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Tourism and the COVID-(mis)infodemic

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Abstract:	In addition to being formally defined as a pandemic, COVID-19 has been classified as an "infodemic" and "(mis)infodemic". As an "infodemic", the information environment on COVID-19 is constantly evolving, with emerging scientific findings, political responses, media coverage, and individual impressions all shared on social media. Initial positions on behaviours and potential treatments were presented and then discarded due to low efficacy or improper research procedures. Further, there has been a fragmented geopolitical response with differing political systems exhibiting varying approaches to decisionmaking and health outcomes which has led to confusion of the public. As a "misinfodemic", COVID-19 discussions have also attracted actors seeking to share misinformation enabled and exacerbated by social media networks, which include willful distortions as well as conspiracy theories. Combined, this (mis)infodemic can change risk perceptions of travel resulting in travel patterns based on technological, regulatory and perceived behavioural homophily.

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1. Introduction

The COVID pandemic has been classified as an “infodemic” with emerging scientific findings, political responses, media coverage, and individual impressions all shared on social media (Bunker, 2020). COVID-19 has created conspiracy theories around the origins of the virus (lab-created bioweapon), prominent individuals (Bill Gates), technology (5G), foreign countries (China destabilizing the west) and local governments (Shahsavari, Holur, Tangherlini, & Roychowdhury, 2020). Many of these theories are not new and have been extensions or elaborations of existing conspiracy theories. For example, scepticism about new technologies such as 5G has been linked to a conspiracy theory that the COVID-19 pandemic was caused by the presence of 5G towers (Jolley & Paterson, 2020). The pandemic has also been framed as a hoax or “plandemic” in which politicians, social activists, and medical practitioners have conspired to mislead the population about the effect of COVID-19. A distinct stream of conspiracy theories has arisen around cures and treatments for COVID-19. While some health treatment approaches are being formally investigated by medical practitioners (hydroxychloroquine), conspiracy theories have exaggerated the efficacy of these approaches (Bertin, Nera, & Delouvé, 2020).

Entities sharing misinformation seek to reinforce, not challenge the beliefs of people who follow these theories by actively participating in their online communities. Increased levels of social media participation with actors who share misinformation are associated with increased health risk perceptions (Puri, Coomes, Haghbayan, & Gunaratne, 2020). These actors include campaigners who are activists who promote misleading narratives on social media. They may be supported by political organizations (including national governments) who see misinformation as a means of reducing trust in authority and hence the legitimacy of a given government. Entrepreneurs use misinformation narratives to sell products and services. Both of these actors attempt to recruit via evangelizing with online communities, composed of individuals with informal (conspiracy) and formal (political, religious ideologies, and familial relationships) belief structures that can influence risk perceptions of COVID-19.

Restarting tourism and experiences based around mass gatherings such as events and festivals will require the minimization of COVID-19 infections to reduce health risks. Realistically, this can only be accomplished via stringent monitoring of the local population, adherence to behavioural guidelines, and development of a vaccine. Studies have however reported non-compliance with preventative behaviours such as social distancing and mask-wearing (Imhoff & Lamberty, 2020). Beyond non-compliance, activists have mobilized virtually and physically against institutions, lockdown measures, and health compliance measures. These protests have received extensive media coverage and have attracted support from several anti-government groups as well as “Qanon” and “Boogaloo” conspiracy theorists (Brennan, 2020).

2. (Mis) Infodemic Impact on Travel

Initial survey findings suggest that a significant percentage of the population of the United States, France, and the UK exhibit vaccine hesitancy and will not take a COVID vaccine even if widely available (DeRoo, Pudalov & Fu, 2020). Combined with

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3 legitimate uncertainties regarding technology, regulation and non-compliance
4 (including vaccine hesitancy), the (mis) infodemic creates issues for travellers and
5 destinations. For the former, countries that have not eliminated the virus may be a
6 health risk and increased costs as their home country may apply quarantining and
7 other health checks on return. For the latter, there may be a renewed risk of infection
8 from countries with non-mandatory vaccine rules along with social discomfort from
9 natives who may perceive tourists as infection vectors. Since health risk perceptions
10 and vaccine take-up can vary by background, monitoring schemes may become
11 discriminatory if not properly designed and an understanding of risk perceptions will be
12 crucial.
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15 **2.1 Technological Country Travel Homophily**

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17 The current “vaccine race” with multiple types under development exacerbates
18 geopolitical issues in terms not only of different safety standards but also in using the
19 vaccine as a possible political weapon for alliances or accusations of espionage and
20 sabotage (LaFraniere et al., 2020). This differs from the scenario for say, yellow fever
21 for which there is a single vaccine. Russia has recently faced criticism for allegedly
22 skipping testing phases for the locally produced vaccine (The Telegraph, 2020), while
23 China has already administered a vaccine to army personnel (Westcott, 2020). There
24 may be the emergence of travel corridors between locations that have adopted similar
25 types of vaccines. Tourists’ risk perception may be affected by a destination’s adoption
26 (or lack) of a certain vaccine type. Further, public health organizations in host
27 destinations may not trust the efficacy of a vaccine that cannot be easily verified by
28 local officials. These factors suggest that there may be emergent preferential travel
29 patterns between countries based on the adoption of vaccine technology.
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33 **2.2 Regulatory Country Travel Homophily**

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35 In addition to the type of vaccine, the veracity of COVID-19 vaccine certificates will
36 need to be established and monitored. This issue will be further complicated where
37 there are border crossings, spaces of transit (such as cruise ships, aeroplanes, or
38 airports) or if tourists enter international waters where national laws do not necessarily
39 apply. A related issue is tourist tracking via contact tracing apps. While countries like
40 South Korea have been highly successful with their contact tracing application, in
41 Europe most efforts have had only partial success, mostly due to low download rates
42 (Halpin & Busvine, 2020). Since countries have taken differing approaches to respond
43 to the pandemic and host countries may set up preferential travel corridors for visitors
44 from similar health regimes. For example, Sweden’s recent exclusion from travel to
45 Denmark shows that certain destinations are likely to be excluded from travel corridors.
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48 In this case, concepts like cultural distance in travel choice and risk perception might
49 change or be added to a “vaccine regime” distance, where tourists incorporate health
50 regulatory risks that are accessed via an examination of vaccine laws and regulation
51 when choosing a destination, possibly influencing future tourism development at
52 destinations (Lee, & Chen, 2020). This might be particularly delicate if inbound travel
53 requires the download of a tracking app. The risk perception of tourists to expose their
54 data to another government might be particularly high, especially if this is related to
55 smartphone tracking and other types of smart technologies.
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2.3 Behavioural Country Travel Homophily

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3 Conspiracy theorists have stated that the pandemic was engineered with the purpose
4 to create totalitarian surveillance states, and the cultural traits of Western countries
5 might make the application of mass vaccination and monitoring difficult. While during
6 the pandemic, countries have promoted themselves as a relatively COVID-free zone
7 (Beirman, 2020) with rigorous testing (e.g. New Zealand, Faroe Islands), this might
8 lead to others branding themselves as COVID-restrictions free zones, where sceptics
9 are not requested for tests, quarantines or vaccine passports. This is particularly
10 dangerous for developing countries which might be heavily hit by the recession and
11 might want to attract wealthy vaccine-hesitant tourists, leading to a spiking infection
12 rate within the destination.
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15 The travel risk perception here is thus likely to increase. Host and guest relations might
16 be plagued by suspicion as the 'other' might have different levels of vaccine
17 compliance. Government initiatives to attract COVID vaccine sceptics might face a
18 backlash from the local people, as their health risks in daily life increases. Last,
19 countries adhering to non-vaccine compliant travel corridors will inevitably be
20 perceived as high-risk destinations by the general public. These factors suggest the
21 emergence of travel patterns based on perceived host/visitor perceptions of
22 restrictions.
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26 27 **3. Future Research Recommendations**

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29 Researchers have been encouraged to go beyond the obvious to generate useful
30 theoretical insights from the Coronavirus pandemic (Zenker & Kock, 2020). This opens
31 a gateway for future tourism research that incorporates the discussed concepts
32 (conspiracy theories, vaccine hesitancy) as part of theoretical frameworks to examine
33 travel behaviour as described in this letter. While lessons can be derived from previous
34 experience with infectious diseases, the (mis) infodemic may change the future host
35 and visitor behaviour. While research has examined the relationship between travel
36 and infections, little work to date has examined the impact of host/tourist misbehaviour
37 and future travel behaviour (Farzanegan, Gholipour, Feizi, Nunkoo, & Andargoli, 2020).
38 Overall, if the (mis) infodemic continues to encourage negative behaviours of travellers
39 and host populations, the tourism industry may take a long time to recover to its
40 previous scale. As a result, researchers may be at risk of examining a phenomenon
41 (large scale tourism) that may no longer exist in its previous form. Research, therefore,
42 needs to consider the impact of the (mis) infodemic on travel behaviour and outcomes.
43 Detailed recommendations are offered as follows.
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46 The first recommendation is the development of future quantitative research into the
47 impact of the COVID "infodemic" on Traveller vaccine hesitancy. Initial findings from
48 the pandemic have identified that travellers may exhibit concerns about vaccines due
49 to the influence of their non-travel knowledge-gathering habits and decision-making
50 processes (Adongo, Amenumey, Kumi-Kyereme, & Dubé, 2020) and that their travel
51 behaviour might change post-pandemic (Li, Nguyen, & Coca-Stefaniak, 2020).
52 Incessant media and social media coverage of evolving health and vaccine information
53 may increase the salience of these issues and therefore their importance in decision-
54 making. Further, the perceived inconsistency of stakeholder (medical, economic and
55 political) perspectives across countries may also induce uncertainty in potential visitors
56 of this salient issue, reducing visitor confidence in health provisions of foreign
57 destinations generally and especially among groups who exhibit vaccine hesitancy.
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3 The role of non-health-related mindsets could also be further explored by extending
4 previous work that has examined the relationship between xenophobia and travel
5 disease avoidance (Kock, Josiassen, & Assaf, 2019). While the findings of that study
6 suggested that people who hold xenophobic beliefs may prefer travel vaccination,
7 opposition to COVID-19 measures has attracted support from political entities that are
8 comfortable with xenophobia (Bolsover, 2020). It is not known if these beliefs may
9 influence willingness for COVID-19 travel vaccination or to host foreign visitors from
10 countries with different technological and regulatory regimes. It may also be necessary
11 to identify the travel behaviours of sceptical tourists, as activists have been willing to
12 use deception to avoid COVID-19 restrictions. On the other hand, it will be vital to
13 understand if other tourists would avoid areas where vaccines are not mandatory to
14 minimize health risks. Future quantitative research can compare insights from the
15 Travel vaccination scale (Adongo, Amenumey, Kumi-Kyereme, & Dubé, 2020) and
16 disease avoidance research (Kock, Josiassen, & Assaf, 2019) across countries to
17 identify the impact on host-guest relations if hesitancy levels between visitors and
18 residents significantly differ.
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22 The second recommendation is to empirically verify the extent to which Covid
23 misinformation influences tourists' future choice of destinations. Fedeli (2020) raised
24 the issue of fake news in a tourism context, highlighting several examples where
25 mendacious information has impacted the tourism industry. Accordingly, visitors to Bali
26 were detracted by rumours spread about a volcanic eruption and misinformation
27 regarding the murder of a Polish tourist in Egypt reduced the number of his countrymen
28 from visiting the country. While causal relationships between misinformation and tourist
29 behaviour may be hypothesized from these cases, empirical evidence for this remains
30 scarce at best. As the availability of information is fundamental for tourists in terms of
31 knowledge construction about places, products and activities, fake news can influence
32 the dynamics of information gathering and processing. The recent emergence of "deep
33 fakes", that can use machine learning techniques to create realistic depictions of
34 events that are not real, can also create misinformation that affects destinations (Kwok
35 & Koh, 2020). Technological developments also have seen the increased use of
36 automated accounts on social media that can rapidly disseminate content in online
37 communities, providing high visibility of misinformation to potential visitors (Williams,
38 Ferdinand & Bustard, 2020). As hyper-reality sees fake news becoming more real than
39 reality itself, fake news could encourage negative beliefs about the notion of tourism
40 places and products for potential travellers (Berkowitz & Schwartz, 2016). In addition
41 to misinformation, which can be independently fact-checked, Covid conspiracy
42 theories cannot be easily falsified (Popper, 2006). Efforts by social media and
43 traditional media organizations to limit sharing of conspiracy theories ironically validate
44 their central premise and may strengthen beliefs (Borel, 2017). Related research could
45 also examine the efficacy of fact-checking efforts.
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50 The third recommendation is the adoption of a symbolic interactionist framework to
51 examine how interaction via social media about COVID-19 information and
52 misinformation can influence place attachment. This issue relates to the processes of
53 knowledge creation and dissemination in tourism, which are based on the shared
54 construction of reality and narratives among tourists (Noy 2005). Blumer's (1969)
55 theorization posited that individuals' behaviour is driven by symbolic meanings
56 acquired through interaction with significant others, which could include media
57 personalities. Mass media effects have been modelled as a proxy for social interaction
58 (Hosany, Buzova, & Sanz-Blas, 2020). Social media platform users may be motivated
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3 to perform a particular action (e.g., the impetus to visit/avoid) toward the mediated
4 object (e.g., a featured place) based on the meaning acquired by interaction or
5 observation of prominent accounts. The impact of media has been shown in the impact
6 of television and movies on Tourist destination perceptions (Wen, Josiam, Spears, and
7 Yang, 2018). This research can be extended to examine how interaction with
8 antivaccination actors and content via social media may shape place meaning and
9 subsequent visitor actions.
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12 The fourth recommendation is the examination of the role of the tourism industry in
13 responding to the (mis) infodemic. Research should aid destination managers in the
14 implementation of monitoring schemes for infections, investigating tourists'
15 perceptions of airport testing and quarantine measures. In terms of vaccine-hesitancy,
16 scholars should explore the role of tourism organizations in public health going beyond
17 compliance with regulations and relating to encouraging and supporting vaccinations
18 and positive behavioural efforts. In other words, research should investigate the role
19 that tourism actors can play in promoting public health in the immediate context of the
20 pandemic and beyond. Another stream of research is needed to investigate the
21 measures that tourism organizations can take to protect themselves from the effects
22 of misinformation. In all of these areas, academics can go beyond examination of
23 phenomena and theorising to support public education efforts and facilitate knowledge
24 exchange among stakeholders (Cai, McKenna, Wassler & Williams 2020)
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