a partner institute of the World

Economic Forum (WEF) and collects data for the Netherlands. This data is used as an input for the WEF's annual Global Competitiveness Report" (University of Amsterdam, 2022, para. 1).

Coursera is described as a WEF partner (WEF, 2022) as follows:

Coursera, founded by Daphne Koller and Andrew Ng, aims to provide life-transforming learning experiences to anyone, anywhere. More than 200 of the world's universities and industry educators partner with Coursera to offer courses, specializations, certificates, and degrees that empower over 44 million learners around the world to achieve their career goals. Some 2,000 companies use the Coursera for Business enterprise platform to transform their talent. Coursera for Government equips government employees and citizens with in-demand skills to build a competitive workforce. Coursera is backed by investors including Kleiner Perkins, New Enterprise Associates, GSV Capital, Learn Capital, and SEEK Group. (para. 1)

Daphne Koller, one of the Coursera founders, is a member of the computer science faculty of Stanford University. She received her Ph.D. at Stanford under the supervision of Joseph Halper, a Mathematics Ph.D. from Harvard University. She had her post-doctoral research at the University of California-Berkeley (a WEF GULF member) with the help of Stuart J. Russell, an alumnus of the University of Oxford (physics) and Stanford University (computer science), and Michael Genesereth, an alumnus of the WEF GULF universities Massachusetts Institute of Technology (physics) and Harvard University (applied mathematics). Her co-founder, **Andrew Ng**, is a Stanford computer science faculty member.

Google, described by the WEF in the following words, is declared by WEF as a partner:

Larry Page and Sergey Brin founded Google in September 1998. Since then, the company has grown to more than 70,000 employees worldwide, with a wide range of popular products and platforms like Search, Maps, Ads, Gmail, Android, Chrome, and YouTube. In October 2015, Alphabet became the parent holding company of Google. (para. 1)

Larry Page co-developed Google while he was at Stanford. He earned his bachelor's degree in engineering from the University of Michigan (a direct agenda contributor of the WEF) and his Master's degree at Stanford. His co-founder, **Sergey Brin**, undertook his graduate studies in computer science at Stanford, as well, and has spoken in Davos at the 2017 annual WEF meeting. **Rajeev Motwani**, a computer science professor at Stanford, was an adviser and supporter of Google. **Pichai Sundararajan**, the current Chief Executive Officer of Alphabet, Inc., a subsidiary of which is Google, was also a graduate of Stanford (materials science and engineering) and the Wharton School of the University of Pennsylvania. He, like Brin, also spoke in Davos in 2018 and 2020.

Google offers Google Cloud Certification courses that Coursera (2022) describes as:

... help(ing) millions of organizations empower their employees, serve their customers, and build what's next for their businesses with innovative technology created in—and for—the cloud... (with) products are engineered for security, reliability, and scalability, running the full stack from infrastructure to applications to devices and hardware. (para. 4)

University of Amsterdam's Amsterdam Centre for Business Innovation (ACBI) describes itself as follows:

The Amsterdam Centre for Business Innovation (ACBI) develops and disseminates new knowledge and insights that help firms, sectors, and regions to strengthen their innovation performance. ACBI is a leading knowledge center of the Amsterdam Business School, University of Amsterdam. It focuses on bringing you the latest developments in business-related innovation in the broadest sense. (para 1)

Henk Volberda leads ACBI and is reported by WEF as the Director and Professor of the INSCOPE: Research for Innovation, Erasmus University Rotterdam, as well. Like the President of the University of Amsterdam, Prof. **Geertrudis Theresia Maria** (Geert) ten Dam, Volberda is a graduate of the University of Groningen, a university linked to the WEF through its various individual agenda contributors.

Table 2. COVID-19-Related Course Offerings List of WEF Partners in Coursera

Content Provider	Courses
Coursera Project Network	COVID-19 Data Analysis Using Python
	Detecting COVID-19 with Chest X-Ray using PyTorch
	COVID-19 Data Visualization Using Python
	Classification of COVID-19 using Chest X-ray Images in Keras
	COVID-19 Prediction mRNA Vaccine Degradation
	Perform basic data analysis tasks using Java streams
	Sentimental Analysis on COVID-19 Tweets using python
	Covid-19 Death Medical Analysis & Visualization using Plotly
	Compare time series predictions of COVID-19 deaths
	COVID-19 : Les sériestemporelles avec Python et Pandas
	Using Covid-19 Data to Make Supply Chain Logistics Decisions in Spreadsheets
	سطحالمكتبياستخدامPython: إشعارات Covid-19
	Simulation of Covid-19 Testing Process Using R Simmer
	Personal Desktop Notifier in Python: Covid-19 notifications
	Covid-19 Cases Forecasting Using Fbprophet
	Application of Data Analysis in Business with R Programming
	How to Use SQL with Large Datasets
	Graficando con Python
	Get Started with Canva

University of Amsterdam	Ebola: Essential Knowledge for Health Professionals
Google Cloud	Verily Pathfinder Virtual Agent for COVID-19 Chat App Build a BigQuery Processing Pipeline with Events for Cloud Run for Anthos

Based on the course titles delivered by the Coursera Project Network (CPN) in Table 2, it is clear that the courses are heavily shaped and influenced by Koller and Ng (CPN offers online guided projects that assist learners to acquire job skills). The same can be observed in the courses offered by Google Cloud, but not in those of the University of Amsterdam.

Links to WEF Program Graduates. Four of the 28 universities are linked to the WEF through persons who have become graduates of the WEF Programs. Rice University and the University of Houston, both in Texas, have fellows in the WEF. Universidad de Chile does not only have a graduate of a WEF Program but also a graduate of the University of California-Berkeley. Likewise, the WEF graduate and council member linked to Xi'an Jiaotong University is also affiliated with the University of Oxford and McGill University (a WEF GULF member). The courses delivered by the universities linked to the WEF graduates are found in Table 3.

David Leebron, Rice University President since 2004, is a Harvard University Law School graduate. **RenuKhator**, Chancellor of the University of Houston System and the President of the University of Houston since 2008 is not directly linked to the WEF or any GULF member school. However, a WEF Global Shapers Community hub or the Houston Hub exists at the University of Houston with one member having joined in 2013, five years into Khator's term. **Howard Gilman**, Chancellor of the University of California-Irvine since 2014, is affiliated with the University of Oxford, Yale University, and the University of Chicago (all WEF GULF member schools) as an author. The University of California-Irvine hosts a Global Shapers Community and Global Immersion Fellowship Program. **Ennio Vivaldi**, Universidad de Chile's President, is a graduate of Harvard University and the Massachusetts Institute of Technology. **Zheng Nanning**, President of Xi'an Jiaotong University, is a graduate of Keio University in Japan (a WEF GULF member). This means that the link to the WEF of the universities in Table 4 also exists at the level of university presidents.

Table 3. *COVID-19-Related Course Offerings List of Institutions with WEF Program Graduates*

Content Provider	Courses
Rice University	Fundamentals of Immunology: Dueling with the Dark Side
University of Houston.	Population Health During A Pandemic: Contact Tracing and Beyond Covid-19 Contact Tracing For Nursing Professionals
University of California, Irvine	Skepticism
Universidad de Chile	Seguimiento de casos y contactos COVID-19
Xi'an Jiaotong University	Lecture Series for Preventing and Controlling COVID-19

Links to Direct Contributors to the WEF Agenda. The four universities in Table 4 are institutions that have contributed articles to the WEF website (the articles are identified with the whole university, and not to one or some individual authors from the same institution). **Wesley Kent Fuchs**, President of the University of Florida since 2015, is not directly linked to the WEF. However, he is the leader of several individual contributors to the WEF agenda. **Mark Schissel**, the President of the University of Michigan since 2014, is an alumnus of Princeton University and Johns Hopkins University and is also affiliated with the Massachusetts Institute of Technology and University of California-Berkeley. Pennsylvania State University President since 2014, **Eric J. Barron** is not linked to any WEF GULF school or partner universities; however, he is linked to WEF program graduates and individual contributors to the WEF agenda through his university. University of Toronto President, **Meric Gertler**, was educated at Harvard University and the University of California-Berkeley. University of Copenhagen Director, **Jesper Olesen**, is not directly linked to the WEF nor WEF GULF member schools. However, he has subordinates who are individual contributors to the WEF agenda. The data in Table 4 suggests that universities that are linked to the WEF through their publications on the WEF website have concurrent links to their presidents via the GULF member schools and/or their individual contributors to the WEF agenda, and/or WEF program graduates.

Table 4. *COVID-19-Related Course Offerings List of Direct Contributors to the WEF Agenda*

Content Provider	Courses
University of Florida	COVID-19 - A clinical update
University of Michigan	Good with Words: Writing and Editing Specialization
	High Stakes Leadership: Leading in Times of Crisis
	Resilient Teaching Through Times of Crisis and Change
	Thrive in Trying Times Teach-Out
Pennsylvania State University	Epidemics - the Dynamics of Infectious Diseases
University of Toronto	Mind Control: Managing Your Mental Health During COVID-19
	The 360° Corporation: Tools for Achieving Corporate Purpose
	The City and You: Find Your Best Place
University of Copenhagen	Personalised Medicine from a Nordic Perspective

Table 3 has shown that universities that contribute directly to the WEF agenda (without any need for individual contributors) may also have individual contributors acknowledged by the WEF. Contributors in schools found in Table 5, however, are the non-GULF university's indirect link to the WEF. Seven universities offering COVID-19-related courses in Coursera establish a link only to the WEF via individual contributors affiliated with them (see Table 5). **Kenneth L. Davis**, President and Chief Executive Officer of the Icahn School of Medicine at Mount Sinai since 2013, is a medicine and psychiatry graduate of Stanford University. **Todd Saliman**, the University of Colorado President starting in 2021, is not seemingly linked to the WEF (given the limited biographical information available online on that area) except for the individual contributors to the WEF agenda from his university. **Timothy L. Killeen**, President of the University of Illinois system since 2015, was affiliated with the University of Michigan (a direct contributor to the WEF agenda) and the University of Colorado-Boulder (an indirect contributor to the WEF agenda). University of California-San Diego's Chancellor

since 2012, **Pradeep K. Khosla**, has a graduate degree (in engineering) from and was an administrator of Carnegie Mellon University (a WEF GULF member school). **Javier Lafuente**, Rector of the UniversitatAutònoma de Barcelona since 2020, is a chemical engineering graduate and has worked at the Massachusetts Institute of Technology and the University of California. The President of the governing council and rector of the University of Iceland since 2015, **Jón AtliBenediktsson**, is not directly linked to the WEF, except for the individual contributors to the WEF agenda from his university. This means that individual contributors to the WEF agenda play a vital role in keeping university presidents, unlinked to the WEF, in the loop. They are WEF network builders from the ground up.

Table 5. *COVID-19-Related Course Offerings List of Indirect Contributors to the WEF Agenda*

Content Provider	Courses
Icahn School of Medicine at Mount Sinai	HPV-Associated Oral and Throat Cancer: What You Need to Know
Colorado University-Boulder	Health, Society, and Wellness in COVID-19 Times
	#talkmentalillness
	Intro to AR/VR/MR/XR: Technologies, Applications & Issues
University of Illinois at Urbana-Champaign	Managing Supply Chain Disruption During COVID-19
UC San Diego	Hacking COVID-19 — Course 1: Identifying a Deadly Pathogen
	Hacking COVID-19 — Course 3: Unraveling COVID-19's Origins
	Hacking COVID-19 — Course 2: Decoding SARS-CoV-2's Secrets
UniversitatAutònoma de Barcelona	PrimerosAuxiliosPsicológicos (PAP). Edición especial COVID-19
	Manejo del enferosemicrítico y crítico por COVID-19
	Unión Europea: Historia, Instituciones y Políticas
University of Iceland	Personalised Medicine from a Nordic Perspective

Finally, three content providers that are not universities, are also linked to the WEF but only through its partners; hence, the link is indirect. The Director of Strategic Partnerships of the Institute for the Future, **John Clamme**, was previously the Director of Corporate Partnerships at the Haas School of Business at the University of California-Berkeley. He is not educated in any of the WEF GULF member schools or any of the WEF direct contributors to the WEF agenda. The founders of Osmosis from Elsevier, **Ryan Haynes** and **Shiv Gaglani**, started building Osmosis while they were medical students at Johns Hopkins. Haynes also graduated with an MPhil and Ph.D. from the University of Cambridge (in philosophy and neuroscience, respectively). Gaglani also earned an MBA at the Harvard University Business School. There is limited information online on the educational background of Lucy Schneiberg, LearnQuest's Chief Executive Officer. However, LearnQuest is known to keep strategic partnerships with IBM, Microsoft, Google, and Apple, all WEF partners. The data in

Table 6 indicates that the WEF remains influential even among non-university COVID-19-related content providers of Coursera.

Table 6. *COVID-19-Related Course Offerings List of Non-University Content Providers of Coursera*

Content Provider	Courses
The Institute for the Future	Life After COVID-19: Get Ready for our Post-Pandemic Future
Osmosis from Elsevier	COVID-19: What You Need to Know (CME Eligible)
LearnQuest	AI for Scientific Research Specialization
	Capstone Project: Advanced AI for Drug Discovery

Connections of Vaccine-related Coursera Courses to the WEF

The Coursera search using "vaccine" as a keyword resulted in 19 courses. Relating the content providers to the universities affiliated with their top administrators and the WEF, Table 7 shows that, except for Imperial College London and University of Amsterdam, the universities were US-based. **Yale University** is associated with the most prolific content provider for courses related to vaccines (Johns Hopkins University), given, perhaps, that it is a medical establishment. It also has a link to the University of California-Irvine. Yale, then, has the most influence over vaccine-related courses on the list. **Stanford University** follows Yale, as it is shown to have connections with Imperial College London, Coursera Project Network, and Icahn School of Medicine at Mount Sinai. The **Massachusetts Institute of Technology** follows Stanford closely, having links with the previous first and second schools. **Harvard University** is fourth (Coursera Project Network and Rice University). Fifth is **University of Oxford** (Coursera Project Network and University of California-Irvine). Given the top five above, one can surmise that top-tier schools in the US and UK allow for greater WEF influence on Coursera courses related to vaccines. These courses, while more general than COVID-19, already include COVID-19 in the course titles, at the very least.

Table 7. *Vaccine-Related Course Offerings List and Links to the WEF*

Content Provider	Courses	WEF Links
Johns Hopkins University	COVID Vaccine Ambassador Training: How to Talk to Parents	Yale University
	Design and Interpretation of Clinical Trials	
	International Travel Preparation, Safety, & Wellness	
	The People, Power, and Pride of Public Health	
	Strategies for Senior Housing Communities during COVID-19	
	Strategies for Assisted Living Communities during COVID-19	
Imperial College	Foundations of Public Health Practice: Health Protection	WEF agenda contributor

London	Interventions and Calibration	Princeton University Stanford University Massachusetts Institute of Technology
	Science Matters: Let's Talk About COVID-19	
Coursera Project Network	COVID-19 Prediction mRNA Vaccine Degradation	Stanford University Harvard University
	Perform basic data analysis tasks using Java streams	University of California-Berkeley University of Oxford Massachusetts Institute of Technology
University of Amsterdam	Ebola: Essential Knowledge for Health Professionals	(individual agenda contributors)
Rice University	Fundamentals of Immunology: Dueling with the Dark Side	Harvard University
University of Houston	Population Health During A Pandemic: Contact Tracing and Beyond	WEF Global Shapers Community hub
University of California, Irvine	Skepticism	University of Oxford Yale University University of Chicago WEF Global Shapers Community and Global Immersion Fellowship Program
Pennsylvania State University	Epidemics - the Dynamics of Infectious Diseases	(WEF Program graduates and individual contributors)
Icahn School of Medicine at Mount Sinai	HPV-Associated Oral and Throat Cancer: What You Need to Know	Stanford University
Institute for the Future	Life After COVID-19: Get Ready for our Post-Pandemic Future	University of California-Berkeley
University of Geneva	Ebola :Vaincre ensemble !	WEF Founder - Klaus Schwab

Connections of COVID-19 Vaccine-related Coursera Courses to the WEF

Meanwhile, the search in Coursera for courses linked to the key term “COVID-19 Vaccine”, yielded only seven results. Except for University of Houston, all courses carry the term COVID-19 in their titles. **Yale University** allows the WEF more influence on these courses (via Johns Hopkins University), followed by **Stanford University** and **Massachusetts Institute of Technology** (Imperial College London and Coursera Project Network), and **University of California-Berkeley** (Coursera Project Network and Institute for the

Future). **Princeton University** (Imperial College London), **University of Oxford** (Coursera Project Network) offer relatively limited opportunities for WEF to influence COVID-19 vaccine-related courses in Coursera. **Coursera Project Network** has the most links to WEF GULF member schools that shape knowledge on vaccines, in general (see Table 7), and COVID-19 vaccines, in particular (see Table 8) in Coursera courses.

Table 8. *COVID-19 Vaccine-Related Course Offerings List and Links to the WEF*

Content Provider	Courses	WEF Links
Johns Hopkins University	COVID Vaccine Ambassador Training: How to Talk to Parents	Yale University
	Strategies for Assisted Living Communities during COVID-19	
	Strategies for Senior Housing Communities during COVID-19	
Imperial College London	Science Matters: Let's Talk About COVID-19	WEF agenda contributor Princeton University Stanford University Massachusetts Institute of Technology
Coursera Network	Project COVID-19 Prediction mRNA Vaccine Degradation	Stanford University Harvard University University of California-Berkeley University of Oxford Massachusetts Institute of Technology
University of Houston	Population Health During A Pandemic: Contact Tracing and Beyond	WEF Global Shapers Community hub
Institute for the Future	Life After COVID-19: Get Ready for our Post-Pandemic Future	University of California-Berkeley

IV. Discussion

The data above reveal 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 with respect to 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. From the Marxist perspective, "ideology" may be defined as "a conspiratorial ideational wool pulled over the eyes of the masses" (Martin, 2015, p. 10). Such ideology, producing consent, co-opts the masses and leads to 'hegemony', which Antonio defined as "the 'cultural, moral and ideological leadership of a group over allied and subaltern groups" (De Orellana, 2015, para. 3). In this case, the top-tier WEF-linked universities do exercise such leadership given that in the context of

confusion and lack of ethical leadership during the pandemic, the masses sought the refuge of "science" to lead the way. In the words of Dupre (2020), following the science during the pandemic meant abiding by mandated hygiene protocols echoed by government policy. De Orellana clarifies that this Gramscian leadership is exercised in the superstructure and driven by the economic interest of the leading group which achieves "the equilibrium between consent and coercion" (para 3). If science paved the way for "informed" consent, the COVID-19 pandemic facilitated coercion (Blanc, 2020).

The WEF, while driven clearly by the economic agenda (as reflected in its name), attempts to balance it by stating on its website that it "strives in all its efforts to demonstrate entrepreneurship in the global public interest while upholding the highest standards of governance. Moral and intellectual integrity is at the heart of everything it does" (WEF, 2022). By saying so, it positions itself as a moral leader, given its position as a socio-political player in the world stage. WEF also claims that it is an "international organization for public-private cooperation" (para 1) but by doing so it positions itself as a trans-state entity that is not accountable to any particular state. Furthermore, it declares that it "engages the foremost political, business, cultural, and other leaders of society to shape global, regional and industry agendas" while remaining "independent, impartial and not tied to any special interests" (para. 2). Considering all these and that its interest lies in "carefully blend(ing) and balanc(ing) the best of many kinds of organizations, from both the public and private sectors, international organizations and academic institutions" (para. 4), it appears to be, and yet never genuinely, a disinterested party. By saying so, it loses its claim to "moral and intellectual integrity" from the Gramscian lens because it fails to publicly declare its vested interest. By seeking to be everything and appearing to be "impartial", it becomes nothing more than a veil contradicting its politico-economic agenda. Data reveal that it has co-opted ideological leaders (universities and educational content providers) that normally serve as ideological state apparatuses in Althusserian terms, and has transformed them into trans-state ideological apparatuses, where the WEF functions as a proxy or substitute for international leadership with integrity when global political structures, in the form of populist politics and democratic institutions, collapsed during the pandemic (Bennett Institute for Public Policy, 2022).

The fact that it gathers top-tier leaders and organizations in Davos, instead of subaltern groups, proves the point that the WEF does not have the latter's interest in mind. Its agenda, covering sustainability, digital education, and the like, may render it altogether noble and altruistic, even heroic, in a time of global disaster. The COVID-19 vaccine mandates in the WEF-linked universities, following the unusually quick roll-out of vaccines that are still under experimentation, marginalizing the ethical ideal of free and informed consent to participate, and discriminating against persons who seek to protect their bodily autonomy, say a lot about its 'disinterestedness' that lies within its core. It should be noted that Roche, the top pharmaceutical company of 2021 (Burke, 2021) with an income of 49.5 billion USD, is a WEF partner (WEF, 2022). It is followed by other WEF partners like Novartis (WEF, 2022) (ranked 2nd), Abbvie (Ramsey, 2017) (ranked 3rd), Johnson and Johnson (WEF, 2022) (ranked 4th), Merck (WEF, 2022) (ranked 5th), Pfizer (WEF, 2022) (ranked 6th), Bristol Myers Squibb (WEF, 2022) (ranked 7th), Sanofi (WEF, 2022) (ranked 8th). Takeda Pharmaceuticals (WEF, 2022) (ranked 9th), and Amgen (WEF, 2022s) (ranked 10th). This indicates that there is economic interest that lies behind the WEF veil supported by the WEF network of top-tier schools. This dataset alone indicates how much these pharmaceutical companies gained from the pandemic. Needless to say, the connection between WEF, pharmaceutical companies, and top-tier universities that have mandated vaccination during the COVID-19 pandemic all point to structures of support for the economic interest driving hegemony towards COVID-19 vaccination during the pandemic.

Given the data above, it is recommended that a textual analysis of the course content of those in the list above be done to clarify messages that lead to consent to global mandatory COVID-19 vaccination. A parallel study should be conducted on other for-profit massive open online course platforms like Udacity, and not-for-profit ones like Khan Academy and edX to find out whether the same findings can be found on those platforms

or not. It is also worth looking at how these connections contribute to the continued marginalization and stigmatization of persons and groups opposing mandatory COVID-19 vaccinations. Such a study would reveal inevitably the collusion of governments with the WEF and its affiliates on these hegemonic structures. Finally, as universities are considered ethical-moral beacons and knowledge-building institutions, one should look into the repercussions of universities becoming ideological trans-state apparatuses on the status of scholarly integrity and how the consequent hegemonic structures feed or impede the development of ethical and critical scholarship in universities. For example, one should look into how grants linked to pharmaceutical company funding seep into the education system and erode commitments to the well-being of marginalized communities they seek to serve. More critical studies like this are encouraged to reveal hegemonies that universities facilitate in the time of massive open online courses.

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