Framing science in the time of Covid-19 pandemic: Lessons from CNN Philippines' reportage

Ernesto Cordero Collo, Jr.
Don Mariano Marcos Memorial State University and Polytechnic University of the Philippines, Philippines
Email: eccollo@up.edu.ph

Abstract

This century has necessitated scholars to probe the credence of science in the news reportage of the COVID-19 pandemic. Therefore, this paper aims to establish the locus of science as treated by CNN against the backdrop of this global health crisis. Using Nisbet's (2009) typology as the new paradigm in public engagement as informed by content analysis, this paper argues that CNN Philippines' news articles are mostly framed as scientific/technical uncertainty which holds science with the highest esteem in decision-making, but it also disregards its authority for political reasons. As guided by Yanovitzky and Weber (2019), this paper also articulates that the functions of CNN as a news media organization in the reportage of science are mobilization and awareness which provoke action among policy actors through relevant information. Further, this paper offers a perceptive look into an emerging dimension for science communication scholars: the gulf between science and politics which surfaces the politicization of key pandemic decisions.

Keywords: science news articles, framing, news media functions, politicization

INTRODUCTION

Central to any news media's functions is information, particularly in times of epidemics. People turn to various information sources to learn of risk management measures, making science communication highly relevant. However, the challenge to accurately report a scientific information or content requires the convergence of the news media and the science community. Apart from considerations on technicality, issues of culture, politics, and power are often present. Considering lives at stake during such conditions, it is of value to look into how scientific information is framed and packaged for public consumption and safety.

A phenomenon that allows the science communication community to contribute to the literature on studying how news media organizations frame science in the face of an epidemic is the COVID-19 pandemic. Initially called the 2019 novel coronavirus, it first made to the news in December 2019, after clinically diagnosed cases were reported in Wuhan, China. After only a month, the virus has already infected thousands inside and outside China (Tweeten, Barone, & Wolfson, 2020). It was officially named coronavirus disease-19, or more commonly known as COVID-19, by the World Health Organization (WHO) on February 11.

It is imperative to walk through the timeline of epidemiological facts that shaped this pandemic into what it is today. The 20th century recorded the 1918 flu pandemic, otherwise known as Spanish flu, which infected and killed approximately 50-100 million people across the globe, as the second deadliest pandemic behind the Great Bubonic Plague in the 14th century. At the turn of the 21st century, four major diseases have already brought the world together to battle out an enemy invisible to the naked eye.

In February 2003, the Centers for Disease Control and Prevention (CDC) in the United States recorded the first case of SARS or severe acute respiratory syndrome in Asia. Before the global outbreak was contained, this illness had spread to more than two dozen countries in North America, South America, Europe, and Asia.

The World Health Organization (WHO) reported the first case of MERS-CoV or Middle East Respiratory Syndrome Coronavirus in Saudi Arabia in 2012 and has since spread to more than 20 other countries, accounting to 2,499 cases and 861 mortalities. Contracted patients developed severe acute respiratory illness, including fever, shortness of breath, and cough.

Two years after MERS-CoV was halted, Ebola virus disease was labeled by WHO as the "largest, most severe, and most complex Ebola epidemic" in history. World Vision reported 11,000 deaths mostly in West African countries such as Guinea, Sierra Leone, and Liberia before the international public health emergency ended in June 2016. After roughly four years since the last epidemic that brought Africa down to its feet, another pandemic surfaced, as officially declared by WHO on March 11, which began in Wuhan, China as its epicenter in December 2019.

Hailed as the worst pandemic at the turn of the 21st century, COVID-19 has been the focus of airtime for all news media organizations worldwide since its exposure to the international community as a pandemic in March (Mahbubani, MacFall-Johnsen, & Baker, 2020). TV airtime, broadsheets, radio news, and the social media have dedicated a generous amount of space for "accurate reporting" of scientific content pertaining to the pandemic. This crisis poses the most challenging time yet for all journalists to raise awareness and actively engage publics on managing the risks of COVID-19 while aiming to deliver the news every single day with utmost attention to scientific details. It is also every news media organization's intent to prevent misinformation from reaching the general public.

Given the key role of news media in risk communication and management, and given that most of the information shared during crises are heavily scientific, science should be presented as trustworthily as possible. However, "valuable information can too easily go to waste if it is not effectively communicated to people who need it to make decisions" (United Nations Office for Risk Reduction, 2017).

Many scholars in the academia, the science communication community, and medical field have published an array of quantitative studies on the worst epidemics in the 20th century mostly through the lens of agenda setting theory and framing analysis.

This study, therefore, was conducted to determine how CNN's news articles framed science to reach out to the public and to analyze its functions as a news media organization.

These then led to two key objectives which this paper attempts to expound:

1. Analyze how science and its role is framed in this pandemic in terms of the emerging frames in CNN Philippines' news articles
2. Determine the functions of CNN Philippines as a news media organization in facilitating dialogues and public policymaking processes

LITERATURE REVIEW

Among the earliest studies that probed at the development of HIV/AIDS on a global scale is the analysis of the presentation of AIDS in mainstream and gay press. Shelburne (2002) studied the reality of AIDS as framed by magazine articles from Time and The Advocate during 1981 until 2002. This study understood how the media influence people's thoughts to mobilize them to action or inaction. It was also discovered that Time appeared to be objective in its reporting while The Advocate expressed bias to the gay community.

Other studies that continued to explore the HIV/AIDS epidemic include Sokolova's (2016) study on State Response to the HIV/AIDS Epidemic in Russia: Institutional Factors which investigated why Russia Federation remains to be one of the few states that refuses to implement key interventions while it is facing the fastest growing HIV/AIDS epidemic in Eastern Europe. This study highlighted how the policies in Russia inspire the actions of many towards this epidemic.

Covering another epidemic is a study by Blakely (2001) who addressed how the social construction of news stories and editorials about the influenza pandemics – Spanish influenza pandemic of 1918, Asian influenza pandemic of 1957, and Hong Kong influenza pandemic of 1968 – across The New York Times, The Times, and The Reader's Guide to Periodical Literature were presented. Results revealed that the social construction changed over time where the Spanish influenza produced a theme of intense anxiety, a theme of scientific optimism was developed by the Asian influenza, and the Hong Kong influenza produced a theme which explains the inability of scientists to control the disease, but just to hold it at bay.

A comparative framing analysis was employed by Li (2016) to analyze how Xinhua, the leading news agency in China, covered SARS and Ebola in its 250 SARS stories and 250 Ebola stories. The study concludes that the SARS stories covered economics, responses by domestic government(s), reassurance, and confidence more frequently than the Ebola stories did, whereas the Ebola stories covered health effects and responses by international governments more frequently than the SARS stories did.

Acquah-Baidoo (2016) investigated how media in the United States and Sierra Leone framed the Ebola crises in West Africa which became a global crisis in 2014. The differences in content which existed between the reports by the New York Times of the US and the Concord Times of Sierra Leone were studied. Findings revealed that the NY Times mainly reported the severity of Ebola that contributed to the curbing of the disease while Concord Times reported with an urgent response and action focus on what needs to be done to curb the situation.

With all of world's news media committed to reporting the most accurate scientific content for public consumption, it is also of interest for science communication and media studies scholars to continue involving their communities in efforts to contribute to the body of knowledge focused on the framing analysis of science news as published by news media organizations during the COVID-19 pandemic.

At present, available literature includes a study by Sohrabi et al. (2020) who reviewed and summarized the current state of knowledge surrounding COVID-19. It presents the epidemiological facts about the pandemic and presents lessons and issues to be learned from the response to COVID-19 which includes lack of transparency, public misinformation, travel restriction delay, and quarantine delay, among others.

Nicola, et al. (2020) were prompted to conduct a study that presents up-to-date management guidelines as new findings continue to emerge every day and the strategic implementation of various measures in the absence of any antiviral and vaccine. Hence, this study emphasized that it is imperative that current and potential treatment options are frequently re-evaluated in order to offer the best possible care under such unprecedented circumstances.

It is a fact that COVID-19 is a new disease and at the moment, there is very limited research conducted for the novel field of coronavirus studies and even for the previous epidemics on how an international news media organization with a local counterpart reports global health crises in an international and local scale in order to discover emergent themes which emanate from their science-related news articles.

To attempt to fill this void, this study investigates how CNN as a news media organization locates its role within a world crisis given the magnitude of impacts caused by the pandemic. Analyzing the organization's functions may also allow the media outlet to re-evaluate its position in science reporting by developing a space where its power transcends information dissemination.

Nisbet's Typology of General Frames

Nisbet (2009) postulated in Framing Science: A New Paradigm in Public Engagement the "growing recognition that communication is not simply a translation of facts but more importantly a negotiation of meaning." The idea that science and its policy implications need to be communicated inspired the press conference from which Nisbet anchored this paper on. This prompted the paradigm shift: scientists must frame their communications that connect with diversified audiences.

Table 1. Nisbet's Science Frame Categories, adopted from Framing Science: A New Paradigm in Public Engagement (2008)

Frames	Definitions of Science-related Issue
Social progress	A means of improving quality of life or solving problems; alternative interpretation as a way to be in harmony with nature instead of mastering it.
Economic development and competitiveness	An economic investment; market benefit or risk; or a point of local, national, or global competitiveness.
Morality and ethics	A matter of right or wrong; or of respect or disrespect for limits, thresholds, or boundaries.
Scientific and technical uncertainty	A matter of expert understanding or consensus; a debate over what is known versus unknown; or peer-reviewed, confirmed knowledge versus hype or alarmism.
Pandora's box/Frankenstein's monster/runaway science	A need for precaution or action in face of possible catastrophe and out-of-control consequences; or alternatively as fatalism, where there is no way to avoid the consequences or chosen path.
Public accountability and governance	Research or policy either in the public interest or serving special interests, emphasizing issues of control, transparency, participation, responsiveness, or ownership; or debate over proper use of science and expertise in decision-making ("politicization").
Middle way/alternative path	A third way between conflicting or polarized views or options.
Conflict and strategy	A game among elites, such as who is winning or losing the debate; or a battle of personalities or groups (usually a journalist-driven interpretation).

Yanovitzky & Weber's Knowledge Brokering Functions

While this study aimed at examining how science is framed following Nisbet's general frames, it also analyzed the functions of CNN as a news media in facilitating dialogue and policymaking processes among stakeholders. Thus, there is a need to explore the world of media studies to fully understand how the news media become a conduit for policymaking.

Public policymaking is a set of processes by which certain issues come to occupy the policy agenda, alternative policy solutions to these problems are proposed and debated, and an authoritative decision is made regarding the solution to be implemented (Kingdon, 2011).

In exploring policymaking, re-defining 'frame' is critical. Frames are used by audiences as "interpretative schema" to make sense of and discuss an issue; by journalists to condense complex events into interesting and appealing news reports; and by policy makers to define policy options and reach decisions (Scheufele, 1999).

To address how frames create a space for stakeholders involved for policymaking, it is significant to re-emphasize that the news media are a primary source of information for policymakers about current events and policy issues and can therefore draw policymakers' attention to issues as well as influence how they think about these issues (Soroka et al., 2012).

Yanovitzky and Weber (2019) identified five knowledge brokering functions that news media now perform in policy ecosystems that have the potential to impact public policymaking processes.

The five functions are awareness, accessibility, engagement, linkage, and mobilization. The first three functions (awareness, accessibility, and engagement) define the potential contributions of news media to facilitating

policy actors' capacity and opportunities to acquire, interpret, and apply policy-relevant knowledge. The two other functions (linkage and mobilization) define the potential role of news media in brokering connections among policy actors (including the resources and repositories of knowledge they possess) and accelerating the transfer of knowledge into action.

METHODS

Research Design/Methods

Guided by the scholarship of qualitative design, this study trekked through content analysis in understanding the data. Content analysis, defined in Macnamara (2015), is used to examine a broad range of texts, describing narratives surrounding stories promulgated by the mass media. It was first introduced as a systematic method to study mass media by Harold Lasswell (1927), initially to study propaganda.

Content analysis was used to analyze the role of science in this pandemic through the emerging frames in news articles and determine the functions of CNN as a news media organization as revealed by the corpus of data in this study.

Sampling and Data

The researcher's source of data was limited to one new media organization – CNN. Based on a survey conducted in the United States, as cited by Business Insider (2019), 53% of the population trusts CNN. Further, it is the only media organization with a local counterpart in the Philippines, thus the decision to derive data from CNN Philippines which distinctly manifested how science was framed in the local and international news.

Specifically, CNN's online news portal as the choice to be the source of data is based on the fact that it renders the fastest access to retrieve past reports. Since most of the countries affected by the virus have been put on quarantine or lockdown after the World Health Organization (WHO) declared the outbreak as a pandemic on March 11, the digital platform was deemed a conducive source of pertinent data.

CNN traces through a timeline of global and local key events related to the pandemic. From this timeline, the researcher examined the representation of science in 10 science-related news articles through 10 local articles. Table 1 shows that the data was limited to two (2) random selection of straight news articles for each month from January to May 2020 for CNN Philippines, accounting to 10 science-related articles published in English and were retrieved from CNN news portal by saving the complete html page where they were posted. The months preceding the outbreak in January were not covered in the analysis, but some news articles written before January were used as corroborations.

Coding Treatment

These 10 science-related news articles were coded for CNN Philippines to discover how science and its role is framed within the same organization, but whose news reportage may be affected by various circumstances, conditions, and many other considerations, given the complexity of the pandemic.

Table 2. List of news articles from CNN Philippines

Month	CNN Philippines
January	DOH monitoring boy from China who tested positive for unidentified coronavirus (January 21)
	Novel coronavirus cases in Ph likely to climb further – expert (January 31)
February	What happens next in the coronavirus outbreak? (February 10)
	No conclusive evidence that novel coronavirus is airborne – DOH official (February 11)

Month	CNN Philippines
March	Health Dept. gives COVID-19 testing 'courtesy' to officials involved in nat'l security, public health (March 23)
	'Science' to determine if Luzon-wide quarantine will be lifted or expanded – CabSec (March 31)
April	Infectious diseases expert: More data needed on quarantine extension (April 3)
	Mass testing' for suspected COVID-19 cases, high-risk patients only (April 4)
May	Duque contradicts Duterte: 'Safe' to reopen classes in August (May 26)
	DOH cites slowdown in COVID19 transmission rate (May 28)

The articles were coded through a coding sheet, formally known as repertory grid. Originally developed by George Kelly (1955) for psychological research, it has since been applied in a wide range of different disciplines (Flitman, 2002).

The researcher's repertory grid contains four coding schemes – condensed meaning units, code, category, and theme– inspired by Erlingsson and Brysiewicz (2017). With few modifications, the researcher's coding schemes are (1) condensed meaning units, (2) interpretation of underlying meaning or code, (3) category or sub-themes, and (4) theme/overarching message.

The unit of analysis included each sentence in every science-related news article. Some sources' statements were lumped alongside the preceding sentence only when they followed the same course of thought; otherwise, they were analyzed separately.

The researcher coded one theme for each article and located its place within Nisbet's eight general frames. Consequently, the coded themes served as bases in identifying the functions which CNN as a news media organization plays in the pandemic. Anchored on Yanovitzky and Weber's (2019) five knowledge brokering functions, the researcher determined which functions were most and least prominent in CNN's news reportage.

RESULTS AND DISCUSSION

This portion of the study brings forth a discussion on how CNN Philippines identified and framed the role of science in the pandemic, alongside their functions as a news media organization.

CNN Philippines' Science Framing and the Role of Science in the Pandemic

As mass media becomes ubiquitous and most relevant today in its many functions, the study of framing has also grown over the last decades, especially in this pandemic where people rely heavily on the media for information across the globe. With this reliance, people or the readers also treat stories beyond their literal meanings and look at them as interpretations through what is generally termed as frames.

Frame analysis, according to Matthes (2009 in Pak, 2016), has been a key method in journalism and mass communication research since the 1980s, and remains so nowadays. Carter (2013) defines frames as organizing principles that are socially shared and persistent over time, and that work symbolically to meaningfully structure the social world. Tankard et al. (1991 in Carter, 2013) understands a frame as a "central organizing idea for news content that supplies a context and suggests what the issue is through the use of selection, emphasis, exclusion, and elaboration."

Through the rigors of content analysis, 10 science-related news articles from CNN Philippines were coded through a repertory grid (Appendix A), leading to identifying the frames.

CNN Philippines' News Articles and Coded Themes

To be able to follow the flow of the discussion, every news is referred to as news article succeeded by the parenthesized number as indicated in Table 2, followed by the news headline and date of publication, i.e., news

article (1) DOH monitoring boy from China who tested positive for unidentified coronavirus (January 21).

Similarly themed are news articles (1) DOH monitoring boy from China who tested positive for unidentified coronavirus (January 21) and (8) Mass testing for suspected COVID-19 cases, high-risk patients only (April 4). Themed as *implementation of health risk management*, news article (1) notes how the Department of Health (DOH) is observing minimum health standards such as contact tracing and isolation in managing the condition of the first suspected carrier from China. Relative to this effort is the intent of news article (8) with the theme *mass testing as a public health response/solution* which demands for early detection of infection by mass testing the vulnerable population as laboratory capacity also improves. Despite the publication of both news articles in different months, they still captured the same theme which suggests the call for risk management and mass testing as solutions to suppressing further spread. The Department of Health, through its former Secretary Dr. Eric Tayag (2020), emphasized in a webinar the critical and consequential phases of surveillance and response in any epidemic through suppression (case-based), containment (event-based), and mitigation (laboratory-based).

Table 3. CNN Philippines' news articles and their coded themes

News Articles	Theme
(1) DOH monitoring boy from China who tested positive for unidentified coronavirus (January 21)	*Implementation of health risk management*
(2) Novel coronavirus cases in Ph likely to climb further – expert (January 31)	*Call for precaution (through accuracy of information)*
(3) What happens next in the coronavirus outbreak? (February 10)	*Post-COVID Precaution*
(4) No conclusive evidence that novel coronavirus is airborne – DOH official (February 11)	*Value for scientific inquiry for public health information*
(5) Health Dept. gives COVID-19 testing 'courtesy' to officials involved in nat'l security, public health (March 23)	*Abuse of power* *Lack of sound judgment and adherence to health standards*
(6) 'Science' to determine if Luzon-wide quarantine will be lifted or expanded – CabSec (March 31)	*High regard to science as key to strategic decision-making*
(7) Infectious diseases expert: More data needed on quarantine extension (April 3)	*Science as key to decision-making*
(8) Mass testing for suspected COVID-19 cases, high-risk patients only (April 4)	*Mass testing as a Public Health Response/Solution*
(9) Duque contradicts Duterte: 'Safe' to reopen classes in August (May 26)	*Contradicting leaders' opinions as hindrance to decision-making*
(10) DOH cites slowdown in COVID-19 transmission rate (May 28)	*Low regard to science in decision-making*

News articles (2) Novel coronavirus cases in Ph likely to climb further – expert (January 31) and (3) What happens next in the coronavirus outbreak? (February 10) readily conveyed a *call for precaution* regarding the COVID-19 pandemic. However, the former article encourages precaution through accuracy of information especially in differentiating terminologies distinctly such as "2019-nCoV related health events" and "patients under investigation." Eventually, the Department of Health released the official nomenclature of cases – classified as persons under monitoring (PUM), persons under investigation (PUI), and positive cases – which was also

amended on April 11, renaming the cases as suspect, probable, and confirmed, respectively. This was based on the recommendation of the World Health Organization (WHO) for uniformed system of reporting. News article (3), on the other hand, is a post-COVID precaution concerning the two repercussions of this pandemic – the virus dying down or becoming part of the new normal.

Themed alike with *high regard to science* are four news articles (4) No conclusive evidence that novel coronavirus is airborne – DOH official (February 11); (6) 'Science' to determine if Luzon-wide quarantine will be lifted or expanded – CabSec (March 31); and (7) Infectious diseases expert: More data needed on quarantine extension (April 3). News article (4) manifests the *value for scientific inquiry for public health information* as seen in the contradicting statements by WHO and Chinese officials over the issue of 2019-nCoV as airborne. Meanwhile, news article (6) implied a *high regard to science as key to strategic decision-making* as the Inter-Agency Task Force (IATF) relies on the credence of science in "determining the government's next move" after the Luzon-wide enhanced community quarantine ends in mid-April; while news article (7) with the theme *science as key to decision-making* also considers science as fulcrum for "supporting a possible extension on the Luzon-wide quarantine." While these articles signify how science serves as the foundation for most leaders today, Lasco (2020) problematized in a commentary the questions: what constitutes "science" and who are the "experts". This commentary alludes to scientists' voices that people listen to every day, such as the seemingly "opposing facts" by the World Health Organization and the US Centers for Disease Control and Prevention on key preventive measures. Lasco also mused that "what experts ultimately say is not free from political and social pressures, as well as new knowledge."

Built upon the theme *abuse of power/lack of sound judgment and adherence to health standards*, news article (5) Health Department gives COVID-19 testing 'courtesy' to officials involved in national security, public health (March 23) reveals the lack of good judgment among some Philippine lawmakers who denied allegations of VIP testing treatment and admitted the use of unaccredited test kits other than the DOH-/FDA-approved test kits.

These actions may be deemed uncalled for and shows some lawmakers' abuse of power for personal interests over public good and welfare. The Food and Drug Administration (FDA), in a press statement on March 30, calls on different institutions and agencies "to be cautions in using these test kits" as its way of safeguarding the "public health by ensuring that health commodities are certified following regulatory standards."

Finally, news article (9) Duque contradicts Duterte: 'Safe' to reopen classes in August (May 26), themed as *contradicting leaders' opinions as hindrance to decision-making,* clearly reports the irreconcilable statements of DOH Secretary Francisco Duque and President Rodrigo Duterte regarding the plan on the reopening of classes in August. Duque expressed his support to reopen classes after Duterte discouraged it without an "available vaccine". This news article enunciates the lack of coordinated communication among key officials that could have prevented their opposing statements. Further, Department of Education Secretary Leonor Briones clarified that the resumption of classes does not require full physical attendance, stressing that online learning may be a viable option for schools.

Diversely, news article (10) DOH cites slowdown in COVID-19 transmission rate (May 28) depreciates science of its potency by projecting *low regard to science in decision-making*. Evidently, scientists have warned the IATF that "cases could spike anew once the quarantine measures are eased" and this caveat was made public after the latter's recommendation to loosen restrictions by June 1, disregarding the authority of science.

CNN Philippines' Science Framing in the COVID-19 Pandemic

In situating the coded themes, this portion of the discussion elucidates the place of the themes within Nisbet's typology of general frames to fully understand how CNN's stories were framed during these critical months and to determine which themes and frames were prioritized.

Nisbet (2009) identified eight general frames that consistently appear across policy debates. These include (1) social progress which refers to solutions to problems; (2) economic development/competitiveness, defined as local, national, or global competitiveness; (3) morality/ethics as respect to limits, thresholds, or boundaries;

(4) scientific/technical uncertainty pertains to calls for sound science, falsifiability, or peer-review' (5) Pandora's Box/runaway science which calls for precaution in face of possible catastrophes; (6) public accountability/ governance or the use or abuse of science in decision-making; (7) middle way/alternative path which looks into a compromise between polarized views; and (8) conflict/strategy or the battle of personalities or groups.

Out of the eight general frames as a result of decades of re-interpreting the role of science, five frames were located in representing the coded themes from 10 science-related news articles from CNN Philippines. Excluded from this discussion are economic development/competitiveness and morality/ethics, and middle way/alternative path.

Table 4. CNN Philippines' news articles and Coded Themes vis-à-vis Nisbet's general frames

News Articles	Theme	Classification of theme according to Nisbet's general frames
DOH monitoring boy from China who tested positive for unidentified coronavirus (January 21)	Implementation of health risk management	*Social Progress*
Novel coronavirus cases in Ph likely to climb further – expert (January 31)	Call for precaution (through accuracy of information)	*Pandora's Box/Runaway Science*
What happens next in the coronavirus outbreak? (February 10)	Post-COVID precaution	*Pandora's Box/Runaway Science*
No conclusive evidence that novel coronavirus is airborne – DOH official (February 11)	Value for scientific inquiry for public health information	*Scientific/Technical Uncertainty*
Health Dept. gives COVID-19 testing 'courtesy' to officials involved in national security, public health (March 23)	Abuse of power/lack of sound judgment and adherence to health standards	*Public Accountability/ Governance*
'Science' to determine if Luzon-wide quarantine will be lifted or expanded – CabSec (March 31)	High regard to science as key to strategic decision-making	*Scientific/Technical Uncertainty*
Infectious diseases expert: More data needed on quarantine extension (April 3)	Science as key to decision-making	*Scientific/Technical Uncertainty*
Mass testing' for suspected COVID-19 cases, high-risk patients only (April 4)	Mass testing as a Public Health Response/Solution	*Social Progress*
Duque contradicts Duterte: 'Safe' to reopen classes in August (May 26)	Contradicting leaders' opinions as hindrance to decision-making	*Conflict/Strategy*
DOH cites slowdown in COVID-19 transmission rate (May 28)	Low regard to science in decision-making	*Public Accountability/ Governance*

From January to May 2020, Table 3 clearly manifests how five of Nisbet's eight general frames appeared across different months, showing the materiality of each theme in any month during this pandemic. For the succeeding discussion, news articles are specified by the month of their publication.

Social Progress. January 21 and April 4 news articles, which are themed as _implementation of health risk management_ and _mass testing as a public health response/solution_, respectively, are categorized under _social progress_. In this frame lies the idea of rendering solutions – transient or long-term – to problems. With the need for public health response and despite belonging to the same frame, they were also written in different months which traverse distinct phases of the pandemic.

The January 21 article is concerned with health risk management in monitoring the then first suspected case of coronavirus while the April 4 article was written after almost 16,500 Filipinos have been tested for COVID19 which called for a more inclusive mass testing.

The development of the frame social progress was carved out of the need to "translate evolution for an ambivalent public" and it was thought of as the frame that may serve as a foundation for medical advances.

Pandora's Box. Hinged on the theme _call for precaution_, the January 31 and February 10 news articles are framed as _Pandora's Box_ which Nisbet (2009) defines as call for precaution in face of possible, out-of-control impacts or catastrophe. This frame is Al Gore and many environmentalists' counter-framing to the uncertainty and economic development frames associated to climate crisis.

Both articles, written on the first few months of the outbreak, were precautionary and seemingly posing a warning to the public, but the nature of their foresight are also varying. The January 31 article calls for the accuracy of information or the use of nomenclature for patients with different conditions to enable coordinated communication, whereas the February 10 article is a precaution regarding post-COVID situation which presents consequences that the public should prepare for. Sneader and Singhal (2020), in the article Beyond Coronavirus: The Path to the Next Normal, supported this precaution through the "five stages that represent the imperative of the time" – resolve, resilience, return, reimagination, and reform – which leaders today should collectively win in order to "find an economically and socially viable path to the next normal."

Scientific/Technical Uncertainty. Three news articles, published on February 11, March 31, and April 3, are framed under _scientific/technical uncertainty_ which calls on the authority of sound science and its falsifiability, and is regarded as a matter of expert understanding, surfacing what is known versus unknown or by either invoking or undermining expert consensus.

Table 3 reflects how this frame is evident across three different months. These news articles from February to April value science or scientific inquiry in all respects as key to public health information or strategic decision-making which may largely affect their welfare. Further, the frame of scientific uncertainty was only strengthened in 1986 with the Chernobyl disaster that generated worldwide attention, with few media providing context on the comparative safety record of the American nuclear energy industry.

Public Accountability/Governance. Interpreted under this frame are the March 23 and May 28 news articles. The former article implicitly acknowledges the _abuse of power or lack of sound judgment_ among some Philippine lawmakers regarding the VIP testing treatment and the use of unaccredited test kits. The May 28 news article bares how the government disregards science when it lifted the modified enhanced community quarantine (MECQ) in Metro Manila and nearby cities and enforced the general community quarantine (GCQ) with "more relaxed quarantines measures" despite scientists' warning and the fatality and confirmed cases. This treatment to science brings to light the weak science culture of a country, disempowering the science community from taking part in important decisions.

This frame refers to the responsible use or abuse of science in decision-making which may lead to politicization and may pertain to research for the public good or private interests. Before the 70s, nuclear energy was framed as social progress, economic development, and a better way of life. Frames changed, however, in the mid-1970s as Ralph Nader and other consumer advocates re-interpreted nuclear energy in terms of public accountability, arguing that the industry had become a powerful special interest.

Conflict/Strategy. With a theme _contradicting leaders' opinions as hindrance to decision-making_, the May 26 news article is categorized as _conflict/strategy_ which pertains to the battle of personalities or groups, and sometimes a game among elites – who is ahead or behind in winning debate. Clearly, this article shows not the battle of personalities, but contradicting opinions regarding the reopening of class in August.

With this definition, the news article is witness to the lack of coordinated communication between the President and the DOH Secretary on key matters relating to health and security.

Detailing the ground from which this frame stands on is the coverage at the political and opinion beats which de-emphasized the technical backgrounder and replaced it with this frame more familiar to election coverage or issues such as abortion (Mooney & Nisbet, 2005).

In the Time of Pandemic: Functions of CNN as a News Media Organization

In determining the functions of CNN as a news media organization in this time of crisis, this portion of the discussion finds its ground on the coded themes out of the 20 science-related news articles. While CNN Philippines is under the helm of CNN as a news organization, the distinct conditions and circumstances in the Philippines brought about by the pandemic may be functioning differently. Therefore, this part is also locating the functions of CNN Philippines and determine their values as a local news media organization.

News media are a primary source of information for policymakers about current events and policy issues and can therefore draw policymakers' attention to issues as well as influence how they think about these issues (Soroka et al., 2012). Further, the news media provide a public arena for policymakers to debate public issues and to promote their policy ideas and initiatives (Van Aelst & Walgrave, 2016).

To guide this analysis is Yanovitzky & Weber's (2019) five knowledge brokering functions – awareness, accessibility, engagement, linkage, and mobilization – which the news media perform in policy ecosystems that have the potential to impact public policymaking processes. The first three functions (awareness, accessibility, and engagement) define the potential contributions of news media to facilitating policy actors' capacity and opportunities to acquire, interpret, and apply policy-relevant knowledge. The two other functions (linkage and mobilization) define the potential role of news media in brokering connections among policy actors (including the resources and repositories of knowledge they possess) and accelerating the transfer of knowledge into action.

In understanding the researcher's analysis of CNN's functions as a news media organization, it is relevant to define "policy actors" and "policy-relevant knowledge" which are terms to be encountered within this portion of the discussion.

Policy actors are referred to by Sabatier and Weible (2014) as large and diverse group of institutional actors (e.g., legislators, government bureaucrats, and judges) and non-institutional actors (e.g., organized interest groups, scientists, and citizens). Policy actors may take actions upon policy-relevant knowledge which Kingdon (2011) defines as information that they use to: (a) understand the scope, nature, causes and consequences of a particular public problem; (b) evaluate and choose among feasible policy alternatives to addressing the problem; and (c) assess the degree to which a particular solution is politically feasible to pursue. Further, policy-relevant knowledge is inclusive of information available from a variety of sources such as government data, scientific research, policy analyses, public opinion polls, constituents' inputs, and news reports (Baumgartner & Jones, 2014).

CNN Philippines' News Functions

Table 6 evinces CNN Philippines' news functions as a media organization based on the coded themes from 10 news articles. Some articles themed and framed similarly do not necessarily lead them to the same function because they were analyzed based on the entirety of the article.

Three of Yanovitzky and Weber's five functions are most apparent in CNN Philippines' reportage. This suggests that a news media organization inadvertently performs different functions during a particular

phenomenon such as disasters, elections, and epidemics.

Awareness Function

For January 21, January 31, and February 10, the most dominant function that CNN plays is the *awareness function* which refers to the role of news media in alerting policy actors to the availability of policy-relevant knowledge. This definition is reflective of the three articles' intent to "disseminate new knowledge" through CNN reporters' ability "to conduct ongoing surveillance of the political and policy environments and report on events and new developments" (Green-Pedersen & Mortensen, 2012). The effect of the awareness function is the timely distribution of policy-relevant knowledge with the goal to reach the policy actors who have the ability and opportunities to access new or updated knowledge quickly.

Generally, the policy-relevant knowledge under this function for the three articles encompasses (1) hospital findings regarding first suspected case in January, (2) call for precaution based on government data, and (3) scientific research for the perusal of government and citizens as policy actors who have shared interest to respond to the information.

Mobilization Function

Towards the next months, the news articles of CNN Philippines on February 11, March 23, and March 31, and April 3 followed the mobilization function which refers to news media's ability to influence policy actors to act based on available knowledge. Simply making policy-relevant knowledge available to policy actors is often insufficient to motivate action. Oftentimes some form of an incentive, such as a potential threat or opportunity, is needed to motivate action (Kingdon, 2011). News coverage of issues and policy actors provides incentives for action by virtue of holding actors publicly accountable for their words and actions (McCombs, 2014; Shoemaker & Reese, 2014).

Table 5. CNN Philippines' news functions based on the coded themes

News Articles	Theme	News Function
DOH monitoring boy from China who tested positive for unidentified coronavirus (January 21)	Implementation of health risk management	*Awareness*
Novel coronavirus cases in Ph likely to climb further – expert (January 31)	Call for precaution (through accuracy of information)	*Awareness*
What happens next in the coronavirus outbreak? (February 10)	Post-COVID precaution	*Awareness*
No conclusive evidence that novel coronavirus is airborne – DOH official (February 11)	Value for scientific inquiry for public health information	*Mobilization*
Health Dept. gives COVID-19 testing 'courtesy' to officials involved in national security, public health (March 23)	Abuse of power/Lack of sound judgment and adherence to health standards	*Mobilization*
'Science' to determine if Luzon-wide quarantine will be lifted or expanded – CabSec (March 31)	High regard to science as key to strategic decision-making	*Mobilization*

News Articles	Theme	News Function
Infectious diseases expert: More data needed on quarantine extension (April 3)	Science as key to decision-making	*Mobilization*
Mass testing' for suspected COVID19 cases, high-risk patients only (April 4)	Mass testing as a Public Health Response/Solution	*Linkage*
Duque contradicts Duterte: 'Safe' to reopen classes in August (May 26)	Contradicting institutional opinions as hindrance to decision-making	*Linkage*
DOH cites slowdown in COVID-19 transmission rate (May 28)	Low regard to science in decision-making	*Linkage*

The March 23 news article "Health Dept. gives COVID-19 testing 'courtesy' to officials involved in national security, public health" best embodies what Yanovitzky and Weber identifies as several ways to stimulate action. One of these is for news coverage to mobilize previously inactive actors to act in order to promote or resist policies that impact constituents (Merolla, Pantoja, Cargile, & Mora, 2013). In this regard, the lawmakers who were given VIP testing treatment were revealed to the public which prompts other public servants to promote policies such as equal opportunity for mass testing.

On the other hand, the policy-relevant knowledge under this function for the other three articles – February 11, March 31, and April 3 – shows scientific data and government data, giving emphasis to the authority of science, as fulcrum for the Department of Health and the Inter-Agency Task Force as the policy actors for the identified policy-relevant knowledge who could lead the mobilization efforts.

Linkage Function

As the last function which CNN Philippines plays as evidenced by some of its articles, the linkage function is an effective mechanism for facilitating policy learning and establishing advocacy coalitions (Sabatier & Jenkins-Smith, 1993), and news media can enable linkage because they are connected to virtually every policy field.

For the April 4 news article themed as mass testing as public health response/solution, while it may perform the awareness function at first read, it essentially revolves around the linkage function. Mass testing at this point is seen as the best solution to suppress further increase of infection rate, but its effect may not be fully realized due to capacity limitations of the Department of Health. This argument may define what Sabatier and Jenkins-Smith (1993) emphasized as the linkage function – establishing advocacy coalitions in order for a goal to be achieved through news media coverage.

On the other hand, the May 26 news article highlights Duque and Duterte's contradicting statements regarding class reopening. As cited by Yanovitzky and Weber Szreter, Woolcock (2004) perceived three different ways in which news media coverage may perform the linkage function: bridging, linking, and bonding. For this news article, it adapts the bridging which is the contribution of news reporting on issues to forging connections among policy actors who are not yet connected regarding a specific issue. Bridging delineates the lack of close coordination between the two most important policy actors in this pandemic by stating opposing statements in public.

The May 28 news article themed as low regard to science in decision-making encapsulates another way by which the linkage function can be performed: bonding. Easley and Kleinberg (2010) defined bonding as the contribution of policy-relevant information in the news to strengthening or weakening existing connections or coalitions among policy actors. The news article emphasizes IATF's recommendation "to loosen restrictions" in Metro Manila by June 1. This is despite the scientists' warning and their suggestion for "rigorous tracking, testing,

and tracing program." This CNN coverage may have reflected linkage function because it that aims to strengthen the coalition of scientists and IATF in considering science in decision-making.

CONCLUSIONS

Science was mostly represented as (1) a language of scientific uncertainty, framing science as an authoritative source of relevant knowledge while revealing contradicting opinions by multiple sources and as (2) a tool for social progress by introducing alternative public health interventions informed by scientific data.

The emergence of a new phenomenon/category–politicization of key pandemic decisions leading to the gap between science and politics–has also surfaced as a new rhetoric.

CNN as a news media organization is actively adapting in an effort to accurately report on new epidemiological developments in this time of pandemic. The performance of functions were heavily hinged on social and political conditions.

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