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Governing Germs at Home:
Controlling SARS Risk and Home Quarantine in Taiwan, 2003

The project examines the home quarantine policy in Taiwan. Governments of SARS-affected areas adopted massive home quarantines to fight against the flow of the virus. For example, during the outbreak, Taiwan had put some 130,000 people in home quarantine, the single most pervasive home quarantine ever implemented within a national territory in modern times. The largest proportion of them were people traveling to Taiwan from SARS-affected areas designated by the WHO, with some of them being confined in designated "homes" such as hotels and military-affiliated establishments. In this project, I investigate the origin and development of home quarantine in Taiwan to demonstrate the need to go beyond the mainstream technical model to examine how such risk control framework and measures are socially constructed.

The Emergence of Home Quarantine in Taiwan

> "Several countries are introducing maximum measures, including quarantine, to prevent the further spread of SARS. New diseases such as SARS are poorly understood as they emerge. At the beginning of an outbreak, it is sound public health policy to institute maximum control measures needed to prevent further spread." (World Health Organization, "Update 10, Data from China, Countries introduce stringent control measures," March 26, 2003)

The Ministry of Health in Singapore issued the Home Quarantine Order (HQO) on March 24, 2003, starting the large scale of preventive measures focusing on "healthy people." [1]Under HQO, those who had close contacts with SARS patients had to stay at home for 10 days and to minimize contacts with other people. Before March 24, the major strategies to prevent the spread of SARS recommended by the WHO were (1) the proper isolation of SARS cases; (2) for those who had been to affected areas or had close contacts with SARS

[1] Use either one space or two between sentences, but be consistent.

cases, if they showed high fever or respiratory symptoms, they had to seek immediate medical attention. Even in Singapore, on March 23 the government still emphasized the "unless you have the symptoms AND a similar travel history or personal contact with infected persons, the Ministry urges the public to seek the advice of a GP first…"[2] This meant that before the introduction of home quarantine measures, only those "ill" persons could become part of preventive measures for further transmission. The issuing of the HQO in Singapore signifies a brave new measure that isolates people who do not have any symptoms. On the first day of invoking HQO, around 300 persons in Singapore were on the government's list requiring home quarantine.

Home quarantine was a further precautionary measure after the Singapore government centralized suspected and probable cases and added protection measures for hospital staff.[3] Based on the epidemiological theory of the transmission pyramid, the Singapore government believed attention should be focused on preventing the increase of SARS cases from secondary and tertiary transmission. Since no further cases occurred among hospital staff, this means that the secondary transmission in the medical setting had been effectively controlled, Efforts were made to contain the spread of SARS among the family and friends of SARS cases. Home quarantine allows detection of the infected cases in a shorter time period. Therefore, those who were subject to the HQO had to check fever regularly, and if they were ill, a specially equipped ambulance would transport them to hospital.

The implementation of home quarantine policies in Singapore immediately became an exemplary case, and spurred experts and local authorities in Taiwan to argue for more stringent measures. The first case of SARS, then known as "atypical pneumonia", was publicized in Taiwan in March 14. One week later, when the family and his co-workers showed some symptoms, heated debates started among government officials and experts as to

[2] Singapore Ministry of Health, 2003/3/23, "Update (x) On SARS Cases in Singapore."
[3] Singapore Ministry of Health. 2003/3/22. Enhanced Precautionary Measures to Break SARS Transmission (MOH SARS Press Releases).

whether the government in Taiwan should add SARS to the official list of transmitted diseases and use such legal justification to isolate the suspect cases. Although the debate in Taiwan focused on how to manage suspect cases, several experts and the media used the establishment of home quarantine in Singapore to argue that stringent control measures were necessary.

The presentation of Singapore in Taiwan as a model of "stringency," in contrast to the image of Hong Kong's handling as "sloppy," paved the way for a sudden implementation of home quarantine in Taiwan. Two days after Singapore issued HQO, four engineers who had been to Beijing were identified as SARS cases, starting another wave of social upheaval. This event ended the controversy on the legal status of SARS; the CDC in Taiwan immediately listed SARS as an official transmitted disease. At the same time, Taiwan issued its first home quarantine orders. Thus, while the WHO had been the major institution that the Department of Health in Taiwan closely followed, Singapore emerged as another significant model to learn from when policy-makers in Taiwan needed to modify their control measures.

More a Political Response than a Scientific Measure

We argue here that, different from that in Singapore, the introduction of home quarantine in Taiwan was more a response to political crisis than a scientific evidence-based control measure. The stage of the SARS outbreak in Taiwan differed from that in Singapore, but Taiwan did not follow all the control measures that Singapore took. While Singapore followed the epidemiological theory of the transmission pyramid to use home quarantine to prevent further spread of SARS via secondary and tertiary transmission, the four SARS cases in Taiwan that triggered the new measures were index cases. One important lesson that both the WHO and Singapore learned is to protect health care workers, but Taiwan did not strictly learn from that experience. On March 16, the WHO announced that 90% of SARS cases were health care workers, and when Singapore issued HQO, half of the SARS cases in Singapore were doctors, nurses, and other hospital staff. When the Ministry of Health in Singapore announced ten measures to contain SARS, three of them were to strengthen the infection

control system in the hospital setting (enhanced infection control procedures in hospitals, enhanced protection procedures in emergency departments at hospitals, and additional isolation facilities in public hospitals).[4] Even though no new cases occurred among hospital staff, the enhancement of protection measures among health care workers was still one of the four precautionary measures that the Ministry of Health announced on March 22.[5] However, such emphasis on control procedures in hospitals was not taken seriously enough, which partly led to the most serious SARS outbreak in Taipei's Hoping Hospital beginning in early April.[6] As Rosenberg has observed, since the 14th century, quarantine has being seen by the authorities as a politically feasible choice even when such measures did not have scientific support.[7] Compared to the lenient practice on hospital control procedures in late March in Taiwan, home quarantine seemed to be singled out as a dramatic ritual that could easily demonstrate the state power during a social crisis that demanded more visible state intervention.

Until March 26, scientific evidence, although limited, suggested that only those who showed symptoms were infectious, and therefore the isolation of SARS cases was deemed one of the most effective strategies to prevent the spread of SARS. As we quoted in the beginning of the paper, the WHO immediately supported Singapore's home quarantine system from the angle that "new diseases such as SARS are poorly understood as they emerge" and therefore maximum measures could be justified.[8] Such a statement did not overthrow past scientific reports regarding infectious patterns. Home quarantine was meant to help detect the suspected cases more efficiently, rather than be offered based on any new scientific finding on the nature of virus or infectious channels. Still, such measures dramatically transform the

[4] Singapore Ministry of Health. 2003/3/17. Measures Taken to Control the SARS Outbreak in Singapore (MOH SARS Press Releases).
[5] Singapore Ministry of Health. 2003/3/22. Enhanced Precautionary Measures to Break SARS Transmission (MOH SARS Press Releases).
[6] Chen, Dong-Sheng. (2003) "City, Infectious Disease, and Social Justice" (in Chinese), paper presented on the "Diseases and Society: Reflection on SARS Outbreaks" conference, November 14-16, National Taiwan University.
[7] Rosenberg, p.282.
[8] the WHO，2003/3/26，Update 10 – Data from China, countries introduce stringent control measures.

perception framework among the lay people.

Transformation of Risk Perception Framework

From the very beginning of the implementation of home quarantine in Taiwan, serious discrimination existed. Some neighbors kept distance from these healthy people, or rejected contacts with their family members who did not have to follow the home quarantine procedures. Several cases reported that healthy people committed suicide not due to the severity of illness but because of social discrimination. Obviously, the community viewed people under home quarantine procedures as infectious. By contrast, authorities and experts emphasized that people under home quarantine were not infectious. Vice Minister Lee of Singapore directly stated “they are not dangerous.” The CDC in the US, as well as the HQO in Singapore, emphasized that “they are not infectious.” A huge gap of perception of danger existed between the lay and the expert.

We would like to argue that it is not due the lack of scientific knowledge that the lay people had such a “wrong” perception. Rather, we want to emphasize that the measure of home quarantine itself helped create such a perception. First of all, the policy marked an easily visible group posing a possible danger, which was much easier for the public to identify as a threat than the invisible virus itself. Before the implementation of home quarantine, health authorities in Singapore, Hong Kong and Taiwan advocated that individuals should seek medical attention whenever they had suspected symptoms. Except for those who came back from the “affected areas,” there was little distinction of exposure to danger among the masses. However, the attention moved from symptoms to persons; home quarantine clearly identitied specific subjects in the community that might have a higher possibility of infectiousness than others. Secondly, the content of measures treated people serving home quarantine as “sick persons” and “dangerous persons.” For example, in Singapore, the health authorities asked employers to treat the quarantine period as “paid hospitalization sick leave.” Such a measure associates people under home quarantine with the ill. Electronic cameras and other surveillance measures were used to supervise their activities. Such stringent

strategies created the image of danger. Thirdly, in Taiwan, the Chinese translation of quarantine is “isolation.” Although in the English-speaking world, the CDC in the US, Canada, and Singapore emphasized the difference between “quarantine” and “isolation,” the Chinese translation shared the same word “Ge[9]-Li.” This terminology blurred the boundary between the ill who needed hospital isolation and the healthy who only needed to observe their health more closely. Therefore, with the introduction of home quarantine during the SARS outbreak, a new type of danger was created, which led to further misunderstanding and social disruption in the community.

[9] I assume you mean 隔離, gélí. Since Chinese is tonal, you might wish to copy my tone marks as here, or even to add the Chinese, as here “ 隔離, gélí ”, which makes it easier for those speakers of Chinese who are not familiar with pinyin