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Public perception of urban companion animals during the COVID-19 outbreak in China

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ABSTRACT

This paper responds to the increasing concern regarding the role of non-human life in shaping urban space by exploring the public perception of urban companion animals during the coronavirus disease 2019 (COVID-19) outbreak in China. We argue that the public’s perception of urban companion animals during emerging infectious disease outbreaks is related to medical and life science issues and reflects the political, economic, and emotional struggles involved in human-animal multispecies cohabitation. We find that the public has mainly followed and reconstructed medical discourses about the risk of companion animal-to-human transmission and discussed sustainable ethical animal practices in urban public health emergency management during the COVID-19 outbreak. Concerns regarding the risk of companion animal-related infection reflect the increasing prominence of more-than-human families, the pet industry, and multispecies leisure conflicts in public space in Chinese cities. The public’s attention to animal ethics has prompted Chinese policy makers to adopt a more morally acceptable model for urban public health emergency management that can be sustained and supported by responsible non-governmental organizations and ethical urban residents.

1. Introduction

In December 2019, a novel coronavirus named 2019-nCoV, which can infect humans, was first discovered in Wuhan, China. On 29 January 2020, 31 provinces launched the highest level of public health emergency response. As of 21 May 2020, the National Health Commission of the People’s Republic of China had reported 84520 confirmed cases and 4645 cases of death. In total, there had been 5,125,832 confirmed cases in 215 countries and regions around the globe.

On 26 January 2020, the Chinese Center for Disease Control and Prevention (China CDC) confirmed that the virus originated from wildlife. The early confirmed cases of the new coronavirus in Wuhan were closely related to a South China seafood wholesale market. Sometimes illegally. On 27 December 2019, a hospital in Wuhan admitted three adults with severe pneumonia symptoms due to 2019-nCoV infection. Two of them were shop owners selling game animals in the market, and one was a regular customer (Li et al., 2020). Wildlife trade and game consumption break the species barrier of virus transmission and geographical isolation, causing viruses to spread from wild animals to humans (Karesh et al., 2005; Pavlin et al., 2009; Smith et al., 2009). Some studies have suggested that the most logical, convenient explanation is that bats were the native host of 2019-nCoV, but it is likely that there was an intermediate host(s) in the transmission cascade from bats to humans (Xu et al., 2020). Other studies have speculated that snakes are the most likely wildlife animal reservoir for 2019-nCoV (Ji et al., 2020). Although the aetiology of 2019-nCoV is not fully clear, it is highly suspected and possible that is of zoonotic origin and that the market was one of the early sources of infection. This understanding has triggered fear of wildlife among the general public. For example, the public began to demand the expulsion of wild animals living near the community that had migrated from other areas to overwinter to reduce the chance of contact with wild animals. The reputation of bats as coronavirus carriers has even led to extreme recommendations for mass killings to ensure public health (Wang et al., 2020; Zhao, 2020).

As assembled spaces of high-density population and goods, cities provide important channels for the transmission of infectious diseases and become an unpredictable factor that alters vector dynamics, as illustrated by recent pandemics (Hassell et al., 2017). Urbanization promotes spatial overlap between hosts in vector ranges, which facilitates the rapid spread of pathogens (Alirol et al., 2011; Keil and Ali, 2005; Pavlin et al., 2009; Smith et al., 2009).
Pollak, 1992). However, the abandonment of cats by pregnant owners (Guay, 2001; Lloyd-Smith et al., 2009) and the development of vaccines (Reynolds, 2011), the transmission mode and pathogenic mechanism of Toxoplasma gondii, a typical zoonosis, has been well controlled through the intervention of preventive medicine (Hill and Dubey, 2002). Due to proper food preparation and water sanitation, raising cats does not have a significant impact on families with pregnant women (Aspöck and Pollak, 1992). However, the abandonment of cats by pregnant owners still occurs. On the other hand, with regard to the emerging zoonoses in wildlife, many medical studies have shown that there is no evidence that companion animals can spread these new viruses (Pfefferle et al., 2011). Some studies of SARS, which ravaged the world in 2003, showed that owners of companion animals did not exhibit a higher risk of clinical transmission caused by companion animals. The issue of whether companion animals can be kept during large-scale public health emergencies has received public attention and discussion.

Most studies on the relationship between urban companion animals and infectious diseases have focused on companion animal zoonoses from a medical perspective. Medical researchers have mainly focused on the nature of the virus (Delwart, 2012; Seiler et al., 2010; Tack and Reynolds, 2011), the transmission mode and pathogenic mechanism (Guay, 2001; Lloyd-Smith et al., 2009) and the development of vaccines (Delwart, 2012; Paul-Pierre, 2009) to promote effective prevention measures to reduce the incidence and global spread of zoonotic pathogens. On the one hand, for common zoonoses caused by companion animals, pathogens have adapted for long-term survival within multiple host species over millennia, and there is extensive research on and understanding of these viruses in the medical field. For example, Toxoplasma gondii, a typical zoonosis, has been well controlled through the intervention of preventive medicine (Hill and Dubey, 2002). Due to proper food preparation and water sanitation, raising cats does not have a significant impact on families with pregnant women (Aspöck and Pollak, 1992). However, the abandonment of cats by pregnant owners still occurs. On the other hand, with regard to the emerging zoonoses in wildlife, many medical studies have shown that there is no evidence that companion animals can spread these new viruses (Pfefferle et al., 2011).

Before presenting the empirical analysis, we first provide an overview of the multispecies relationship between humans and animals in cities to provide a base for understanding the narratives about urban companion animals in China.
example, residents may refuse evacuation and rescue by local authorities because of concerns about the safety of their pets (Day, 2017; Trigg et al., 2016). Forced separation from pets in disasters may cause post-traumatic stress disorder and mental illness (Brackenridge et al., 2012; Hudson et al., 2001; Hunt et al., 2008). When companion animals leave their owners and become stray animals, they may become a mobile source of zoonosis and a new public health risk in cities (Heath and Linnabary, 2015). Therefore, there is a global need for emergency planning for companion animals during disasters to improve urban resilience and public health (Chadwin, 2017). Many Western countries have begun to attach importance to the close relationship between people and companion animals and to incorporate companion animals into urban emergency management policies. For example, after Hurricane Katrina in 2005, the United States passed the Pets Evacuation and Transportation Standards Act. This policy requires state and local urban emergency management to consider and provide services for companion animals, which directly reduced the harm to people and companion animals when Hurricane Harvey occurred 12 years later (Glassy, 2018).

However, most previous studies have focused on natural disasters such as fires, floods, and hurricanes, while few studies have analysed the urban crisis caused by emerging infectious diseases. Along with the process of globalization, the repeated emergence of infectious diseases has increased the vulnerability of cities and raised concerns about urban safety (Keil and Ali, 2007). The original contribution of this paper lies in its analysis of the transformation of the relationship between humans and urban companion animals in the emerging infectious disease crisis and the embeddedness of this phenomenon within the urban framework in the Chinese context.

3. Methodology

To collect data for the study, we used web crawlers to search original text published by Weibo users from 1 January 2020 to 3 February 2020 based on two Chinese keywords: ‘2019-nCoV (新型冠状病毒)’ and “urban companion animal (城市宠物).” We saved the crawled blog data to a local server as our main data source. Weibo (a microblogging website) is one of the most important social media platforms in China. It is similar to Twitter in terms of its powerful interactive functions and timely information updates, which significantly influence the organization of social life and public opinion. In Weibo’s text resources, key and frequently used words can reflect various public narratives and the degree of public concern about these narratives (Zhang et al., 2019). Our next step was to clean the data by deleting duplicate content and advertisements. We obtained 1160 valid sample comments published by Weibo bloggers, which totalled more than 200,000 words.

We used a Python-based program to perform natural language processing (NLP) analysis on the obtained text materials. The primary natural language analysis we conducted was word frequency analysis, and we produced a word cloud of the 100 most frequently used words in Weibo texts. The next step was to clean the data by deleting duplicate content and advertisements. We obtained 1160 valid sample comments published by Weibo bloggers, which totalled more than 200,000 words.

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The starting point for content analysis is to identify the semantic units that appear most often in all textual materials to provide an overview of potential research topics. We filtered and segmented the Weibo text data after crawling. We deployed auxiliary words (e.g., “due to,” “this”) and merged repeated words (e.g., “don’t” and “can’t,” “cats and dogs” and “companion animal cats”) and identified high-frequency words about the public perception of urban companion animals through word frequency analysis. In the perception word cloud map shown in Fig. 1, the frequency of words in Weibo text was directly proportional to their size. During the outbreak of COVID-19, the most commonly used terms about urban companion animals were “coronavirus,” “media,” “TV,” “at present” and “cats and dogs”, which suggests that public perception mainly focused on instant reports of the progression of the epidemic by various media.

Table 1 presents more information about important public perception issues. For example, reports of companion animals that received extensive public attention were mainly from official media (e.g., “People’s Daily,” “interviews,” “academics”) and social media (e.g., “posts,” “videos”). The information that the public received from these media included epidemic prevention knowledge related to companion animals (e.g., “2019-nCoV,” “virus,” “animal,” “contact,” “avoid,” “epidemic situation”) as well as instant (e.g., “today,” “yesterday”) social news related to companion animals (e.g., “behaviour,” “offensive,” “panic,” “fall to death,” “downstairs,” “cats and dogs,” “tragic death,” “come on”) in specific places (e.g., “Shanghai,” “Tianjin,” “community”).

To further explore the issues related to public perception, after reading all the comments, we identified a strong correlation between words such as “panic,” “infection,” “evidence,” “academician,” continuous development in recent years, the Internet has become an indispensable part of people’s lives. The rapid development of social media and the popularization of smartphones have provided people with increasingly popular platforms to express their opinions. The large amount of data generated on social media provides new tools to understand the characteristics of social behaviour. Textual information from social media constitutes a large public perception database containing data that are difficult to collect via traditional surveys. Compared with interview and questionnaire data, information provided in the social media context more closely reflects the real ideas of respondents. Because conversation on the Internet is more relaxed than social surveys, respondents are less affected by social expectations, ethics and the atmosphere.

Third, the use of social media data allowed us to more accurately reflect public perception during the outbreak. After the COVID-19 outbreak, the Chinese central government advised the public to minimize exposure to public space. In order to further prevent the spread of the virus, based on the central government’s epidemic prevention policies, provincial and local governments had continued to formulate more strict community access management policies to require the public to stay at home. Therefore, people chose to stop going out and to remain at home. Popular social media has become the most important platform for people to obtain information on the progress of epidemics and to express their views. Therefore, obtaining textual information from social media is the best way to understand public perceptions and attitudes during an outbreak. Furthermore, data from Weibo are highly time sensitive (instant data) and can therefore effectively and quickly provide feedback on the changes in perception as the epidemic develops.

However, the limitations of our selected methodology also should be acknowledged. The textual data collected for this study did not allow us to sufficiently unpack the specificities of different cities, communities, and neighbourhoods. The representativeness of social media data for analysis is limited, and highly sophisticated social media users sometimes guide and manipulate the views of the wider public.
“People’s Daily,” “avoid” and “contact.” This finding shows that the public paid attention to the medical discourses verified by scientists and published by the official media to determine whether companion animals could be infected with and spread 2019-nCoV and how to live a healthier life with companion animals. However, words such as “fall to death,” “tragic death,” “murder,” “downstairs,” “investigation,” “post,” “onlooker,” “rubbish,” “Shanghai,” “Jiading District,” “come on,” “today,” “yesterday,” and “recently” were in the same highly related network, suggesting that the public participated in grassroots discussions on social media about the negative experience of caring for companion animals due to epidemic prevention in a specific urban spatiotemporal context. Therefore, we summarized two topics of public perception: 1. the possibility of companion animals transmitting disease and 2. the experience of having companion animals during the epidemic.

Based on these two topics and the detailed discourses in Weibo, we continue to analyse the complex human-companion animal relationship in the city reflected in these popular topics of public perception in the next two sections.

5. Official discourses and the risk of companion animal-to-human transmission

The public’s perception of urban companion animals was primarily focused on professional medical discourses about the risk of companion animal-to-human transmission. We combined the changes in high-frequency words in public discourse over time to analyse which specific social groups paid attention to this medical knowledge.

With the initial outbreak of COVID-19, the public paid attention only to reports of the origin of 2019-nCoV and the rapid spread from person to person; the relationship between companion animals and COVID-19 did not generate large-scale public attention and discussion. However, the sudden outbreak aroused great public concern about disease prevention and health protection. Many businesspeople engaged in companion animal sales, pet grooming and related industries took this opportunity to use the professional discourse of medical workers to illustrate the benefits of breeding companion animals for disease prevention.

The identity of medical workers in China has undergone a dynamic construction process (Fang, 2012). After the experience of large-scale public health emergencies such as the SARS and H1N1 outbreaks, medical workers have been positioned as having a “useful” social identity that can effectively maintain social order (Mason, 2016). Their suggestions for disease prevention have become part of scientific discourses that represent the professionals of biomedical systems. Because of his outstanding contribution in fighting SARS in 2003 and his personal quality of honesty, an academician in the Chinese Academy...
of Engineering named Nanshan Zhong became an authority in the field of infectious diseases in China. The Chinese public has great trust in the professionalism of Nanshan Zhong. In May 2018, Nanshan Zhong and his research team were invited to record a programme for a Guangzhou TV station. In the programme, Nanshan Zhong’s research team said that the incidence of allergic respiratory diseases in urban children was on the rise and that the cause of allergies was that the urban environment is too clean, so urban residents lack opportunities to come in contact with and adapt to various allergens. Therefore, his team suggested that parents should consider raising companion animals at home, which could help their children adapt to allergens. However, at that time, this show and expert advice did not attract much attention.

During the intense period of COVID-19, Nanshan Zhong was once again ordered by the Chinese government to conduct emergency scientific research and popularize epidemic prevention knowledge. Nanshan Zhong’s discourse on COVID-19 prevention and treatment has become a symbol of medical discourse that is highly recognized by the government and trusted by the public. Although Nanshan Zhong did not directly express any views on the role of companion animals in the transmission of COVID-19, businesspeople working in the companion animal industry shared the previous video of Nanshan Zhong’s academic team discussing the relationship between companion animals and allergic respiratory diseases to demonstrate the correctness of keeping and purchasing companion animals.

The owner of a kennel named Huihui (慧慧) said excitedly, “See? There are many benefits to raising a dog or cat, so do not be foolish! Take them home if you like!” Inoetphoto (英宠摄影), a professional photographer of companion animals, said, “I collected this news (‘Nanshan Zhong proving the benefits of keeping a companion animal’) more than a year ago. At that time, some people opposed me and said, ‘Who is Nanshan Zhong? Is he absolutely authoritative? Today, do you know who Nanshan Zhong is?’”

In addition to mentioning the previous news about Nanshan Zhong, businesspeople have also intentionally misrepresented the suggestions of Nanshan Zhong’s research team. For example, a pet groomer named “Abandon de Xiaowo” (abandon的小窝) said, “At present, there are tens of thousands of pet industry practitioners in Hubei (Wuhan is the capital city of Hubei Province), but no one is infected with COVID-19! Nanshan Zhong also said that raising companion animals can prevent all kinds of respiratory diseases!”

These statements show that allergic and infectious diseases have been deliberately confused for the purpose of promoting the companion animal economy. A large number of businesspeople participated in the discussion on the relationship between companion animals and diseases, reflecting the emerging companion animal industry in Chinese cities. From the specific work performed by these merchants, it can be observed that in addition to pet sales, various subdivided pet consumption spaces, such as pet grooming and photography studios, have emerged in Chinese cities. Companion animals are both commodities and investment targets that are highly commoditized under the market economy system. Medical knowledge and discourse have become tools and boosters for pet market promotion and capital accumulation.

In mid-to-late January 2020, COVID-19 began to spread rapidly across China, and the number of infections and deaths increased continuously. Starting at 10:00 a.m. on 23 January 2020, the Chinese government adopted a series of strict epidemic intervention measures, including the suspension of public transportation in Wuhan and the closure of departure lanes at the airport and railway station in Wuhan, to reduce the spread of infection throughout China. At the same time, the public began to consciously stay home as much as possible to reduce their exposure to sources of infection. The Chinese government began to organize medical experts to publicize the latest progress of the epidemic and to teach the public preventive methods through CCTV, People’s Daily and other official media. In the midst of this effort, the issue of whether companion animals could be infected and spread COVID-19 became one of the core topics of public concern. For example, in response to a question raised on 29 January by a netizen on Weibo about whether domestic companion animals could spread the novel coronavirus, the World Health Organization answered as follows: “At present, there is no evidence that companion animals such as dogs and cats can be infected with the virus. However, it is always a good idea to wash your hands with soap and water after contact with companion animals.”

We found that the medical experts of the World Health Organization used very cautious words to describe the possibility of pets transmitting the virus, such as “current” and “no evidence.” The Chinese CDC also recommended that companion animals stay at home and avoid exposure to contaminated environments. As one of the two main companion animal species, cats are easier to isolate from the outside world. Dogs, however, need more outdoor exercise, and most have an established daily habit of having outdoor interactions with people. Many dog owners in the city see their dogs explicitly as family members. In their view, more-than-human families have the right to claim parts of public space as their own to improve their health and subjective well-being (Cheesbrough et al., 2019; Instone and Sweeney, 2014).

In the United States, dog parks are common in cities across the country as more-than-human public spaces (Urbanik and Morgan, 2013). Most cities in China, however, lack a dedicated companion animal park for human-companion dog interaction. In the limited public spaces, such as gated communities and parks, pet owners, dogs and other urban residents inevitably meet frequently in everyday life. The impolite behaviour of some dog owners in public spaces (for example, failing to pick up dog faeces or allowing their dogs to frighten surrounding wildlife or bark at people) makes non-dog-owning and anti-dog residents feel uncomfortable (Mouton et al., 2019). Quarrels and even fights about companion dogs occur from time to time. During the epidemic, conflicts in the public space have become apparent and have intensified. For example, Zenne Quge Mingzi Zheme Nan (怎么取个名字这么难) said to the pet owner of a gated community, complained, “The old lady walks her dog in our community every day! She never considers other residents of the community! Her dog strolling around would increase our risk of getting the virus!” In addition to concerns about the virus being transmitted by dogs, some residents expressed their anger at dog owners who do not pay attention to epidemic prevention. Wu Buguo Shi Feng (我不是是风) said, “An old man walks his dog in our community every day, but he never wears a mask! Who knows if he is a suspected patient? Such a selfish and immoral person!”

Faced with these complaints, dog owners chose to reconstruct the discourses of medical workers to demonstrate that daily contact and encounters with companion animals are absolutely safe. They utilized obscure biological terms combined with virological characteristics to frame their reconstructed discourse as “scientific” and “professional.” For example, some of them mimicked the rigorous and cautious language of the World Health Organization, saying, “The 2019-nCoV belongs to β type, and the canine coronavirus (CCoV) and feline coronavirus (FCoV) belong to α type, so there is no cross-infection. Cats and dogs lack the ACE2 enzyme, and the s-protein of the strain cannot bind, so cats and dogs will never become poisonous organisms of the novel coronavirus. Be sure to spread the right facts to the masses!”

In a sense, medical discourses were restructured to negotiate multispecies leisure conflicts. The possibility of companion animals transmitting disease, as a public perception issue, reflects the increasing prominence of more-than-human families, the pet industry and the social issues related to these factors in Chinese cities.

6. Grassroots discussion and the experiences of companion animals during the epidemic

The public perception of pets is strongly influenced by media discourses and representations (van Stipriaan and Kearns, 2009). Normally, pet owners often post and share photos and videos of their companion animals doing funny things on social media to delight and cheer up others. However, as an emerging infectious disease began to spread and the association between companion animals and health became
unknown or even negative (although most arguments about a negative association were based on prejudice, species discrimination and rumours that have not been scientifically verified), the public began to have the pathological fear of companion animals. It was this fear that led to a complex mediascape during the outbreak that was different from the positive mediascapes observed in the past. Practices such as the abandonment and slaughter of companion animals began to occur in some gated communities. On 30 January 2020, a companion animal owner in Tianjin who believed that raising companion dogs would increase the risk of infection threw his dog from a high-rise building. On the same day, five cats were also dropped and killed in Jiading District, Shanghai. The Weibo blogger Companion Animal Mengchong Xingqiu (伴动物萌星球), who has 3.73 million followers, reported these two extreme cruel events. This post received 82,000 public retweets and 29,000 comments.

On 1 February, the blog Global Companion Animal Trip (环球伴侣动物之旅) reported on Weibo that in a community in Wuxi, Jiangsu Province, a resident was quarantined in a hospital for suspected infection. Under the pretext of ensuring the health of other residents, the community management staff entered his home without permission and killed his companion cat. The report quickly sparked outrage, and the public began to expose various extreme epidemic preventive actions, such as banning and culling companion animals in their own cities.

The cruel treatment of companion animals and the act of abandoning or even killing animals to prevent human beings from being infected reflected strong anthropocentrism. Strong anthropocentrism reduces animals to resources for human development and lacks an ethical consideration of whether human needs and desires are reasonable (Norton, 1984; Thompson, 2010). With regard to this strong anthropocentrism, some people think that the treatment and shelter of companion animals in emerging infectious disease outbreaks should be taken seriously but that human safety is the top priority. People who hold this view suggest that if necessary, companion animals that may transmit the virus can be executed but that the execution method must be humanitarian. Others believe that companion animals are just as important as humans and that they should never be executed, even if they are at risk of infection or are already infected.

Consistent with Cui and Xu’s (2019) views on animal ethics, we can summarize two types of animal ethics from these public discussions. The first is animal welfare ethics. This view acknowledges the moral significance of animals but does not exclude the use of animals for the sake of human development (Fennell, 2013). For example, this view holds that animals can be used in medical experiments, raised as food, and imprisoned in cages for tourists. However, when animals are used in such ways, their well-being must be ethically considered; for example, their suffering must be minimized (Cui and Xu, 2019; Dawkins, 2012). Siyu Zuori Zhongzhong (死于昨日种种) said, “If the companion animal’s fur carries the virus, it should be isolated as soon as possible or executed without pain.” Henailv (禾奶绿) said, “Look at the corpse of the cat killed by the community management staff. The tall hairs all stood up, which shows that it must have been in pain before death. No one can brutally kill animals! But of course, if they are really infected, they should also be quarantined or euthanized, and they should not be allowed to infect people.”

The second type of animal ethics is animal rights ethics. Taking a non-anthropocentric perspective, animal rights supporters contend that animals have pre-given rights and intrinsic value and therefore need to be treated as the subjects-of-a-life (Cui and Xu, 2019; Regan, 2004). This includes the right of animals to freedom and the right of animals to be fully addressed in the same way that human rights are (Cohen and Regan, 2001; Cui and Xu, 2019). For example, Shaonv Dapei (少牛搭配) said, “Don’t raise them if you don’t like it! Raising a companion animal is the same as raising a child! Animals are not your toys. If you raise them, you should be responsible for them! If your child is sick, will you throw it down from upstairs?” Kaixin Jiuhao de Ms (开心就好Ms) exclaimed, “These people (community management staff) are simply inhuman monsters! Animals, like us, are alive. Instead of protecting them, they unexpectedly buried them alive! Are these people still human?”

Although the Chinese central government and local authorities have not directly proposed emergency plans for companion animals, public discussion on animal ethics has raised official awareness of the importance of considering animals in urban public health emergency management. Chinese policy makers have begun to actively correct excessive epidemic prevention measures and educate the public to protect animals. As the mouthpiece of the government, China Central Television and People’s Daily began to explicitly call on citizens to take care of companion animals during the epidemic rather than abandoning or harming them. Local authorities, such as the Xi’an Public Security Bureau, have issued notices warning community management agencies to cancel the prohibition order on companion animal breeding, pay attention to animal care in epidemic prevention measures, and not arbitrarily kill companion animals.

In addition to the debate on animal ethics, we found that the high-frequency words used by the public to describe the experiences of companion animals represented not only negative emotions such as “misery” and “falling to death” but also positive emotions such as “cheer” and “warmth.” This finding shows that companion animals also experienced effective social care and shelter during the epidemic. The COVID-19 outbreak coincided with China’s most important festival, the Spring Festival. During the Spring Festival, people usually leave their workplaces and return to their hometowns. However, this year, traffic controls implemented to prevent the spread of the virus caused many people working in Wuhan to not return to Wuhan after visiting their hometowns for the Spring Festival. Their companion animals raised in Wuhan were in danger of food shortages or even death. Due to the limited capacity of the government for epidemic prevention and rescue, and in light of the dangerous epidemic situation with anxious pet owners and helpless companion animals, the Wuhan Small Animal Protection Association, a non-governmental organization (NGO), cooperated with pet owners throughout Wuhan to provide door-to-door assistance to companion animals that remained at home. The spontaneous rescue and shelter of companion animals by NGOs and ethical residents became a powerful supplement to the government’s emergency response plan.

Therefore, we found that the public’s attention to animal ethics and care prompted Chinese policy makers to adopt a more morally acceptable model for urban public health emergency management that can be sustained and supported by responsible NGOs and ethical urban residents.

7. Conclusions

This paper utilized a case study of the COVID-19 outbreak in China to analyse the public’s perception of urban companion animals in the context of a public health emergency. This emerging infectious disease, acting as a mirror and a catalyst, has exposed various human-animal multispecies urban cohabitation situations and problems in Chinese cities. We found that the public mainly followed and reconstructed medical discourses about the infection risk caused by companion animals and discussed sustainable and ethical animal practices in urban public health emergency management during the COVID-19 outbreak.

First, discourses about the risk of companion animal-to-human transmission were mainly distributed by medical workers in official media. This professional medical knowledge was not only employed by the public to prevent diseases but also reconstructed and misinterpreted by specific social groups to promote the increasingly prosperous pet economy and to negotiate leisure conflicts in urban public space. Second, discourses about companion animal experiences were mainly revealed by the public on social media. Both the tragic and caring experiences of these animals reflect the lack of attention to animals in urban public health emergency plans and the efforts of ethical organizations and individuals to rescue companion animals during the outbreak.

This study contributes to the existing literature in several ways. Our research demonstrates “the vulnerability of pets’ positions as human rights holders” and “the growth of moral awareness.” There are still many challenges in the implementation of this model, but it provides a basis for policy making and offers a way forward for the future management of urban companion animals.
belongings” (Fox and Walsh, 2011, p, 114) and indicates that companion animals represent “significant otherness” (Power, 2012) in the modern urban home-making process. Pet-oriented goods and services are not unique to Western countries. In Asia’s high-growth economies, especially in China, pet investment in urban space is increasing at an extremely rapid rate. Pets figure as both commodities and as sites of intensely commodified investment under the market economy system. By reconstructing the relationship between companion animals and diseases, businesspeople attempt to prove that keeping companion animals does not harm human health to eliminate people’s hesitation to integrate companion animals into their families. On the other hand, during the COVID-19 epidemic, owners abandoned and killed their companion animals because of their fear of infection. The excessive response to companion animals in Chinese cities does not seem to be reflected in the Western countries. Therefore, there is such a difference should be the topic of future research. At the same time, more research is necessary to determine how to comprehensively analyse the dynamics of the two-sided, complex human-companion animal relationships and how this relationship is represented on social media.

In this study, the authors advance the understanding of the relationship between companion animals and Chinese cities. In recent years, companion animals have entered the homes of Chinese urban residents and have become family members and even furry children. The conception of home in more-than-human families not only involves the private sphere but also has come to include public spaces such as neighbourhood parks and the city itself. Therefore, Chinese urban planners should consider incorporating nonhumans, especially dogs, in land use decisions. Constructing pet parks, providing places for companion animals to exercise and socialize, and providing professional equipment such as waste cans, water supplies, and shade in public spaces can reduce multispecies leisure conflicts in the city.

Furthermore, this article contributes new knowledge about urban public health emergency management. When natural disasters such as earthquakes and tsunamis occur, the safety of human and animal life is simultaneously threatened. As a result, urban emergency management decision makers have begun to value companion animals and their owners and have attempted to develop special companion animal emergency plans to promote public health and safety. However, due to species barriers, human-to-human emerging infectious diseases, as public health crises, are considered to threaten only human health, so most of the corresponding emergency plans provide treatment and shelter only for human beings while ignoring the companion animals that live with them. Our research suggests that humans and companion animals are mutually integrated, constituted and penetrated in the urban everyday life space. Human infection, abandonment and cross-species infection can make companion animals a new public security risk. Therefore, future research and policy should consider how to integrate non-human actors and animal welfare into the domains of urban public health emergency management, including reflections on the inclusion of animals, as a type of moral and political subject, into a wider range of political decisions and practice, as well as how to develop plans for the shelter and care of companion animals in response to crises.

In the face of COVID-19, China, a country with 1.4 billion inhabitants, has already shown great coordination and solidarity, which effectively slowed the speed and limited the extent of the transmission. Although human hygiene and biosecurity are the first options for disease prevention and management, Chinese policy makers are increasingly aware that companionship plays a key role in maintaining public health during outbreaks. The public’s advocacy and attention to sustainable animal ethical practices has encouraged Chinese policy makers to continuously adjust their public health emergency plans in communication with the public and to attach greater importance to companion animals. Therefore, future attention to the ethical practices through which government, ethical actors and corporations can come together to provide protection for animals is needed.

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