Chapter 2

Compellence and Nuclear Weapons

A Study of Conditions for the Success of Proactive Nuclear Threats

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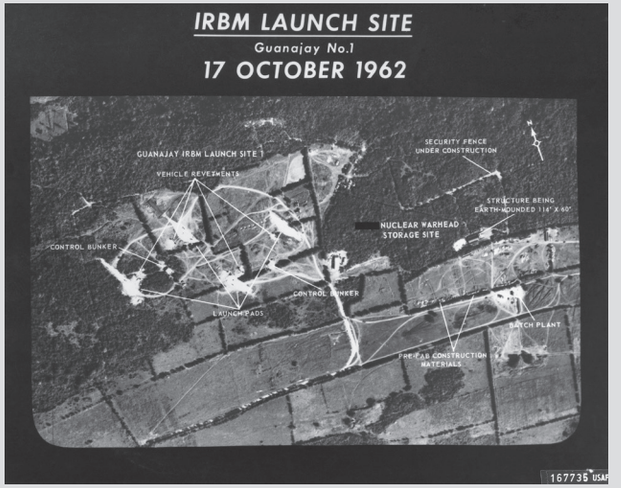


Soviet ballistic missile launch site built in Cuba during the Cuban Missile Crisis (GRANGER/Jiji Press Photo)

Deterrence has long been seen as the primary role of nuclear weapons. Since the Cold War, nuclear deterrence has remained one of the central topics in defense policy and strategy, as well as in security studies and international politics more broadly. However, deterrence is not the only function of nuclear weapons. Nuclear weapons can be used in the event of an actual war, and it is this possibility that makes deterrence possible in the first place. In deterrence, the threat of using nuclear weapons prevents an adversary from doing something (and thereby maintain the status quo). But threats can also be used to actively pursue one's own goals (i.e., to change the status quo) by coercing an adversary to take a particular action.

The use of threats to coerce an adversary to take a desired action is called compellence.[1] Although a lesser-known strategy than deterrence, nuclear weapons have, in fact, also been used for compellence. For example, during the serious confrontation between the United States and North Korea in 2017, the two states challenged each other with nuclear threats: the United States demanded that North Korea denuclearize, and North Korea demanded that the United States abandon its hostile policy. This example can be interpreted as a case of the United States and North Korea employing nuclear compellence against each other. The threat of nuclear weapons is an attractive strategy for nuclear-armed states if it can be used effectively to coerce others to comply with its demands. However, the above-mentioned confrontation between the United States and North Korea was fraught with the tension of a possible nuclear war, and neither side ultimately succeeded in forcing the other to comply with its demands. Thus, nuclear compellence is a high-risk strategy with no guarantee of success.

In the end, how effective is nuclear compellence? And under what conditions would nuclear compellence be more likely to succeed? This paper reviews previous studies on nuclear compellence, then conducts a comparative analysis of past cases to examine differences in the characteristics of successful and unsuccessful cases. The first section describes the concept of compellence and summarizes previous studies. The second section explains the analytical framework, comprising the cases to be analyzed and the factors focused on in the analysis. Finally, the third section conducts a comparative analysis of five cases and examines the conditions that increase the likelihood of success of nuclear compellence.

The Concept of Compellence and Existing Research

Compellence

Compellence is the strategy of coercing an adversary to accept one's demands to take certain actions under the threat of imposing costs or achieving them by brute force if the adversary does not comply. It is similar to deterrence in that threats are used to influence others' behavior, but differs primarily in the following two ways. First, deterrence is a strategy for maintaining the status quo by dissuading the adversary from doing something. Compellence, on the other hand, is a strategy for altering the status quo by demanding that the adversary act in a certain way. Examples of specific demands include starting something, stopping an action that is in progress, and undoing something that has already been done. All of these require the adversary to alter the situation that existed at the time the demand was made. Second, while deterrence relies solely on threats, compellence may involve the actual use of military force. Deterrence is used when it is desirable to maintain the status quo, so there is no need for the deterring party to make the first move. The deterrent threat will be carried out only if the adversary disrupts the desired situation by doing something the deterrent party has demanded it not do. Therefore, deterrence is a passive strategy; the deterrent party does not make a move until the other party does, and if it is forced to make a move by the other party's action, deterrence has failed. In contrast, compellence is used when the status quo is undesirable, so the compeller must actively work to alter the status quo. If threats alone are not enough to move an adversary who would not otherwise feel the need to move, the compeller must actually build up pressure until the adversary moves.[2]

Compellence is therefore a strategy for proactively altering the status quo, but it is also different from altering the status quo by brute force. Rather than unilaterally achieving one's objectives through military force regardless of the adversary's intentions, compellence seeks only to manipulate the adversary's cost-benefit analysis so that it chooses to take the desired action. Even if actual military force is used in the process, the expectation is that this will serve as an example to show the adversary what will happen if it does not comply with the demands, and force it to accept the demands. Therefore, if the adversary does not comply with the demands even after repeated use of military force, and the objective is only achieved by brute force, the attempt at compellence has failed.[3]

Although compellence receives less attention than deterrence, research has been accumulating since the Cold War, beginning with studies by Thomas Schelling and Alexander George and his colleagues.[4] In particular,

compellence research differs significantly from deterrence research in that it has developed with a focus on empirical studies. In deterrence research, the inherent difficulty in explaining why something did not happen in the first place makes it difficult to demonstrate the effectiveness of deterrence and reasons for its success or failure. In the case of nuclear deterrence, there have (fortunately) been no examples since World War II of deterrence failing and leading to nuclear war. On the other hand, because compellence explains changes in an adversary's behavior, it is relatively easier to examine the effects of factors such as the presence or absence of compellent threats and circumstantial differences. Because there are numerous cases of successful and unsuccessful compellence, researchers have used qualitative comparative case studies and quantitative data analysis to make empirical causal inferences.

Thomas Schelling, who also won the Nobel Prize for Economics in 2005 (AFP-JIJI)

At the same time, compellence research has a problem: researchers have raised various variables as possible factors influencing the success or failure of compellence and have not narrowed down the conditions for its success. This problem is exacerbated by the broad applicability of compellence. Even if the focus is limited to the context of international relations, there can be different patterns of compellence, such as compellence between major powers, between major powers and minor powers, and between states and non-state actors, as well as different forms depending on the issues at stake in the confrontation and the means of exerting pressure. The conditions for the success of compellence are expected to vary from context to context, and are not universally applicable across different contexts.

Nuclear Compellence

Among the various possible forms of compellence, nuclear compellence is compellence that uses nuclear weapons as a means of exerting pressure. The use of nuclear weapons to exert pressure includes both the threat to use them and their actual use (with the threat of further use). In reality, the nuclear weapons are basically not used on their own, but are used in combination with a variety of other means of exerting pressure.

Not many existing studies focus specifically on nuclear compellence, but some discuss the topic from a broader perspective.[5] Several aspects of nuclear compellence have been discussed in existing studies; two main issues have been how to ensure the credibility of nuclear threats and whether nuclear weapons are actually effective as a means of compellence.

Credibility is central to the use of any threat, and compellence is no exception. How an adversary responds to a compellent threat is fundamentally a matter of cost-benefit calculation. That is, the adversary evaluates the severity of the threat and the likelihood that it will be carried out, compares the expected gain from complying with the demand against the gain from denying the demand and acting in accordance with its original plan, and chooses the better (less bad) option.[6] Therefore, the certainty that a threat will be carried out in the eyes of the adversary—the credibility of the threat—is one of the important factors influencing the adversary's behavior.

Threats are basically conveyed in words, but merely stating that military force will be used does not necessarily make a threat credible. This is because executing a threat is costly. In other words, a threat may be a bluff, an attempt to sway one's adversary by pretending that one intends to carry out the threat when in fact one is unwilling to bear the cost of doing so.[7] This problem is especially acute in the case of nuclear threats. Nuclear weapons are thought to have enormous costs on the user side. If the adversary has a second-strike capability, the user must be prepared for a nuclear retaliation, making nuclear attacks potentially suicidal. The user can also expect various other political, economic, and social costs, including international condemnation, isolation, and sanctions.[8] While such threats may be credible if used as a last resort in self-defense, threatening to use nuclear weapons for other purposes leaves ample room for an adversary to doubt the seriousness of the threat.

Therefore, researchers have discussed ways to lend credibility to nuclear threats whose credibility would normally be called into question. There are two methods that have attracted attention. One, known as the madman theory, is to make the adversary believe that the user of the threat is not making a rational decision. The credibility of a nuclear threat increases when the decision-maker is someone who does not care about the costs of nuclear use. In this context, "madness" refers to a significant departure from normal rational judgment. The source of madness may be literal irrationality due to the influence of emotion or mental illness, or it may be highly biased calculations based on extreme preferences. Leaders with extreme preferences may place an elevated value on the issue at hand, or may view the cost of war as insignificant. An objectively irrational action can become a rational choice when calculated from the perspective of a person with such extreme values of costs and benefits. Also, since credibility is only

a matter of how a threat is perceived by the adversary, the credibility of the threat increases as long as the adversary believes in the madness, regardless of its authenticity.[9] In recent years, studies have emerged that examine the effects of actions based on the madman theory, including in non-nuclear contexts, but conclusions about its effectiveness are divided.[10]

Another way to increase the credibility of a nuclear threat is through brinkmanship. This method is used when it would be irrational to deliberately launch a nuclear strike. Instead of threatening a nuclear strike, it involves pressuring an adversary by taking actions that increase the risk of inadvertent nuclear war. This method is often compared to playing a game of chicken. The two sides will engage in a risk-taking contest to see who is willing to come closer to being destroyed by nuclear war, a fate that neither side desires, but that both will be involved in if it occurs. The side with the weaker resolve will be the first to drop out of the game. The risk of inadvertent use of nuclear weapons can be increased simply by remaining in a state of confrontation, and the risk of that decision slipping out of central control can be increased by delegating the authority to use nuclear weapons to subordinate commanders.[11] However, a recent study has pointed out that brinkmanship cannot assume that escalation will occur automatically. Even if a nuclear weapon is used by accident, the adversary's leadership must still make a deliberate decision to retaliate with full force, leading to nuclear war. From this perspective, it can be said that even in the case of brinkmanship, an irrational (due to emotion or other factors) decision to launch a nuclear strike is necessary for the process of escalation to occur.[12] Brinkmanship's effectiveness has been examined as part of the debate over the effectiveness of nuclear compellence, which will be considered next. Here, too, there are conflicting views.

The second main issue in existing studies on nuclear compellence is the effectiveness of nuclear compellence. On the one hand, there is the argument that nuclear weapons are not suited for compellence. For example, Richard Lebow and Janice Stein analyzed crises in Cuba and the Middle East and argued that nuclear weapons are useless except in defense of vital interests, and are ineffective for more proactive compellence.[13] Todd Sechser and Matthew Fuhrmann analyzed nuclear compellence more comprehensively. Based on a quantitative analysis of a dataset, they pointed out that neither nuclear possession nor relative nuclear superiority, even against non-nuclear-armed states, increased the likelihood of successful compellence. They also analyzed 19 cases and argued that even seemingly successful cases of nuclear compellence were not actually examples of successful compellence, or in those cases that were successful, nuclear weapons contributed little to the success.[14] In his recent book, James Lebovic

also argued that nuclear weapons are unsuitable for compellence, pointing to the ambiguity and fragility of nuclear superiority and the difficulty of appropriately manipulating the risks and the adversary's perception of the compeller.[15]

On the other hand, there is also the argument that nuclear weapons can be effective in compellence. For example, in a study of the use of nuclear threats in both deterrence and compellence, Richard Betts analyzed cases in which nuclear-armed states threatened non-nuclear-armed states and cases in which nuclear threats were used in confrontations between nuclear-armed states, and argued that threats by the side with the superior balance of nuclear forces were more likely to succeed, although he acknowledged that it was difficult to draw definitive conclusions.[16] Based on a quantitative analysis using a dataset, Kyle Beardsley and Victor Asal pointed out that in crises between a nuclear-armed state and a non-nuclear-armed state, the former is more likely to win, and the latter takes less time to give in.[17] Matthew Kroenig focused on the relative size of each side's nuclear forces, arguing that the side that is superior in the balance of nuclear forces will confront its adversary with greater resolve and be more likely to win the crisis because the costs of fighting a nuclear war will be relatively smaller. He then demonstrated the validity of his argument through quantitative analysis and four case studies.[18] Nicholas Anderson and his colleagues argued that nuclear weapons have a compellent effect even in peacetime, before a crisis occurs. They argued that this effect is particularly strong when states with weaker conventional forces than their adversaries, or states with low levels of allied commitment, acquire new nuclear weapons, and illustrated their point with cases of new nuclear-armed states.[19]

Thus, previous studies have come to mixed conclusions about the effectiveness of nuclear compellence. There are several possible reasons for this. First, to evaluate the effectiveness of a nuclear threat, one must determine how it was perceived by the adversary and the reasons behind the adversary's decisions, but such information is difficult to obtain.[20] Moreover, actions taken in a crisis waver between conflicting needs and tend to be inconsistent, allowing evidence supporting different arguments to be found in the same cases.[21] In addition, the characteristics of the cases included in quantitative analyses may be biased depending on the dataset used. Nuclear crises are more diverse than the term suggests, and the effectiveness of nuclear compellence is likely to vary depending on factors such as the likelihood that nuclear weapons will actually be used and the room for signaling.[22]

So far, this paper has looked at compellence through the threat of nuclear weapons, but nuclear compellence can also take the form of actual nuclear

use. As mentioned earlier, compellence requires one to continuously apply pressure until the adversary complies with one's demands. The use of nuclear weapons can be a means of applying such pressure. Compellence through the use of nuclear weapons is thought to have two main mechanisms. One is brinkmanship. Like the use of threats, the execution of a limited nuclear strike as a first step, with the potential to escalate to an all-out nuclear war that would be catastrophic for both parties, can be used as leverage to force an adversary to compromise.[23] The other is the imposition of additional costs. The destruction that actual nuclear use would cause would be a significant cost to the adversary. The threat of further nuclear strikes creates an incentive for the adversary to compromise in order to avoid additional costs, since pursuing its original objective would no longer be worth the cost. Thus, whereas brinkmanship is a contest of risk tolerance, this is a contest of cost tolerance.[24] Researchers during the Cold War, seeking victory through the use of nuclear weapons, examined the possibility of a limited nuclear war between the Eastern and Western blocs; after the Cold War, researchers examined the possibility of new nuclear-armed states using nuclear weapons in wars against adversaries with superior conventional forces.[25] However, these studies were only theoretical explorations of possibilities and did not include any real-world examples.

As outlined above, research on nuclear compellence has focused on several main issues. Most central among these is the debate over the effectiveness of nuclear compellence. Since both arguments for and against the effectiveness of nuclear compellence find supporting evidence, the conclusion is not as simple as one side or the other being right. Rather, the question that should be asked is under what conditions, and in what form, is nuclear compellence most likely to succeed? This point will be discussed in the next section and beyond.

Analytical Framework

This section explains the analytical framework for exploring the conditions under which nuclear compellence is likely to succeed. To consider these conditions, it is best to look at cases where nuclear compellence is clearly used and its success or failure can be determined with relative certainty. Therefore, this paper will examine nuclear crises in which it is clear that the parties involved have resorted to nuclear compellence (as discussed below, the specific focus will be on confrontations between nuclear-armed states). Because there are a limited number of cases of nuclear crises in which nuclear compellence was used, this paper uses a comparative case study

method to search for conditions. Hereafter, this section will identify specific cases to be analyzed and consider factors that may work in favor of nuclear compellence based on previous studies.

Cases of Nuclear Compellence

The study by Sechser and Fuhrmann, which provides the most comprehensive coverage of nuclear compellence among existing studies, identified 19 instances in which nuclear compellence was deliberately used in crises. The selection criteria were: (1) "at least one crisis participant must issue an explicit or implicit nuclear threat"; (2) "the crisis must carry a nontrivial risk of nuclear escalation"; and (3) "the nuclear threat must be linked to a coercive demand." Several of these 19 cases were borderline cases that were ambiguous as to whether they met the criteria, while 13 were clear cases of nuclear compellence. According to the authors' analysis, the majority of these cases were either clear failures of nuclear compellence or seemingly successful cases that, upon closer examination, were not actually successful.[26] In addition, since the publication of this study, nuclear compellence has been used in the Korean Peninsula Crisis that lasted from 2017 to 2018, and in the Russo-Ukrainian War that began in 2022, both of which are instances in which nuclear compellence was unsuccessful. As noted above, it has been difficult to evaluate the results of nuclear compellence, but overall,

Table 1. Nuclear compellence cases studied by Sechser and Fuhrmann

Nuclear Crisis	Compeller(s)	Target(s)
Korean War (1950–1953)	United States	China/North Korea
Indochina War (1954)	United States	China/Soviet Union/Viet Minh
First Taiwan Strait Crisis (1954–1955)	United States	China
Suez Crisis (1956)*	Soviet Union	France/United Kingdom
Second Taiwan Strait Crisis (1958)	United States	China
First Berlin Crisis (1958–1959)	Soviet Union	United States
Second Berlin Crisis (1961)	Soviet Union	United States
Cuban Missile Crisis (1962)	United States	Soviet Union
Seizure of the USS *Pueblo* (1968)*	United States	North Korea
Vietnam War (1969)	United States	Soviet Union/North Vietnam
Sino-Soviet Border Conflict (1969)	Soviet Union	China
Bangladesh War (1971)*	United States	India
Yom Kippur War (1973)	Israel/United States	United States/Egypt/Soviet Union
Falklands War (1982)*	United Kingdom	Argentina
Kashmir Crisis (1990)*	Pakistan	India/United States
Third Taiwan Strait Crisis (1995)*	China/United States	Taiwan/China/United States
Kargil War (1999)	Pakistan	India
Indo-Pakistani Border Crisis (2001–2002)	India	Pakistan
Korean Peninsula Crisis (2013)	North Korea	South Korea/United States

Note: Asterisks designate borderline cases.
Source: Prepared by the author based on Sechser and Fuhrmann, *Nuclear Weapons and Coercive Diplomacy*, 128.

the results themselves have not been good.

From this group of cases, it is necessary to select the cases to be used in the comparative analysis. In order to contribute to the overall theme of this book, which is to examine the "new horizons of the nuclear age," it would be preferable to analyze the most recent cases of nuclear compellence: the Korean Peninsula Crisis of 2017–2018 and the Russo-Ukrainian War. Since these cases were unsuccessful, successful cases are needed for comparison. Both of these cases involved a confrontation between nuclear-armed states, so a similar composition would be appropriate for the successful cases. Among the cases cited by Sechser and Fuhrmann are the Cuban Missile Crisis and the Sino-Soviet Border Conflict, two cases of confrontation between nuclear-armed states in which nuclear compellence appears to have had a relatively high degree of success. In both cases, the adversary complied with the compeller's demands, and there is information indicating that nuclear threats influenced the adversary's behavior. Although the degree of success and the contribution of nuclear threats to that success are debatable when other factors besides nuclear threats are taken into account, these are cases that could be considered real-world examples of successful nuclear compellence. In examining the Cuban Missile Crisis, the Berlin Crisis also provides a useful comparison. Both cases involved the same parties, were close in time, and were perceived by both parties as being a part of a series of connected confrontations.

For these reasons, this paper will focus on the Cuban Missile Crisis and the Sino-Soviet Border Conflict as successful cases of nuclear compellence, and the Berlin Crisis, the Korean Peninsula Crisis of 2017–2018, and the Russo-Ukrainian War as unsuccessful cases. To provide a perspective from which to analyze these cases, the next part will sort through factors that can influence the success or failure of nuclear compellence.

Factors Thought to Work in Favor of Nuclear Compellence

As noted earlier, previous studies have considered a variety of variables as factors influencing the outcome of compellence. The remainder of this section will narrow the focus to the context of compellence using nuclear threats and, based on previous studies, summarize the conditions under which nuclear compellence is likely to succeed. In a complex phenomenon such as compellence, it is natural to assume that a combination of several factors leads to success, rather than just one or a few factors influencing the outcome. For this reason, this paper incorporates a relatively large number of factors in the analysis. Although having too many variables relative to the number of cases makes it impossible to strictly verify the impact of each factor, given the fact that knowledge about nuclear compellence is still insufficient, this paper will give priority to analyzing the cases from a comprehensive perspective.

(1) Terms of the Demand

The first factor that could determine the success or failure of compellence is the terms of the demand. In the case of deterrence, demands are based on the status quo as a reference point. In the case of compellence, however, the goal is to alter the status quo, and the compeller is free to decide what to demand, how much, when, and how it wants its adversary to comply.[27] Due to this flexibility, there is an argument that the terms of the demand made to the adversary impact the success or failure of compellence, but previous studies are divided on the merits of this argument. Those who argue for its impact suggest that the more serious the demand, the harder it is for the adversary to accept it, especially if the demand involves a vital interest of the adversary that makes acceptance or negotiation impossible.[28] Related to this, the balance of interests between the parties can also have an impact. A balance of interests that favors the compeller is thought to increase the likelihood of compellence success, since the compeller is generally more willing to accept greater costs when key interests are at stake.[29]

The key here is how to determine the significance of those interests. There are a variety of interests that are important to a state. At issue here, however, is the involvement of interests significant enough to impact a confrontation involving nuclear threats. Therefore, this paper will simply classify the parties' interests as vital or otherwise. A vital interest is defined as an interest related to the survival of the state, specifically matters that affect the strategic balance of military threats to the state's homeland and matters that affect the state's economic survival.[30] To increase the likelihood of compellence success, it is better to avoid making demands that involve the adversary's vital interests, and, conversely, to make demands on issues that involve one's own vital interests.

There is one more aspect to consider in relation to the terms of the demand: assurance against additional demands in the future. If there is a possibility of repeated confrontations in the future, the state that is the target of compellence may be concerned about setting a precedent of giving in to demands, and that giving in will invite more demands later on. Therefore, some have pointed out that even in circumstances where it would be more advisable to accept the current terms of the demand, the target may instead choose to resist the compeller in order to avoid giving the impression of having weak resolve. To avoid this situation, it is important to give the target credible assurance that no additional demands will be placed on it.[31] In light

of the above, the following points should be examined with regard to the terms of the demand:

- Do the terms of the compeller's demand involve the adversary's vital interests? Compellence is more likely to succeed when vital interests are avoided.
- Which of the parties is at an advantage in the balance of interests? Compellence is more likely to succeed when the compeller's vital interests are involved and the adversary's vital interests are not.
- Is assurance provided that there will be no further demands on the adversary? Compellence is more likely to succeed when such assurance is provided.

(2) Type of Threat and Pressure

Like deterrence, threats and pressure used in compellence can be classified as punishment and denial. Compellence by punishment involves threatening to impose a cost on the adversary as a punishment if the adversary does not comply with the demand. The adversary is free to choose its own actions even if the punishment is carried out, but this strategy makes the adversary realize that resistance is not worth the cost and that it should choose to comply with the demand. On the other hand, compellence by denial involves threatening to enforce the terms of the demand by force if the adversary does not comply. In the case of denial, carrying out the threat to the end will lead to achieving the objective by brute force regardless of the adversary's will, but the goal is only to make the adversary realize that resistance is futile and that it should choose to voluntarily comply with the demand.[32] Depending on the terms of the demand, it may be impossible to apply pressure through denial in the first place.

Existing research suggests that denial is more effective than punishment.[33] Threatening to use nuclear weapons can also be a form of denial-type pressure, depending on the terms of the demand. Alternatively, denial-type pressure may involve only conventional forces, but use the risk of conflict escalating to the use of nuclear weapons as a threat. Based on the above, the following point will be examined regarding the nature of threat and pressure:

- Is the threat or pressure used in compellence punishment or denial? Compellence is more likely to succeed when denial-type pressure is used.

(3) Urgency

Another threat-related factor is urgency—there is an argument that successful compellence is accompanied by a sense of urgency for prompt acceptance of the demand. A clear way to create this urgency is to use an ultimatum. An ultimatum consists of three elements: a demand, a deadline for acceptance, and a threat about what will happen if the demand is not accepted.[34] Previous studies are divided on whether the use of an ultimatum or the creation of urgency leads to successful compellence.[35] Since this factor can also have an impact on nuclear compellence, the following point will be examined:

- Is an ultimatum used? Compellence is more likely to succeed if it is used.

(4) Seriousness of the Threat

The seriousness of the threat can also affect the success or failure of compellence. Threats of nuclear use, if carried out, have the most serious consequences—so it is primarily the credibility of the threat that is at issue. However, in some situations, nuclear threats may not be taken very seriously by the adversary. For example, a state may be limited in its ability to strike its adversary's homeland due to a lack of projection capabilities, or interception may be feasible. Some have also argued that the relative nuclear capabilities of the parties, and thus the relative damage each can inflict, will affect the outcome of a confrontation.[36] Therefore, the following points will also be examined:

- Is it possible to launch a nuclear strike against the adversary's homeland? Compellence is more likely to succeed if it is possible.
- Which of the parties is superior in the balance of nuclear forces? Compellence is more likely to succeed when the compeller has the upper hand.

(5) Credibility of the Threat

The final factor related to threats is their credibility. As noted earlier, a major focus of prior research has been how to ensure the credibility of nuclear threats. The following paragraphs will summarize the factors that can increase the credibility of nuclear threats, assuming both threats of the deliberate use of nuclear weapons and threats based on the risk of uncontrolled escalation leading to nuclear use, which were covered earlier. Of course, the above-mentioned factors related to the seriousness of the threat—namely, the nuclear capability to strike the adversary's homeland

and the balance of nuclear forces, especially the possibility of disarming the adversary's nuclear forces with a first strike—are also closely related to the credibility of the threat. However, having such capability does not automatically make a threat credible. The following are specific factors that have been discussed in existing research as factors that may have an impact on credibility.[37]

The first is domestic support. Domestic support is thought to increase the costs and risks acceptable to leaders, which in turn would increase the credibility of a threat.[38] This factor seems to be particularly important for democracies, where the existence of support for the administration itself and for its handling of international crises can be confirmed by polling data. If the compeller is a non-democratic state, the question may be whether there is support within the regime's power base rather than public support.[39] For example, a situation of declining leadership authority and intensifying power struggles within a one-party dictatorship could raise doubts about the state's willingness to continue a confrontation in a serious international crisis. Thus, the existence of strong domestic support for the compeller can be a factor supporting the credibility of its threats.

The second factor is reputation. Parties to international relations widely accept the idea that an actor's past behavior creates an image or reputation about that actor, and that others will predict the actor's future behavior based on its reputation.[40] However, studies have presented a variety of arguments on issues such as whether international actors can have reputations in the first place, and if they can, on what aspects are reputations earned, and to what extent do they influence others' perceptions?[41] The usual focus of attention is on an actor's reputation for resolve. In the case of nuclear threats, however, in addition to this, an actor's reputation for unpredictability may also have the effect of increasing an adversary's fear of losing control of the situation, thereby increasing the credibility of the threat. Moreover, a reputation for irrationality, including extreme preferences, would also increase the credibility of extreme actions such as nuclear strikes, as is argued by the madman theory. Because reputation is merely an impression that one entity has of another, it can be difficult to confirm directly. However, it is possible to determine whether an actor has previously taken actions that could create a reputation favorable to compellence, so this point will be examined.

The third factor is the actual use of military force. In the case of a confrontation at the conventional level, it is assumed that the actual use of military force has the effect of demonstrating the willingness and capability of the compeller to use military force.[42] In the case of a threat to use nuclear weapons deliberately, a similar effect can be expected of gradual escalation signals. And in the case of brinkmanship, actual military conflict is thought

to serve as leverage by increasing the risk of the situation escalating out of control.

The final factor is leadership. When strong leadership is present and each party has a high level of unity, signaling and communication are more likely to succeed, which in turn is thought to work in favor of compellence.[43] This argument could be directly applied to threats of deliberate nuclear use. However, given that the risk of losing control of the situation is considered important leverage in nuclear threats, conversely, a situation involving problematic leadership and poor control may also lend credibility to the possibility of escalation. Therefore, the credibility of a threat is likely to be enhanced when the degree of control held by leadership is aligned with the strategy pursued by the compeller.

As discussed above, existing studies argue that a variety of factors can increase the credibility of a threat. Taken together, the following points should be examined:

- Is there strong domestic support for the compeller? Compellence is more likely to succeed if there is.
- Are there any past behaviors that demonstrate strength of resolve, unpredictability, or irrationality on the part of the compeller? Compellence is more likely to succeed if there are.
- Are conventional forces used? Compellence is more likely to succeed when such forces are used.
- Are the parties to the confrontation able to control the actions of the domestic and foreign actors involved? In the case of a threat to use nuclear weapons deliberately, compellence is more likely to succeed when the compeller is in control. In the case of brinkmanship, compellence is more likely to succeed when the compeller is not in control.

(6) Use of Positive Inducements

Existing studies suggest that compellence is more likely to succeed when a positive inducement is offered in addition to threats. In compellence, a demand is made at the expense of the adversary's interests, and offering something to offset that cost is expected to make it easier for the adversary to accept the demand.[44] Since this can also apply to nuclear compellence, the following will be examined:

- Is a positive inducement offered? Compellence is more likely to succeed when it is offered.

(7) Isolation of the Adversary

The last factor is the isolation of the adversary. Because the presence of international support helps a state access resources to counter threats, compellence is more likely to succeed when the adversary is isolated.[45] Even in the case of nuclear compellence, the presence of a third party to provide diplomatic support in overcoming a crisis, or an ally that the adversary can expect to fight alongside with in the event of all-out war, would likely increase the adversary's willingness to resist the threat. Therefore, the following will be examined:

- Is there a third party providing support to the adversary? Compellence is more likely to succeed when none exists.

Cases

In this section, case analyses will be conducted according to the analytical framework presented in the previous section. For each case, this section will first describe the case, and then examine whether there were any factors that could be seen as working in favor of nuclear compellence. The results are summarized in a table later in this section. This part discusses the factors that make the difference between success and failure in nuclear compellence, based on the analyses of individual cases and comparisons drawn between them.

In many cases, compellence is not a one-way attempt in which one party threatens the other, but a pattern of reciprocal threats in which the threatened party attempts either to counter the threat and make the compeller give up, or conversely, to make the compeller give in to its own demands.[46] However, there would be much overlap if the interactions were analyzed from both sides in each case. For brevity, in the following part, each case will be analyzed from the perspective of the initial compeller, the first side that clearly used compellence.

Berlin Crisis (1958–1961)

(1) Case Description

As a result of World War II, Germany was divided into East and West Germany. The city of Berlin, located deep in East Germany, was further divided into zones occupied by the United States, the United Kingdom, France, and the Soviet Union, respectively. No peace treaty was signed between the Allies and Germany. Reflecting the division of the country,

West Germany joined the North Atlantic Treaty Organization (NATO) and enjoyed rapid economic growth, leading the Soviet Union to fear the annexation of East Germany by West Germany and the provision of nuclear weapons to West Germany by NATO countries. Meanwhile, East Germany was a member of the Warsaw Treaty Organization, but its economy was in bad shape, and the continued outflow of highly skilled personnel to the West through Berlin only accelerated the problem. West Berlin was also a hub for Western intelligence activities, and for these reasons the Soviet Union and East Germany were discontented with the situation in Berlin.[47]

To change this situation, in November 1958, the Soviet Union issued an ultimatum to the United States, the United Kingdom, and France on the Berlin problem, with the following content: The current situation, in which the three countries have not adhered to the agreement made by the four countries during World War II on the postwar treatment of Germany, and in which Berlin has been divided and occupied on the basis of this agreement, is no longer acceptable. To eliminate the threat posed by West Berlin to the East, West Berlin should be turned into a demilitarized free city. If the West does not comply within six months, the Soviet Union will make an agreement with East Germany alone to end the occupation and transfer all of East Germany, including Berlin, to its government for control. Any invasion of East German territory will be considered an attack on the entire Warsaw Treaty Organization and "appropriate retaliation" will be taken.[48] Because the United States, the United Kingdom, and France had to pass through East German territory to supply West Berlin, if the three countries did not comply with Soviet demands and the Soviet Union acted on its ultimatum, there was a risk that supplying West Berlin could lead to a military conflict.[49]

The Soviet Union also used nuclear threats to back up its demands. From late 1958, the Soviet Union began stationing missile units in East Germany. In April of the following year, it also deployed nuclear warheads there, which enabled it to strike targets in Europe, including the United Kingdom and France.[50] The Telegraph Agency of the Soviet Union (TASS) reported that any attempt to forcibly reach Berlin would be considered an attack on East Germany and would provoke a reaction from the Warsaw Treaty Organization, possibly leading to nuclear war.[51] In addition, Premier Nikita Khrushchev made repeated statements flaunting the Soviet Union's nuclear capabilities in meetings with key U.S. officials. In a meeting with Vice President Richard Nixon, he threatened to wipe out West Germany along with the other countries where U.S. military bases were located if war broke out.[52]

In response to Soviet compellence, the United States emphasized that

it had no intention of surrendering its rights in Berlin.[53] While taking precautions by deploying more U.S. troops to Europe and conducting fleet exercises in the Atlantic, the United States decided to approach the situation with gradual escalation, sending a small armed unit to probe the Soviet response if access to Berlin was blocked.[54] The United States found the Soviet threats to lack credibility.[55] Not only did the Soviet Union send several signals indicating that it was flexible about the six-month deadline it had set, it also sent a senior official to the United States soon after the crisis broke out, and Premier Khrushchev himself expressed a desire to visit the United States.[56] Moreover, while Western intelligence agencies had detected that the Soviet Union had deployed nuclear missiles to East Germany, this information apparently did not reach the policymaker level, making it unlikely that it influenced the West's decision-making during the crisis.[57]

In the end, the Soviet Union did not carry out its threats, despite the fact that the West had not yielded to Soviet demands six months after the ultimatum was issued. As of January 1959, the United States had proposed to the Soviet Union a foreign ministerial meeting of the four countries involved in the crisis, although the Soviet Union had insisted on a summit meeting. However, accepting that he could not obtain agreement on the summit, Premier Khrushchev, in a meeting with British Prime Minister Harold Macmillan, who visited the Soviet Union in February and March, indicated that he was not strict about the deadline he had set and accepted a foreign ministerial meeting of the countries involved.[58] Subsequently, between May (before the expiration of the ultimatum) and August, foreign ministerial meetings of the four countries were held to discuss the Berlin problem, but no agreement was reached.[59] In July, when the ministerial meetings had come to a standstill, President Dwight Eisenhower invited Premier Khrushchev to visit the United States after the Premier had met with a delegation of U.S. governors in Moscow and expressed his willingness to do so.[60] Then, when Premier Khrushchev visited the United States in September, the U.S. and Soviet leaders agreed to withdraw the deadline set by the Soviet side and to hold a four-party summit.[61]

Although this settled the first Berlin Crisis, nothing about the Berlin problem itself had been resolved. A four-party summit was held in Paris in May 1960, but was canceled due to an incident in which a U.S. reconnaissance plane had been shot down in the airspace over the Soviet Union. The Soviet Union then decided to postpone negotiations on the Berlin problem until after the next U.S. administration was formed.[62] Throughout this time, the Soviet Union continued to make demands and threats about the Berlin problem.[63]

In June 1961, the United States and the Soviet Union entered the second Berlin Crisis when Premier Khrushchev issued another ultimatum on the Berlin problem during a summit meeting with John F. Kennedy, the new U.S. president. The ultimatum was the same as the first: conclude a peace treaty with East Germany or accept the conversion of West Berlin into a free city. If the United States failed to comply by the end of the year, the Soviet Union would make peace with East Germany and transfer control of the territory to its government. It would consider any encroachment into East German territory an invasion and would claim the right to defend it.[64]

To back up its ultimatum, the Soviet Union again used the threat of nuclear weapons. After the last crisis, the Soviet Union had finished the deployment of intercontinental ballistic missiles (ICBMs) that could reach the United States. It then demonstrated its nuclear capability through statements to U.S. and British officials, a flight of a prototype supersonic bomber, and a military exercise involving its nuclear missile units. It also ended its participation in the nuclear testing moratorium and conducted more than 24 nuclear tests in September alone, and continued intermittent testing until the end of October.[65] In addition to the nuclear threat, East German authorities began building a wall along the border between East and West Berlin in August after deploying large Soviet and East German forces around Berlin, and took other steps to restrict land and air access to West Berlin.[66]

As before, however, the United States refused to accept the Soviet Union's demands. During and after his presidential campaign, Kennedy repeatedly expressed his intent to defend West Berlin and access routes to the city. In late June, he responded to the Soviet Union's demand by announcing his intention to maintain West Berlin's posture and rights.[67] Then, in a televised speech in late July, President Kennedy requested a major increase in the defense budget from Congress, announced his plan to significantly expand military capacity and call up reserve forces, and declared that the United States had no intention of being driven out of Berlin. After construction of the wall began in August, the United States deployed additional forces to Europe, including 40,000 troops and air units, and placed half of its long-range bombers on standby, ready to launch in 15 minutes. It also conducted many exercises and resumed nuclear testing to compete with the Soviet Union's nuclear tests.[68] Furthermore, a senior Defense Department official announced in a speech in October that the United States' nuclear capability was overwhelmingly superior to that of the Soviet Union, and provided specific figures.[69] While acknowledging the possibility of escalation to nuclear war, the United States did not believe that the Soviets would follow through on their threat.[70]

As the crisis worsened, both the United States and the Soviet Union

moved to negotiate a diplomatic solution.[71] In late September, Premier Khrushchev sent a behind-the-scenes message to President Kennedy that "[t]he storm in Berlin is over." He then publicly announced at the Soviet Communist Party Congress in mid-October that he would not adhere to the year-end deadline on the Berlin problem.[72] Meanwhile, in opposition to the Soviet policy, East Germany began to block Western personnel from passing through the checkpoint on Berlin's East-West border in October. The United States countered this by beginning to provide military escort under the cover of deployed tanks for civilian vehicles crossing the border. In response, the Soviet Union also deployed tanks at the checkpoint, resulting in an overnight standoff between U.S. and Soviet tanks there in late October. During the standoff, the United States and the Soviet Union communicated with each other to reduce tensions, and this resulted in the Soviets first withdrawing their tanks, followed by the U.S. tanks.[73]

(2) Analysis

As described above, the Soviet Union's use of nuclear compellence in Berlin twice ended in failure because the Soviet Union was unable to make the United States yield to its demands. Its compellence took the form of brinkmanship, based on the danger of conventional confrontation triggering escalation. As shown below, most of the factors that are thought to work in favor of compellence were absent in this case.

The first is the terms of the demand. The Soviet Union's demand that the United States agree to make West Berlin a free city was not, by the definition used in this paper, a demand that harmed the United States' vital interests. For the United States, the Berlin problem was a matter of maintaining the credibility of its commitment to the defense of Western Europe.[74] Although the alliance issue was an extremely important interest in the context of the Cold War, the loss of West Berlin was not a matter of survival for the United States.[75]

Looking at the balance of interests, the Berlin problem was not a vital interest for the Soviet Union, either. Dealing with the West Berlin problem was important for stabilizing East Germany, but this was more an alliance issue than one of Soviet survival.[76] Thus, the balance of interests in this case did not particularly favor the compeller.

No particular assurance was given that additional demands would not be made. As noted above, the United States feared undermining the credibility of its commitment in the context of the Cold War and was concerned that compromising on Berlin would invite further challenges from the Soviet Union.[77]

Next, the factors related to the features of the threats and pressure

used will be examined. First, regarding the distinction between pressure by punishment and denial, the type of pressure in this case was denial. The Soviet demand to agree to make West Berlin a free city was a demand that could not be realized without acceptance by the adversary. The intention behind this demand, however, was to expel Western troops occupying West Berlin. Throughout the crisis, Soviet conventional forces around Berlin were overwhelmingly superior. It was possible to blockade West Berlin and cut off supply routes, making it difficult to sustain Western troops, or to eliminate them by brute force.[78] The Soviet side did in fact attempt to block the West's access to West Berlin, which is why Soviet pressure can be classified as the denial type.

However, nuclear weapons did not directly contribute to this denial-type pressure. The Soviet Union could not use nuclear weapons to blockade West Berlin or eliminate Western troops stationed there. Nuclear threats were used only as a form of pressure to raise concerns about escalating the conflict at the conventional level.

As for the urgency of the threat, the Soviet Union used ultimatums in both the first and second crises. However, contrary to the assumptions of previous studies on compellence, the ultimatums did not have the effect of increasing the adversary's sense of urgency. The reasons for this may include the fact that the deadlines given were six months from the date of the ultimatums, which was a considerable amount of time; that the Soviet side showed flexibility on the deadlines; and that the construction of the wall was seen as directly stopping the flow of civilians from the East to the West, thus reducing the possibility of Soviet military action in West Berlin.[79]

There are two aspects to examine regarding the seriousness of the threat. The first is whether the Soviet Union was capable of attacking the U.S. homeland. This was nearly impossible during the first crisis. Although the Soviet Union had already conducted successful test launches of ICBMs, they were not operational until December 1959, after the crisis.[80] Soviet bombers and submarines were also poor performing and were very likely to be detected and destroyed. By the time of the second crisis, the Soviet Union's ability to strike the U.S. homeland had improved considerably. The Soviet Union was fielding ICBMs and beginning to deploy more reliable and functional missiles. It was also building up its submarine fleet, increasing the likelihood that they would evade U.S. defenses.[81]

The other aspect is the balance of nuclear forces between the United States and the Soviet Union. Throughout both crises, the U.S. side was superior in this regard. During the first crisis, the gap in forces was so great that the United States expected to be able to disarm the Soviet Union's nuclear forces with a first strike. By the time of the second crisis, U.S. nuclear

superiority had gradually declined and the success rate for a disarming first strike was much lower, but the U.S. side still had the advantage.[82] Thus, in this case, the balance of nuclear forces did not favor the compeller.

Moving on, factors related to the credibility of the threat will be looked at. Domestic support for the compeller was different at the time of each crisis. Domestic support existed during the first crisis. In 1957, Khrushchev emerged victorious in the power struggle after thwarting attempts by his colleagues to remove him from the position of Soviet Communist Party leader and ousting his main rivals. As a result, as of 1958, there were no significant domestic challenges to Premier Khrushchev's authority.[83] By the time of the second crisis, however, domestic support was less strong. Premier Khrushchev's position had been weakened by the Soviet Union's problems at home and abroad and by the military's dissatisfaction with the downsizing of the armed forces, which manifested in challenges to his authority.[84]

Next is reputation. There does not seem to be any behavior that could have formed a favorable reputation. One past confrontation that could have served as a reference for the Soviet Union's strength of resolve is the Berlin Blockade of 1948–49, but this precedent did not work in the Soviet Union's favor, as on that occasion the West successfully sustained West Berlin by airlift until the Soviets backed down.[85] The Soviet Union's failure to follow through on its ultimatum during the first crisis in 1958–59 also set an unfavorable precedent for the Soviet Union's reputation during the second crisis. Precedents for unpredictability or irrationality also cannot be found.

There was no actual use of military force in this case, either. Soviet pressure was limited to demonstrative actions. Even when U.S. and Soviet tanks faced off during the second crisis, they did not actually exchange fire.

The final factor related to the credibility of the threat is the leadership in control of the actors involved. Since the Soviet nuclear threat in this case took the form of brinkmanship, a lack of control could have increased the credibility of the threat. During the first crisis, escalation did not occur from a lack of control. During the second crisis, as mentioned earlier, the Soviet side struggled with problems of control when East Germany, rebelling against the Soviet policy, independently changed the rules at the checkpoint, leading to a standoff between U.S. and Soviet tanks. However, this occurred after Premier Khrushchev had withdrawn the ultimatum, effectively ending compellence. It is difficult to say that that this added any credibility to the nuclear threat. Prior to this incident, there had been no incidents from a lack of control in particular.

The next question is whether or not a positive inducement was offered in addition to the threat. In this case, the Soviet Union did not offer any particular positive inducements, and compellence relied solely on threats.

The last factor is the isolation of the adversary, which was also not met. Because this confrontation took place in Europe, the United States could have responded through NATO if war had broken out.

Cuban Missile Crisis (1962)

(1) Case Description

By June 1962, the Soviet Union had reached an agreement with Cuba to deploy nuclear missiles there to deter attacks on Cuba and to compensate for its own disadvantage in ICBMs, thus improving its nuclear balance against the United States.[86] Soviet troops and equipment were secretly transported to Cuba beginning in July, followed by ballistic missiles and nuclear warheads that arrived between mid-September and October.[87] The United States, aware since August that supplies were being brought into Cuba and that its air defenses were being strengthened, warned the Soviets in September that the deployment of offensive weapons in Cuba would have serious consequences. The Soviets, however, reiterated that they were doing no such thing.[88]

In mid-October, the United States became aware that the Soviet Union was building ballistic missile launch sites and deploying ballistic missiles in Cuba, and applied military pressure to compel the Soviet Union to remove them. In a televised speech on October 22, President Kennedy condemned the Soviet Union's deployment of offensive weapons to Cuba and demanded their removal. As an initial response, he announced a naval blockade of Cuba, warned of further military action if the deployment continued, and declared that the United States would see the launch of nuclear missiles from Cuba as an attack on the United States by the Soviet Union.[89]

This threat was not sufficient to make the Soviet Union change its mind. When Premier Khrushchev learned that President Kennedy planned to make an address, he feared that war might break out, but was relieved when the actual response was nothing more than a naval blockade.[90] In response to the United States, the Soviet Union maintained that the weapons deployed in Cuba were for defensive purposes, condemned the U.S. naval blockade, and expressed no intention of complying with its demand.[91]

The United States stepped up the pressure. On October 24, it implemented a naval blockade and, for the first time in history, raised the United States' defense posture to DEFCON 2, one step short of all-out war, putting all U.S. long-range nuclear forces on alert. This order was deliberately issued over an unencrypted line to ensure that it could be intercepted by the Soviet side. When Attorney General Robert Kennedy and the Soviet ambassador to the United States had met the night before, each side had stressed their

respective positions—that the Soviets would not accept a naval blockade and boarding, and that the United States would conduct boarding—and there had been a strong sense of the potential for a conflict. While Premier Khrushchev had ordered Soviet ships on October 23 to ignore the blockade and return fire if attacked, he rescinded this order and ordered ships to stop or turn back before reaching the blockade line on October 24, prior to the implementation of the naval blockade, for fear of a confrontation.[92]

While the United States adamantly demanded that the original status quo be restored,[93] escalation of the crisis drove the Soviet Union to remove its nuclear missiles. By October 25, Premier Khrushchev had already begun to solidify his intention to remove the nuclear missiles from Cuba, but he was still waiting to see the United States' reaction. However, with U.S. military forces assembling in the southeastern United States on a scale not seen since the Korean War, and having received false information from the Soviet Embassy in the United States and its intelligence agency on March 26 that the United States had decided to invade Cuba and could do so at any time, he proceeded to remove the missiles from Cuba.[94] In letters written on October 26 and 27, the Soviet Union proposed to the United States that in exchange for the lifting of the naval blockade, a pledge not to invade Cuba, and the removal of U.S. ballistic missiles from Turkey, it would remove weapons from Cuba that the United States considered offensive.[95]

The crisis then took a dramatic turn from October 27 to 28. On October 27, local Soviet forces fired surface-to-air missiles without Moscow's permission and shot down a U.S. reconnaissance plane over Cuba.[96] In response to the downing of its reconnaissance plane, the United States delivered a de facto ultimatum to the Soviet Union. Attorney General Robert Kennedy met with the Soviet ambassador to the United States and, while indicating a readiness to accept Premier Khrushchev's proposal, told him that the United States was resolved to use military force to eliminate Soviet missile launch sites and that the pressure within his administration to retaliate for the downing of the reconnaissance plane was mounting to the point that a spiral toward nuclear war could begin. He then demanded that the Soviet Union announce the removal of its ballistic missiles within the next day.[97] The night before this message arrived in Moscow, a letter was sent by Cuban Prime Minister Fidel Castro complaining about an imminent attack by the United States and calling for the Soviet Union's first use of nuclear weapons. Faced with the possibility of uncontrollable escalation on the ground and the ultimatum from the United States, Premier Khrushchev decided to remove the ballistic missiles. The next day, on October 28, the Soviet Union notified the United States that it was removing weapons that the United States considered offensive, ending the crisis.[98]

(2) Analysis

This case, in which the United States forced the Soviet Union to accept its demands, is an example of successful nuclear compellence. It took the form of brinkmanship, based on the threat of uncontrolled escalation. As seen below, this case contained a relatively large number of factors that were thought to work in favor of compellence.

First to examine is the terms of the demand. The demand to remove nuclear ballistic missiles from Cuba did not violate the Soviet Union's vital interests. As noted earlier, the Soviet Union's primary motive for deploying missiles was the defense of Cuba. While this was an important interest, it was an alliance issue, and not a matter of Soviet survival. As for its other motive of improving the balance of nuclear forces with the United States, the Soviet Union already had the capability to retaliate against the United States (as will be discussed below), and the deployment of missiles in Cuba did not have any decisive impact on the security of the Soviet homeland.

At the same time, the balance of interests did not favor the United States, either. The deployment of Soviet missiles in a neighboring country was a serious problem, but the change did not exactly pose a serious threat to U.S. survival. As described below, the United States and the Soviet Union at that time were moving toward a state of mutual assured destruction (MAD), and the U.S. homeland was already threatened by Soviet nuclear forces, regardless of the nuclear missiles in Cuba. Discussions within the Kennedy administration recognized that the deployment of Soviet nuclear missiles to Cuba would not significantly affect the strategic balance.[99]

There was also no assurance regarding additional demands. The United States was not clear about what was included in the "offensive weapons" it demanded be removed, and what was demanded and what was not remained ambiguous. In fact, negotiations dragged on after the crisis ended because the United States demanded the removal of bombers in addition to missiles during U.S.-Soviet talks.[100]

Next are factors related to the nature of the threat or pressure. As for whether the pressure used was punishment or denial, the pressure in this case was of the denial type. If the Soviet Union did not comply with its demands, the United States was prepared to eliminate the missiles by brute force through aerial bombardment or by invading Cuba. The problem was happening right next to the U.S. homeland, and the U.S. side was vastly superior in the balance of conventional forces.[101] The Soviet Union also had a large force of approximately 42,000 people and various equipment deployed in Cuba, as well as tactical nuclear weapons in preparation for an invasion.[102] While it would not have been easy to gain control of Cuba, it was not impossible to remove the missiles by brute force. The nuclear threat

was not directly linked to this denial-type threat, but was a part of the threat of escalation of the situation.

As for the sense of urgency, an ultimatum was also used in this case. The U.S. ultimatum came at a time when Premier Khrushchev felt a strong fear of losing control of the situation and had the effect of making him realize the need to make a quick decision.[103]

Regarding factors related to the seriousness of the threat, the United States was capable of striking the Soviet homeland and was superior in the balance of nuclear forces. The Soviet Union also recognized its own nuclear inferiority.[104] However, although the United States had a numerical advantage in terms of both the number of warheads and delivery systems, the Soviet Union's nuclear capability was also expanding, and it had a second-strike capability. A successful disarming first strike would have been difficult, and the situation was moving toward MAD.[105]

Looking at factors related to the credibility of the threat, domestic support for the compeller was mixed. President Kennedy's approval rating remained above 70% from his inauguration until early June 1962. Although it subsequently dropped to the 60% range, support was still high at 61% in mid-October, with 25% disapproving. The naval blockade also received a high level of support, with 84% approving of the measure in a poll taken immediately after it was announced. However, public opinion on policies toward Cuba was consistently less supportive of invasion and the use of military force. Many opposed such measures, and the public generally did not support hard-line measures.[106] Thus, the support for a naval blockade, which carried the risk of escalation from an accidental conflict, might have had the effect of lending some credibility to the Kennedy administration's brinkmanship. However, public opinion did not add credibility to threats to escalate the situation beyond that.

As for past actions that could form a reputation, there were precedents that could have been related to a reputation for resolve. The first is the Bay of Pigs invasion. Having seen how the United States had trained, equipped, and sent Cuban exiles to overthrow the Castro regime, but had not deployed U.S. forces when the invasion failed, Premier Khrushchev was left with the impression that President Kennedy was weak in resolve.[107] The second is the Berlin Crisis, on which views are divided. One view is that the United States left an impression of strong resolve. According to this view, Premier Khrushchev recognized the strength of U.S. resolve in its continued rejection of Soviet demands, risking war.[108] The other view is that the Berlin Crisis also left an impression of weak resolve. According to this view, while President Kennedy may not have given in to Soviet demands during the Berlin Crisis, he also did not take a more hardline approach. By continuing

to take a compromising stance to avoid escalating the issue, he gave Premier Khrushchev the impression that he would back down under pressure.[109] Both positions draw on statements made by Premier Khrushchev himself, and it is possible that he had conflicting impressions. However, at least it can be said that there is no precedent that could have created a reputation that clearly worked in favor of compellence by the United States. There was also no particular precedent that could have indicated unpredictability or irrationality.

Regarding the use of conventional forces, both the United States and the Soviet Union used conventional weapons on multiple occasions. However, the two states did not progress to a state of military engagement. As mentioned earlier, the Soviets shot down a U.S. reconnaissance plane with surface-to-air missiles, and Cuban forces opened anti-aircraft fire on other U.S. reconnaissance planes.[110] On the U.S. side, conventional weapons were used against Soviet submarines, although not in an attack. Through the naval blockade, the United States sought to prevent both Soviet surface vessels and submarines from crossing the blockade line. To enforce the blockade, underwater submarines had to be brought to the surface, but it was not possible to contact the submarines directly in the water. The United States therefore decided to drop training depth charges with a low explosive charge near the submarines to signal an order to surface, and notified the Soviet side of this decision. The Soviet Union, however, refused to agree to such a method of communication and did not relay the message to its own submarines. When the United States then used this method, Soviet submarines interpreted it as an attack by the U.S. military, and one submarine came close to firing its onboard nuclear torpedo in counterattack.[111]

As for the leadership's control over the actors involved, since the United States' nuclear threat followed a strategy of brinkmanship, confusion and lack of control by the leadership are expected to increase the credibility of the threat. In this case, as mentioned earlier, there was a lapse in control on the Soviet side that allowed local troops to fire anti-aircraft missiles and shoot down a U.S. reconnaissance plane without Moscow's permission. Although this was a matter of control on the part of the adversary, not on the part of the compeller, the situation worked in favor of the pressure in brinkmanship, which is the loss of control of the situation, leading to disaster.

The next factor to consider after examination of the threat is the use of positive inducements. The United States offered the Soviet Union two inducements: a promise not to invade Cuba and the removal of U.S. ballistic missiles from Turkey. These were items that the Soviets had demanded in their correspondence with the United States during the crisis, and the United States' acceptance of them allowed Premier Khrushchev to claim

that he had achieved results, which facilitated his acceptance of the removal of missiles from Cuba.[112]

The last factor is the isolation of the adversary. The Soviet Union was not isolated, as it could have acted through the Warsaw Treaty Organization if all-out war broke out.

Sino-Soviet Border Conflict (1969)

(1) Case Description

The border between the Soviet Union and China was based primarily on treaties made in the 19th century, but the Chinese saw these as unequal treaties and were dissatisfied with the status quo. Since around 1960, it had been taking actions that challenged the Soviet Union's effective control in various parts of the border region. In 1964, the two states negotiated the demarcation of the border, but no agreement was reached.[113]

One of the places where incursions and clashes continued was Damansky Island (Zhenbao Island), an island in the middle of the Ussuri River. The Soviet Union's stance was that the border was the riverbank on the Chinese side of the river, and treated the uninhabited island as its own territory. China, however, claimed territorial rights to Damansky Island because it was located on the Chinese side of the river.[114] Repeated skirmishes broke out on the island as China sent troops disguised as fishermen and armed patrols to the island, and the Soviet border guards, who had set up border posts on the opposite shore, used armored vehicles to expel them.[115]

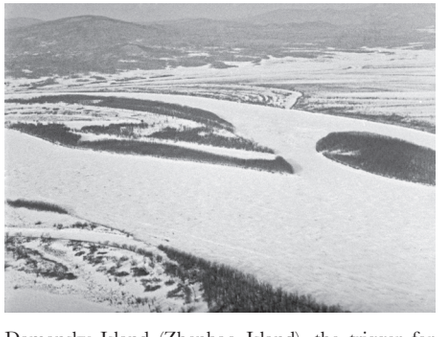
It was under these circumstances that a large-scale military clash took place on Damansky Island in March 1969. After deploying large numbers of troops to the island and the Chinese side of the bank in advance, China ambushed the Soviet troops on March 2, resulting in casualties on both sides of the battle. Both sides then reinforced their postures, and on March 15 an even bigger battle took place, with both sides suffering heavy losses.[116]

Following these large-scale clashes, the Soviet Union repeatedly demanded that China agree to high-level negotiations on border demarcation, but the Chinese side refused.[117] In an attempt to bring China to the negotiating table, the Soviet Union then applied various forms of pressure. Numerous clashes occurred between the two states even after the clashes on Damansky Island, including some initiated by the Soviet side. In May, the Soviets detained a number of Chinese residents and border patrol personnel in the border region, including in the western section of the border. Small-scale battles between China and the Soviet Union also occurred in Xinjiang in June and on an island in the Amur River in July, followed by a large-scale battle in Xinjiang in August.[118] The Soviet Union allowed media coverage of its deployment of reinforcements and military exercises.[119]

In addition to these measures, the Soviet Union also used nuclear threats. Immediately after the clashes on Damansky Island, the Soviet Union raised the alert status of its Strategic Rocket Forces and deployed mobile missile launchers. It also issued statements emphasizing its nuclear missile capabilities and warning China of defeat through radio broadcasts. In August, the Soviet Union announced that the former deputy commander of the Strategic Rocket Forces had been appointed the new commander of the Far Eastern Military District. That same month, there was an unprecedented decline in the activity of the Far Eastern units of the Soviet Air Force, which could be understood as behavior leading up to the preparation of an all-out attack. The Soviet Union also conducted strike drills using targets that mimicked Chinese nuclear facilities and asked other countries, including the United States, how they would react if the Soviet Union were to launch a nuclear strike against Chinese nuclear facilities. Such actions sent the message that a nuclear strike against China was being considered. In addition, in September, the Soviet Union repeatedly sent signals through the media suggesting that it was preparing for a nuclear strike against China.[120]

These pressures brought to China's attention the growing danger of all-out war with the Soviet Union. Fearing that the Soviet Union might suddenly launch a preemptive nuclear strike, Chinese Communist Party Chairman Mao Zedong evacuated government officials and residents from major cities to rural areas, rapidly built underground bomb shelters, put the military on alert, and carried out a large-scale relocation. China conducted two nuclear tests in September to demonstrate its resolve, and in October it put its Second Artillery Corps on alert for an immediate nuclear strike.[121]

At the same time, China had a change of policy and agreed to the Soviet Union's demand for high-level negotiations. The Soviet Union used the funeral of Vietnamese President Ho Chi Minh, who died in September, as an opportunity to approach China for a high-level meeting. China accepted, and Premier Alexei Kosygin made a stop in Beijing on the way back to Moscow to meet with Premier Zhou Enlai on September 11. At the meeting, the two sides confirmed that they had no



Damansky Island (Zhenbao Island), the trigger for the Sino-Soviet Border Conflict (SPUTNIK/Jiji Press Photo)

intention of attacking each other and agreed to resolve the border issue through talks. Subsequent arrangements were made, and the crisis was then resolved with the resumption of border negotiations on October 20.[122]

(2) Analysis

This case, in which the Soviet Union forced China to comply with its demands, is a successful example of nuclear compellence. The threat took the form of deliberate nuclear use, but rather than a madman theory style of threat, exceptional circumstances in this case made unilateral nuclear strikes an option. As will be seen below, a relatively large number of factors were present that are thought to work in favor of compellence.

The first factor is the terms of the demand. The Soviet Union demanded that China return to border negotiations. Territory is an important issue for states, but the area where the Sino-Soviet border had to be demarcated was not an area on which either state depended for its survival. Thus, no vital interests of either state were involved, and there was no balance of interests in favor of the compeller.

Neither was assurance given regarding additional demands. Although the immediate demand was for China to return to negotiations, it was naturally assumed that this would be followed by a demand to accept Soviet claims to territory at the negotiating table. In fact, border negotiations between China and the Soviet Union continued long after the conflict ended, and it was not until 1991 that an agreement defining the eastern border was reached.[123]

The next factors are about the nature of the pressure. In this case, the Soviet Union used compellence through punishment, not denial. Getting the adversary to return to the border negotiations required voluntary action on the part of the adversary and could not be achieved directly by brute force. No matter how many threats were put into practice, the Chinese side would have remained free to choose whether to comply or not.

An ultimatum was not used in this case. However, as mentioned earlier, the Chinese side was seriously concerned about a nuclear strike after receiving nuclear threats from the Soviet Union. There seems to have been a sense of urgency, especially since China rushed to take various response measures in preparation for a nuclear strike after the information emerged in August that the Soviet Union had asked other countries how they would react if it attacked Chinese nuclear facilities.[124]

The compeller had the nuclear capability to strike the adversary's homeland. The Soviet Union had already deployed a large number of delivery systems, including long-range missiles, and the entire territory of neighboring China was within range of a nuclear strike.

As for the balance of nuclear forces, the compeller had an overwhelming

advantage. China conducted its first nuclear test in 1964 and had been steadily building up its nuclear capability, but as of 1969 progress was still at a rudimentary level. China could only deploy bombers and medium-range ballistic missiles, and it was not until the mid-1970s that it was able to deploy longer-range missiles capable of striking Moscow, giving it a sufficient retaliatory capability against the Soviet Union.[125] Thus, at the time of the border conflict, the Soviet Union was vastly superior in the balance of nuclear forces and could be expected to be able to destroy most of the Chinese nuclear and missile forces and other key military facilities with a first strike.[126]

Next are the factors related to the credibility of the threat. There was domestic support. After assuming the post of General Secretary of the Communist Party of the Soviet Union, Leonid Brezhnev, the top Soviet leader at the time, steadily consolidated his power base. Once the initially conspicuous disagreement with Premier Kosygin subsided around 1969, there were no serious disagreements within the Soviet leadership.[127]

As for past behavior indicating strength of resolve, unpredictability, or irrationality on the part of the compeller, there was a precedent indicating strength of resolve. In 1968, the Soviet Union intervened militarily in Czechoslovakia, which was liberalizing on its own terms, in order to change the country's leadership and bring it back to a pro-Soviet line. It then took the position that the interests of the socialist bloc as a whole took precedence over the sovereignty of individual countries (the so-called Brezhnev Doctrine).[128] This action was a clear indication of the Soviet Union's willingness to intervene militarily in Eastern bloc countries, and China feared that it might suffer the same fate.[129] There were no particular precedents for unpredictability or irrationality.

Both sides also used conventional forces. As noted earlier, military clashes between China and the Soviet Union had occurred repeatedly since March. In terms of the balance of conventional forces between China and the Soviet Union, China had more troops, but the Soviets were superior in equipment. After initial clashes with China, the Soviet side further built up its forces against the Chinese front.[130] Both sides suffered losses in combat, but after the March 15 battle, the Soviet side initiated many of the clashes, demonstrating its willingness to use military force.

Regarding control over the actors involved, the last factor related to credibility, a higher degree of control can be considered conducive to compellence in this case because the Soviet Union was threatening the deliberate use of nuclear weapons. Since there was no particular situation that indicated a break in control on the Soviet side, it can be said that this factor worked in favor of the compeller.

Next is the use of positive inducements. The Soviet Union did not offer any particular inducements to China, so this factor was absent.

The last factor is isolation of the adversary. China had no superpower allies at the time, and it was aware of its own isolation.[131] The United States was working to improve relations with China, and China also believed that negotiating with the Soviet Union on the border issue would spur the United States to move to strengthen ties with China.[132] At the same time, it was unrealistic to expect the United States to intervene directly in a war between China and the Soviet Union.[133] Thus, there was no third party to assist the adversary.

Korean Peninsula Crisis (2017–2018)

(1) Case Description

Since the 1990s, the United States and North Korea have repeatedly confronted each other in crises over North Korea's nuclear development, but no confrontation has been able to stop the development program. North Korea frequently launched ballistic missiles since the end of the Barack Obama administration, and it immediately resumed ballistic missile launches after a wait-and-see pause when the Donald Trump administration took office in January 2017. In response to the resumption of launches, the United States announced in March that "all options are on the table" and that "the policy of strategic patience has ended," and outlined a policy to pursue the complete denuclearization of North Korea under a "maximum pressure" strategy.[134]

The United States and North Korea then entered into a confrontation that raised the possibility of nuclear war between the two countries to an unprecedented level. President Trump and senior U.S. officials made repeated remarks emphasizing U.S. military power and warning that pressure would continue until North Korea dismantled all of its nuclear and ballistic missile development programs. Likewise, the North Korean side repeatedly threatened that it was ready for war and responded by launching ballistic missiles, including ICBMs. The United States and South Korea countered this by also conducting missile launch drills. Senior U.S. officials repeatedly remarked that the use of military force against North Korea was being considered, and U.S. bombers and naval vessels were deployed around the Korean Peninsula.[135]

From August onward, more direct nuclear threats were used. When asked by a reporter to comment on North Korea's nuclear capabilities, President Trump said, "North Korea best not make any more threats to the United States. They will be met with fire and fury like the world has never seen."[136]

Secretary of Defense James Mattis also issued a statement that North Korea should cease "actions that would lead to the end of its regime," i.e., the development of nuclear weapons.[137] And when North Korea threatened an enveloping fire of ballistic missiles around Guam, President Trump fired back by threatening that North Korea would face unprecedented consequences if Kim Jong Un did anything in Guam, followed by a Tweet that the United States was prepared for a military solution and that North Korea had better act wisely.[138]

North Korea did not flinch. In addition to ballistic missile launches, it conducted its largest nuclear test to date in September, announcing that it was a hydrogen bomb test.[139] At the United Nations General Assembly held that month, President Trump referred to Kim Jong Un, Chairman of the State Affairs Commission, as "rocket man" and said that "if [the United States] is forced to defend itself or its allies, we will have no choice but to totally destroy North Korea."[140] In response, Chairman Kim Jong Un issued a statement calling President Trump a "mentally deranged U.S. dotard," saying he would make President Trump pay personally for his words.[141] In September and October, the U.S. military checked the posture of non-combatant evacuation operations from South Korea and conducted an evacuation drill. North Korea, seeing this as a harbinger of war, accused the United States of escalating tensions. Then, in October and November, three carrier strike groups were deployed in the Pacific region and a submarine with special forces and land-attack cruise missiles called at a port in South Korea.[142]

The crisis peaked at the end of 2017 and into the following year. In late November, North Korea conducted its third ICBM test-launch that year and declared that it was capable of reaching any part of the continental United States. In addition, when a large-scale combined U.S.-South Korean exercise was held in December, North Korean media warned that war with the United States had become inevitable. On the U.S. side, many arguments emerged to allow for a preventive war against North Korea, or to point out the possibility of entry into an inadvertent war, and it was reported that the Trump administration was considering a limited strike option.[143] In his first speech of

President Trump delivering a speech at the United Nations General Assembly that includes a strong warning to North Korea (Reuters/Kyodo News)

2018, Chairman Kim Jong Un asserted that North Korea had acquired a deterrent against the United States. He touted his control over a nuclear arsenal, declaring that "the nuclear button is on my office desk." President Trump responded by tweeting that he had a "much bigger [and] more powerful" nuclear button that actually works.[144] When it was reported in February that the United States was considering a naval blockade to ensure the implementation of sanctions against North Korea, North Korea responded that it would see a naval blockade as an act of war.[145]

While this exchange of threats and pressure continued, diplomatic negotiations also resumed in 2018. First, tensions between North and South Korea began to ease: following high-level talks and visits of delegations since January, an Inter-Korean Summit Meeting was held in Panmunjom in April.[146] The South Korean envoys who visited North Korea in March visited the United States soon after to deliver a letter from Chairman Kim Jong Un to President Trump. When President Trump heard from the South Korean envoys that Chairman Kim Jong Un seemed serious about denuclearization and had suggested a face-to-face meeting with him, President Trump immediately agreed to meet with Chairman Kim Jong Un.[147] After some complications in making the arrangements, the U.S.-North Korea summit was held in Singapore on June 12. A joint statement was issued, which included the provision of "security guarantees to the DPRK" by the United States and reaffirmation of North Korea's commitment to "complete denuclearization of the Korean Peninsula." Going further, President Trump even mentioned the suspension of U.S.-South Korean exercises and the future withdrawal of U.S. forces in South Korea during a press conference.[148]

However, the agreement reached at the U.S.-North Korea summit did not actually lead to the denuclearization of North Korea. North Korea's idea of denuclearization of the Korean peninsula included the withdrawal of U.S. extended deterrence for South Korea, not the unilateral denuclearization of North Korea as demanded by the United States.[149] There was a deep gulf between the United States, which aimed for comprehensive denuclearization, and North Korea, which sought incremental denuclearization measures and corresponding relief from sanctions. The working-level talks, meant to flesh out the vague agreement reached at the summit, quickly came to an impasse. A second U.S.-North Korea summit was held in Hanoi in February 2019, and the U.S. and North Korean leaders met in Panmunjom in June. While each side showed a slight softening of their stance, no concrete denuclearization process was agreed upon.[150] Although the crisis itself has been resolved, North Korea's nuclear weapons program is still ongoing.

(2) Analysis

In this case, the United States and North Korea confronted each other with nuclear threats, but the following analysis will be conducted from the perspective of the United States, which was the first side to clearly use compellence, as the compeller. The United States' nuclear compellence failed because it could not make North Korea accept denuclearization. As for the form of compellence used, the United States adopted both brinkmanship and madman theory-type threats of deliberate nuclear use. As will be seen below, many of the factors that are thought to work in favor of successful nuclear compellence were present in this case. The reasons why nuclear compellence failed despite the existence of these factors will be discussed later in the comparative analysis.

The first to examine are factors related to the terms of the demand. In this case, the United States' demand for complete denuclearization violated North Korea's vital interests. North Korea had an overwhelming disadvantage in conventional forces against its adversaries, and nuclear weapons were an asset that ensured its survival.[151] Therefore, giving up nuclear weapons was an act that would have endangered the survival of their country, and the demand could not be easily accepted.

The balance of interests did not favor the compeller, either. As noted above, the confrontation involved North Korea's vital interests, so even if U.S. vital interests were also at stake, the balance of interests would not have worked in favor of the United States. Whether the interests of the United States were vital or not, as defined in this paper, is also open to interpretation. It is important for the United States to prevent North Korea from becoming capable of striking the U.S. mainland with nuclear weapons.[152] The threat to the U.S. mainland will continue to grow, especially if North Korea continues to make steady progress in developing nuclear weapons.[153] At the time of this crisis, however, it was debatable whether North Korea's acquisition of a rudimentary ICBM capability, whose ability to re-enter the atmosphere with a nuclear warhead had not yet been demonstrated, was a change that affected the survival of the United States. In any case, in this crisis, the balance of interests worked in favor of North Korea, as it faced a demand directly related to the survival of its regime.

Assurances were provided that no additional demands would be made. During the crisis, the United States expressed "Four Nos" to North Korea: that it did not seek regime change, regime collapse, accelerated reunification of South and North Korea, or a sending of forces into North Korea,[154] which sent the message that there were no objectives beyond denuclearization. However, this did not reassure North Korea. North Korea had been on guard because it had hacked into U.S. and South Korean operational plans

that included attacks on North Korean leadership.[155] North Korea had also learned lessons from the fate of Libya, which had agreed to eliminate its nuclear program only to later become the subject of a regime change,[156] as well as the Trump administration's unilateral exit from the Iran nuclear agreement, and was not in a position to trust U.S. promises.[157]

Next, the factors related to the features of the threats and pressure used will be examined. Regarding the distinction between pressure by denial and by punishment, the denial-type of pressure was used. As mentioned earlier, from the beginning of the crisis, the United States emphasized that all options were on the table, implying that it would use all forms of military force if its demand for denuclearization was not met. Subsequently, it was also reported that a "bloody nose" strike, a limited strike against North Korea's nuclear capability, was being considered. These were threats that, if carried out, would have directly deprived North Korea of its nuclear capability. Although the United States did not directly link these threats to the use of nuclear weapons, the possibility of their use was not ruled out. It was basically expected that the U.S. side would use its overwhelmingly superior conventional forces, but there was still a possibility that it might use nuclear weapons to carry out the above threats, such as to eliminate North Korea's nuclear capabilities (including underground facilities) or if the situation escalated to all-out war.[158]

An ultimatum was not used. There is no information on whether the North Koreans felt a sense of urgency for other reasons, so this point remains unclear.

Regarding factors related to the severity of the threat, the compeller was capable of attacking its adversary's homeland and was overwhelmingly superior in the balance of nuclear forces. North Korea's nuclear capability at the time was estimated to be only a few dozen warheads, and while it could launch missile strikes against countries in the region, it had not yet verified that its ICBM capable of reaching the U.S. mainland could carry a warhead able to re-enter the atmosphere.[159] The U.S. side was therefore vastly superior in terms of both number of warheads and projection capability. However, with regard to a disarming first strike, a study conducted at the end of the Obama administration had concluded that while most of North Korea's known nuclear weapons and related facilities could be destroyed, complete disarmament was not possible; a ground invasion was considered necessary for complete disarmament.[160]

Next are the factors related to the credibility of the threat. As far as domestic support for the compeller is concerned, there was no indication that strong domestic support existed. President Trump's approval rating was not high, remaining in the 30% range for most of the period between

his inauguration and June 2018, when the U.S.-North Korea summit was held in Singapore. Partisanship reflected a stark divide: Republican support generally remained above 80%, while Democratic support generally remained below 10%.[161] Public opinion polls on the president's policy toward North Korea showed a similarly clear divide along partisan lines, with disapproval higher in polls from October to November 2017, at the height of the crisis.[162]

As for past behavior that might have shaped reputation, there was a precedent that may have been taken to indicate strength of resolve and unpredictability. This was the April 2017 airstrike on Syria, in which the Trump administration resorted to the use of military force at the same time as it began its confrontation with North Korea. President Trump had initially been cautious about responding militarily to Syria's use of chemical weapons. However, he became emotional after seeing pictures of child victims and decided to carry out the airstrike.[163] The airstrike's basis in international law was ambiguous, but it set a precedent that the Trump administration had no interest in such concerns.[164]

Conventional forces were not actually used in this case. Many exercises and missile launch tests and demonstrations were conducted, but they remained threats and did not lead to engagement.

Regarding control over the actors involved, situations arose in which the compeller lost control. In this case, the United States used both the threat of deliberate nuclear use and brinkmanship, with the risk of loss of control working to the detriment of the former but to the benefit of the latter. President Trump's deliberate attempts to exploit unpredictability,[165] his statements on Twitter made without coordinating with those around him, and the frequently exposed lack of unity within his administration[166] created an overall situation that raised doubts about the Trump administration's level of control. There were also incidents that could have caused unintended escalation, such as the sending of false evacuation order messages to U.S. military personnel and their families in South Korea in September 2017 and the false missile alert in Hawaii in January 2018.[167]

Positive inducements are the next to examine. A positive inducement was provided at the Singapore summit when the United States accepted North Korea's request to suspend U.S.-South Korean exercises.[168]

Finally, was a third party present to provide support to the adversary? Although North Korea had China as a supporter, it was doubtful how much China could be counted on in a nuclear confrontation with the United States. The Treaty of Friendship, Cooperation, and Mutual Assistance between China and North Korea contains an automatic intervention clause that guarantees military assistance if either party is attacked by another

country. However, it was unclear whether China would actually intervene in this case, especially since the Chinese interpretation was that it was not obligated to intervene in situations caused by North Korea itself, and North Korea understood this.[169] Thus, the condition of no third-party support was met to some extent.

Russo-Ukrainian War (2022–)

(1) Case Description

In 2014, popular protests in Ukraine led to the collapse of the pro-Russian government. Russia, seeing this as a coup backed by the West, used a private military company and Russian military units without identification marks to secure the Crimean Peninsula, ostensibly to protect Russian residents there, and staged a referendum to "annex" Crimea. In addition, Russia organized pro-Russian separatist forces in eastern Ukraine to expand its area of control. Fighting continued with the Ukrainian government, which tried to suppress them.[170] Beginning in October 2021, Russia concentrated Russian military units in areas bordering Ukraine, and in February 2022, it recognized the pro-Russian-controlled areas of eastern Ukraine as independent states.[171]

Then, on February 24, 2022, Russia launched an invasion of Ukraine with the stated goals of protecting citizens at the request of the pro-Russian regions it had recognized as states and "demilitarizing" and "denazifying" Ukraine. The Russian military initially pursued a blitzkrieg, advancing from the east and south, as well as from the north, deploying paratroopers in an attempt to quickly overrun the capital city of Kyiv, but it failed to capture the city. Russia gradually expanded the territories it occupied in eastern and southern Ukraine, but the Ukrainian military, with military support from Western countries, continued to staunchly resist. From September onward, Ukraine launched a counteroffensive and was able to recapture some of the Russian-occupied territory. At the end of September, Russia "annexed" four occupied eastern and southern Ukrainian regions. In October, it began conducting large-scale missile and drone strikes across Ukraine, including on civilian facilities.[172] In January 2023, Russia staged an offensive that ended in failure, and this was followed by a series of localized battles and retaliatory strikes with long-range weapons. The Ukrainian side launched a long-planned counteroffensive in June, but the pace of its advance remained slow due to fierce resistance on the Russian defense lines. As of the end of 2023, a war of attrition was still ongoing.[173]

As the combat unfolded, Russia repeatedly made nuclear threats. On February 19, before the invasion, Russia held a nuclear exercise including live-fire ballistic missile drills.[174] Then, on the day of the invasion, President Vladimir Putin warned in a speech that outside intervention in the situation in Ukraine would lead to consequences never seen in history. On February 27, he ordered Russia's nuclear forces on alert.[175] In March, Foreign Minister Sergey Lavrov said that if a third World War were to take place, it would be a nuclear war. Furthermore, Deputy Chair of the Security Council Dmitry Medvedev warned that if the United States continued to try to destroy Russia, the world could end up in a nuclear dystopia.[176] Both individuals also repeatedly warned the United States that transferring arms and providing other military support to Ukraine risked direct conflict and nuclear war with Russia.[177] Just as President Putin declared in a September address that Russia would utilize all available means if it faced a threat to its territorial integrity, Russia also made repeated threats to curtail counteroffensives by the Ukrainian armed forces into its territory—including the four eastern and southern regions of Ukraine it had proclaimed "annexed"—and Western support for Ukraine.[178] In addition to these threats, Russia conducted several nuclear exercises and ballistic missile launch tests.[179] Almost every month from February 2022 to the end of 2023, Russia made some kind of statement or action that could be considered a nuclear threat.

Russia's position was that it was willing to negotiate with Ukraine and the West, but it insisted that they must accept its "annexation" of the four regions as the "new territorial realities." The conditions for peace on the Ukrainian side included the restoration of its territorial integrity and the withdrawal of Russian troops, which meant that vital positions were in direct conflict with each other.[180]

Although the United States and other NATO countries have avoided directly intervening in the war, such as by establishing a no-fly zone,[181] they have continued to support Ukraine despite repeated threats from Russia. To support Ukraine's military resistance and counteroffensive efforts, arms transfers to Ukraine have gradually been increased in both quantity and quality. Extensive financial and economic sanctions have also been imposed on Russia. Meanwhile, the defense posture in NATO territories has been strengthened: the United States has increased its deployed forces in Europe by about 20,000 troops to a total of about 100,000, while NATO has reinforced its forces deployed in Eastern European member countries.[182] In response to Russia's nuclear threats, NATO also reiterated its warning that the use of nuclear weapons by Russia would result in severe consequences and responses.[183]

(2) Analysis

Since the Russo-Ukrainian War is an ongoing case, the analysis in this paper is tentative and based on developments through the end of 2023. It

is also necessary to clarify the subject matter of the analysis. First, Russia's nuclear threats in Ukraine have both deterrence and compellence aspects, but this paper focuses on the latter. Threats designed to prevent something from happening, such as threats made just before the invasion to discourage Western intervention, or to curb the supply or use of certain weapons,[184] can be considered deterrence. However, threats used to constrain ongoing military assistance and counterattacks by the Ukrainian side amount to compellence, which is aimed at changing the adversary's behavior in a way that alters the status quo. The latter is the subject of this paper's analysis. Second, the targets of Russia's nuclear compellence include the United States, other NATO countries, and Ukraine, but this paper will analyze the issue from the perspective of nuclear compellence against the United States specifically. This is because the United States was the main target of Russia's nuclear threats, and because the scope of this paper is nuclear compellence between nuclear-armed states.

Based on the above perspective, Russia used nuclear compellence against the United States to demand that it stop providing military support to Ukraine and attempting to defeat Russia.[185] As of the time this paper was written, Russian compellence has been unsuccessful. Compellence by Russia took the form of brinkmanship. It pressured the United States with the threat that U.S. support and involvement in the conflict could lead to direct U.S.-Russian conflict and even nuclear war. Although there were relatively many factors that should have worked in favor of nuclear compellence in this case, Russia's nuclear compellence failed. The reasons for this will be discussed in the comparative analysis, but prior to that discussion, the following part will first examine the presence or absence of the individual factors in this case.

The first factor is the terms of the demand. Russia's demands circumvent U.S. vital interests. For the United States, the Russo-Ukrainian War is a matter of strategic interest because the war is taking place in a region adjacent to NATO territory and because the consequences of a clear war of aggression could affect challenges to the status quo in other regions. However, it is not a matter that poses a major threat to the U.S. homeland.

For Russia, on the other hand, the war is a direct threat to itself. It has been pointed out that Russia's historical experiences have made it sensitive to the threat of aggression from the west, and that the Western-leaning Ukraine and its deepening cooperation with NATO were perceived as a threat to Russia's own security.[186] There is also the argument that the presence of a pro-Western administration in Ukraine was seen by Putin's government as a threat, in the sense that a successful democratic revolution in a former Soviet space could inspire attempts to overthrow Russia's own

political system from within.[187] Moreover, the war has become a matter of direct concern for the survival of the regime, since Russia's defeat in the Russo-Ukrainian War would severely undermine the legitimacy of the Putin regime.[188] Therefore, in light of the criteria in this paper, the stakes for Russia are vital, giving it an advantage over the United States in the balance of interests.

No assurances were provided regarding additional demands. Since its failure to gain control of Kyiv, Russia, which initially pushed for the "demilitarization" and "denazification" of Ukraine, has shifted its emphasis to securing eastern and southern Ukraine and forcing Ukraine and the Western countries that support it to accept this new territorial reality.[189] As of the end of 2022, however, Russia has shown no sign of making any effort to reduce the prospects of additional demands or confrontations. Deputy Chair of the Security Council Medvedev has stated that the war will continue until the "fascist regime" in Ukraine is eliminated and completely "demilitarized,"[190] and Russia has been casting the war as an all-out conflict with the West.[191]

Next are factors related to the features of the threat or pressure. We can interpret the type of pressure used in Russian compellence against the United States as denial. By using ground forces to invade and control Ukrainian territory and continuously inflicting damage on Ukrainian forces, Russia is directly countering U.S. attempts to defeat Russia by supporting Ukrainian military resistance and counteroffensives.

Nuclear threats are also directly involved in achieving denial. As noted earlier, in an attempt to curtail Ukrainian counteroffensives backed by the United States, Russia has repeatedly warned that attempts to retake "annexed" Ukrainian territory could meet its requirements for the use of nuclear weapons because doing so would undermine Russia's territorial integrity. In this context, there is particular concern about the possibility of Russia using tactical nuclear weapons to prevent Russian forces from being defeated on the battlefield.[192]

Ultimatums were not used. The Russian side has not explicitly set a deadline for the United States to accept its demands, despite frequent threats.

The next factor is the seriousness of the threat. First, in terms of the ability to strike the adversary's homeland with a nuclear weapon, Russia has the ability to strike the United States. Second, in terms of the balance of nuclear forces, although the Russian side has a slight numerical advantage in the number of warheads, the nuclear forces between the United States and Russia are basically balanced, so this factor does not work in favor of the Russian side.[193]

Next to examine are the factors related to the credibility of the threat. The first is domestic support for the compeller. Looking at Russian public opinion polls, strong support exists, with President Putin's approval rating in the high 70% to low 80% range, and support for the Russo-Ukrainian War averaging over 75%.[194] As for the elite class that supports the regime, divisions of opinion and dissatisfaction have surfaced in the wake of the Russian military's poor performance.[195] In addition to power struggles within the elite, discord has been notable, such as the Wagner rebellion led by Yevgeny Prigozhin in June 2023.[196] However, despite differences of opinion, the elites agree that Russia must win the Russo-Ukrainian War, and there is no domestic threat to President Putin's position.[197] In general, domestic support on the Russian side can be said to be strong.

Regarding past behavior that might have built a reputation, there were precedents demonstrating a strength of resolve. During Russia's 2014 invasion of the Crimean Peninsula, Russia made efforts to conceal its military's involvement in the invasion, an action that demonstrated its intent to avoid risks and costs. In subsequent operations in eastern Ukraine, however, the state no longer hid its involvement, but directly deployed both organized local forces and Russian troops.[198] This can be interpreted as a precedent that demonstrates Russia's resolve to accept risks and costs in order to achieve its objectives. Moreover, because the Russo-Ukrainian War has been going on for some time, there is room for actions in the early stages of the war to serve as precedents that affect the credibility of nuclear threats in the later stages of the war. The fact that Russia has continued to wage war while suffering tremendous damage throughout the Russo-Ukrainian War also shows its strong resolve. As for Russia's reputation for irrationality and unpredictability, prior to Russo-Ukrainian War, the Putin regime was, conversely, perceived as acting on the basis of rational calculations.[199]

Regarding the use of conventional forces, Russia has been using them on a large scale. This case is an example of nuclear compellence in the midst of a conventional war, and the scale of conventional forces used is the largest of the cases discussed here. However, these forces are only being used against Ukraine, and there has been no direct conflict between Russia and the United States (or NATO). However, as will be described below, there was an incident involving missile launches against British aircraft.

Regarding control over the actors involved, there were at least two situations in which decision-makers lost control. One was an incident in September 2022 in which a Russian fighter jet fired missiles at a British reconnaissance plane. Initially, Russia announced that the incident was caused by a technical misfunction, but it was later reported that the Russian pilot had misunderstood the ground station controller's instructions and

deliberately fired the missiles. The first missile was not properly guided, and the second simply fell from the Russian jet, so there was no damage to the British plane. Had a missile hit, however, the situation could have led to a direct clash between NATO and Russia.[200] Another incident demonstrating a lack of control was the Wagner Group rebellion of June 2023. In this incident, a private military company with considerable combat capabilities marched toward Moscow while engaging with Russian troops. This situation raised strong doubts about Russia's internal control. There was a report that some of the Wagner troops came close to reaching a Russian nuclear weapons storage site,[201] which could have had unforeseen consequences depending on how the situation developed. Because Russia's nuclear compellence has taken the form of brinkmanship, incidents indicating such lapses in control could have raised fears that Russia was losing control of the situation, which might have worked in favor of compellence.

The next factor is positive inducements. This factor was not satisfied, particularly because Russia has used compellence that relies on punishment without offering a reward.

The final factor is the lack of a third party to assist the adversary. This case takes place in Europe, where the United States has been cooperating with NATO countries in dealing with the situation. Therefore, the United States is not isolated and does not satisfy this factor.

Comparison

Table 2 summarizes the distribution of factors that are thought to work in favor of nuclear compellence in each case. Several things become clear when the cases are compared.

The two successful cases used different forms of nuclear compellence, and while both had many factors working in favor of the compeller, some were distributed differently. The strategy employed by the United States in the Cuban Missile Crisis was brinkmanship, manipulating the risk of escalation into a catastrophic, all-out war that neither the United States nor the Soviet Union wanted. Particularly important factors, given the course of the case, were the occurrence of an incident outside of the control of the decision-makers and the actual use of military force in the incident. Looking back on the crisis later, Premier Khrushchev said that it was the shooting down of a U.S. reconnaissance plane by local Soviet troops acting on their own that finally led to his decision to remove the missiles.[202] Denial-type pressure, demonstrating the compeller's willingness to eliminate the missiles by brute force, and an ultimatum, creating a sense of urgency, were also effective in threatening escalation. In addition, the use of positive

inducements also helped to facilitate acceptance of the demand by providing Premier Khrushchev with something he could claim as achievements.

In contrast, in the Sino-Soviet Border Conflict, the Soviet Union used the threat of deliberate nuclear use. This case was successful largely because the balance of nuclear forces was such that China's nuclear capability was at a rudimentary stage and could be successfully disarmed by a first strike. The precedent of the Soviet Union's military intervention in Czechoslovakia also instilled fear in China, apparently influencing its perception of the credibility of the threat. China's international isolation and lack of allies to call on for help may also have exacerbated the effects of these factors. It must also be remembered that the direct demand in this case was rather small: for China to sit at the border negotiations. Of course, China could have foreseen that the Soviet side would make additional demands at the negotiating table, but as long as China had agreed to negotiate, it could have escaped the crisis situation without compromising on essential issues.[203] Although no positive inducement was provided in this case, the fact that the demand was quite limited may have made additional incentives unnecessary.

Turning to the failed cases, the Berlin Crisis witnessed many factors being stacked against the compeller, so the outcome is easy to understand. Compared to the Cuban Missile Crisis, which involved the same parties and occurred around the same time, the Berlin Crisis conspicuously lacked factors related to the seriousness and credibility of the threat. During the first crisis, the Soviet Union did not even have the capability to strike the U.S. mainland with a nuclear weapon, so the balance of nuclear forces favored the U.S. side. During the second crisis, the Soviet Union had a nuclear projection capability which was able to reach the U.S. mainland, but it lacked all the factors necessary to make its threat credible. Given that the Soviet strategy was brinkmanship, one factor that may have contributed to the strategy's failure was the fact that no situation arose that triggered fears of the situation spiraling out of control, including clashes with conventional forces. Although ultimatums were used, they failed to create a sense of urgency on the U.S. side, especially because the deadlines were six months away.

As for the Korean Peninsula Crisis, compellence failed even though most of the factors existed in favor of the compeller. This suggests that the variables that were absent in this case had a significant impact. The most important of these variables is likely the fact that the demand violated the vital interests of the adversary. The fact that the demand was for denuclearization, which was directly related to the survival of North Korea, made it much more difficult for North Korea to accept. Of course, limiting the scope of the demand is not enough to make compellence successful, as evidenced by the failure of

Table 2. Distribution of factors that appear to work in favor of nuclear compellence in each case

Factor \ Case	First Berlin Crisis Compeller: Soviet Union Adversary: United States Form: Brinkmanship Result: Failure	Second Berlin Crisis Compeller: Soviet Union Adversary: United States Form: Brinkmanship Result: Failure	Cuban Missile Crisis Compeller: United States Adversary: Soviet Union Form: Brinkmanship Result: Success	Sino-Soviet Border Conflict Compeller: Soviet Union Adversary: China Form: Threat of deliberate nuclear use Result: Success	Korean Peninsula Crisis Compeller: United States Adversary: North Korea Form: Threat of deliberate nuclear use/Brinkmanship Result: Failure	Russo-Ukrainian War Compeller: Russia Adversary: United States Form: Brinkmanship Result: Failure
The terms of the compeller's demand do not involve the adversary's vital interests	Yes	Yes	Yes	Yes	No	Yes
The balance of interests favors the compeller	No	No	No	No	No	Yes
Assurance is provided that the compeller will not make further demands	No	No	No	No	Yes	No
The compeller uses denial-type pressure	Yes	Yes	Yes	No	Yes	Yes
The compeller uses an ultimatum	Yes	Yes	Yes	No	No	No
The compeller is capable of launching a nuclear strike against the adversary's homeland	No	Yes	Yes	Yes	Yes	Yes
The compeller is superior in the balance of nuclear forces	No	No	Yes	Yes	Yes	No
Strong domestic support exists for the compeller	Yes	No	Somewhat [1]	Yes	No	Yes
Past behavior demonstrates the compeller's strength of resolve	No	No	Somewhat [2]	Yes	Yes	Yes
Past behavior demonstrates the compeller's unpredictability and irrationality	No	No	No	No	Yes	No
The parties actually use conventional forces	No	No	Yes	Yes	No	Yes
The parties' degree of control over the domestic and foreign actors involved is consistent with their strategy [3]	No	No	Yes	Yes	No / Yes [4]	Yes
The compeller offers positive inducements	No	No	Yes	No	Yes	No
There is no third party to provide support to the adversary	No	No	No	Yes	Somewhat [5]	No

1 Support was partial. 2 A precedent existed that could be taken as indicating either strength or weakness of resolve.
3 In cases involving the threat of deliberate nuclear use, there must be no incidents indicating a lack of control. In cases of brinkmanship, there must be an incident indicating a lack of control.
4 Both the threat of deliberate nuclear use and brinkmanship were used, and incidents indicating a lack of control occurred. 5 The degree of support was unclear.
Source: Prepared by the author.

compellence in the Berlin Crisis and the Russo-Ukrainian War. Nevertheless, there is no doubt that the severity of the demand had a significant impact on the unsuccessful outcome of compellence in the Korean Peninsula Crisis.

Both brinkmanship and the threat of the deliberate use of nuclear weapons were used in this case. In comparison with the Cuban Missile Crisis, a successful example of brinkmanship, the actual use of military force and ultimatums were absent in this case while they were present in the Cuban Missile Crisis. The Korean Peninsula Crisis also saw incidents such as the transmission of a fake message ordering non-combatants to evacuate from South Korea, but no actual military force was used between the United States and North Korea. Nor was an ultimatum to meet a particular deadline issued. The result was that North Korea did not fear a loss of control over the situation or feel a strong enough sense of urgency. This suggests that successful brinkmanship requires venturing into considerably riskier territory, very close to the point of catastrophe.

Compared to the Sino-Soviet Border Conflict, a successful case in which the threat of deliberate nuclear use was used, the Korean Peninsula Crisis differs in that the compeller did not have strong domestic support, conventional forces were not used, a situation indicating a break in control occurred, and the adversary was not completely isolated. The first three factors are related to the credibility of the threat, and the absence of these factors may have prevented the threat of the deliberate use of military force, including nuclear weapons, from being fully believed. The impact of China's presence as a supporter on North Korea's calculations and decision-making is unknown, but it is possible that North Korea expected China to serve as a resource provider and diplomatic intermediary.

In addition, although the balance of nuclear forces was the same in both cases, with the compeller having an advantage, the difference in the extent of that advantage may have affected the outcome. In the Sino-Soviet Border Conflict, the Soviet Union was able to disarm China of its nuclear forces with a first strike, while the Chinese side had a very limited ability to retaliate. In contrast, in the Korean Peninsula Crisis, U.S. attempts to disarm North Korea with a first strike were already unlikely to succeed, and North Korea was capable of retaliatory strikes against neighboring countries and Guam, if not the U.S. mainland.[204] This may have been another reason why North Korea thought that it could resist U.S. threats.

Nuclear compellence in the Russo-Ukrainian War has also failed, even though relatively many of the factors were present in favor of the compeller. In examining why compellence has failed, it is helpful to compare this case to the Cuban Missile Crisis, a successful case using the same strategy of brinkmanship. Looking at the differences between the two cases, while in

the Russo-Ukrainian War there were a balance of interests in favor of the compeller, strong domestic support, and precedents demonstrating strength of resolve, there was no advantage in the balance of nuclear forces, and no ultimatum or positive inducements were used. Regarding the balance of nuclear forces, it may not have made much difference anyway, because in the Cuban Missile Crisis, the Soviet Union (the target of compellence) had a retaliatory capability, and both the United States and the Soviet Union feared nuclear war. The main difference between the two cases, then, would be the lack of urgency and positive inducements. Regarding the sense of urgency, in addition to the lack of an ultimatum, which was discussed in the analysis, the fact that this case was not a direct confrontation between the United States and Russia, and that the United States was only indirectly involved, may have also affected the absence of this factor. The Cuban Missile Crisis was a direct confrontation between the United States and the Soviet Union, and tensions were so high that any clash could have triggered an escalation toward nuclear war. In contrast, U.S. involvement in the Russo-Ukrainian War has been indirect, through military assistance, meaning there is a long way to go before direct U.S.-Russian conflict and nuclear war, and that there is room for controlling escalation. Nor has Russia's extensive use of conventional forces been directed against the United States. Such structure of the conflict is likely a part of the reason why Russia has failed to create sufficient fear through its brinkmanship, despite the fact that Russia has the advantage in the balance of interests and despite the dangerous incident in which missiles were fired at British military aircraft. And as for positive inducements, Russia has not offered any. Given that the Russo-Ukrainian War is a clear case of invasion, there would be a significant cost for the United States to simply agree to a political deal. It would be difficult for Russia to prepare a large enough incentive for its adversary without abandoning its own war aims.

Conclusion

This paper conducted a comparative analysis of past cases of nuclear compellence with the aim of examining the effectiveness of nuclear compellence and the conditions for its success. The first section summarized the concept and previous studies, and then reviewed arguments about the supposed mechanisms behind nuclear compellence and their effectiveness. The second section explained the analytical framework. First, it confirmed that there have been 21 cases in which nuclear compellence was deliberately used, including ambiguous cases. Next, from these cases, the section selected

five cases of confrontation between nuclear-armed states for case studies. They were: the Cuban Missile Crisis and the Sino-Soviet Border Conflict as successful cases of nuclear compellence, and the Berlin Crisis, the Korean Peninsula Crisis of 2017–2018, and the Russo-Ukrainian War as unsuccessful cases. Based on previous studies, the section then summarized the factors thought to work in favor of nuclear compellence. The third section reviewed how these factors were distributed in each case and discussed the differences between the successful and unsuccessful cases.

It is impossible to definitively state the conditions for the success of nuclear compellence based on only two successful cases of deliberate nuclear compellence between nuclear-armed states. However, if the hypothesized factors favoring compellence that were present in the two successful cases are considered as the conditions for success, they would be as follows. First, there is a set of conditions common to both cases; they are: The terms of the demand avoid the adversary's vital interests; the seriousness of the threat is such that the compeller is able to launch a nuclear attack on the adversary's homeland; the compeller is superior in the balance of nuclear forces, another factor related to the seriousness of the threat; as a source of the credibility of the threat, conventional forces are actually used; and also related to the credibility, the degree of control over the actions of the actors involved is consistent with the strategy (in the case of a threat of deliberate nuclear use, the compeller must be in control; in the case of brinkmanship, there must be a lack of control). In the case of brinkmanship, there are some more conditions in addition to the above; they are: Denial-type pressure is used as a threat; an ultimatum that creates urgency is used; and a positive inducement is used in addition to a threat. The case of the threat of deliberate nuclear use also has some additional conditions other than the common conditions described above; they are: Strong domestic support exists as another source of the credibility of the threat; there are precedents demonstrating a strength of resolve, which also support the credibility; and the adversary is isolated. In addition, the level of superiority in the balance of nuclear forces must be overwhelming, such that disarmament of the adversary's nuclear forces by the first strike is realistically possible, and the adversary's ability to retaliate is virtually nonexistent.

To rigorously verify whether these can be considered conditions for success, it would be necessary to compare a larger number of cases with different combinations of variables. Therefore, in the limited scope of this paper's comparison, it is not possible to determine whether all or only some of the above conditions are significant. Having acknowledged this point, this paper comes to the following conclusions. In light of the course of the cases and in comparison with the failed cases discussed in this paper, it is relatively likely that, among the above conditions, the following are particularly important for the success of nuclear compellence: The demand avoids the adversary's vital interests; for the strategy of brinkmanship, conventional forces are actually used; and for the threat of deliberate nuclear use, the compeller has an overwhelming superiority in the balance of nuclear forces, at a level where the adversary's nuclear forces can be disarmed by a first strike. Regarding the use of conventional forces in brinkmanship, it seems that the way in which the forces are used is more important than the scale and intensity of the use—it should directly involve the parties to the conflict and be linked to lapses in control. In any case, the conclusions of this paper must be verified further.

Moreover, the analysis in this paper is limited to cases of deliberate nuclear compellence between nuclear-armed states, and does not consider the use of nuclear compellence against non-nuclear-armed states or the compellence effects of nuclear possession itself without the use of deliberate nuclear threats. While this paper has mentioned that some previous studies have considered these points, further analysis is warranted.

Despite these limitations, this paper is significant for two reasons. First, it adds new considerations to causal relationships behind the success or failure of nuclear compellence, a topic for which accumulated knowledge is lacking. In particular, it incorporates a broad range of factors into the discussion, building on previous studies of compellence in general, and provides a new angle of analysis by distinguishing between nuclear compellence based on different types of threats: brinkmanship and the threat of deliberate nuclear use. Second, it includes the most recent cases of nuclear compellence in the analysis: the Korean Peninsula Crisis of 2017–2018 and the Russo-Ukrainian War. Studies on these two cases are still scarce, and analyzing their composition and development from the perspective of nuclear compellence and discussing the reasons for the failure of nuclear compellence provide insights that contribute to our understanding of these cases.

In general, nuclear compellence involves significant risks and is a difficult strategy to implement successfully. The conditions for its success are likely to be a combination of several factors. In the case of brinkmanship, sufficient fear cannot be created without venturing into very dangerous territory, while threats of deliberate nuclear use require an overwhelming advantage in nuclear capability at a level that makes a disarming first strike a realistic threat. These conditions are not easy to meet. Despite this, states have actually been using nuclear compellence. While not as frequent as during the Cold War (the "first nuclear age"), use has continued in the post-Cold War period (the "second nuclear age"), and more and more states appear to be involved. The Russo-Ukrainian War saw the first use of nuclear compellence

between nuclear great powers in a long time, revealing the possibility of nuclear compellence being used in the new era of great power competition. In order to properly fear nuclear compellence, it will be necessary to further our understanding of the phenomenon by accumulating more empirical studies.

1. Sometimes called coercive diplomacy or simply coercion. Which term is used and the scope of what each term means varies from one researcher to the next, which can easily lead to confusion. For more information on how the term is used, see Ohnishi Ken, "Compellence and Coercive Diplomacy: Concepts and Characteristics," National Institute for Defense Studies (NIDS) (March 2019).
2. Thomas C. Schelling, *Arms and Influence* (New Haven: Yale University Press, 1966), 69-72; Gary Schaub Jr., "Compellence: Resuscitating the Concept," in *Strategic Coercion: Concepts and Cases*, ed. Lawrence Freedman (Oxford: Oxford University Press, 1998), 37-47; David E. Johnson, Karl P. Mueller, and William H. Taft V, *Conventional Coercion across the Spectrum of Operations: The Utility of U.S. Military Forces in the Emerging Security Environment* (Santa Monica: RAND, 2002), 7-14. Different researchers take different positions on how they treat the actual use of military force; Schaub, for example, says that compellence also only uses threats. For more on this point, see Ohnishi, "Compellence and Coercive Diplomacy."
3. Schelling, *Arms and Influence*, 79-80; Alexander L. George, "Coercive Diplomacy: Definition and Characteristics," in *The Limits of Coercive Diplomacy*, 2nd ed., ed. Alexander L. George and William E. Simons (Boulder: Westview Press, 1994), 10-11.
4. Schelling, *Arms and Influence*; Alexander L. George, David K. Hall, and William E. Simons, *The Limits of Coercive Diplomacy: Laos, Cuba, Vietnam* (Boston: Little, Brown, 1971).
5. One recent review of the research on nuclear coercion, including compellence, is Walter C. Ladwig III, "Nuclear Coercion: Evaluating Insights from Academic Scholarship," in *The Sheathed Sword: From Nuclear Brink to No First Use*, ed. Prakash Menon and Aditya Ramanathan (New Delhi: Bloomsbury, 2022).
6. Robert A. Pape, *Bombing to Win: Air Power and Coercion in War* (Ithaca: Cornell University Press, 1996), 13-16; Johnson et al., *Conventional Coercion across the Spectrum of Operations*, 15-18.
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8. Matthew Fuhrmann, "After Armageddon: Pondering the Potential Political Consequences of Third Use," in *Should We Let the Bomb Spread?* ed. Henry D. Sokolski (Carlisle: U.S. Army War College Press, 2016).
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Nuclear Weapons and Coercive Diplomacy (Cambridge: Cambridge University Press, 2017), 38-41.

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13. Richard Ned Lebow and Janice Gross Stein, *We All Lost the Cold War* (Princeton: Princeton University Press, 1994), 361-364.
14. Todd S. Sechser and Matthew Fuhrmann, "Crisis Bargaining and Nuclear Blackmail," *International Organization* 67, no. 1 (January 2013); Sechser and Fuhrmann, *Nuclear Weapons and Coercive Diplomacy*.
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22. Mark S. Bell and Julia Macdonald, "How to Think about Nuclear Crises," *Texas National Security Review* 2, no. 2 (February 2019).
23. Schelling, *Arms and Influence*, 105-116.
24. Ibid., 176-184; Robert Powell, "The Theoretical Foundations of Strategic Nuclear Deterrence," *Political Science Quarterly* 100, no. 1 (Spring 1985): 80-83.
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26. Sechser and Fuhrmann, *Nuclear Weapons and Coercive Diplomacy*, 125-129.
27. Schelling, *Arms and Influence*, 72-73.
28. E.g., Alexander L. George, "Theory and Practice," in George and Simons, *The Limits of Coercive Diplomacy*, 15; Phil Haun, *Coercion, Survival, and War: Why Weak States Resist the United States* (Stanford: Stanford University Press, 2015).
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32. Lawrence Freedman, "Strategic Coercion," in Freedman, *Strategic Coercion*, 29-30; Johnson et al., *Conventional Coercion across the Spectrum of Operations*, 16-17.
33. E.g., Pape, *Bombing to Win*; Art, "Coercive Diplomacy," 399-401.
34. George, "Theory and Practice," 18.
35. E.g., Peter Viggo Jakobsen, *Western Use of Coercive Diplomacy after the Cold War: A Challenge for Theory and Practice* (Hampshire: Macmillan, 1998); Tim Sweijs, *The Use and Utility of Ultimata in Coercive Diplomacy* (Cham: Palgrave Macmillan, 2023).
36. Kroenig, *The Logic of American Nuclear Strategy*.
37. In addition to the factors mentioned below, audience cost is another factor that has been widely discussed in existing studies. However, the impact of audience cost cannot be examined because all of the cases analyzed in this paper use publicly disclosed nuclear threats. Therefore, this paper focuses on other factors.
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44. E.g., George, "Theory and Practice," 16-17; Art, "Coercive Diplomacy," 388-389, 393-399.
45. E.g., George and Simons, "Findings and Conclusions," 273-274; Alexander B. Downes, "Step Aside or Face the Consequences: Explaining the Success and Failure of Compellent Threats to Remove Foreign Leaders," in Greenhill and Krause, *Coercion*.
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47. Robert M. Slusser, "The Berlin Crises of 1958-59 and 1961," in *Force without War*, ed. Barry M. Blechman and Stephen S. Kaplan (Washington, D.C.: Brookings Institution, 1978), 344-347; Vladislav M. Zubok, "Khrushchev and the Berlin Crisis (1958-1962)," Woodrow Wilson International Center for Scholars (May 1993), 7-9; Michael D. Cohen, *When Proliferation Causes Peace: The*

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51. Slusser, "The Berlin Crises of 1958-59 and 1961," 367; Betts, *Nuclear Blackmail and Nuclear Balance*, 85.
52. William Taubman, *Khrushchev: The Man and His Era* (New York: W. W. Norton, 2003), 407, 414, 417; Sechser and Fuhrmann, *Nuclear Weapons and Coercive Diplomacy*, 134-135.
53. William Burr, "Avoiding the Slippery Slope: The Eisenhower Administration and the Berlin Crisis, November 1958-January 1959," *Diplomatic History* 18, no. 2 (Spring 1994): 198; Fursenko and Naftali, *Khrushchev's Cold War*, 219.
54. Slusser, "The Berlin Crises of 1958-59 and 1961," 367-369, 377; Burr, "Avoiding the Slippery Slope," 201-202; Dwight D. Eisenhower, *The White House Years: Waging Peace, 1956-1961* (Garden City: Doubleday, 1965), 340-341.
55. Betts, *Nuclear Blackmail and Nuclear Balance*, 86; Sechser and Fuhrmann, *Nuclear Weapons and Coercive Diplomacy*, 135.
56. Slusser, "The Berlin Crises of 1958-59 and 1961," 367, 371, 373; Taubman, *Khrushchev*, 408-409; Press, *Calculating Credibility*, 82.
57. Uhl and Ivkin, "'Operation Atom,'" 303; Sechser and Fuhrmann, *Nuclear Weapons and Coercive Diplomacy*, 136.
58. Eisenhower, *The White House Years*, 344-347; Taubman, *Khrushchev*, 400-403, 408-411; Fursenko and Naftali, *Khrushchev's Cold War*, 219-222.
59. Slusser, "The Berlin Crises of 1958-59 and 1961," 377-378; Taubman, *Khrushchev*, 412-416.
60. Eisenhower, *The White House Years*, 405-408; Fursenko and Naftali, *Khrushchev's Cold War*, 225-227.
61. Eisenhower, *The White House Years*, 446-448; Taubman, *Khrushchev*, 438.
62. Fursenko and Naftali, *Khrushchev's Cold War*, chap. 11; Taubman, *Khrushchev*, 445-446, 455-468.
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64. Slusser, "The Berlin Crises of 1958-59 and 1961," 412-413; Taubman, *Khrushchev*, 499-500; Kempe, *Berlin 1961*, 241-253.
65. Slusser, "The Berlin Crises of 1958-59 and 1961," 429; Kempe, *Berlin 1961*, 382; Sechser and Fuhrmann, *Nuclear Weapons and Coercive Diplomacy*, 137-138.
66. Slusser, "The Berlin Crises of 1958-59 and 1961," 423-424, 427, 429; Fursenko and Naftali, *Khrushchev's Cold War*, 377-386; Kempe, *Berlin 1961*, chaps. 14-15.
67. Slusser, "The Berlin Crises of 1958-59 and 1961," 420; Kempe, *Berlin 1961*, 55.
68. Slusser, "The Berlin Crises of 1958-59 and 1961," 421-422, 430-431; Fursenko and Naftali, *Khrushchev's Cold War*, 371-372, 376-377; Kempe, *Berlin 1961*, 385-388; Cohen, *When Proliferation Causes Peace*, 95.
69. Fursenko and Naftali, *Khrushchev's Cold War*, 409-410; Kempe, *Berlin 1961*, 444-447.
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71. Fursenko and Naftali, *Khrushchev's Cold War*, 386-394, 398.
72. Ibid., 397-400; Kempe, *Berlin 1961*, 411, 426-429.
73. Fursenko and Naftali, *Khrushchev's Cold War*, 401-404; Kempe, *Berlin 1961*, xiii-xviii, chap. 18.
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77. Eisenhower, *The White House Years*, 337-339; Kempe, *Berlin 1961*, 257-258.
78. "U.S. Replies to Soviet Note on Berlin," 80; Press, *Calculating Credibility*, 84; Kempe, *Berlin 1961*, 55-56.
79. George and Smoke, *Deterrence in American Foreign Policy*, 402-403, 410; Fursenko and Naftali, *Khrushchev's Cold War*, 210, 215-216, 384, 394; Kempe, *Berlin 1961*, 379.
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82. Ibid.; Mark Trachtenberg, *History and Strategy* (Princeton: Princeton University Press, 1991), 192-193; Fursenko and Naftali, *Khrushchev's Cold War*, 370-371.
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84. Slusser, "The Berlin Crises of 1958-59 and 1961," 387-390; James G. Richter, *Khrushchev's Double Bind: International Pressures and Domestic Coalition Politics* (Baltimore: Johns Hopkins University Press, 1994), chap. 6.
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88. Fursenko and Naftali, *Khrushchev's Cold War*, 452-454; Taubman, *Khrushchev*,

553-557.

89. "Radio and Television Address to the American People on the Soviet Arms Build-Up in Cuba, 22 October 1962," John F. Kennedy Presidential Library and Museum website.
90. Fursenko and Naftali, *Khrushchev's Cold War*, 468-474; Taubman, *Khrushchev*, 560-562.
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92. Taubman, *Khrushchev*, 564-565; Martin J. Sherwin, *Gambling with Armageddon*, 359-360, 369-371.
93. "Letter from President Kennedy to Chairman Khrushchev, October 25, 1962," John F. Kennedy Presidential Library and Museum website.
94. Fursenko and Naftali, *Khrushchev's Cold War*, 483-486; Taubman, *Khrushchev*, 567-568.
95. "Department of State Telegram Transmitting Letter from Chairman Khrushchev to President Kennedy, October 26, 1962," John F. Kennedy Presidential Library and Museum website; "Letter from Chairman Khrushchev to President Kennedy, October 27, 1962," John F. Kennedy Presidential Library and Museum website.
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