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Fiona S. Cunningham and M. Taylor Fravel. "Dangerous Confidence? Chinese Views on Nuclear Escalation." *International Security* 44:2 (2019): 61-109. DOI:

https://doi.org/10.1162/isec_a_00359

Published by ISSF on **12 June 2020**

<https://issforum.org/to/iar140>

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In their recent article, "Dangerous Confidence? Chinese Views of Nuclear Escalation," Fiona S. Cunningham and M. Taylor Fravel outline both the causes and consequences of Chinese views concerning conventional and nuclear warfare, limited or otherwise.

This article represents a new attempt by the foremost scholars in the international security literature to examine China's nuclear force posture and to outline the consequences of this posture for strategic stability, in general, and strategic competition between Washington and Beijing, specifically.¹ It also provides evidence that careful fieldwork, interviewing, and archival research can yield useful insights for scholars of international security and strategic studies.

Cunningham and Fravel also offer an alternative to Caitlin Talmadge's recent argument that Beijing may pursue limited nuclear escalation in a scenario in which its nuclear deterrent is at risk—in spite of Beijing's stated no first use policy.² Amid continued debates surrounding Chinese nuclear modernization and efforts by the U.S. administration to multilateralize existing arms control regimes to include Beijing, the need for this analysis is unquestionable.³

¹ Fiona S. Cunningham and M. Taylor Fravel, "Assuring Assured Retaliation: China's Nuclear Strategy and U.S.-China Strategic Stability," *International Security* 40:2 (2015); Caitlin Talmadge, "Would China go nuclear? Assessing the risk of Chinese nuclear escalation in a conventional war with the United States," *International Security* 41:4 (2017): 50-92; Joshua Rovner, "A Long War in the East: Doctrine, Diplomacy, and the Prospects for a Protracted Sino-American Conflict," *Diplomacy & Statecraft* 29:1 (2018): 129-142; Thomas G. Mahnken and Gillian Evans, "Ambiguity, Risk, and Limited Great Power Conflict," *Strategic Studies Quarterly* 13:4 (2019): 57-77.

² Caitlin Talmadge, "Would China go nuclear? Assessing the Risk of Chinese Nuclear Escalation in a Conventional War with the United States," *International Security* 41:4 (2017): 50-92.

³ Susan Turner Haynes, "Chinese Nuclear Strategy," in Aiden Warren and Philip M. Baxter, eds., *Nuclear Modernization in the 21st Century: A Technical, Policy, and Strategic Review* (New York: Routledge, 2020).

Cunningham and Fravel argue that Chinese nuclear strategists hold paradoxical views concerning escalation control—that escalation can be controlled in conventional contexts and that it cannot be controlled in nuclear contexts. As a consequence, Chinese nuclear procurement and operational doctrine eschews non-strategic nuclear forces and options for pursuing limited nuclear war. The second step of their argument suggests that China is confident that nuclear escalation can be avoided. The authors go on to argue that this confidence may threaten strategic stability.

As is the case with all good work in the social sciences, the article provokes new substantive questions as well as methodological questions worthy of further consideration. In this article review, I examine the primary argument put forward by the authors regarding Chinese views of escalation. I then turn to a discussion of the methodological approach. Finally, I outline the need for alternative approaches to investigate the behavioral and cultural determinants of nuclear force posture and doctrine and its attendant consequences for conventional and nuclear escalation.

Chinese Nuclear Posture and Limited Nuclear War

Cunningham and Fravel begin by outlining a cognitive theory concerning how Chinese views on escalation influence Chinese force posture and nuclear doctrine. Specifically, they argue that the Chinese view that escalation cannot be controlled beyond the nuclear threshold limits Chinese preparation for limited nuclear war. They also note, on the basis of interviews and Chinese military publications, that Beijing appears confident that it can control conventional escalation.

This paradox is intriguing—particularly whether utilitarian or normative considerations are driving this outcome—but more work is needed to contextualize the finding. Is this paradox—at the state or unit level—unusual? Are the same considerations at play in Washington and Moscow? This context is particularly important given that, as the authors note at the outset of their article, much of the academic discussion and policy debates regarding limited nuclear war—including the potential for “escalate to de-escalate” strategies—occurs between adversaries with symmetrical capabilities (62).⁴

The argument that China’s material capabilities—with a comparatively small nuclear arsenal—are a driver of Beijing’s willingness to avoid a limited nuclear war doctrine is given short shrift in the piece. “Trading” nuclear capabilities in limited nuclear conflicts does not offer an attractive proposition to Beijing—even if the suggested doubling of China’s nuclear forces is to occur.⁵ Indeed, the authors quote a Chinese officer in the Second Artillery in 2004 that makes this point, “Once an adversary uses small-yield nuclear weapons to attack our military targets, if we use a corresponding [number] of nuclear weapons to counterattack at the same level, we will enter a war of attrition we cannot win” (89). Given this logic, it is possible that both cognitive and material factors determine nuclear strategy. How much each set of variables matters represent an important question for future scholarship.

It is also worth considering whether the cognitive model for the Chinese position on nuclear escalation is static or dynamic. As China’s nuclear posture changes—both quantitatively and qualitatively—are Chinese beliefs concerning the viability of escalation control likely to change? What might drive these shifts in beliefs? These are important questions for scholars to consider in future work.

(Over)confidence and Nuclear Escalation

⁴ Jeffrey A. Larsen, and Kerry M. Kartchner. *On Limited Nuclear War in the 21st Century*. (Stanford: Stanford University Press, 2014).

⁵ Robert P. Ashley, “Russian and Chinese Nuclear Modernization Trends,” remarks at the Hudson Institute, Washington, D.C., 29 May 2019.

Cunningham and Fravel next turn to a discussion of Chinese confidence in avoiding nuclear escalation writ large. As they make this shift, it is worth noting that there is a subtle distinction between the belief that “nuclear escalation cannot be controlled” (108) and confidence “that nuclear escalation can be avoided” (65)—and that the determinants of each may vary.

According to the authors, the confidence that nuclear escalation can be avoided is explained by three factors: “the long-standing decoupling of [China’s] conventional and nuclear strategies; the availability of other strategic capabilities such as conventional missiles, space weapons, and cyberweapons; and organizational biases of different groups involved in China’s nuclear strategy and missile operations” (95).

On the question of decoupling, I have two concerns. As the authors note, “China established its first conventional missile unit in 1993 as an experimental unit within the then exclusively nuclear Second Artillery. Conventional missile units remained within the Second Artillery to take advantage of organizational efficiencies in training and equipment. Moreover, for operational flexibility, conventional missiles were dispersed among different Second Artillery bases, rather than centralized in one exclusively conventional missile base” (93). Separating material capabilities from strategy for the purpose of analysis is not an easy endeavor but the distribution of material capabilities—conventional and nuclear—suggests that there is reason to interrogate the reality of Chinese decoupling—as the authors later note in their discussion of commingling. Taking the decoupling argument at face value, it is also possible that decoupling is driven by Beijing’s confidence that nuclear escalation can be avoided, rather than the other way around.

Second, and perhaps most interesting, is the argument that China’s conventional missiles, space weapons, and cyberweapons offer a “strategic” alternative to nuclear escalation. This argument flows from Cunningham’s prior work exploring non-nuclear strategic capabilities and mirrors recent work engaging with the strategic effect of cyber capabilities.⁶ Whether this argument holds, however, depends upon the definition of “strategic.” Across the international security literature, “strategic” has been loosely defined and is often contingent upon the research subject.⁷ Cunningham suggests that, “strategic weapons... can be used to attack important targets such as an adversary’s satellites, its homeland critical infrastructure, its aircraft carriers, and an adversary’s forward-deployed forces and allies in a conflict.”⁸ Others offer a far more restrictive definition that describe strategic weapons as immensely destructive and war-winning in terms of their effects—hence its treatment as a euphemism for nuclear weapons.⁹ I tend to prefer this restrictive definition, but the line between ‘strategic’ and ‘non-strategic’ is, at best, blurred and in need of further discussion. Whether conventional missiles, space capabilities, and cyber weapons offer a strategic substitute for nuclear escalation appears to be contingent on the definition of the strategic effect that these weapons are designed to achieve.

⁶ Fiona Stephanie Cunningham, “Maximizing Leverage: Explaining China’s Strategic Force Postures in Limited Wars,” PhD diss., Massachusetts Institute of Technology, 2018; Adam P. Liff, “Cyberwar: A New ‘Absolute Weapon’? The Proliferation of Cyberwarfare Capabilities and Interstate War,” *Journal of Strategic Studies* 35:3 (2012): 401-428; Richard J. Harknett and Max Smeets, “Cyber campaigns and strategic outcomes,” *Journal of Strategic Studies* (2020).

⁷ For a discussion of strategic nuclear policy, see Charles L. Glaser, *Analyzing Strategic Nuclear Policy*. (Princeton: Princeton University Press, 2014); The opposite “non-strategic” nuclear weapons presents a similar definitional challenge: Amy F. Woolf, “Nonstrategic Nuclear Weapons,” Congressional Research Service, 14 January 2010.

⁸ Fiona Stephanie Cunningham, “Maximizing Leverage: Explaining China’s Strategic Force Postures in Limited Wars,” PhD diss., Massachusetts Institute of Technology, 2018, 17.

⁹ Bernard Brodie, ed., *The Absolute Weapon: Atomic Power and World Order* (New York: Harcourt, Brace and Company, 1946).

Finally, Cunningham and Fravel outline the organizational biases that have led to a preponderance of focus on conventional rather than nuclear posture in China. I found this section compelling—and the conclusion that nuclear experts and military officers fail to examine nuclear escalation and crisis stability telling. Once again, this article could have considered whether this phenomenon is particular to the Chinese case.

All three explanations explored above suffer from the same foundational problem. Each explanation for Chinese confidence in avoiding nuclear escalation provides a monadic explanation for a dyadic phenomenon. Confidence regarding the avoidance of nuclear escalation is driven not only by the distribution of material capabilities and organizational biases of one side, but of all parties to a conflict. It is unclear to this reader why Chinese military experts would not take into account the vagaries of adversary decision-making when it comes to nuclear escalation given that they are in evidence in the design of China's minimal deterrence force posture.¹⁰

Methodological Questions

In pursuit of Chinese operational doctrine, the authors conducted a series of interviews with Chinese experts, and gathered Chinese texts used for military training and research publications authored by Chinese civilians and military officers, leaning heavily on various *Science of Military Strategy* documents.

To their credit the authors note the limits of this methodological approach: “They [the interviews] provide an opportunity for interviewees to signal views that enhance deterrence but that may not reflect the actual beliefs driving Chinese nuclear decisionmaking. Interviewees may also be influenced by organizational interests and views that provide an incomplete picture of the views that inform official nuclear decisionmaking” (81). It is also worth noting that elite interviews with foreign researchers represent an opportunity for signaling to external audiences.¹¹

More might have been made of the differences between individuals in the researcher's sample. The demographic characteristics and organizational affiliations of interviewees might explain diverging perspectives concerning the viability of limited nuclear war and the potential for nuclear escalation, respectively.

With that said, the methodological approach undertaken by Cunningham and Fravel is eminently defensible, particularly in order to study a series of interrelated research questions for which we have little to no empirical data. This lack of empirics is a problem with two consequences for the analysis in the article—as well as broader scholarship concerning strategic competition.

First, it impacts the microfoundations of Chinese views of nuclear escalation. For example, Cunningham and Fravel note that “many Chinese experts agree that once nuclear weapons were used, subsequent nuclear escalation would not be controlled” (76). But what evidence is there for the contention outlined by Chinese experts? Given the focus of the article, more discussion concerning the means to evaluate the arguments proffered during interviews and in the documents analyzed by the authors would be welcome.

Second, this uncertainty is mirrored in the discussion of the consequences of Chinese nuclear force posture for strategic stability. At the close of the article, Cunningham and Fravel argue that Chinese (over)confidence has had deleterious effects on strategic stability and they point to several pathologies associated with Chinese views concerning nuclear

¹⁰ Alastair Iain Johnston, “China's New” Old Thinking”: The Concept of Limited Deterrence,” *International Security* 20:3 (1995): 5-42; Eric Heginbotham, Michael S. Chase, Jacob L. Heim, Bonny Lin, Mark R. Cozad, Lyle J. Morris, Christopher P. Twomey et al., *China's Evolving Nuclear Deterrent: Major Drivers and Issues for the United States*. (Santa Monica: RAND Corporation, 2017).

¹¹ Given that nuclear scholars are concerned with questions of costly signaling, they are particularly well-placed to consider these dynamics.

escalation. Specifically, the authors suggest that Chinese strategists do not address the danger of commingling conventional and nuclear forces,¹² do not account for “pressures to escalate” in conventional conflict (101), do not consider the potential for misperception between adversaries (102), and assume proportionality in an adversary’s response to an escalatory scenario (103). We may have many sound theoretical reasons to think these are destabilizing, but we lack the evidence to definitively claim that they affect strategic stability. Indeed, the lack of nuclear escalation involving China in spite of these pathologies might suggest they have minimal effect.

Recent developments in experimental social science drawing from political psychology offer some hope that researchers can close this gap, but more work is needed to integrate the excellent qualitative work undertaken by Cunningham and Fravel into quantitative studies.¹³ In time, the combination of these methods may allow us to interrogate the cultural, demographic, and psychological underpinnings of escalatory behavior—whether conventional or nuclear.

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¹² This argument mirrors that of Talmadge and is also reflected in recent work regarding the dangers of entanglement involving nuclear command, control, and communication systems: James M. Acton, “Escalation Through Entanglement: How the Vulnerability of Command-and-control Systems Raises the Risks of an Inadvertent Nuclear War,” *International Security* 43:1 (2018): 56-99.

¹³ Scott D. Sagan, and Benjamin A. Valentino. “Revisiting Hiroshima in Iran: What Americans really think about using nuclear weapons and killing noncombatants,” *International Security* 42:1 (2017): 41-79; Daryl G. Press, Scott D. Sagan, and Benjamin A. Valentino, “Atomic Aversion: Experimental Evidence on Taboos, Traditions, and the Non-use of Nuclear Weapons,” *American Political Science Review* 107:1 (2013): 188-206; Kai Queck, “Nuclear Proliferation and the Use of Nuclear Options: Experimental Tests,” *Political Research Quarterly* 69:2 (2016): 195-206; Joshua D. Kertzer and Dustin Tingley, “Political Psychology in International Relations: Beyond the Paradigms,” *Annual Review of Political Science* 21 (2018): 319-339; Andrew W. Reddie, Bethany L. Goldblum, Kiran Lakkaraju, Jason Reinhardt, Michael Nacht, and Laura Epifanovskaya, “Next-generation Wargames,” *Science* 362:6421 (2018): 1362-1364.