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Korean mothers' morality in the wake of COVID-19 contact-tracing surveillance

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ABSTRACT

The Korean government collects and releases sociodemographic information about people infected with COVID-19, their travel histories, and whether or not the patients wore masks. Korean mothers then upload this information on the boards of online groups called "mom cafes." Based upon a digital ethnography of 15 "mom cafes," we examine how Korean mothers understand the travel histories of virus patients and explore the relationships between morality and materiality in the context of infectious disease surveillance. The main findings reveal that mom cafe mothers form moral personhood based on information gathered about artifacts, places, and the mobility of patients. They tie patients' travel histories inextricably to moral identities. Non-maleficence is central to Korean mothers' morality. This morality appears through the material discourses of artifacts, places, and mobility. A face mask becomes one such hallmark of morality. It is a requisite for moral persons. Those who visit crowded places, such as churches, clubs, and room salons, become immoral because they can be easily infected and spread the virus to their families and communities. To mom cafe mothers, mobile patients, such as clubbers, appear less moral than those who self-quarantine due to the high infection rate of COVID-19. We conclude that morality in this context involves the materiality of artifacts, a sense of place, and the spatial mobility of people.

1. Introduction

When the COVID-19 pandemic struck, local Korean governments released information on virus patients in their regions. This information comprises the socio-demographic information of virus patients such as their age and gender, their travel histories, and whether or not they wore a mask. Korean mothers are very concerned about the safety of their families and keep watch over whether new patients infected with COVID-19 appear near their homes. Hence, they upload and share the travel history information of virus patients on internet group discussion boards called "mom cafes," which operate in most South Korean cities. Using this information, these mothers, like detectives, predict who the virus patients are, where they live, and what they do for a living. Mom cafes are replete with moral blame regarding the virus patients' travel histories. Their discourses form the moral personhood of the virus patients.

This research examines how Korean mothers understand morality in the wake of COVID-19 contact-tracing surveillance. The surveillance is based upon "three Corona Acts," namely, the Infectious Disease Control and Prevention Act, Quarantine Act, and the Medical Service Act. In response to the COVID-19 pandemic, on March 4, 2020, the above acts were amended to strengthen the penalty for COVID-19-related legal violations. Nevertheless, we analyze this surveillance in terms of moral rather than legal norms. This distinction is important because the Korean government did not execute a lock-down policy in 2020. The Korean surveillance system is heavily dependent on a sense of morality in the form of self-regulation rather than legal enforcement. Thus, the Korean approach has been touted as a democratic approach, as opposed to totalitarian surveillance (Harari, 2020; Parodi et al., 2020).

This paper contributes to the literature on public health surveillance (Fairchild et al., 2017a; Hepple, 2007). It denotes "the ongoing systematic collection, analysis, and interpretation of data, closely integrated with the timely dissemination of these data to those responsible for preventing and controlling disease and injury" (Thacker and Berkelman, 1988). For pandemics such as COVID-19, entire communities and populations are responsible for controlling its spread and are therefore subject to surveillance. Currently, media interest in COVID-19 surveillance is surging globally. It encompasses the issues of body and

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identity politics in terms of racism (Yan et al., 2020), human rights in terms of conflict between privacy and the common good (Kuo, 2020), and the tension between democracy and totalitarianism (Harari, 2020; Parodi et al., 2020). Meanwhile, academic research on COVID-19 surveillance is steadily rising (e.g., Couch et al., 2020; French and Monahan, 2020; Ram and Gray, 2020; Vitak and Zimmer, 2020), but empirical studies are still limited (e.g. DiMoia, 2020; Stevens and Haines, 2020).

While the literature has addressed the issues of privacy and democracy associated with COVID-19 surveillance, the present study delves into the relationship between morality and materiality in such context, offering a material perspective on the ethics of public health surveillance. Furthermore, by connecting morality to movement and location, this research contributes to studies on mobility (Urry, 2000) and place (Devine-Wright and Clayton, 2010; Gregory, 1994; Said, 2000). Specifically, this research examines the materiality of Korean mothers' morality in terms of the artifacts, places, and mobility of virus patients. We examine morality and materiality as discursive products of Korean mothers. Morality is related to human behavior, and travel history information accounts for the behaviors of COVID-19-positive patients. Morality is discursive, but it has materiality when popular discourses of travel history information deal with artifacts, places, and mobility. In particular, with respect to "artifacts," we address the role of masks in the formation of morality. By tracing the background of Koreans' mask-wearing behaviors, this paper provides a glimpse of why Korean people wear face masks well.

The remainder of this paper is organized as follows: Section 2 reviews the literature and establishes our theoretical framework. We then discuss our research methods and provide an overview of Korean COVID-19 surveillance. In the results section, we analyze morality based on three categories of materiality: 1) artifacts, 2) places, and 3) mobility. The concluding section highlights the main findings and implications of this research.

2. Literature review and theoretical framework

2.1. Infectious disease surveillance and morality

Infectious disease surveillance often presents an ethical dilemma between communitarianism and liberalism. It uncovers the tension between "the common good, equity, solidarity, reciprocity, and population wellbeing" (Fairchild et al., 2017a: e348) and "autonomy, privacy, and individual rights and liberties" (Fairchild et al., 2017a; see also Hepple, 2007; Selgelid, 2005). For instance, the SARS outbreak in 2002 forced the Canadian government to make difficult choices between individual freedoms and the common good with very limited information and short deadlines (Smith et al., 2004). Surveillance involving the monitoring and reporting of infected patients to the government and public raises serious concerns about privacy infringement, discrimination, and stigmatization (Bayer, 2008; Fairchild et al., 2017a; Singer et al., 2003).

There are two approaches to the moral aspect of public health surveillance. First, in light of normative ethics, the relationship between morality and surveillance is somewhat oppositional. This perspective focuses on the ethical obligation of surveillance and stresses responsible surveillance practices (Fairchild and Bayer, 2004; Fairchild et al., 2017a, 2017b; Hepple, 2007; Klingler et al., 2017). In contrast, in terms of descriptive ethics, morality is a social construct that is co-produced with public health surveillance (Reynolds et al., 2013). There are few studies of morality, as produced by, or as a tool of infectious disease surveillance.

Our study takes the latter position, considering how Korean mothers are constructing morality in the wake of COVID-19 surveillance. They create the moral identities of patients by discussing patients' travel histories, which are provided by local governments. As Frohmann (1994: 9) argues, social identities "do not derive from the self-reflexive acts of individual egos, but from traces of behavior pertinent to the apparatuses of surveillance." We posit that COVID-19 surveillance plays an important role in creating a boundary between moral and immoral, thereby shaping the imaginary of moral personhood as a personal identity. This morality is used as a source for blaming patients, or functions as a source of "governmentality" (Foucault, 2011), with the aim of controlling Korean people's lives during the COVID-19 outbreak.

This research also analyzes the relationship between morality and materiality. A body of literature on the sociology of medical ethics and bioethics has criticized the de-contextualization of morality by normative ethics and examined the relationship between ethics and society (e.g., DeVries et al., 2007; Fox, 1989; Hoffmaster, 2001; Weisz, 1990). However, materiality has received little attention in terms of what "the social" is in this field. Recently, scholars have sought to extend public health ethics to non-humans (Rock and Degeling, 2015). Likewise, new materialism has drawn significant attention in the sociology of medicine and public health over the past two decades (e.g., Fox, 2016; Mol, 2002). Although our study bears on poststructuralism, we delve into the materiality of morality in terms of the artifacts, places, and mobility of virus patients in the context of infectious disease surveillance.

2.2. Morality and artifact

Technical artifacts, such as CCTV and the internet, are essential for contemporary surveillance as well as "anti-surveillance camouflage" (Kim, 2016; Monahan, 2015). We investigate the role of the artifacts of those surveilled in the production of morality. Morality is not merely a human affair; materiality plays an important role in the moral decision-making of human agents. Indeed, there are several positions on the moral status of artifacts. According to Kroes and Verbeek (2014), some posit that artifacts are morally neutral and that human agents impose their morality, while others argue that artifacts are intrinsically moral agents that co-constitute morality with human agents.

Taking the face mask as an artifact, we examine the relationship between morality and face masks. In many countries, a mask culture is deeply rooted in social stigmas, racism, and religion (Anderson, 2020). We will argue that the face mask is used either as a moral artifact to care for the community or serves as a tool of "governmentality" for COVID-19 surveillance (Foucault, 2011). A mask evokes moral emotion in the Korean public. Currently, if Koreans walk outside without masks, they may feel guilted by onlookers. This research investigates how Korean mothers discuss virus patients who do not wear masks and imagine moral behaviors in the face of the COVID-19 crisis.

2.3. Morality and place

The control of place is critical to surveillance (Bennett et al., 2003; Graham, 1998; Klauser, 2013), but the relationship between morality and place has not been included in surveillance studies, as far as we know. There is, however, extensive literature on ethics and place or space in geography studies (Proctor and Smith 1999; Smith 2000). The geographical literature presents concepts such as place identity (Proshansky et al., 1983) and place attachment (Giuliani, 2002), arguing that social identities are closely tied to where people live. Kim and Chung (2019) summarize the two main perspectives on place as either imagined, through the human symbolic experience of space (Gregory, 1994; Said, 2000), or formed, through sensory and material interactions between things and people occupying a space (Certeau, 1984; Feld, 2005; Mitchell, 2013).

We refer to the relationship between place and morality as "place morality" to denote the entanglement of the two concepts. Place morality is a discursive product generated from popular discourses on the travel history information of patients. Our study differs from previous studies that have investigated the sense of place felt by inhabitants and visitors. The places we analyze in this research are felt by Korean mothers, who do not visit them since they are "risky" due to COVID-19. We argue that the mothers' perceptions of crowded places, like churches

and clubs, create a moral code that deems the virus patients who visit these places immoral.

2.4. Morality and mobility

Surveillance regimes control and regulate the physical mobility of people (Lyon, 2003: 24). The relationship between mobility and morality has not been directly addressed in surveillance studies, although it has been the focus of studies on migration (e.g. Bezabeh, 2017) and sports (e.g. Flemsæter et al., 2015). Notably, Flemsæter et al. (2015) addressed the construction of mobile subjectivities in contested outdoor spaces in terms of "how social identities interact with the citizen responsibilities assigned to different forms of mobility, such as mountain biking, skiing and walking" (p. 342). Similarly, we examine how mobile persons become immoral in the wake of COVID-19 contact tracing. We argue that the mobility of virus patients leads to moral personhood in Korean mothers' discourses. Those who travel to many places may well be deemed immoral, as opposed to those in self-quarantine. Mobility in the form of walking, private car use, and public transportation shapes morality during the pandemic. It is inextricably linked to the high contagion rate of the virus because mobile patients can spread the virus rapidly.

3. Research method

This research is based on "database digital ethnography," which views the digital database as a core site for the production of social meaning (Burns and Wark, 2020). We collected and analyzed comments (N = 3729) from January to May 2020 made by Korean mothers on the travel histories of virus patients on 15 internet groups called "mom cafes," of which 14 were in Seoul and one was nationwide. A mom's cafe is a powerful site for forming mothers' opinions of safety, education, and politics, among other topics. We chose mom cafes for this study for several reasons. They outline the norms of group uniformity for mothers. Generally, these cafes are established locally, which makes it possible for members to upload travel history information as soon as local governments release it. Mothers are highly sensitive to safety issues; therefore, we anticipated that the cafes would be a good site to witness how they generate moral discourses related to COVID-19 contact tracing. Moreover, the comments made under pseudonyms are candid and long enough to conduct discourse analysis. All the comments were anonymous. Based on Table 1, we inserted anonymous codes to signify the mom cafe and date associated with a quotation and used "M#" to distinguish among the moms' comments within the block quotations in the Results section.

To examine our data, we conducted reflexive thematic analysis (Braun and Clarke, 2020). We first read a set of data collected and then developed our codes such as mask, location, and movement path, as well as moral blame and praise. Our codes were generated from the basic format of the travel history information of virus patients, as well as from mothers' comments on this information. We first classified our data into three codes (i.e., mask, location, and movement path). Second, under each code, we created additional codes (i.e., moral blame and praise) and then sorted mothers' discourses on virus patients. Third, we generated the three themes—1) artifact and morality, 2) place and morality, and 3) mobility and morality—not only from our codes, but also based on theories of surveillance, material culture, and moral geographies. Under the three themes, we placed moral narratives and then interpreted how the idea of morality is constructed in terms of our aforementioned themes.

Table 1
Data on mom cafes.

#	Cafe code	Location	# of posts	# of comments
1	A	National	22	175
2	B	Seoul	12	360
3	C	Seoul	11	303
4	D	Seoul	14	166
5	E	Seoul	20	480
6	F	Seoul	4	61
7	G	Seoul	9	142
8	H	Seoul	32	712
9	I	Seoul	18	333
10	J	Seoul	7	135
11	K	Seoul	10	236
12	L	Seoul	7	131
13	M	Seoul	12	299
14	N	Seoul	5	54
15	O	Seoul	8	142
Total			191	3729

4. Overview of Korean COVID-19 surveillance

Korea's COVID-19 surveillance consists of manual and automated systems. The manual system uses direct interviews to identify the travel history of virus patients; however, virus patients can lie about their travel histories. Accordingly, CCTV footage (M.S. Kim, 2020) or automated surveillance systems are used to verify the suspicious travel history of some virus patients or to trace the infection cycle of seemingly unrelated patients. However, the manual system is much more widely used than the automated systems.

There are three types of automated surveillance systems. The first is the Drug Utilization Review (DUR), which is operated by the Health Insurance Review and Assessment Service. This system provides drug safety information to doctors and pharmacists so that they can check for inappropriate drug use in advance when prescribing or selling drugs. The system was implemented nationwide in 2010 (Yoon, 2010). Originally, the purpose of this system was to prevent overlapping prescriptions and reduce excess medical costs. The DUR is linked to the International Traveler Information System (ITS). ITS is a program established by the Korean Centers for Disease Control and Prevention (KCDC) to provide information on infectious diseases to medical institutions to prevent their spread from overseas. It is possible to track suspected COVID-19 positive visitors to pharmacies through information on purchased drugs. At the outset of the COVID-19 crisis, the system was used to track people arriving from abroad, but it failed due to the lack of communication with local medical institutions. Currently, the system is used for COVID-19 surveillance in a limited manner (M.S. Kim, 2020).

When the COVID-19 crisis was imminent, the Korean government developed two new surveillance systems using information technology. First, the "Self-Quarantine Safety Protection App" is a program developed by the Ministry of Interior and Safety. It tracks and controls the travel history of potential patients when installed on the mobile phones of self-isolators under quarantine, who have either arrived from overseas or have had contact with virus patients. However, this app has limitations, such as when self-isolators leave their phones at home and go out. In turn, the government has begun requiring people who repeatedly violate self-isolation to wear a safety wrist band at all times.

The second is the COVID-19 Smart Management System, which is a type of "plastic surveillance" (Lauer, 2020) using credit card information. This system was originally developed as a data hub platform for the construction of a smart city, with the support of the Ministry of Land, Infrastructure, and Transport. It has been used as a COVID-19 surveillance system since March 26, 2020. It identifies the travel history of virus patients by combining confirmed patient location data (GIS) from three major telecommunication companies and credit card usage information in consultation with 23 credit card companies, in close cooperation with the National Police Agency. It does not include CCTV video information. It tracks the location of virus patients 14 days before their symptoms were discovered (MOLIT and KCDC, 2020).

This system does not function nonstop. The KCDC has to obtain consent during an interview with virus patients and the approval of the

National Police Agency to apply it to a case. This system uses big data and machine learning technology to predict and position the movement speed and location of virus patients, and refine and filter inaccurate data, enabling the KCDC to automatically identify patients' travel histories and points of stay. In addition, it can analyze a large number of infection areas and identify the sources of infection with various statistics.

Local governments disclose information on virus patients, collected through these surveillance systems, to local residents per the Infectious Disease Control and Prevention Act. The information includes the patients' age and gender, the places and times of their visits, and whether they wore a mask. Initially, the scope of information disclosure varied. Some local governments even revealed the occupation of virus patients, allowing residents to characterize them, leading to controversy over privacy infringement. Subsequently, in response to the concerns and criticisms of the National Human Rights Commission of Korea, the KCDC released new guidelines that keep local governments from disclosing the occupation of virus patients in their travel history. Nevertheless, the identity of the virus patients can be assumed, and privacy is not completely guaranteed. In early May 2020, when an Itaewon district club infection occurred in some sexual minority clubs, there were concerns that the travel history information would not protect their privacy and that sexual minorities would not voluntarily get tested for COVID-19. Accordingly, the KCDC decided to conduct an anonymous COVID-19 investigation for patients in connection with the club infections.

If a person tests positive with COVID-19, the patient is quarantined and transferred to hospitals dedicated to infectious disease. "Infectious Disease Specialist EMS Teams" are responsible for transferring patients to the designated hospital, completely blocked from the outside. Initially, all patients were moved to the designated hospitals, but it soon became very difficult because of the large-scale infections that occurred in Daegu city, resulting in a shortage of hospital beds. Accordingly, the Korean government operated a so-called "residential treatment center" system, starting in March, to quarantine and accommodate mild cases. These centers were originally training centers or educational facilities, with many separate rooms that can be easily transformed to medical facilities. Thus, most patients in Korea were housed in designated hospitals or residential treatment centers that are quarantined from the outside.

5. Results

As local governments began releasing virus patients' travel histories, Korean mothers began estimating how well they overlapped with their own travel histories. The personal privacy of virus patients is not fully protected, but many Korean mothers wanted even more detailed information about patients' travel histories. They wondered where virus patients live and what they do for a living. Travel history forms the social identity and life of the virus patients. One mother stated:

> M1: [Travel history] reminded me of my husband who works in a construction company. He went to work in the early morning and worked from 7:00 am to 4:30 pm in the field. He eats lunch in several designated restaurants. He has been working for 24 years. I feel a lump in my throat. (E-03-10)

> M2: Their life is roughly seen from the travel history. (E-03-10).

Korean mothers have been blaming virus patients for their negligence of other people's safety. Once individuals are confirmed to be positive for COVID-19, all of their contacts must be tested or quarantined. This situation is morally painful. The mothers have expressed this as immorality in terms such as "thoughtless," "no sense," and "selfish." Morality, on the other hand, conveys a "sense of social responsibility" and "advanced citizenship." In blaming virus patients, one of the most frequently used terms was *Minpye* in Korean, which means "causing trouble to other people" (N.M. Kim, 2020). It is related to non-maleficence in terms of medical ethics. In addition to the politics of moral blame, a governmentality effect (Foucault, 2011) has also emerged, as the mothers imagine their own travel histories and how they would look if disclosed to the public. They have been regulating their own behavior through this type of morality.

This morality also depends on virus patients' honesty about their travel history during their interviews with government officials. Some hide information or lie due to stigma and social discrimination. They are held accountable for lying. The mothers criticize them by saying it is a "thoughtless" act of "selfish individualism." After one priest tested positive, he was suspected of not fully disclosing his travel history; one mother pointed out that it was "stark organizational selfishness." This critique contrasts with mothers' praise of one patient who wrote their travel history in a diary after their COVID-19 symptoms appeared. A mother called this patient, "an exemplary citizen." These Korean mothers are creating a boundary between morality and immorality based on honesty.

Yet, honesty is not the focus of the present research, given the Foucauldian differences between judicial power and micropower (Foucault, 2001). Foucault (2001) distinguishes micropower from judicial power, although he also insists that micropower that exists in institutions is, at the same time, a judicial power. We intend to avoid the rationale of structural functionalism that Korean behaviors are determined by laws or judicial systems relative to COVID-19. The honesty of virus patients is currently subject to judicial processes. According to the Infectious Disease Control and Prevention Act, patients who lie about their travel history are subject to a maximum fine of 20 million won and a maximum of two years imprisonment. Thus, honesty belongs to judicial authority and institutional power. In contrast, mask-wearing – addressed below – is related to micro-power because mask-wearing was not legally enforced at the time of our data collected: since May 26, 2020, mask-wearing has become mandatory in public transportation. Despite that, our data are limited to Koreans' behaviors before then, so that they are more suitable to the Foucauldian micro-power—governmentality analysis. In fact, Koreans wear facemasks well not because of a legal enforcement mandate but because of their own morality. We seek to understand the micropower of morality in artifacts (i.e., mask), places, and mobility.

5.1. The face mask as a moral artifact

Seoul's streets are filled with people wearing face masks amid the COVID-19 outbreak. The scenes of mask usage released in the mass media were unfamiliar to foreigners at the beginning of the COVID-19 outbreak. In other countries, sick people wear a mask in general, while in Korea healthy people also were wearing masks. Even World Health Organization experts insisted that wearing a mask was not as necessary as washing hands. Koreans' obsession with mask usage was taken as an overreach, or an unscientific response to COVID-19. However, after the explosion of COVID-19 patients in Europe and the United States, healthy people started wearing masks also in other countries.

Koreans only recently began using masks daily. Korean mask culture is related to fine dust pollution that has aggravated South Korea in recent years, presenting a serious contemporary environmental problem. Fine dust routinely covers the Seoul sky, inciting even healthy people to wear masks to protect their health; likewise, many have bought air purifiers. Wearing a mask was part of normal life in South Korea prior to the COVID-19 outbreak, hence there was no popular prejudice that those wearing masks are unhealthy.

A mask used to protect against fine dust pollution is for personal safety, while a mask used in the COVID-19 outbreak is an act of social responsibility for others. Of course, personal safety is undoubtedly one of the most crucial reasons for wearing a mask in the midst of this pandemic. Yet the mask has also become a moral artifact – a sign of caring for the community – a form of non-maleficence, thus provoking the stigmatization of those not wearing masks. They are now regarded as

immoral. The morality of the mask is co-produced with the moral identity of the virus patients.

The morality of the mask includes a sense of place. Where people wear masks matters: not wearing a mask in crowded and enclosed places, such as elevators, marts, hotels, pools, workplaces, buses, and subways enrages the mothers. On the topic of virus patients visiting clubs in Itaewon, one mother said:

> M3: It is common sense that unmasking outside is becoming an eyesore. Even inside clubs, a sweaty dance without a mask…Why didn't you wear a mask on the subway? (F-05-12)

Korean mothers were especially worried about the negligence of virus patients coming from other countries. They discussed the difference in mask usage between Korean and Western countries: when Asians wear a mask in a foreign country, they are vulnerable to race discrimination; however, in the current pandemic, foreigners have also begun wearing masks. Some mothers said that in Korea, people coming from other countries should behave like Koreans and wear a mask. The mothers have also criticized young people for not wearing face masks. In these cases, the immorality of not wearing a mask is expressed as thoughtlessness and selfishness:

> M4: No entrance without masking. I went to the mart and found several people not wearing a mask and burst out of the mart without shopping. Very selfish people. (H-04-18)

In contrast, the mothers praised one patient who wore a mask very well. This version of morality is expressed as "exemplary" behavior:

> M5: Mask plus face shield. That is exemplary. (C-03-19)

> M6: Mask plus face shield, and [the patient] took the stairs (instead of the elevator) and walked 20 minutes to triage clinics. Travel history is very simple. Really, thumbs up. I hope for a complete recovery!! (C-03-19)

The morality of these Korean mothers has materiality. A mask is a hallmark of the morality they imagine. The face mask is not inherently moral because this morality is based on community health and did not exist when it was worn due to fine dust pollution, prior to the COVID-19 outbreak. Fine dust pollution has no risk of causing a contagion-like respiratory pandemic. Thus, infectious viruses also form the image of the mask as a moral artifact of community health. Today, the micropower of COVID-19 surveillance operates with a mask. Unmasked people feel the glares of others, resulting in a type of governmentality (Foucault, 2011) regulating Koreans' behaviors.

5.2. The immorality of crowded places

When one virus patient's travel history included a motel and a bar, one mother said, "that travel history is very dissolute." Morality is connected to the sense of place: it is immoral to visit crowded places where a COVID-19 infection is very likely to occur such as churches, clubs, room salons, computer rooms, and karaoke businesses.

It is ironic that in the COVID-19 crisis, churches and entertainment zones, such as clubs and bars, evoke a similar sense of place. The specificity of a sense of place is newly constructed in addition to the influence of its history; in the COVID-19 crisis, it expresses the outcome of interactions between viruses and people. Due to the high infection rate of COVID-19, crowded places are dangerous, and those who have visited there indiscriminately become immoral. Morality, risk, and sense of place are thus intertwined with one another.

The notion that a church could give rise to an immoral person in the COVID-19 crisis started when it became public knowledge that the first local infection in Korea originated from the Shinchonji Church in Daegu. In turn, other Korean churches treated the Shincheonji Church as heretical. The worship service at Shincheonji showed a crowded ritual in which viral transmission could easily occur. The congregants sat shoulder-to-shoulder and raised their voices to worship and sing, leading to exponential contagion.

After the rapid spread of infection through the Shincheonji Church, social concerns about established religious groups also increased. Per the government's recommendations, most large churches held worship services online, but some small churches clung to face-to-face worship due to financial difficulties. Eventually, when a virus patient emerged from the Donghan Church in Dongdaemun-gu, one mother criticized him based on the idea of non-maleficence:

> M7: Whether or not this church is Shincheonji is not important. In some churches that still hold worship services and group activities, small gatherings should be avoided. Please practice social distancing. Really, *do not harm other people* and be patient. (emphasis added, M-03-04)

On March 16th, a group infection occurred at "The Church of Grace River" in Seongnam. This church is famous for healing the sick, and when the congregants entered the church they were given salted water to prevent virus transmission. This ritual seemed to be "unscientific." Mom cafe mothers criticized the church's virus patients for being "selfish" and "thoughtless." Criticizing the church as "the second Shincheonji," they accused church members of not distinguishing between "religious freedom," "infinite selfishness," and "indulgence."

Computer rooms and karaoke businesses also give rise to immoral individuals during the COVID-19 crisis. When schools turned to online education, students began gathering in computer and karaoke rooms. Both are enclosed spaces with a high possibility of spreading the virus. Some students visit these locations very often, five or six days a week. Regarding a virus patient in Dongdaemun-gu who visited a computer room, one mother responded:

> M8: How does he go to the computer room every day? It might be his private life, but he went to the hospital the next day after going to the computer room. It's something like COVID-19 or a cold, and after that he continued to go in and out of the computer room; and in the meantime, went to the hospital and pharmacy and then the computer room. … an enclosed space. Is Dongdaemun-gu like Daegu in Seoul? (L-03-11)

The other type of place made immoral by COVID-19 is meant for entertainment, such as cocktail bars, room salons, and clubs. An entertainer visited a room salon in Gangnam and spread COVID-19 to one female employee and her roommate as well. She reportedly contacted a total of 500 people. In response, the mothers bemoaned:

> M9: I think there may be people who aren't being tested right now or who aren't revealing their identity because they are embarrassed by their travel history there. It's not like a regular bar. (C-04-07)

> M10: Why are they going to entertainment places despite the government's strong social distance policy? I am really upset about inconsistent standards. Please file a lawsuit about this place; like the churches, entertainment places are crowded, dark, and narrow spaces indoors. (C-04-07)

In May, 2020, Itaewon clubs became an epicenter of local mass infection. While room salons are divided into several rooms, clubs allow many people to gather in one space to dance and sing, enabling the rapid spread of the virus. The mothers pondered:

> M11: Why do they go to the club at this point? Young people are too selfish…They will not go to a club if they are thinking of their parents. (A-05-11)

> M12: In the first place, the clubs enable people to be in really close contact, but it was a little strange to leave this place unsupervised with only religious facilities supervised. (A-05-11).

The mothers expressed feelings of guilt as they recalled their youthful days.

M13: I am now disparaging young people, but I also went out to play in the clubs amid the H1NI outbreak. I regret it. (A-05-11)

M14: I agree. I did not go to the club, but I did not care [about the disease] as much as now. Yet, at that time, [the disease] did not seem to have lasted that long. When I look back as a mother, I was really thoughtless. (A-05-11)

In summary, morality has a sense of place. Korean mothers are developing what we call "place morality." Crowded spaces in which viruses can spread easily appear risky to them, and Korean mom cafe mothers regard those who visit these locations as immoral because they threaten community safety. Viruses and masks evoke oppositional effects in place morality. The highly contagious nature of the virus makes crowded places dangerous. If people wear a mask in a crowded place the place becomes less risky, and the masked person becomes more moral. The sense of COVID-19 places is fluid, depending on how people use artifacts, such as face masks and gloves, when there. The bad reputation of crowded places, including churches and clubs, can be rectified by the actions and artifacts of the people who visit them. In contrast, hospitals are risky but not viewed as immoral places by Korean mothers because they feel it necessary for sick patients to go there. Instead, they find it immoral for virus patients to visit other crowded places because their visits are neither urgent nor necessary. Such views are at play in not considering hospitals immoral places, while the use of masks or gloves in hospitals would play a limited role. Thus, not only the virus and masks, but also human thought is at play in the formation of place morality.

5.3. Immoral mobile personhood

The Korean government has recommended that people refrain from traveling and to stay at home to prevent the spread of COVID-19. The virus is easily spread as patients move from place to place. The number of virus patients has increased exponentially in some areas. Due to the high infection rate, virus patients' mobility is linked to the risk of the virus, shaping morality in the current crisis.

In this analysis, the mom cafe mothers have shown two responses. A flood of accusations against virus patients who move through too many places, such as marts and cafes, and praise bestowed upon those who thoroughly self-quarantine. The mobility of virus patients is an important criterion for separating morality from immorality. The mode of mobility, such as walking, driving a car, or taking public transportation, also figures into determinations of morality.

Morality has been manifested through describing a patient's travel history as "too selfish," "unconscientious," "thoughtless," and having "zero morality." Moral blame is very severe against virus patients who have gone to banks, restaurants, or hospitals, without self-quarantining at home after being tested at triage (screening) clinics. Some mothers lamented:

M15: If they did a coronavirus test at triage clinics, self-quarantining was right; but, they traveled too much. Dental care? (G-03-12)

M16: This travel history is too selfish. It makes no sense to go to the dentist and a public restaurant after visiting a triage clinic. (G-03-12)

M17: Dentist and taxi after triage clinic with no mask. It's really zero morality. (G-03-12)

The Korean mom cafe mothers also criticized the mobility of foreigners and Korean students returning from abroad, among virus patients. Some patients tested negative at the airport quarantine station but later tested positive. They traveled to many places before they were confirmed positive. Some patients were criticized for taking a trip or shopping despite their symptoms. One mother said: "A long-distance flight would be difficult with a time lag, but the patient was excited to travel. The travel history makes it seem that the patient wanted to enter Korea deliberately to travel a lot." Mothers used the expressions "unconscientious," "thoughtless," "the last king of selfishness," "senseless," and "unethical" to criticize one international student patient who went shopping.

M18: This unconscientious person traveled too much. (H-03-21)

M19: If you come to Korea by plane, you have to quarantine yourself, but shopping in a department store as soon as you return? (B-03-26)

M20: Why did they travel so much after coming from America at this point? Thoughtless. (B-03-26)

M21: I hope they realize how senseless and unethical they are. (B-03-26)

M22: Really, the last king of selfishness. If self-quarantine is really violated, the punishment should be severe. (B-03-26)

Mothers blamed the virus patients as well as parents for the poor management of their children. In Korean society, the relationship between parents and children tends to continue even after children reach adulthood. Parental obligations to children tend to be larger than those of other countries:

M23: Right. That parent also needs to be blamed. They should not just get their children studying abroad, but also teach their children concepts. Why didn't they know that they could kill someone with a weak immune system? (B-03-26)

A common example of an immoral mobile individual is the clubber who goes to several clubs in one night. In Seoul, there are famous clubs located in Kangnam, Hongdae, and Itaewon. Clubbers do not stay in one place but tend to roam through several places when they go out. One mother called an Itaewon clubber a "terrorist." The identity of mobile patients is co-produced with COVID-19's infectious nature. COVID-19 is likened to a "wandering disease" (A-05-11):

M24: I have never seen a travel history like this: terrifyingly, he roamed here and there. (O-05-08)

M25: He shouldn't have traveled like that. … The travel history is too wide, and he picked and traveled through crowded places during the holidays. This is a serious problem. (A-05-11).

M26: Since he had been to 5 clubs, I thought there would be an infection. (D-05-08)

M27: That's right. The selfish person only thinks of himself. (H-05-08)

M28: He's really selfish. Even if it is hot, I always wear a mask. Coronavirus, once you get it, is one that roams like crazy. And if you get sick, you should stay home. (H-05-08).

The self-quarantining of virus patients has been central to preventing the spread of COVID-19. The mothers praised the virus patients who self-quarantined or had short travel histories. For example, a boy with COVID-19 was infected at church but quarantined himself at home, jumping rope. The mothers commented that his travel history "is cute" and "seems to show good personal character," and that "he is a righteous boy." In another case, a ballet teacher in Bangbae-dong went home to self-quarantine after visiting a triage clinic and had no contact with others. She was praised as a "true" and "great" teacher, a person with "advanced citizenship," and having "great [sense of] responsibility."

Modes of transportation are also associated with morality. The government recommended that those suspecting they have COVID-19 should use their own cars to visit drive-through triage clinics for testing. The mothers criticized one virus patient in Mapo who had

COVID-19 symptoms and took public transportation to visit the triage clinic and contacted other people. They praised another patient who walked from home to the triage clinic:

> M29: He seems like a man with good sense, given that he walked to get COVID-19 testing. … I hope that he gets better soon. Please spread no more. (G-03-09)

To sum up, morality is shaped by mobility due to the high risk of contagion with the virus. COVID-19 is very mobile, and it is difficult for the Korean government to test all of those that mobile patients have come in contact with. Thus, under these circumstances, they become immoral. The moral personhood of virus patients is co-produced with each of the virus's characteristics. Moreover, the concept of immoral mobile personhood also includes virus patients under 14-day legal quarantine but travel illegally. However, our data are mostly limited to virus patients who have not yet tested positive, and their quarantine has not been legally enforced yet.

6. Conclusion

Korean mom cafe mothers imagine moral personhood based on the travel histories of COVID-19 patients. It is hard to account for their morality in light of Western medical ethics. Yet, in our heuristics, central to their morality is non-maleficence, which means inflicting no harm on others. Non-maleficence has engendered the stigmatization of virus patients. Their morality is not of social justice or fairness because social minorities like LGBT communities are not exempt from stigmatization (DiMoia, 2020). Non-maleficence is akin to communitarianism (e.g., Sandel, 1998). However, it is not that far from liberalism, provided that it does not allow the harming of other people while valuing individual freedom. Non-maleficence has to do with the Korean term "*minpye,*" meaning "causing trouble to others" (N.M. Kim, 2020). This term was frequently invoked in Korean mothers' critiques of virus patients. Nonetheless, the focus of the present research is not non-maleficence itself but its materiality.

The discourses of Korean mothers link patients' travel histories to their moral identities. This morality is a discursive product that arises in the minds of Korean mothers and incorporates the material discourses of artifacts, places, and mobility. It is *impure* due to this entanglement. Both are inseparable. Morality is neither a metaphysical idealism existing in the human mind alone (Smith, 1759), nor is it objective, existing outside of it (Durkheim, 2008). The artifacts, places, and mobility of actors help form this morality.

Morality has materiality because of its dependence on artifacts. Korean mom cafe mothers view the face mask as a moral artifact of caring for family and community. The interpretation of a face mask as a moral artifact depends on a respiratory infectious disease caused by a highly contagious virus. This meaning did not exist prior to the COVID-19 outbreak, that is, when the public began responding to fine dust pollution. Then, it was only an artifact of safety for the individual, not the community. The face mask is not inherently moral. However, it is also not morally neutral. It influences the morality of Korean mothers. This morality is the outcome of heterogeneous interactions among Korean people, masks, and viruses.

Morality has a sense of place. We called this place morality. Right now, Korean mothers regard crowded places like churches, clubs, room salons, computer rooms, and karaoke businesses as risky because, in them, viruses are easily transmitted. Virus patients who visit crowded places are deemed immoral by the mom cafe mothers. Place morality can be formed by both those who visit a location and those who do not; the patients, not the Korean mothers, visit the crowded spaces. Given new materialism, place is the outcome of interactions between humans and nonhumans occupying a specific location. Not only virus patients but also virus and mask are central to the formation of places related to COVID-19. However, Korean mothers did not visit and occupy these crowded places. The place morality addressed in this paper is that imagined by them. It is not about the places where virus patients feel guilty, thus, our concept of place morality is more poststructuralistic. That said, place morality is material as well. It can perform materiality—that of micropower refraining Korean mothers from visiting crowded places.

Morality involves the spatial mobility of actors. The mobility of COVID-19 patients is an important standard for Korean mothers with which to draw a boundary between morality and immorality. Korean mothers deem mobile patients, like those who travel to several places after visiting triage clinics, less moral than those in self-quarantine. This morality is related to modes of transportation. Mom cafe mothers feel that those who walk or use their own cars are more moral than those who use public transportation to visit triage clinics. Central to our approach to morality was overcoming the humanism of traditional moral philosophy; taken together these aspects demonstrate that morality is not a product of "pure" human beings alone, but the outcome of interactions between humans and nonhumans over a specific place.

Further research is needed to examine how the general public, including virus patients, understand their artifacts, places, and mobility in the face of the COVID-19 crisis. This research found that the mothers' sense of morality regulates their behavior in terms of governmentality (Foucault, 2011), as they imagine how their own travel history would look while condemning that of virus patients. However, we cannot be sure whether this morality dominates South Korea. It may be specific to the group of Korean mothers who participate in mom cafes or are highly concerned about the risk of COVID-19. Thus, how this morality influences the moral behavior of other publics deserves attention in future research. Critically, there is a special need to examine what Korean social minorities think of this morality generated by the COVID-19 surveillance system. Because their work conditions and existing social prejudices can make it challenging to comply with this morality, they are therefore more vulnerable to moral blame and stigmatization amidst the COVID-19 pandemic.

Credit author statement

Eun-Sung Kim: Conceptualization, Funding acquisition, Methodology, Investigation, Formal analysis, Writing – original draft. Ji-bum Chung: Conceptualization, Methodology, Investigation, Writing-Reviewing and Editing.

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