Organizing Risks: Frontline Bureaucrats, Vaccine Hesitancy, and the Fragmented Governance in COVID-19 Response

Abstract: As novel threats emerge with increasing ambiguity and unpredictability, the authority of science and technology in defining and managing risks has been deeply contested. In the realm of public health, vaccination programs—a cornerstone of state-led risk interventions—have faced growing public resistance, fueled by distrust in government risk management. While existing scholarship has examined how states construct and impose risk frameworks, less is known about how frontline bureaucrats implement, adapt, or resist these frameworks in everyday governance. This article shifts attention to the contradictions and divergences in state risk management by examining how frontline government workers in China engaged with local residents' vaccine hesitancy during the COVID-19 pandemic. Drawing on 80 in-depth interviews with 50 neighborhood-level government employees in a Southern coastal city, we argue that frontline workers did not simply enforce a coherent state agenda but instead developed disparate strategies in response to bureaucratic pressure and shifting central government guidelines. While some strictly adhered to state directives, others tacitly permitted vaccine hesitancy, selectively accommodating resistance based on residents' socioeconomic status and neighborhood power dynamics. These findings highlight the multiplicity of risk interventions at the ground level and reveal how frontline bureaucrats actively shape the implementation of state policies, sometimes in ways that contradict official risk narratives. By foregrounding the interactive processes through which risk is organized and negotiated in daily governance, this study contributes to sociological understandings of state power, bureaucracy, and the contested nature of public health interventions in risk societies.

Scholars are awakening to a series of natural and human disasters heralding the proliferation of unexpected novel threats marked by emergency and ambiguity. These emerging risks pertaining to the unfamiliar and difficult-to-calculate insecurities have greatly undermined the experts' roles in defining risk and their acceptability. Science and technology have hence lost much established legitimacy and capability to conclusively determine the presence and nature of a risk as science and technology create as many uncertainties as they dispel. In fact, various controversies around climate change, infectious diseases, natural resource crisis, global financial downturn, and large-scale involuntary migration among others illustrate deep struggles over how to stabilize the meanings of a risk object, whose truths matter and in what ways, who hold the responsibility to take action, and what interventions should be conducted.

What roles do the state play in defining, assessing, and managing risks and related vulnerabilities in what Beck declared risk society? This question is unavoidable when vaccination programs as the cornerstone of state public health efforts have been countering waves of challenges around the globe. More broadly speaking, distrust in government risk management grows and many nation states face increasing apprehension, resistance, and challenges from the public who hold incongruent risk values and interests, progressive or conspiratorial ones alike. We shall take seriously calls inside medical sociology for changing the level of analysis around the evaluation of risk and mitigation options beyond individual-level factors.

The sociology of risk has demonstrated the power and resources leveraged by political authorities to articulate their own risk visions and promote projects accordingly. This process in turn often perpetuates if not strengthening existing inequalities by placing more hazards and harms on already disadvantaged members of the society. While highlighting the effects of structural factors and institutional interests by examining public policies and formal regulations, these discussions overlook how the dynamic process of risk constructing and distributing unravel differently within daily state administration operation. A few illuminating studies began to address this gap by examining concrete governmental *actions*–such as coercion and manipulation. They largely focus on government agents' rational calculation and coherent decisions to counter actual or potential contestation of the state's control over risk. Recent empirical evidence casts doubt on this one-dimensional portrayal by suggesting that state administrations especially those at the local level can sometimes form more fluctuating and multifaceted interactions with defiant citizens. Yet little is known about the conditions and processes of those interactions which lead to variant outcomes.

Building on previous research in medical sociology, sociology of risk, and bureaucracy studies, this article offers a more dynamic account by shifting attention to divergences and contradictions in state risk management. We concur that the state prioritizes exerting its risk authority on vaccination especially during an unfolding crisis. We argue, however, state agents may crush and muffle the deviant risk values and practices of some citizens while accommodating and facilitating those of others. This argument foregrounds the multiplicity of risk interventions in frontline government workers' everyday *information*, *cultural*, and *bodily* work to secure the (begrudging) cooperation of individual residents. Organizing risk

on the ground is not merely a straightforward process of devising rational procedures and activities to address a well-defined objective risk by frontline workers with predetermined interests or grand strategies. This is especially true when extant sci-technological knowledge cannot cement reliable meanings of and solutions to novel risks. We suggest that frontline workers rather derive disparate normative and instrumental judgements of state frameworks from their conflict and negotiations with local residents over how to categorize at-risk groups, establish desirable outcomes, and distribute benefits and burdens of risk interventions. Differences in those workers' bureaucratic operations and their power relations with governing neighborhoods shape these interactive processes, which in turn produces variation in the levels and forms of (in)tolerance towards residents' resistance and opposition.

We develop these ideas using the empirical case of the COVID-19 vaccination program in China by drawing on 80 in-depth interviews with 50 frontline government employees working at the neighborhood level in a Southern coastal city. Bureaucratic pressure was mounting in 2022 as the Chinese state was rushing for lofty goals of achieving high vaccine coverage. However, the ambivalent, contradictory, and ever-changing vaccination guidelines from the central government only fueled confusion and skepticism, even among bureaucrats. Frontline workers were overloaded with the burdensome tasks of organizing informal routines to reconstruct the likelihood, nature, and magnitude of adverse effects from domestically manufactured vaccines in ways that could convert vaccine hesitant residents. Workers hence developed divergent goals, preferences, and practices in their day-to-day work through which they were making sense of vaccination risks and of their proper roles. While some "muddled through," more workers "muddled away" from the state plan by (in)advertently allowing certain groups of residents—such as elders in affluent neighborhoods—to exercise bodily autonomy and reject COVID-19 vaccines or boosters. We identify various combinations of individual workers' professional orientations and the power and resources possessed by the neighborhoods they were managing that either expand or diminish the space for residents' vaccine hesitancy and opposition to persist.