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INTERNATIONAL

The United States & Japan:
Allied Against Disinformation

EDITED BY
ROB YORK & AKIRA IGATA

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Introduction

Rob York

I n our 21ˢᵗ century information age security does not start with weapons or with the armed forces who wield them. A range of non-traditional security issues has arisen to test even the oldest and closest of alliances—including that of the United States and Japan. Disinformation is among these issues, and this paper series, carried out with the generous support of the US Embassy Tokyo, highlights the specific challenges that disinformation presents. The good news is that Japan, at least so far, is not demonstrating exceptionally high difficulties with disinformation so far. However, as the paper by Prof. Morihiro Ogasahara demonstrates, there are specific demographics and specific types of news consumers in the country who are vulnerable, and Dr. Christopher Paul's findings indicate that Japan could very well find itself under a more sustained attack by adversaries wishing to weaken its relationship with the US in the future. We at Pacific Forum hope that these papers serve as a wakeup call for policymakers, and lead to proactive solutions not only for this alliance, but which may be modeled for US relationships throughout the region.

Rob York

Director of Regional Affairs

Pacific Forum

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The Relationship between News Repertoire and Exposure to, Discernment of, and Dissemination of Disinformation: An Analysis in the 2022 Japanese Upper House Election

Morihiro Ogasahara

Morihiro Ogasahara

Introduction

Since the 2016 US presidential election and the UK referendum on leaving the EU, disinformation [1] has been considered "a fundamental threat to the free and fact-based exchange of information underpinning democracy and trust in public institutions."[2] Disinformation has been weaponized to attack politicians and public agencies, discredit news media outlets, and even deny election results. The COVID-19 pandemic and Russia's war of aggression against Ukraine have further exacerbated the information environment. Much fabricated information, such as unproven medical treatments, anti-vaccine information, war propaganda, and conspiracy theories flood the internet.[3]

Although disinformation is a global concern, its content and the extent of its influence vary from country to country. For example, while a considerable amount of political disinformation causes profound mistrust and concern in the US,[4] Japanese voters have, comparatively speaking, been less exposed to political disinformation and have not perceived it as such a severe issue.[5]

Differences among countries regarding disinformation-related behavior, such as exposure to, discernment of, and dissemination of disinformation, may be attributable to differences in media environments across countries. Compared to the media environment in the United States, the Japanese media environment is such that the media is less polarized, trust in news is at a higher level, the audience more passively consumes news from traditional media outlets, social media is less important as a news source, and interaction with news online is less frequent.[6] The low importance of social media as a news source and the lack of online news communication may curb the spread of disinformation via social media in Japan.

In today's diverse media environment, relationships between news media can vary from person to person. Newman et al.[7] have called the growing tendency to limit news exposure, especially among younger generations under 35, "selective news avoidance" and warned about its effects. News avoiders use social media as their primary news source rather than traditional news media and access fragmented information, leading them to lack context for understanding the news. Thus, news avoidance habits may increase individuals' vulnerability to disinformation. In Japan, the proportion of news avoiders (14%) is comparatively lower than in many other countries, such as Brazil (54%), the United Kingdom (46%), and the United States (42%).

Individuals have diverse news consumption habits including selective news exposure, which shape their personal media environments for news. These personal media environments may significantly influence disinformation-related behaviors, such as exposure, discernment, and dissemination. Therefore, to understand the reality of disinformation-related behavior in society and consider countermeasures, it is necessary to examine how people combine different news sources to construct their media environments and how these personal media environments relate to disinformation-related behavior. News repertoire studies have investigated this precise kind of personal media environment, labeling "news repertoire" and defining it as "the distinct ways that media users combine news use across a wide array of media platforms and content."[8] The news repertoire approach can be applied to disinformation research. This study aims to identify news repertoires in Japan and quantitatively examine the relationship between these repertoires and disinformation-related behaviors.

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[1] In some cases, the term "misinformation/disinformation" is used instead of "disinformation." Misinformation is "information that is false, but the person who is disseminating it believes that it is true," and disinformation is "information that is false, and the person who is disseminating it knows it is false" (Wardle & Derakhshan, 2018). Although both misinformation and disinformation are considered threats to democracy, since this paper focuses on the audience of the information, not on the information disseminator, the term "disinformation" is used.

[2] "Transparency, communication and trust: The role of public communication in responding to the wave of disinformation about the new Coronavirus," OECD, July 3, 2020

[3] "Disinformation and Russia's war of aggression against Ukraine: Threats and governance responses, OECD Policy Responses on the Impacts of the War in Ukraine," OECD Policy Responses on the Impact of the War in Ukraine, November 3, 2022.; "Building Trust and Reinforcing Democracy:

Preparing the Ground for Government Action," OECD, November 17, 2022.

[4] Brooke Auxier, "64% of Americans say social media have a mostly negative effect on the way things are going in the US today," Pew Research Center, October 15, 2020.

[5] Shinichi Yamaguchi, *"Complete Guidance of Social Media,"* Keiso Shobo (Tokyo), 2022, (in Japanese).

[6] Morihiro Ogasahara, "Quantitative Analysis on the Model for Media Credibility Formation on the Internet", *Journal of Mass Communication Studies*, Vol.73, 2008, pp. 113-130.

[7] Nic Newman, Richard Fletcher, Craig T. Robertson, Kirsten Eddy, Rasmus K. Nielson "Reuters Institute digital news report 2022," *Reuters Institute for the Study of Journalism, 2021.*

[8] S. Edgerly, "Red media, blue media, and purple media: News repertoires in the colorful media landscape," *Journal of Broadcasting & Electronic Media*, 2015.

Existing Studies and Research Questions

News repertoires

News repertoires are defined as users' overall news consumption patterns[9] or "the distinct ways that media users combine news use across a wide array of media platforms and content."[8] With the proliferation of multi-channel television, the internet, and social media, people use multiple news sources every day, and people also have their own ways of combining and using news sources. It is difficult to grasp the overall picture of news effects on people with this type of news consumer behavior by separately investigating the effects of individual news sources, such as television, newspapers, and social media. The news repertoire approach has been developed to examine holistic media use instead of individual media effects, and has clarified associations between news repertoire groups (groups of users adopting a particular news repertoire) and political attitudes/behaviors. As existing studies employ different analytical methods and identify different types of news repertoires in different countries, an overview of the repertoire types reported prior to this study is provided below.

Lee and Yang[10] found three news repertoire groups in South Korea (news avoiders, emerging news seekers, and traditional news seekers) by non-hierarchical cluster analysis (k-means method). Traditional news seekers, often exposed to news through traditional media, have more political knowledge than emerging news seekers, who are exposed to news on the internet and SNS, and news avoiders, who are less exposed to news through any news media.

Edgerly[11] used principal component analysis and non-hierarchical cluster analysis (k-means method) to extract six news repertoires (news avoiders, online only, TV + print, liberal + online, conservative only, news omnivores) from 21 types of news exposure behaviors in the United States. Participation in civic activities was highest among news omnivores, who were exposed to news regardless of types or political tendencies of media, and the lowest in the news-avoidant group, who were not exposed to news regardless of type or media political leanings.

Wolfsfeld et al.[12] integrated 11 types of news exposure in Israel into two variables: Political exposure through traditional media and one through social media, and divided the survey respondents into four groups (news avoiders, traditionalists, socialists, and eclecticists). Only the eclectics were positively associated with political participation.

Castro et al.[13] conducted a comparative study of 17 European countries and extracted five groups of news repertoires from 14 types of news source usage (news minimalists, social media news users, traditionalists, online news seekers, and hyper consumers of news) using latent class analysis. Traditionalists and online news-seekers have positive correlation with political knowledge, while hyper consumers of news and traditionalists had a higher level of media trust, and online news-seekers had lower.

Ogasahara[14] performed a non-hierarchical cluster analysis (k-means method) using nine types of news sources usage among US adults in 2015-2016 and found the same news repertoire typology as Castro et al.[15] Hyper consumers of news were statistically significantly more educated, higher-income, and more politically interested than news minimalists.

To understand the situation of disinformation in Japan through the news repertoire approach, we need to clarify the typologies of news repertoire first, continuously examine the relationship between the news repertoire and the factors related to disinformation as explained following, and the relationship between the news repertoire and disinformation-related behavior.

RQ1. What are the typologies of news repertoire in Japan?

[9] Hyunwoo Lee and JungAe Yang, "Political knowledge gaps among news consumers with different news media repertoires across multiple platforms," *International Journal of Communication*, Vol. 8, 2014.
[10] Lee and Yang, 2014.
[11] Edgerly, 2015.
[12] Gadi Wolfsfeld, Moran Yarchi, Tal Samuel-Azran, "Political information repertoires and political participation," New media & society, 18(9), 2016, pp. 2096-2115.

[13] Laia Castro, Jesper Strömbäck, F Esser,et al, "Navigating high-choice European political information environments: A comparative analysis of news user profiles and political knowledge," The International Journal of Press/Politics,Vol. 27, Iss. 4, May 11, 2021, pp. 1-33.
[14] Morihiro Ogasahara, "Can a "virtuous cycle" between news media and political participation be established in the mobile social media environment?," Tomita, H., (Ed) Second Offline, 2022, pp. 359-380. (in Japanese).
[15] Castro et al, 2021.

Factors related to disinformation-related behavior

Since disinformation was perceived as a threat to democracy, numerous studies have accumulated findings about factors that may influence disinformation-related behavior; the exposure to, discerning, and sharing of disinformation.[16] [17]

Allcott and Gentzkow[18] estimated that false news articles from the fake news database they gathered were shared 38 million times on Facebook and that the average US adult saw 1.14 fake news articles from the database over three months during the 2016 election. Since disinformation is most often found on social media today, people who use social media more frequently are likely exposed to disinformation more often. Pew Research Center reported that US adults who use social media as the most common way to get political news are more likely to be exposed to political and COVID-19 disinformation, and not only that, they are less interested in politics and COVID-19 news and less knowledgeable about current events and politics.[19]

> H1. Political interest is negatively associated with exposure to disinformation.

> H2. Political knowledge is negatively associated with exposure to disinformation.

Cognitive science research has considered two explanations for the cognitive mechanisms by which people believe disinformation: a "classical reasoning" account[20] and a "motivated reasoning" account.[21] [22] These accounts are related to the dual-process theory of cognition, which states that human cognition can be distinguished between autonomous, intuitive processes (System 1) and deliberative, analytic processes (System 2).[23] The classical reasoning account posits that individuals rely on logical and rational processes, primarily associated with System 1, to make decisions and judgments. As a result, it suggests that people can discern disinformation by carefully evaluating the news. According to the motivated reasoning account, individuals' decision-making processes are shaped by their desires, emotions, and goals, leading them to accept information and make decisions that align with their pre-existing beliefs, values, and attitudes. Consequently, ideologically-driven deliberation in System 2 may predispose people to believe in disinformation. In an experimental psychological study by Pennycook and Rand[18] participants with higher CRT (cognitive response test) scores and better analytical thinking were more accurate in identifying disinformation, supporting the explanation of classical reasoning. Political knowledge could be critical in discerning of disinformation because prior knowledge affects the quality of judgment when people deliberate whether the news is true or false.[24]

> H3. Political knowledge is positively associated with discerning of disinformation.

Source credibility studies suggest that the more credible a source is, the more people perceive the source's information as true.[25] The credibility of information sources can be divided into the credibility of sources such as anchors of TV news and the credibility of media such as television, newspapers, and social media.[26] Media credibility is considered a multidimensional concept consisting of multiple subscales, such as accuracy and objectivity, with the believability of the information source as the central factor.[27] [28] [29] [30] Majerczak and Strzelecki found

[16] Hunt Allcott & Matthew Gentzkow, "Social media and fake news in the 2016 election," Journal of economic perspectives, Vol. 31(2), 2017, pp. 211-236.

[17] Gordon Pennycook & David G. Rand, (2019) "Lazy, not biased: Susceptibility to partisan fake news is better explained by lack of reasoning than by motivated reasoning," Cognition, Vol. 188, September 15, 2017, pp. 39-50.

[18] Allcott and Gentzkow, 2017.

[19] Amy Mitchell, Mark Jurkowitz, Baxter Oliphant, Elisa Shearer, "Americans Who Mainly Get Their News on Social Media Are Less Engaged, Less Knowledgeable," Pew Research Center, July 30, 2020.

[20] Amos Tversky, Daniel Kahneman, "Judgment under Uncertainty: Heuristics and Biases: Biases in judgments reveal some heuristics of thinking under uncertainty," *Science*, Vol. 185 (4157), September 27th, 1974, pp. 1124-1131.

[21] Ziva Kunda, "The case for motivated reasoning," *Psychological Bulletin*, Vol. 108(3), 1990, pp. 480-498.

[22] Pennycook & Rand, 2019.

[23] Daniel Kahneman, "*Thinking, fast and slow,*" Macmillan, 2011.

[24] Gordon Pennycook, David G. Rand, "The psychology of fake news," *Trends in Cognitive Sciences*, Vol. 25 (5), 2021, pp. 388-402.

[25] Carl I. Hovland, Irving L. Janis, Harold H. Kelley, "*Communication and Persuasion,*" Yale University Press, 1953.

[26] John Newhagen,, & C. Nass, "Differential criteria for evaluating credibility of newspapers and TV news," *Journalism Quarterly*, Vol. 66(2), 1989, pp. 277-284.

27 A.J. Flanagin, M.J. Metzger, "Perceptions of Internet Information Credibility," *Journalism & Mass Communication Quarterly* 77(3), 2000, pp. 515–540.

28 Spiro Kiousis, "Public trust or mistrust? Perceptions of media credibility in the information age," *Mass Communication & Society*, Vol. 4(4), Nov. 17, 2009, pp. 381-403.

29 Thomas J. Johnson, Barbara K. Kaye, "Wag the blog: How reliance on traditional media and the Internet influence credibility perceptions of weblogs among blog users," *Journalism & Mass Communication Quarterly*, Vol. 81(3), 2004, pp. 622-642.

30 Przemyslaw Majerczak, Artur Strzelecki, "Trust, Media Credibility, Social Ties, and the Intention to Share towards Information Verification in an Age of Fake News," *Behavioral Sciences*, Vol. 12(2), February 16, 2022, p. 51.

from an online questionnaire survey that people who ascribe low credibility to social media likely to perform information verification. In other words, a person who grants high credibility to a form of media is less likely to perform information verification on it.

> H4. Media credibility of social media is negatively associated with discerning of disinformation.

Vosoughi et al.[31] collected large-scale disinformation data on Twitter and found that falsehood "diffused significantly farther, faster, deeper, and more broadly than the truth." They explained the reason is that false news is more likely to be perceived as novel than true news and that novel information is more likely to be retweeted. However, sharing disinformation does not necessarily indicate that a person is deceived and believes it is true. In a psychological experiment conducted by Pennycook et al.,[32] participants were presented with both false and true news headlines and asked to rate the accuracy of each headline. They rated the true headlines significantly higher than the false ones. However, when asked about their likelihood of sharing the headlines, the truthfulness of the headlines had little impact on their sharing intentions. The lack of analytical thinking compels people to share disinformation that is more novel than true, and media credibility may exacerbate this tendency.

> H5. Media credibility of social media is positively associated with dissemination of disinformation.

Given our knowledge of disinformation and related factors, the following research questions are proposed.

> RQ2. How do news repertoires associate with political interest, political knowledge, and media credibility in social media?

> RQ3. How do news repertoires associate with exposure to, discerning, and disseminating disinformation?

Method

Data

An online questionnaire survey was conducted from July 10 to July 31, 2022, immediately after the 2022 Upper House election. The survey subject is the respondents of the 2021 Japanese Lower House election survey conducted from Oct. 31 to Nov. 2, 2021; 2,400 men and women aged 18 to 79 as of the 2021 survey. The subject of the survey were 100 men and 100 women in the teenage and 70s cohorts, and 200 men and 200 women in each 10-year group from their 20s to 60s. Since panel surveys generally have a high dropout rate of respondents, in this survey, the target response rate was set as 60% and stopped accepting responses when the target response rate was reached for each cell by gender and age group. The final number of valid responses to this survey was 1,252, with a response rate of 51.7%. The difference in the response rate by gender is small (male: 51.0%, female: 53.3%), and the response rate is low for young people (teens: 14.0%, the 20s: 41.3%), while the response rate is for people in their 30s to 70s. was between 54.8% and 60.0%.

Measurement

Dependent Variables

Disinformation-related behavior

Disinformation-related behaviors of exposure to, identification of, and dissemination of disinformation were measured using fact-checked news content. From the list of fact-checked news published by FIJ (Fact Check Initiative) from April to July 2022, five news items judged to be false by news organizations and one news item judged to be true were extracted (Table 1). Respondents were asked if they had seen each of the six news items. The mean number of false news exposure among false news contacts was 1.46 items (SD: 0.82). The amount of exposures to false news items was defined as *the number of exposures to disinformation*.

Respondents were then asked to answer their belief regarding each news item they had seen with a 5-point scale (true, rather true, neither, rather false,

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[31] Soroush Vosoughi, Deb Roy, Sinan Aral, "The spread of true and false news online," *Science*, Vol. 359(6380), March 9, 2018, pp. 1146-1151.

[32] Gordon Pennycook, Ziv Epstein, Mohsen Mosleh, Antonio A.Arechar, Dean Eckles, David G. Rand, "Shifting attention to accuracy can reduce misinformation online," *Nature*, Vol. 592(7855), March 17, 2021, pp. 590-595.

false) or "I did not care whether it was true or not". Respondents who answered "I did not care…" were excluded from the analysis. Each discerning of disinformation score for each news item was counted as two points in case an answer corresponded with a fact-checking judge (the answer was "true" or "rather true" for a news item judged as 'true,' or vice versa). On the other side, zero points were counted if an answer did not correspond with a fact-checking judge and if an answer was "I did not care…," one point was counted. The *discerning of disinformation* score of each respondent was calculated as the average discerning of disinformation score of all news items the respondent was exposed to. In other words, the discerning of disinformation score of respondents was an expectation value of their correct information identification.

Lastly, respondents were asked about disseminating disinformation with the question to each news item, "Did you share the information regarding the news or talk about it with others after you were exposed to the information?" If the news item was judged as "false" by fact-checking and the answer was "I talked with my friends or family members," or "I spread it on SNS (retweet or share)," the answer was coded as disseminating disinformation. The probability of disseminating disinformation for each respondent

was calculated using the number of exposed disinformation as the denominator and the number of disseminating disinformation as the numerator.

Independent variables

News repertoire

The frequency of usage for 19 news sources were classified to news repertoire groups using non-hierarchical cluster analysis as described in the following results section, referring to the method of Lee & Yang[33] and Edgerly.[34] The respondents read the definition of news in this survey; "New information that many people in society are interested in, not only TV news and newspaper articles, but also social media posts and YouTube videos," and answered the frequencies of 19 news source usage with a 6-point scale (1: about several times a day, 2: about once a day, 3: about several times a week, 4: about several times a month, 5: about once a month, and 6: nothing). The breakdown of news sources is five forms of traditional media (TV news, TV wide shows, newspaper articles, magazine articles, radio news), three traditional media news sites (Sites of TV stations, newspaper publishers, and magazine publishers), three news aggregators (Yahoo! News, LINE News, news apps other than LINE News), three social media (Facebook, Twitter, and Instagram), three online news sources such as UGC: User Generated Content (Video sharing sites such as YouTube, blogs, Matome sites[35]), and two personal news sources (friends or colleagues, family members). Answers to the frequency of news source usage were converted to the frequency of monthly use (e.g., several times a day = 75 times, once a day = 30 times).

Media credibility

Media credibility was measured using believability, objectivity, and actuality as subscales, referring to Flanagin

No.	Posting date	Content	Fact-check rating	Exposure rate
1	2022.4.5	The massacre of residents in Bucha, Ukraine, is a "fake" by the Ukrainian military	False	16.5%
2	2022.4.22	Prime Minister Kishida said that if the Liberal Democratic Party wins the Upper House election, he will raise the consumption tax to 19%.	False	5.3%
3	2022.5.9	Tadashi Yanai, president of Uniqlo, said, "Mathematically speaking, it would be more profitable to cut salaries in half."	False	5.4%
4	2022.5.15	Former Secretary-General Fukuyama of the Constitutional Democratic Party of Japan said, "People are fed up with incompetent opposition parties that do not do their jobs.""	False	10.1%
5	2022.7.5	The 2.08% raise in this year's annual wage negotiations between management and labor unions is the second highest in the past 20 years.	Almost true	10.7%
6	2022.7.5	Congressman Taro Kono of the Liberal Democratic Party attended a rally held by Kiyomi Tsujimoto of the Constitutional Democratic Party of Japan.	False	4.2%

Table 1. False/true news items used in the survey and exposure rate

[33] Lee & Yang, 2014.
[34] Edgerly, 2015.
[35] "Matome sites" are UGC (User Generated Content) websites that gather information and links (including anonymous BBS such as 4-chan) on specific topics.

and Metzger, [36] Kiousis, [37] and Johnson & Kaye. [38] Respondents were asked to evaluate each subscale of 16 kinds of news sources. The question is, "To what extent do you think the content of the news you see and hear on TV news, newspaper articles, social media, etc. is believable/objective/factual? Please answer using 11-point scale; 0 as 'none of them,' 10 as 'all of them.'" The media credibility score of each news source was calculated as the average evaluation of believability, objectivity, and factuality. The Cronbach's alpha of the media credibility score of each news source was .82 to .90.

Subsequently, a factor analysis (maximum likelihood method, Promax rotation) was performed with 16 media credibility scores (Table 2). The first factor is the credibility of traditional media and their websites, and the second factor is one of the social media, UGC (User Generated Content), and interpersonal news sources. The former was named as "traditional media credibility factor'' and the latter as "social news credibility factor." Traditional media credibility and social news credibility scores were calculated as the average media credibility scores of each seven news source items with high factor loadings for the traditional media credibility factor and social news credibility factor. Cronbach's alpha is .98 and .95,

respectively. Social news credibility is treated as synonymous with media credibility of social media in this study.

Political Interest

Political interest was measured by asking respondents to answer the degree of agreement to the statement; "I am interested in politics" with 5-point scale (strongly agree, somewhat agree, neither, somewhat disagree, strongly disagree).

Political Knowledge

Political knowledge was measured using questions about understanding current social issues, following the methods commonly used in related studies (e.g., Delli Carpini & Keeter [39]; Lee and Yang [40]). Respondents were asked to read seven questions about social issues (e.g., "Which social network service is trying to be acquired by American businessman Elon Musk?") and select the correct answers from four options (e.g., Facebook, Instagram, TikTok, Twitter)（Table 3）. One point was counted for a correct answer (Twitter), and 0 points were counted for a wrong answer and the total score of the seven questions was taken as the political knowledge score. The Cronbach's alpha is .53.

	1	2
Newspaper articles	.997	-.076
TV news（public broadcasting）	.989	-.137
TV news（commercial broadcasting）	.946	.011
Newspaper company's news sites	.943	.029
Radio news	.921	.027
TV station news sites	.894	.120
TV talk shows	.734	.273
Twitter	-.086	1.016
Instagram	-.046	1.003
Facebook	-.038	.978
YouTube	-.071	.969
Matome sites	.187	.748
Family members	.228	.578
Friends	.265	.411

Table 2. Factor Table 2. Factor analysis of media credibility score (Maximum likelihood method, Promax rotation)
Note. Yahoo! News and LINE News items were excluded from the analysis because they had loadings greater than 0.3 in both factors. "Matome sites" are UGC (User Generated Content) websites that gather information and links (including anonymous BBS such as 4-chan) on specific topics.

No.	Question	Correct answer	Correct answer %
1	What is the name of the British prime minister who announced his resignation on July 7th?	Johnson	86.9
2	The new coronavirus infection has spread in Japan, and we have entered a new wave of infections. How many waves of infection will there be this time?	Seven times	86.6
3	What is the name of the consumption tax-related legal system that will start in 2023, which has been criticized for increasing the burden on sole proprietors?	Invoice	82.1
4	Which social network service is seeking to be acquired by American businessman Elon Musk?	Twitter	74.8
5	What is the name of the oil and natural gas development projects funded by Japanese trading companies that President Putin has ordered to be transferred to Russian companies free of charge?	Sakhalin-2	70.4
6	What is the name of a variant of the novel coronavirus that is currently circulating?	The omicron variant	78.2
7	On what rights did the US Supreme Court change its ruling in June for the first time in nearly 50 years, having a major impact on US society?	Abortion rights	69.1

Table 3. Questions for measuring political knowledge

Demographics

The demographic variables used in the survey were gender, age, educational background (5-point scale: junior high school, high school, junior college/technical college, university, graduate school),

[36] Andrew J. Flanagin, Miriam J. Metzger, "Perceptions of Internet Information Credibility," *Journalism & Mass Communication Quarterly,* Vol. 77(3), 2000, pp. 515–540.
[37] Kiousis, 2001.

[38] Johnson & Kaye, 2004.
[39] Michael X. Delli Carpini, Scott Keeter, "*What Americans Know about Politics and Why it Matters,*" Yale University Press, Sept. 23, 1997.
[40] Lee & Yang, 2014.

and annual household income (8-point scale: less than 2 million JPY to 20 million JPY or more). Responses of educational background were converted to years of education (junior high school = 9 years, high school = 12 years, junior college/technical college = 14 years, university = 18 years, graduate school = 20 years). Responses of annual household income were quantified (e.g., "less than 2 million JPY" = 100, "2 million JPY or more and less than 4 million JPY" = 300) and converted to logarithms.

Results

News repertoires in Japan

Non-hierarchical cluster analysis (K-means method), a statistical analysis technique that groups similar data into a specified number of clusters, was performed by the same method as Lee & Yang[41] and Edgerly.[42] As a result of inputting 19 types of news information source usage frequency and analyzing by changing the number of clusters from 2 to 8, the number of clusters that gave the most easy-to-interpret result was 5. Table 4 shows each news repertoire group's frequency of news sources usage. Because the number of news repertory groups and the characteristics of each group were largely consistent with findings of Castro et al.[43] and Ogasahara,[44] the same news repertory names as in Castro et al. were used in this analysis.

The first cluster (n=246, 19.6% of respondents) has high exposure to news through social media (Facebook, Twitter, Instagram), YouTube, and conversations with friends. These respondents were considered as "social media news users" of Castro et al.[45] The second cluster (n=404, 32.3%), the biggest group in the five news repertoire groups, is the "news minimalist," which used all news sources significantly less frequently than the other groups. The third (n = 368, 29.4%) cluster uses traditional media such as TV news and Yahoo! News more frequently than others, while social media and UGC usage are less frequent. It was classified as

"traditionalists." The fourth cluster (n=130, 10.4%) is the "online news seekers," who use news sites of TV stations/newspapers, online news sites, and news aggregators on the Internet more frequently than other groups. The final cluster (n=104, 8.3%) is for "hyper consumers of news" who use most news sources significantly more frequently than the other groups.

	Social news users (n=246)	News minimalists (n=404)	Traditionalists (n=368)	Online news seekers (n=130)	Hyper consumers of news (n=104)
TV news	37.8b	*29.1a*	**65.8d**	55.3c	**70.3d**
TV shows	20.7b	*13.7a*	36.4c	32.1c	**48.5d**
Newspapers	*7.0a*	*8.3a*	23.2b	*8.7a*	**39.9c**
Magazines	*2.6a*	*1.5a*	*2.6a*	*2.0a*	**11.1b**
Radio	*4.9a*	*6.2a*	*9.9a*	*6.7a*	**18.0b**
TV news sites	*6.0a*	*5.7a*	13.1b	24.2c	**57.2d**
Newspaper sites	*3.5a*	*3.7a*	*7.2ab*	11.3b	**37.4c**
Magazine sites	*1.9a*	*1.6a*	1.8a	3.7a	**16.5b**
Yahoo! News	38.0b	*23.9a*	46.1b	49.0b	**63.1c**
LINE News	29.6b	*9.6a*	11.2a	25.1b	**44.3c**
News Apps	*12.0ab*	*6.7a*	13.6b	49.0c	**58.6d**
Facebook	**14.1cd**	*2.6a*	*4.7ab*	9.4bc	**16.1d**
Instagram	**59.2d**	*6.4ab*	*5.1a*	11.9b	21.3c
Twitter	**56.4d**	12.3b	*4.7a*	28.4c	28.7c
YouTube	48.7c	*18.5a*	*12.3a*	45.8bc	40.6b
Matome sites	*4.7ab*	*2.7ab*	*1.6a*	5.5b	**9.4c**
Blogs	6.1b	*2.3a*	*3.0ab*	6.4bc	10.2c
Friends	**43.1c**	*11.8a*	30.0b	23.7b	**41.1c**
Family members	60.3b	*21.3a*	**66.7bc**	*20.2a*	**70.2c**

Table 4. One-way ANOVA of frequency of news sources usage by news repertoire group
Note. Bold (italicized) numbers are statistically significantly higher (or lower) than the other groups at the 5% level. The signs a to d in the cells indicate no significant difference at the 5% level between the same signs due to Tukey's range test.

Characteristics of each news repertoire group

Table 5 compares demographics, political interest, political knowledge, and media credibility between news repertoire group using the chi-square test (sex) and one-way ANOVA (other variables). Social news users are statistically significantly younger and more educated than other news repertoire groups. Traditionalists are more likely to be older and more trusting of traditional media. Hyper consumers of news are more likely to be male, old, politically interested, and knowledgeable. Online news seekers are more likely to be male and educated, and news minimalists are likely to be female, less educated, less

[41] Lee & Yang, 2014.
[42] Edgerly, 2015.
[43] Castro, et al, 2021.
[44] Ogasahara, 2022.
[45] Castro, et al, 2021.

politically interested, and less politically knowledgeable.

	Social news users (n=246)	News minimalists (n=404)	Traditionalists (n=368)	Online news seekers (n=130)	Hyper consumers of news (n=104)
Sex (% of male)	*42.3%*	48.3%	50.3%	50.8%	**59.6%**
Age	*37.2a*	46.0b	**55.5c**	49.3b	**55.0c**
Education year	14.8	14.6	14.4	14.6	14.7
Household income	647.5bc	566.8ab	644.6bc	*529.0a*	**744.01c**
Political interest	*3.0a*	*3.0a*	3.2ab	3.3ab	**3.6c**
Political knowledge	*5.2a*	*5.2a*	**5.7b**	**5.8b**	**5.9b**
Traditional media credibility	*6.0a*	*6.1a*	**7.0b**	*6.3a*	**7.0b**
Social news credibility	5.2ab	*5.0a*	5.5bc	5.2ab	**5.8c**

Table 5. Comparison of demographics, political interest, political knowledge and media credibility by news repertoire group
Note. Bold (italicized) numbers are statistically significantly higher (or lower) than the other groups at the 5% level. Signs a to d in the cells indicate no significant difference at the 5% level between the same signs due to Tukey's range test. In the row of household income, the numbers are the average household income, and the signs are the results of Tukey's range test using logarithmically transformed values.

News repertoire and the factors related to disinformation

To examine the relationship between the news repertoire and the factors related to disinformation, OLS regression analyses predicting political interest, political knowledge, traditional media credibility, and social news credibility were performed (Table 6). Independent variables were demographics and the dummy variables of the news repertoire group; social news users, traditionalists, online news seekers, and hyper consumers of news (news minimalist was the reference category).

Hyper consumers of news had significantly higher levels of political interest, political knowledge, traditional media credibility, and social news credibility than news minimalists. Traditionalists had higher levels of traditional media and social news credibility, with no significant difference in political interest and political knowledge than news minimalists. By contrast, online news seekers had higher levels of political interest and political knowledge, with no significant difference in traditional media and social news credibility than news minimalists. Social news users had a higher level than news minimalists only for social news credibility.

	Political interest	Political knowledge	Traditional media credibility	Social news credibility
	β	β	β	β
Sex (1: male, 2: female)	-0.15***	-0.20***	0.14***	0.08*
Age	0.15***	0.22***	0.13***	0.15***
Education year	0.11**	0.14***	-0.01	-0.13***
Household income (logarithm)	0.03	0.07*	0.14***	0.06*
Hyper consumers of news	0.13***	0.06†	0.12***	0.14***
Traditionalists	0.04	0.03	0.14***	0.12**
Online news seekers	0.07*	0.10*	0.03	0.04
Social news users	0.04	0.02	-0.03	0.09*
R^2	0.09	0.13	0.10	0.08
Adjusted R^2	0.08	0.13	0.09	0.08
F	11.22	18.55	13.27	11.03
N	976	977	977	977

Table 6. OLS regression analyses predicting political interest, political knowledge, and media credibility
Note. News minimalist is the reference category. †p < .10. *p < .05. **p < .01. ***p <.001. For all independent variables, the Variance Inflation Factor (VIF) was less than 2.0.

News repertoire and disinformation-related behavior

To examine the relationship between the news repertoire and disinformation, OLS regression analyses predicting the number of exposures to disinformation, discerning of disinformation score, and probability of disseminating disinformation were performed (Table 7). Independent variables were demographics, the dummy variables of the news repertoire group (news minimalist was the reference category), political interest, political knowledge, traditional media credibility, and social news credibility.

The amount of exposure to disinformation was positively associated with all news repertoire groups except traditionalists. Contrary to hypothesis 1, political interest was positively associated with exposure to disinformation, and unlike hypothesis 2, political interest was not significantly associated. Social news credibility was negatively associated at the 10% level.

The discerning of disinformation was not significantly associated with all news repertoire groups. Political knowledge was positively associated with the discerning of disinformation, and hypothesis 3 was supported. Social news credibility was not significantly associated, and hypothesis 4 was not supported.

The probability of disseminating disinformation was positively associated with traditionalists at the 10%

level. Social news credibility is positively associated with dissemination of disinformation and hypothesis 5 was supported.

	Number of exposures to disinformation	Discerning of disinformation	Probability of disseminating disinformation
	β	β	β
Sex (1: male, 2: female)	.09**	.000	.20**
Age	.01	.063	-.08
Education year	.05	-.009	-.08
Household income (logarithm)	-.01	-.062	.12†
Political interest	.10**	.031	.06
Political knowledge	.05	.138*	.04
Traditional media credibility	-.07†	.184*	-.07
Social news credibility	.10**	-.117	.16*
Hyper consumers of news dummy	.09**	-.056	-.00
Traditionalists dummy	.02	-.044	.13†
Online news seekers dummy	.06†	.002	.01
Social news users dummy	.13***	-.072	-.04
F	3.97**	1.74†	2.41**
R²	.05	.06	.09
Adjusted R²	.04	.03	.05
N	976	323	295

Table 7. OLS regression analyses predicting exposure to, discerning, and disseminating disinformation
*Note. News minimalist is the reference category. †p < .10. *p < .05. **p < .01. ***p < .001. All VIFs are less than 2.0.*

Since the analyzes of the number of exposures of disinformation and the probability of dissemination of disinformation in Table 7 are for disinformation only, a binomial logistic regression analysis was performed to examine the differences from the case of true information (Table 8). The dependent variables are the presence or absence of exposure to and dissemination of true information (item 5 in Table 1), and the independent variables are the same as in Table 7.

In contrast to the results in Table 7, exposure to true information was positively associated with traditionalists, and not significantly associated with hyper consumers of news and traditional media credibility. The positive association between exposure to true information and political interest, online news seekers, and social news users was the same as in table 7. Dissemination of true information was positively associated with traditionalists and social news credibility, as shown in Table 7.

Discussions

News repertoires in Japan

In this paper, how news repertoires were categorized and how the news repertoire associated with exposure to, discerning, and disseminating disinformation were analyzed quantitatively. Analysis of the 2022 Japanese Upper House Election survey data showed that the news repertoire of Japanese voters can be categorized as traditionalists, hyper consumers of news, online news seekers, news minimalists, and social media news users (RQ1). The characteristics of these news repertoires are largely consistent with those found in 17 European countries by Castro et al.[46] and found in the US by Ogasahara;[47] therefore, these typologies may be robust in the current media environment.

The association between news repertoire and four factors related to disinformation-related behavior showed that hyper consumers of news had a stronger positive association than news minimalists with political interest, political knowledge, and media credibility (RQ2). Because higher media credibility generally correlates with more frequent use of news sources,[48] hyper consumers of news, the group most actively exposed to news through the most diverse news sources, have higher media credibility for both traditional media and social news. Furthermore, high news use frequency and high news source diversity may foster political interest, political knowledge, and political participation, creating a virtuous cycle in which high political interest and political knowledge motivate news usage and make cognitive load for

	Exposure to true information	Dissemination of true information
	B	B
Sex (1:male, 2:female)	.422†	1.030
Age	.018*	-.086**
Education year	.004	-.149
Household income (logarithm)	-.142	.748
Political interest	.552***	.476
Political knowledge	.096	.037
Traditional source credibility	.065	-.305
Social news credibility	.077	.985*
Hyper consumers dummy	.623	-20.46
Traditionalists dummy	.883*	20.23†
Online news seekers dummy	.694†	17.74
Social news users dummy	.784*	18.10
Constant	-6.70**	-27.09*
Nagelkerke R²	.130	.430
n	976	111

Table 8. Logistic regression analyses predicting exposure to and dissemination of true information.
*Note. News minimalist is the reference category. †p < .10. *p < .05. **p < .01. ***p < .01.*

[46]Castro, et al, 2021.
[47]Ogasahara, 2022.

[48] Tony Rimmer, David Weaver, "Different questions, different answers? Media use and media credibility," *Journalism Quarterly*, Vol. 64(1), March 1987, pp. 28-44.

news consumption lower, leading to increased news use frequency.[49]

Traditionalists had a stronger positive association than news minimalists with media credibility, whereas differences in associations with political interest and political knowledge were not significant. Even though traditionalists primarily use traditional media and news aggregators as their primary source of news and do not use social media much, the high association with both traditional media and social news may be due to their high level of "general media credibility"[50] for news media in general. Their high credibility with media they do not use very often, and their low association with political interest and political knowledge suggest that their news exposure is not due to seeking information but simply out of habit (their high level of political knowledge may be due to their higher average age). They may be passive and uncritical in their acceptance of news broadcast in the media and have not accumulated much knowledge.

In contrast to traditionalists, online news seekers have a stronger association with political interest and political knowledge but no significant association with media credibility. Their primary news sources are news aggregators and UGC sites, which are "pull media" rather than "push media" like traditional media,[51] and they can get as much political news as they want according to their political information needs. Ogasahara[52] found that Internet usage time is not associated with media credibility of the internet and explained the reason that exposure to information on the Internet differs from exposure to information in traditional media, and users tend to use sources of information that may contain false information to the extent that they are able to manage based on their own information literacy. Similarly, given that users who are more information literate and seek news on UGC sites are more likely to be exposed to both valuable and false news, UGC site usage is expected not to enhance or diminish social news credibility. In addition, their high frequency of news use and low media credibility may

indicate that they are in critical and analytical contact with the news.

Social news users are more associated than news minimalists only with social news credibility, and not significantly associated with traditional media credibility, political interest, and political knowledge. They are the group with the lowest average age, political interest, and political knowledge, and their exposure to news on social media is likely due to their interest in non-political information. Despite the high likelihood that information on social media is false, the high frequency of news contact and social news credibility on social media suggests that they are not very analytical about their news exposure.

Finally, the reference category in the analysis, the news minimalists are the most reluctant to consume news among the five news repertoire groups, with the lowest levels of political interest, political knowledge, and media credibility. They avoid news exposure because of their low interest in politics, and thus political knowledge is not accumulated, their cognitive load to news consumption is not reduced, and media credibility through news use also is not fostered. These factors may create "a vicious cycle" that inhibits their political participation.[53]

News repertoire approach to disinformation-related behavior

	Number of exposures to disinformation	Discerning of disinformation	Probability of disseminating disinformation
Independent variables			
News repertoire			
Hyper consumer of news	+	none	none
Traditionalists	none	none	(+)
Online news seekers	(+)	none	none
Social news users	+	none	none
Media credibility			
Traditional media credibility	(-)	+	none
Social news credibility	+	none	+
Political interest	+	none	none
Political knowledge	none	+	none

Table 9. Summary of the associations between disinformation-related behavior and independent variables.

Note: +: significant positive association, -: significant negative association, none: no significant association. Signs in parentheses indicate significance at the 10% level.

News minimalist is the reference category in news repertoire groups.

[49] Pippa Norris, "A virtuous circle: Political communications in postindustrial societies," Cambridge University Press, 2000.

[50] Morihiro Ogasahara, "Quantitative Analysis on the Model for Media Credibility Formation on the Internet," *Journal of Mass Communication Studies*, Vol. 73, 2008, pp. 113-130.

[51] Nicholas Negroponte, "*Being Digital,*" Alfred a Knopf, 1995.

[52] Ogasahara, 2008.

[53] Norris, 2000.

Table 9 shows the summary of the associations between disinformation-related behavior and important independent variables. News repertoire groups with more frequent use of online news sources had more frequent exposure to disinformation. In addition, the hypothesis of a negative association between political knowledge and exposure to disinformation (H2) was not supported, and the positive association between political interest and exposure to disinformation was opposite to H1. These results suggest that exposure to disinformation is an incidental and a stochastic phenomenon and that the more frequently people use online news motivated by a high interest in political information, the more likely exposure to disinformation is to occur. The finding that the probability of exposure to true information on traditional media (67.9% on TV or newspapers) was more than one of exposure to disinformation on traditional media (24.2 to 61.4%) and that traditionalists are positively associated with exposure to true information also supports this explanation.

The positive association between political knowledge and identification of disinformation is, as expected by H3, and supports Pennycook et al.'s finding that the cause of the misidentification of disinformation is a lack of analytical thinking. [54] The result that traditional media credibility, which implies less analytic exposure to news, was positively associated with discerning of disinformation is seemingly inconsistent with this finding. The positive association between traditional media credibility and identification of disinformation suggests that *not having analytical exposure* to traditional media news that is less likely to be false, for better or worse, results in increased discerning of disinformation.

No significant association between discerning disinformation and social news credibility (H4 rejected) and a significant positive association between disseminating disinformation and social news credibility (H5 supported) are consistent with the findings of Pennycook et al. [55] Discerning of disinformation and disseminating disinformation are two different types of information processing, and disseminating disinformation is not caused by believing disinformation but by sharing it without paying attention to gain reputation among friends.

Interestingly, traditionalists were positively associated with both the dissemination of disinformation and the dissemination of true information. This result indicates that traditionalists tend to disseminate news, whether it is true or false, and supports the inference above that traditionalists are likely to lack analytical thinking in their news exposure.

Contribution of this study

The first significant finding of this study is that the same news repertoire typology as in Europe[56] and the United States[57] was found in Japan. If this typology is robust in today's news information environment, it will be possible to conduct international comparative studies in a common framework using a news repertoire approach.

Second, it is also significant that we were able to confirm that the identification and dissemination of disinformation are due to a lack of attention, as Pennycook et al. [50][58] argue, and suggest that media credibility is related to a lack of analytical thinking. The finding that high media credibility is not necessarily a good thing from the perspective of countermeasures against disinformation will be useful when considering countermeasures against disinformation.

Related to this, thirdly, it is also significant that the analysis of the characteristics of each news repertoire group suggested that traditionalists, who seem to be resistant to disinformation because of their frequent use of traditional media, may lack analytical thinking and are vulnerable to disinformation, especially in the condition of information dissemination.

These findings require further validation but could be helpful for the future development of disinformation research.

Limitations of this Study

Because of several limitations of this study, interpretation of the results should be made with caution. First, the number of fact-checked news items used in the survey was small. In particular, that only one item was judged to be true made it challenging to compare the number of exposure and probability

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[54] Pennycook & Rand 2019.

[55] Pennycook, et al, 2021.

[56] Castro, et al, 2021.

[57] Ogasahara, 2022.

[58] Pennycook & Rand, 2019.

of spread between information that was determined to be false and information that was determined to be true. That is because fact-checking is less active in Japan than in other countries such as the United States, and there are fewer news items fact-checked. As of 2022, no fact-checking organizations in Japan are members of the IFCN (International Fact-Checking Network). Nevertheless, since fact-checking activities are gradually becoming more active in Japan, it is desirable to conduct surveys in the future by selecting a period when sufficient fact-checked news items can be collected.

It should be noted that the survey data analyzed in this study relies on respondents' self-reporting and thus does not capture information about news exposures that were actually happened but forgotten. It should also be noted that the monitors of online survey research firms who responded to this survey are not necessarily a representative sample of Japanese voters and that it is impossible to determine causal relationships using the cross-sectional survey data in this study.

As is true of news repertoire studies in general, because the news repertoire is categorized by news source, what news content people were actually exposed to is not included in the analysis model. In a media environment such as Japan, where political polarization of traditional media has not occurred to a great extent, it is desirable to examine the types of news sources people use daily and the news content they are exposed to.

This study is an exploratory analysis of disinformation-related behavior in Japan using a news repertoire approach. Based on the limitations above, it is expected that the study of disinformation will be further deepened through an approach that captures people's personal media environment, or news repertoire.

Morihiro Ogasahara

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Options for Countering Disinformation in Japan

Christopher Paul

Introduction

Disinformation, the intentional spread of false or misleading content, has experienced a global explosion in recent decades. Much disinformation is produced and spread on the internet through social media. The extent and spread of disinformation raise concerns about its potentially corrosive influence on societal cohesion and its possible threat to democracy, if the will of voters is suborned by foreign actors or through manipulation by domestic actors. Japan has experienced increased disinformation, though arguably to a lesser extent than other nations. How much should Japan be concerned about online disinformation? If disinformation is concerning, what should be done about it?

This paper begins with a discussion of the nature of disinformation and why it can be persuasive. It then describes the disinformation tactics employed by different propagandists, posing a three-level megaphone model for disinformation. This model underpins a discussion on approaches to countering disinformation, which is then situated within the Japanese context.

What is Disinformation?

Many terms have been used to describe false information propagated throughout a society. In this paper, I use *disinformation*, and, as needed, the related term *misinformation*. Scholars define misinformation as information that is accidentally false, while disinformation is false information disseminated knowingly and intentionally. Of course, the definitional lines can blur when content begins its journey as an intended falsehood, but then is unwittingly spread by other communicators who don't know it is false. We tend to still consider such content to be disinformation, but make a distinction between the originator and those who contribute to spread.

There are at least seven types of disinformation.[1] 1) Parody or satire, which has no intention to cause harm and should be recognized by consumers as intentionally false, but is not always understood as such; 2) misleading content, where the way an issue, topic, or person is framed is disingenuous; 3) imposter content, where one or more authentic sources or persons is impersonated; 4) fabricated content, made up and false; 5) false connection, where some part of the content (headlines, images) are not appropriately related to the rest of the content; 6) false context, where genuine content is shared with falsified contextual information; 7) manipulated content, where genuine imagery or information is changed in order to mislead. Examples of all seven types abound.

Disinformation Can Be Persuasive

How effective is disinformation? If disinformation is easily identified by consumers, or is unlikely to affect their beliefs and behaviors, then perhaps disinformation is more of a nuisance than a genuine problem. There is a natural tendency to be skeptical about the effectiveness of disinformation. As virtuous people, most of us are inclined to impute effectiveness to virtuous approaches: that is, we naturally assume that truthful persuasion is much or effective than falsehood-based persuasion. Unfortunately, that isn't necessarily so. [2] Disinformation can be very persuasive.

There is a great quantity of disinformation available. This is by design; both the Russian and Chinese approaches to disinformation (described in greater detail below) rely on volume. Existing research in social psychology supports a high-volume approach: quantity has a quality all its own. The number and frequency of messages received makes messages more persuasive, as does presentation of multiple similar arguments by multiple sources. [3] The persuasiveness of volume holds for true information, but it also holds for false and misleading information as well. Disinformation is also often rapidly disseminated and frequently repeated; frequency leads to familiarity, which is strongly correlated with persuasiveness, and rapidity leads to first impressions that are consistent with the disinformation, and first impressions are notoriously hard to dislodge.[4] The property of being false is not

[1] Claire Wardle, "Fake News. It's Complicated," *First Draft News*, February 16, 2017.

[2] Paul, Christopher and Miriam Matthews, *The Russian "Firehose of Falsehood" Propaganda Model: Why It Might Work and Options to Counter It*. Santa Monica, CA: RAND Corporation, 2016.

[3] Stephen G. Harkins and Richard E. Petty, "The Multiple Source Effect in Persuasion: The Effects of Distraction," *Personality and Social Psychology Bulletin*, Vol. 7, No. 4, 1981, pp. 627-635; Andrew J. Flanagin and Miriam J. Metzger, "Trusting Expert- Versus User-Generated Ratings Online: The Role of Information Volume, Valence, and Consumer Characteristics," *Computers in Human Behavior*, Vol. 29, 2013, pp. 1626-1634.

[4] Teresa Garcia-Marques and Diane M. Mackie, "The Feeling of Familiarity as a Regulator of Persuasive Processing," *Social Cognition*, Vol. 19, Issue 1, 2001, pp. 9-34; Stephan Lewandowsky, Ullrich K.H. Ecker, Colleen M.

in itself persuasive, but humans are remarkably poor judges of truth and falsehood. This is in part because humans are just bad at judging what is true, and in part because the contemporary information environment places enormous burdens on our cognitive processes, forcing us to use heuristics or shortcuts that are easily exploited by those who wish to deceive us. [5] We often use what are called "peripheral cues" to make truth or falsehood judgements, so if a presenter is attractive, or a recording looks like a news broadcast, or if the information presented is consistent with our world view, we tend to make a quick unconscious determination to accept the information, even if it happens to be totally false. [6] And, once we've accepted false information, we tend to cling to it (back to the power of first impressions).[7] So disinformation that isn't recognized as such and thoughtfully disregarded can change our understanding of certain events, and our views in general.

Bottom line: all humans are at least somewhat vulnerable to being deceived and manipulated through disinformation, and so it is a threat worth taking seriously.

Disinformation Tactics

Disinformation can be propagated through social media, including platforms familiar to and popular with Japanese internet users, such as Line, Twitter, and Instagram, or through other applications such as Meta (Facebook), YouTube, Reddit, Pinterest, Tumblr, TikTok, WeChat, or Vkontakte.[8] In addition to direct posting and spread via social media, propagandists also participate in and spread propaganda through the comments sections on message boards, news or other sites, or social media. Propaganda can also originate and be spread through various encrypted or non-encrypted messaging applications, such as LINE, telegram, WhatsApp, Facebook Messenger, Signal, or Vibr. Disinformation also spreads in niche communities, such as the communications platforms used by gamers to exchange information about or during online games, such as Discord, Twitch, Xbox

Live, or PlayStation Online. Propagandists use traditional web pages and web pages associated with state run media to spread disinformation. These web pages can be optimized to pop in search engines (Google, Yahoo, Bing, etc.) and increase their spread. And, propagandists can get their content seen by a broad range of internet users through AdTech and paid advertising.

Disinformation often contains at least partial truths, but is altered in some way in order to be manipulative. This might include:[9]

- Fabrication—part or all of the content is made up, false, or misleading (could include fabricated video, audio, still imagery, or memes, as well as text or documents)
- Misappropriation—misrepresenting real events, people, or evidence in ways that lead to incorrect conclusions about what actually took place
- Deceptive identities—impersonation of either genuine sources of information (such as a specific scholar), a member of credible category (such as journalists, or a "witness" to events), or just a cover persona
- Obfuscation—seeking to cloud public discourse by offering multiple contradictory accounts of events
- Conspiracy theories—proposing covert plots by shadowy organizations or cabals
- Selective use of facts—presenting factual information in a manipulative way; also called "partial truth"
- Rhetorical fallacies—Content appealing to flawed logic (whataboutism, false dilemma, slippery slope, false equivalency, straw man, etc.)
- Appeals to emotion or authority—Content intended to bypass audience reasoning and provoke a response.

Propagandists use these techniques for a range of purposes. These might include slandering other countries' officials, representatives, actions, policies,

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Seifert, Norbert Schwarz, and John Cook, "Misinformation and Its Correction: Continued Influence and Successful Debiasing," *Psychological Science in the Public Interest,* Vol. 13, No. 3, 2012, pp. 106-131; Richard E. Petty, John T. Caccioppo, Alan J., Strathman, and Joseph R. Priester, "To Think or Not To Think: Exploring Two Routes to Persuasion," in T.C. Brock and M.C. Green (eds.), *Persuasion: Psychological Insights and Perspectives*, 2nd ed., Thousand Oaks, Calif.: Sage Publications, 2005, pp. 81-116.

[5] Lewandowsky, et al., 2012.

[6] Petty, et al., 2005.

[7] Lewandowsky, et al., 2012.

[8] WeChat is a Chinese instant messaging, social media, and mobile payment platform, while Vkontakte is a Russian-language social media platform popular in Russia, Belarus, Ukraine and other countries in Eastern Europe.

[9] Matthews, Miriam, Alyssa Demus, Elina Treyger, Marek N. Posard, Hilary Reininger, and Christopher Paul, *Understanding and Defending Against Russia's Malign and Subversive Information Efforts in Europe*. Santa Monica, CA: RAND Corporation, 2021; Daniel Arnaudo, et al, *Combating Information Manipulation: A Playbook for Elections and Beyond*, National Democratic Institute, International Republican Institute, Stanford Internet Observatory Cyber Policy Center, September 2021.

institutions, or culture; promoting other countries' actors (either because they are friendly to the propagandizing nation, or because their actions are internally divisive); promoting the image and views of the propagandizing nation; stopping or drowning out views that contradict the propagandizing nation's preferred narrative; deflecting or denying wrong-doing on the part of the propagandizing nation. Propagators of domestic disinformation use the same tactics and for similar purposes, although aimed at other groups or organizations (or their own government) rather than foreign nations.

Two of the major disseminators of disinformation globally are Russia and China. Both Russia and China employ disinformation first and foremost against their own populations for purposes of social control. Their external use of disinformation is thus a secondary effort, if still somewhat substantial.

Russia seeks to promote distrust and fear. The Russian government wants its own citizens to fear imaginary threats from an aggressive NATO and other forces seeking to contain and constrain Russia. The Russian government wants its opponents to fear what Russia might do and so give in to its demands and allow its aggressions to stand.

Russia's approach to propaganda has been likened to a "firehose of falsehood" with four distinguishing characteristics:[10]

- Russia's propaganda is high volume and multi-channel, in numerous mediums and modes
- It is rapid, continuous, and repetitive, broadcast 24 hours a day, with no delays for fact-checking
- It makes no commitment to objective reality, often broadcast false or partially false content (though falsehoods are backed up with fabricated evidence, or presented by sources intended to seem credible, or are consistent with the preexisting beliefs of the intended audiences)
- It makes no commitment to consistency, with different Russian sources and voices

presenting contradictory accounts of events, and sometimes even an individual speaker or channel contradicting themselves in a relatively short span of time.

Scholar Ben Nimmo has characterized Russian engagement in the information environment as seeking effects following "4 D's"—dismiss, distort, distract, and dismay.[11] RAND colleagues have noted that Russia seeks to do this through the use of a number of tactics:[12]

- Using multiple platforms and matching them to both the language and the use patterns of targeted audiences
- Using a variety of deceptive identities, including both wholly manufactured personas but also accounts purporting to represent reasonably well-known actual persons
- Emphasizing volume and placing quantity over quality
- Amplifying native content—identifying authentic content that is contentious or embarrassing, and promoting it
- Organizing "real world" events, such as getting people to attend a rally or demonstration.

While Russia's approach to information is based on distrust, China's primary approach is more positive, in that it promotes positive views of China (true or not, justified or not) and seeks to prevent or bury any criticism. Thematic narratives include China's peace-loving status, lack of expansionist ambitions, and purely defensive military strategy, as well as emphasizing China's geographic centrality and its inevitably rise and regional dominance.[13] In more recent years the propaganda of the People's Republic of China (PRC) has strayed from the strictly positive to occasionally mirroring Russia's destructive approach. That has particularly been the case when fostering or echoing false claims related to the origin and spread of COVID-19.[14] Going forward, it would be reasonable to expect PRC disinformation to be balanced between promoting positive views of the

[10] Paul, Christopher, and Miriam Matthews, *The Russian "Firehose of Falsehood" Propaganda Model: Why it Might Work and What Might be Done About it,* Santa Monica, Calif,: RAND Corporation, 2016.

[11] Nimmo, Ben, *Anatomy of Info-War: How Russia's Propaganda Machine Works, and How to Counter It,* Central European Strategy Council, undated.

[12] Treyger, Elina, Joe Cheravitch, and Raphael S. Cohen, *Russian Disinformation Efforts on Social Media*. Santa Monica, CA: RAND Corporation, 2022.

[13] Harold, Scott W., Nathan Beauchamp-Mustafaga, and Jeffrey W. Hornung, *Chinese Disinformation Efforts on Social Media*. Santa Monica, CA: RAND Corporation, 2021.

[14] Wendler, JohnRoss, "Misleading a Pandemic: The Viral Effects of Chinese Propaganda and the Coronavirus." *Joint Force Quarterly*, 104, 1st Quarter 2022, p. 32-39.

party-state and seeking to make rival and competitor governments appear weak, corrupt, or abusive.

The PRC uses the information environment for population control and to assert influence abroad. It uses disinformation for both purposes. People's Liberation Army (PLA) writings discuss the use of "political work" and "external propaganda" to convey Chinese messages to foreign audiences and to undermine enemy governments and militaries. [15] PLA concepts for information warfare have recently added "cognitive domain operations" to their previous "three warfares" approach: psychological warfare, public opinion warfare, and legal warfare. Disinformation features prominently in such efforts. Taiwan is far and away the most frequent target of PRC and PLA disinformation.

RAND researchers have documented the PLA approach to executing social media disinformation campaigns based on interviews with Taiwanese experts. The PLA identifies the specific platform best matched to the target demographic; then collects personal data, maps social networks, cultivates opinion leaders, joins discussion group; then, after building sufficient rapport and trust for its managed personas, it begins to disseminate disinformation. [16] Another approach used by the PRC is "astroturfing," seeking to bury negative comments and manipulate public opinion by masking the source of messages to make them appear as if they have emerged organically from legitimate social segments; called astroturfing because astroturf is fake grass, and astroturfed messages are fake grassroots activity. Some of the PRC's astroturfing is outsourced to patriotic civilian internet users and is not actually government activity, though is government encouraged activity. An example of such astroturfing or "flooding" is the 2015 bombardment of Taiwanese leader Tsai Ing-Wen's Facebook page with pro-PRC posts and demands for Taiwan's reunification with China. [17]

RAND colleagues have noted that the PRC primarily employs three types of disinformation campaign: [18]

- Steady-state efforts that are constantly ongoing and designed to deepen social divisions, lower morale, and decrease confidence in democracy
- Social media efforts in support of discrete goals, such as hampering a trip abroad by a Taiwanese official, complicating a foreign military exercise, or affecting an election outcome—these efforts seek to create a cascade of negative news about a topic in a more deliberate and focused way
- Opportunistic attacks.

An example of the latter is the PRC amplification and spread of news about an unfortunate accident where a Taiwanese tank fell off a bridge resulting in the drowning of four soldiers. [19] This event fed into PRC themes as it seeks to divide and demoralize Taiwan society: incompetence of the Taiwan government and military that are weak, corrupt, and out of touch with the populace and leading Taiwan toward disaster. [20] While the PRC and PLA have thus far reserved their most aggressive disinformation efforts for Taiwan, similar efforts and levels of intensity may be directed toward other nations in the future.

A Model of Disinformation

As my colleagues and I have previously described, disinformation can be modeled like a megaphone in three parts: beginning with the production of disinformation, carrying on to its distribution, and concluding with its consumption. [21] This view of disinformation is similar to the cyber kill chain, because disinformation has no effect unless it passes through all three stages. [22] Policies intending to disrupt disinformation, then, will be aimed at one of more of these three stages. Unfortunately, none of the three is particularly easy to interfere with.

[15] Harold, Scott W., Nathan Beauchamp-Mustafaga, and Jeffrey W. Hornung, *Chinese Disinformation Efforts on Social Media*. Santa Monica, CA: RAND Corporation, 2021.

[16] Ibid

[17] "Taiwan Opposition Leader Tsai Ing-Wen's Facebook Page Flooded with Posts from the Mainland," Reuters, Nov. 12, 2015.

[18] Harold, Scott W., Nathan Beauchamp-Mustafaga, and Jeffrey W. Hornung, *Chinese Disinformation Efforts on Social Media*. Santa Monica, CA: RAND Corporation, 2021.

[19] Sophia Yang, "Kaohsiung Tank Accident Adds One Dead to Four," *Taiwan News*, Aug. 19, 2016.

[20] Harold, Scott W., Nathan Beauchamp-Mustafaga, and Jeffrey W. Hornung, *Chinese Disinformation Efforts on Social Media*. Santa Monica, CA: RAND Corporation, 2021.

[21] Matthews, Miriam, Alyssa Demus, Elina Treyger, Marek N. Posard, Hilary Reininger, and Christopher Paul, *Understanding and Defending Against Russia's Malign and Subversive Information Efforts in Europe*. Santa Monica, CA: RAND Corporation, 2021.

[22] For a discussion of the notion of the cyber kill chain and its application, see Bahrami, Pooneh Nikkhah, Ali Dehghantanha, Tooska Dargahi, Reza M. Parizi, Kim-Kwang Raymond Choo, and Hamid HS Javadi. "Cyber kill chain-based taxonomy of advanced persistent threat actors: Analogy of tactics, techniques, and procedures." *Journal of Information Processing Systems* 15, no. 4 (2019): 865-889.

The production of disinformation begins with actors with bad intent, either working for or at the behest of a state actor (like Russia or China), or affiliated with a non-state external actor (like the various violent extremist organizations who still seek recruits globally), or a member of a domestic political party or faction who feels the need to mislead in order to advance their point of view. The fact that the internet can be accessed from almost anywhere in the world and the tradition of freedom of expression in mature democracies (such as Japan) makes production of disinformation easy for the propagandists and a difficult place for targeted policy interventions. Even if a polity agrees that foreign disinformation has no legitimate place in domestic political discourse, it can often be very difficult to determine when content has foreign origins (a challenge that is often as or more difficult than determining whether content is true or false).

The distribution or dissemination of disinformation also involves the redistribution of content, often through sharing, forwarding, or re-posting. The key process that happens in this step is the amplification of the content. A single user account, real or otherwise, that originates a piece of disinformation has a relatively limited reach. It is only through further amplification that it becomes more and more likely to reach more and more people. This amplification can come from sharing or endorsement by automated or inauthentic accounts controlled by or allied with the originating propagandist, or it can come from other users who endorse or share the content. Users might share disinformation for a variety of reasons: they might mistakenly believe the false content, or they might want to believe the false content because they share the implicit sentiment or world view underpinning it, or they might recognize it as false but want others to believe that it is true.[23] Authentic or inauthentic sharing or "liking" can lead to further algorithmic amplification, with the social media platforms serving up content "validated" by other users to users who use patterns suggest they might respond favorably to the new content. Though it is difficult to reduce the initial production of disinformation, there should be more opportunities to imagine interventions that might reduce its spread.

Once disinformation has been produced and disseminated, it is consumed. At the point of consumption, if false information is accepted by a recipient, then the disinformation has been at least partially successful. Of course, propagandists seek more than just convincing a single target of a single falsehood: they likely intended for many people to receive the content, and a large number of those to accept the falsehood; and, they likely want more than just acceptance or belief, but would probably like to see some sort of behavioral response as well, perhaps something as simple as liking or sharing the false content (to further extend its reach) or perhaps employing talking point or false facts in their future political discourse, or perhaps adopting words or phases consistent with the disinformation, or perhaps changing other behaviors, like voting preferences or level of involvement in political action. There are opportunities to reduce the impact of disinformation at the point of consumption, too.

Approaches to Countering Disinformation

As noted above, disinformation must successfully transit its production, distribution, and consumption to be effective, and a disruption at any point in that chain can reduce its effectiveness. This model of disinformation is described as a megaphone for at least two reasons: first, because of the evocative metaphor of a megaphone of disinformation, but second to capture the ever-widening reach of the disinformation. At origin, there could be as few as one single content creator producing a piece disinformation and posting it or sharing it. If that were prevented, no further action regarding that specific instance would be required. Once produced, distribution begins. Propagandists rarely post content in just one place, and rarely rely on purely organic processes to enable spread. Most disinformation is almost immediately liked or shared or repeated by automated accounts that follow the initial postings, which then leads to further amplification by other users. The megaphone begins to get wider, and policies that interfere with amplification can reduce some of the redistribution, but unless the false content is prevented from ever being posted or is immediately removed by automated systems (something in practice that is possible, through fraught with challenges), at least some individuals will see it. Those who receive disinformation consume it. This is the wide open end of the megaphone, and is where the consumers either

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23 For more on the power of narrative, see Christopher Paul. 2019. "Homo Narratus (The Storytelling Species): The Challenge (and Importance) of Modelling Narrative in Human Understanding," pages 849-864 in Paul K.

Davis, Angela O'Mahony, and Jonathan Pfautz (eds.) *Social-Behavioral Modeling for Complex Systems*. Hoboken, NJ: Wiley and Sons.

recognize disinformation for what it is and reject it, or unwittingly embrace falsehoods as fact. Certainly some consumers correctly discriminate truth from fiction, and certainly there are policy interventions possible that increase the likelihood of consumer rejection of disinformation. However, it would generally be preferable to disrupt the progress of disinformation through the megaphone at an earlier stage and prevent more consumers from ever being exposed. And, the challenges facing policies to disrupt disinformation at any stage are unlikely to be perfectly reliable, so the best approach to defending against disinformation would by a combined hybrid approach that includes multiple interventions aimed at each of the three steps in the megaphone.

This megaphone model (production, distribution, consumption) is also a useful starting place for summarizing possible solutions to the challenges of disinformation. Most proposed policy interventions seek to affect one or more of the three stages. If further divided based on who might undertake or enact the policy intervention, the summary becomes complete. The remainder of this section describes three possible policy actors (civil society, social media platforms, and governments) and considers the kinds of actions each might take to affect the three stages of the megaphone.

The first category of counter-disinformation policy actors is **civil society, to include individual citizens, civil society groups and organizations, and academic and research institutions**. Considering the role for civil society across the stages of the megaphone, there is little that civil society actors can do to impede the production of disinformation. Individuals and groups can engage as citizens and avoid generating disinformation themselves; disinformation is not a sphere where one can "fight fire with fire." Individuals and civil society groups can generate legitimate and truthful content so that there is still genuine speech as an alternative to inauthentic or dishonest speech.

Further along the megaphone, in distribution (and redistribution and amplification) there is more of a role for civil society. Individual citizens can leverage the power of credible voices, and can identify, call out, and report disinformation and disinformation actors. The importance of even a single, credible, voice

saying "no, that isn't so" is undeniable (and, we should not overestimate the power of a single authentic voice crying out against a maelstrom of inauthentic voices). Civil society organizations have even more opportunities to leverage the power of collective action. Coupled with research efforts and efforts to identify and attribute inauthentic accounts and online behaviors, civil society groups can engage in "naming and shaming" or other forms of reporting on disinformation actors. Groups can also engage in more positive and persistent engagement with disinformation propagators, "trolling for truth" and mobilizing the power of mockery – the informal North Atlantic Fella Organisation's (NAFO) use of Shiba Inu avatars and memes to mock Russian aggression and disinformation is an example of this.[24] Academic, quasi-academic, and research organizations can contribute to fact-checking and to media literacy, both of which have the potential to be cornerstones of efforts to slow the distribution of disinformation. Media literacy efforts can increase the likelihood that someone who sees disinformation becomes skeptical before reposting or sharing it. This coupled with fact checking resources, can slow the spread of disinformation. If a potential spreader is cued to the possibility of disinformation by something they learned as part of a media literacy effort, and then goes to a fact-checking site and sees the disinformation is debunked, they are much less likely to spread it.

This of course extends to the third stage of the disinformation megaphone, consumers, too. Academic and research media literacy education and fact checking can help consumers to identify and resist disinformation. And individual citizens can be on their guard, pursue media literacy education, increase their awareness of disinformation techniques and themes, make regular use of fact-checking sites, cross-check their facts with multiple legitimate sources, etc. And, this cannot be the only element of an approach to disinformation defense. Do not place the entire burden on consumers. Humans, even intelligent, trained, and engaged consumers, still have moments of weakness and considerable general human vulnerabilities to overcome, and require considerable additional support to be able to reliably avoid or overcome disinformation.

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[24] Michael Drummond, "Ukraine's internet army of 'fellas' are using dog memes to fight Russian propaganda—and they've raised $1m for the army too." *SkyNews*, Jan. 24, 2023.

The second category of counter-disinformation policy actors is the **social media platforms** themselves. Those in charge of policies for social media platforms have policy options to help thwart disinformation at all points along the megaphone. To help reduce disinformation in the production phase, the platforms have several options. Currently, all of the major social media platforms have terms of service and governing rules and have some form of content moderation to enforce those rules. Both the terms of service and moderation practice are far from perfect and provide opportunities for improvement. For example, most platforms have stated policies against inauthentic accounts, but generally fairly limited enforcement against them. This is in part because of perverse financial incentives; advertising revenue is usually tied in part to overall user/subscriber numbers, which are artificially inflated in favor of the platforms by the presence of active inauthentic accounts. While there may be reputational incentives for platforms to be seen to crack down on inauthentic accounts, there are contradictory financial incentives.

One part of social media platform content moderation this is reasonably successful is efforts to prevent and remove the posting of child sexual abuse material (CSAM). Space is insufficient to go into too much detail here, but using widely available automated tools, much CSAM is removed from most social media platforms before such content is ever even posted.[25] Even if disinformation is too difficult to recognize to allow automated prevention of it ever being posted, producing disinformation could be explicitly restricted by platform rules, and once identified by human moderators, could be enforced more stridently through deplatforming/account termination, and more resilient efforts to prevent users caught propagating disinformation from simply opening a new account. Oh, and increasing the number of human content moderators, the languages in which content moderation takes place, and the automated tools available to support content moderation are all contingent on investment choices by individual social media platforms.

There are even greater opportunities for platforms to stem the spread of disinformation in the distribution stage of the megaphone. While platforms guard their proprietary content promotion algorithms jealously, these could be used in conjunction with validated fact-checking sites to demote known false claims and deprioritize content generated by users who have a history of starting or spreading disinformation. Of course, such approaches include the risk of alienating users who believe disinformation and also risks the appearance or the reality of politically-motivated bias. Another approach that could side-step some of these challenges employs warnings to users when they are about to post or share disinformation (as determined by an automated process), noting that the content they are sharing has been debunked and pointing them to fact-checking sites, or noting that the content appears to violate platform policies and asking them to confirm that it is in accordance with policies before they post it. [26] Such an approach has several advantages: it slows the spread of false content without actually impeding anyone's freedom of expression (a user can simply click past the warning and post the false material), and it gives platforms more standing to eventually impose consequences on a user if their content does indeed violate platform policies because they ignored a warning that it appeared to do so and posted the content anyway.

Platforms can do more to help consumers recognize and resist disinformation at the end of the megaphone, too. Platforms could promote media literacy through targeted optional interventions, bite-sized instructional bits that share disinformation techniques and themes to be on guard against with users.[27] Platforms could offer free advertising slots to civil society organizations that produce media literacy education to micro-public service announcements, or ads that link to fact checking sites or more extensive media literacy promotion activities. Platforms could use fact-checking sites to provide "stoplight" assessments of all content to assist users in assessing its credibility. Though a combination of the hue and the size of one or two stoplight indicates, users could learn, quickly and visually, whether content was validated by multiple fact checking sites (green), disputed (red), or too new to be sure (amber), with similar assessments related to the source of the content and its historical record for facticity.

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[25] Montgomery, Kathryn C., Jeff Chester, and Katharina Kopp. "Social Media Platform Safeguards for Whom? Assessing Tech Industry Strategies for Protecting Children and Shielding Advertisers." Center for Digital Democracy, 2022.

[26] Christopher Paul and Hilary Reininger, "Platforms Should Use Algorithms to Help Users Help Themselves," Partnership for Countering Influence Operations, Carnegie Endowment for International Peace, 2021.
[27] Reininger, Hilary, #KeepingItReal: Improving Social Media Users' Resistance to False Information during Elections. Santa Monica, CA: RAND Corporation, 2021.

The third category of potential counter-disinformation actors is **governments**, including national governments, state or local governments, and international governing bodies. Governments can take a range of actions that can potentially affect disinformation in all three stages. Governments can pass regulations, either forbidding and sanctioning certain behaviors or placing requirements on companies or industries. Governments can undertake enforcement actions against those who have violated laws or regulations or other types of active interventions. Governments can also use their authoritative positions for softer forms of intervention, encouraging or supporting actions by other stakeholders, or by citizens. Finally, governments can work in partnership with other organizations, either as funders or grantors, or by joining in public-private partnerships.

To reduce the production of disinformation governments could regulate social media platforms in a way that seeks to hold them accountable for the content that appears on their platforms. This would be particularly difficult legislation to get exactly right at any precise moment in time, and would be compoundingly more difficult as technology continues to evolve (which is to say, constantly). Government regulation of social media to combat disinformation production or distribution might have positive effects, but it is also reasonably likely to have unintended consequences or miss some important aspect of the problem. That is, to use an English expression, government intervention is likely to be to some extent "ham handed." This would not be good. However, the *threat* of regulation might be good. That is, if a legislature takes up the issue of regulation seriously, and poses a challenge to the social media platforms that they either need to improve their efforts to combat disinformation voluntarily or the government will impose regulations requiring them to do so, social media companies would be strong incentivized to improve the effectiveness of their counter-disinformation efforts lest they be subject to ham-handed formal regulations.

In terms of actions and enforcement actions, there is ample opportunity for governments to act to reduce the production of disinformation. Enforcing existing laws, indicting foreign propagandists (similar to US

Department of Justice indictments against Chinese hackers),[28] or using technical means to disrupt the operations of foreign propagandists are all possible actions. Government entities can also report terms of service violations to social media companies, helping to target their content moderation efforts; such reporting might be cued through intelligence collection, for example.

Turning to possible government efforts to reduce the distribution of disinformation, regulations might force transparency about how content is promoted by social media platforms, or reduce the flow of disinformation via AdTech. As noted previously, the threat of such regulations might encourage social media platforms to find more creative ways to accomplish these same objectives without regulation. Somewhat pro-social and positive government actions in this space (as opposed to enforcement actions) might include engagement in correct and verified content generation, fact-checking, pre-bunking based on intelligence (like the forewarning of Russia's planned false flag operations before invading Ukraine in February of 2022),[29] public service announcements, and media literacy education. Though in all cases governments need to be careful even in these "positive" actions to avoid the appearance or the reality of political bias against opposition parties. So, such efforts are usually best executed in partnership with non-partisan organizations such that the government provides the funding and the authority, while the non-partisan organization works to slow the flow of disinformation with a layer of insulation from domestic political considerations. Public private partnerships could also share information from government to the private sector and back, provide analytic support to organizations seeking to combat disinformation, and engage with grassroots organizations. In partnership or not, governments can work to raise awareness of disinformation, how it works, how it spreads, and common techniques, decreasing unwitting spread and consumption to some extent.

Many of these same sorts of efforts (positive actions, with or without private partner organizations) that can contribute to reducing the spread of disinformation can also reduce consumption. These include efforts that contribute to awareness, media

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[28] "Four Chinese Nationals Working with the Ministry of State Security Charged with Global Computer Intrusion Campaign Targeting Intellectual Property and Confidential Business Information, Including Infectious

Disease Research." Press Release, United States Department of Justice, July 19, 2021.
[29] Julian E. Barnes, "US Exposes What It Says Is Russian Effort to Fabricate Pretext for Invasion," *New York Times*, Feb. 3, 2022.

literacy education, availability of fact checking, etc. Table 1 summarizes some of these possible contributions to disrupting disinformation across

	Production	Distribution	Consumption
Civil society	Engage as citizens Generate legitimate content	Leverage the power of credible voices Report disinformation/actors Naming and shaming "trolling for truth" Fact-checking Media literacy promotion	Be responsible consumers Fact-checking Media literacy promotion
Platforms	Tighten terms of service Enforce terms of service Better/more moderation Increased investment in moderation Content moderation in more languages	Links to fact-checking Prompt users for confirmation Change content promotion algorithms	Targeted media literacy interventions Free public service announcements "Stoplight" assessments of content and sources for all content
Governments	Regulation Threat of regulation Enforcement actions	Regulation Threat of regulation Point out terms of service violations Public/Private Partnerships Fact-checking Pre-bunking/forewarning Media literacy education	Fact-checking Pre-bunking/forewarning Media literacy education
	←--------------------Raise awareness---------------------→		
	←--------------------------Promote changes to incentive structures------------------------→		
	←--------------------------------Share information---------------------------------→		
	←--------------------------------Provide analytic support----------------------------------→		

Table 1 Summary of Some Possible Approaches to Countering Disinformation

production, distribution, and consumption by the range of counter-disinformation actors discussed.

The Disinformation Problem in Japan

Is unclear, at least to me, how much of problem disinformation in Japan currently poses. However, there is certainly the potential for future threat (from the PRC, in particular). As of 2021, a RAND study found relatively few clear-cut cases of Chinese disinformation on social media in Japan. But this is unlikely to remain the case in the future. As the authors note:

> This is not for lack of motivation or opportunity: Japan and the Philippines are US allies, and

Singapore is a key staging point for the US military. This makes them attractive targets for a rising China looking to expand and cement its reach over the Indo-Pacific, and all three states have cleavages that China theoretically could exploit through disinformation on social media if it chose to do so. Singapore is a multiethnic society; the Philippines has economic, religious and ethnic divides and, recently, a precarious relationship with the United States; and Japan already has naturally occurring resentment toward US basing in Okinawa. Ultimately, Chinese disinformation is almost more striking for its absence than its presence.[30]

While there is limited evidence of PRC disinformation efforts targeting Japan to date, recent Russian efforts have been reported, and are concerning. Maiko Ichihara notes that "[e]xtensive Russian disinformation and propaganda about the Russia-Ukraine war have been disrupting the discursive space in Japan. The impact of this disinformation is unprecedented in Japan…"[31]

This aggressive Russian disinformation campaign, and its reported impact, bode ill for the future. How vulnerable is Japan to disinformation, both in general and relative to other countries. There are reasons for both pessimism and optimism.

On one hand, there are reasons to believe that Japan might be comparatively resilient in the face of disinformation. Japanese society is relatively homogonous ethnically and linguistically, and Japanese politics has a lengthy period of one-party rule, so, there are fewer social and political divisions

[30] Cohen, Raphael S., Nathan Beauchamp-Mustafaga, Joe Cheravitch, Alyssa Demus, Scott W. Harold, Jeffrey W. Hornung, Jenny Jun, Michael Schwille, Elina Treyger, and Nathan Vest, *Combating Foreign Disinformation on Social Media: Study Overview and Conclusions*. Santa Monica, CA: RAND Corporation, 2021.

[31] Ichihara, Maiko, "How to Tackle Disinformation in Japan: Lessons from the Russia-Ukraine War," in Ryan Hass and Patricia M. Kim (eds) *Democracy in Asia*, Brookings, 2022, pp 36-43.

to exacerbate than in many other countries. Further, compared to the United States and Europe, Japan's media environment is less polarized, is more trusted by the population, and online news is less important than traditional news in Japan. [32] Limited use of online news by the Japanese could help reduce the spread of disinformation in Japan.[33]

On the other hand, there are reasons for concern regarding Japan's vulnerability to disinformation. While widespread, Japanese homogeneity is not universal. Okinawa, for example, has its own distinctive culture, cuisine, and dialect. And, American military forces are still based in Okinawa. Cultural differences, occasional tensions with US forces, and physical proximity to China create more fertile soil for disinformation. Also, according to Freedom House's 2022 annual report on internet freedom, Japan is classified as a "free" internet country, with few obstacles to internet access and protections for freedom of expression online in place.[34] While from the perspective of democracy and personal freedom this is a good thing, it does leave potential propagators of disinformation a relatively free hand. Regarding regulations against disinformation, the Japanese government still prefers a non-regulatory approach, so there are currently no Japanese laws against disinformation or fake news.[35] Instead, Japan's citizens are expected to rely on fact-checking to protect them from disinformation, and many news sources, such as national newspapers *Nikkei*, *Asahi*, *Mainichi*, and *Sankei*, regional newspapers such as *Ryukyu Shimpo* and *Okinawa Times*, and national and regional television broadcasters such as NHK, Nippon TV, and Chukyo TV all have some sort of fact checking function.[36] However, all of these fact checking efforts involve human fact-checking and have relatively modest staffs, and surveys suggest that few Japanese make regular use of fact-checking websites.[37]

Options for Countering Disinformation in Japan

Considering all of these things together, what are attractive options for countering disinformation in Japan? Policies and approaches need to match both the threats/challenges and the context. And, while solutions need to be matched to the context, they should recognize the nature of the problem as embodied in the three part disinformation model (production, distribution, consumption) and include response elements aimed in all three places. While I claim some expertise regarding disinformation I am much less expert on Japan and the Japanese media environment and so recognize that other might be better positioned to take my general advice (see Approaches to Countering Disinformation, above) and make feasible proposals for Japan. There is likely a need for further research to ascertain which of the various possibilities are best suited to Japan given its unique history, distinct government characteristics, its culture and polity, and the current and possible future threat from disinformation. Nonetheless, I will attempt to frame some options and make some suggestions.

Beginning with production, to my understanding, there are virtually no obstacles in place for the production of disinformation on social media by individuals or foreign organizations in Japan. The possible exception is a number of laws in place in Japan posing legal consequences for individuals who obstruct business by spreading fake news, or who defame others by alleging false facts or facts not in the public interest.[38] However, I do not know how many cases have been brought under any of these laws, and how practically enforceable they are. Considered in the disinformation model employed here, such prosecutions certainly would not happen on a timescale that would do anything about distribution or consumption of disinformation, though might

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[32] Ogasahara, M. (2018), Media Environments in the United States, Japan, South Korea, and Taiwan. In Kiyohara, S., Maeshima, K., and Owen, D. Eds. *Internet Election Campaigns in the United States, Japan, South Korea, and Taiwan*. Springer International Publishing, 79-113.

[33] Ogasahara, M. (2023), this volume.

[34] Shahbaz, Adrian, Allie Funk, and Kian Vesteinsson, 2022. *Freedom on the Net 2022: Countering an Authoritarian Overhaul of the Internet, Freedom House*, 2022. Available at: https://freedomhouse.org/report/freedom-net/2022/countering-authoritarian-overhaul-internet

[35] Japanese Ministry of Internal Affairs and Communications, 2019. Puratto fo-mu sa-bisu ni kansuru kenkyukai saishu houkoku sho (an) [In Japanese], as cited in Cheng, John W.; Mitomo, Hitoshi; Seo, Youngkyoung; Kamplean, Artima (2020): "The lesser evil? Public opinion towards regulating fake news in three Asian countries," ITS Online Event, 14-17 June 2020, International Telecommunications Society (ITS), Calgary;

Ichihara, Maiko, "How to Tackle Disinformation in Japan: Lessons from the Russia-Ukraine War," in Ryan Hass and Patricia M. Kim (eds) *Democracy in Asia*, Brookings, 2022, pp 36-43.

[36] Ichihara, Maiko, "How to Tackle Disinformation in Japan: Lessons from the Russia-Ukraine War," in Ryan Hass and Patricia M. Kim (eds) *Democracy in Asia*, Brookings, 2022, pp 36-43.

[37] Ichihara, Maiko, "How to Tackle Disinformation in Japan: Lessons from the Russia-Ukraine War," in Ryan Hass and Patricia M. Kim (eds) *Democracy in Asia*, Brookings, 2022, pp 36-43; Cheng, John W.; Mitomo, Hitoshi; Seo, Youngkyoung; Kamplean, Artima (2020): "The lesser evil? Public opinion towards regulating fake news in three Asian countries," ITS Online Event, 14-17 June 2020, International Telecommunications Society (ITS), Calgary.

[38] Kashish Makkar, "A Primer on the Regulation of Fake News in Asia Pacific," 2020, *Law Asia.*

perhaps act as a deterrent against production of disinformation.

For broadcasters and journalists there are laws and efforts in place to promote responsible journalism and reduce the production and distribution of disinformation by broadcasters. These include Japan's Broadcasting Act of 1950, which regulates broadcasters and establishes a system to prevent programs from distorting the facts, and the Broadcasting Ethics and Program Improvement Organization, a non-governmental organization established to improve the quality of broadcasting and promote higher ethical standards in broadcasting.[39]

These policies should slow the distribution and redistribution of disinformation by journalists and in broadcast media, but are not intended to (and will not) impact the spread of disinformation by individual consumers online. More can and should be done in Japan to reduce and deter the production of disinformation. This might include regulations requiring foreign media sources with poor track records regarding veracity to be subject to regulation, or a base regulation prohibiting the intentional production of disinformation which can then be used to sanction bad actors, or to make formal accusations or publicize bad actors (naming and shaming).

Considering the distribution stage in the disinformation model, I am aware of several efforts in Japan. The first is a voluntary Code of Conduct in which social media company pledge to help minimize the spread of disinformation in Japan.[40] Though results from this effort are unclear, this is promising, as it is a mechanisms by which social media platforms can be encouraged to do better. There might also be opportunities to report on the success of Code of Conduct activities, perhaps creating a situation in which platforms compete with each other to earn a reputation of security against disinformation that would then be attractive to consumers.

A second effort is a public-private team in Japan to fight disinformation on social media.[41] This effort has many aspects, but my understanding is that one aspect involves opportunities for government and

credentialed experts to comment on contentious content, with the expert commentary "pinned" to the top of the discussion and serving as immediate fact-checking. This has the advantage of being impossible to astroturf away and bury the pinned comments, and also associates the fact-checks with real named individuals rather than generic organizational representation. Provided the individuals involved work to protect their credibility, that has considerable promise, and should be expanded. As an additional step, new content that is similar to prior disinformation (as determined by algorithms) could have prior expert commentary automatically associated with it, immediately putting the fact-checking with the new or repeated contentious claims.

A third effort is indicated in Japan's 2022 National Security Strategy, which announces the intent to establish a new structure within the government "to aggregate and analyze information on disinformation and others originated abroad, to strengthen external communications, and to enhance cooperation with non-governmental agencies." [42] Future plans also include the adoption of artificial intelligence-powered tools to collect and analyze disinformation on social media and collaboration with private-sector experts to enable the government to catch and counter disinformation early and reduce spread.[43]

Turning to consumption, I've read about a number of media literacy efforts in Japan, and all are to be applauded. However, media literacy alone is not a sufficient solution to the problem, because even the most well-prepared humans are still vulnerable to being misled (less vulnerable, but still vulnerable). Efforts to protect consumers by reducing the amount of disinformation they are exposed to (production and distribution), or by presenting warnings or fact-checking at the point of exposure, are needed to increase protection during the consumption stage.

As a final note, combatting domestic disinformation poses slightly different challenges than combatting foreign disinformation. It is easy in a democracy to line up to oppose foreign disinformation: harmful lies from outside of the polity have no place in the political process. Contending with domestic disinformation requires more nuance and a softer

[39] Ibid

[40] Kyodo, "Japan Plans to Take Steps Against 'Fake News' by June," *Japan Times*, Jan. 14, 2019.

[41] Kashish Makkar, "A Primer on the Regulation of Fake News in Asia Pacific," 2020, *Law Asia*.

[42] *National Security Strategy of Japan*, Provisional English Translation, December 2022, Ministry of Foreign Affairs of Japan

[43] Asahina, Hiroshi, "Japan taps AI to defend against fake news in latest frontier of war: Updated security strategy calls for stronger response to disinformation campaigns," *Nikkei Asia*, Jan. 9, 2023.

touch. To some extent, domestic disinformation is part of protected free speech, where competing political parties offer different aspirational views of reality. If domestic disinformation were to be blocked, it would be very easy to imagine the process by which truth is adjudicated from falsehood becoming politicized, or of being accused (truly or not) of being politically biased. Thus regulations aimed at disinformation can be more forceful when directed at foreign sources.

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