WHAT IS THE SOLE PURPOSE OF US NUCLEAR WEAPONS?

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About FAS
The Federation of American Scientists is a nonpartisan, nonprofit policy research and advocacy organization founded in 1945 to meet national security challenges with evidence-based, scientifically-driven policy and expertise.

Over 75 years later, we are still working to minimize the risks of significant threats—arising from nuclear weapons, biological and chemical agents, and climate change—as well as addressing a broad suite of contemporary issues and challenges where science, technology, and innovation policy can deliver dramatic progress and prevent catastrophic harm.

Cover image: an Advanced Inertial Reference Sphere (AIRS) guidance system for the Peacekeeper ICBM at the Hill Aerospace Museum, Hill AFB, Utah. The system, a beryllium sphere suspended in fluorocarbon fluid, provided the MX missile with extreme accuracy, free from the risk of gimbal lock or the reliance on external references. Photo by Martin Miller, https://www.martin-miller.us/.
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Executive Summary

• Prior to assuming office, President Biden indicated that he would establish that “the sole purpose of our nuclear arsenal is to deter—and, if necessary, retaliate for—a nuclear attack against the United States and its allies.”

• Sole purpose should be understood as a central component of an integrated deterrence strategy that can effectively manage the risk of nuclear escalation in a limited conflict as well as the rising stability risks from nonnuclear weapons.

• Sole purpose could significantly reduce the risk of unintended escalation and increase the credibility of more flexible and realistic nonnuclear response options in a range of importance contingencies.

• In order to attain its intended benefits, declaratory policy must be reflected in force structure and planning.

• The president’s existing language on sole purpose provides considerable flexibility for the administration to define the doctrine, but does not itself provide clear guidance for strategy, force structure, or for related declaratory policies like “no first use.”

• Defining sole purpose is a critical task for the administration’s defense policy review.
  * As a central component of an integrated defense policy that will strengthen US deterrence and assurance credibility, sole purpose should be defined at the level of the NDS.
  * A sole type definition would state that the United States would consider nuclear use in response to a certain type of attack, having modest effects on a narrow set of plans but few effects on force structure.
  * A sole function definition would define what is and what is not a requirement of deterrence, potentially removing certain strategic or nonstrategic roles of nuclear weapons.
  * Depending on how it is defined, sole purpose could have transformational effects on nearly every aspect of nuclear weapons policy or relatively modest effects. It could accommodate or incorporate a range of related policy options, like a deterrence-only posture or no first use.

• Fully implementing a sole purpose policy is critical to attaining its benefits.
  * A simple declaratory statement is not a complete sole purpose policy. Because any statement is likely to be ambiguous, sole purpose should also consist of a set of presidential directives that determine how the policy will be affect force structure and planning.
  * By eliminating one or more of the requirements that structure US nuclear forces, a sole function definition could potentially have significant effects on a range acquisition decisions and plans.
  * If the president concludes that sole purpose has implications for force structure or force posture, the administration should ensure that these changes are made before the presidential term is concluded.
  * Following a decision to adopt sole purpose, civilian officials should review existing operational plans and concepts to ensure that they comport with the president’s guidance for escalation management of a conflict with a nuclear-armed adversary.
• Embedding the policy in plans, force structure, and allied consultations is critical to achieving its benefits and reducing the risk that it is reversed by a future president, which would be highly risky.

• If defined, implemented, and communicated as a part of an effective integrated deterrence posture, sole purpose could strengthen assurance of allies.
  
  • Some allies will be understandably apprehensive about any shift in US nuclear weapons policy in the current environment.
  
  • Allies should be consulted closely as sole purpose is being defined, as it is released, and as it is being implemented.
  
  • As a central component of an integrated deterrence strategy, sole purpose should be raised in consultations that include both nuclear weapons experts and broader defense strategists, at all levels of government. By integrating alliance consultations along with strategy, US officials can fully convey how sole purpose contributes to a stronger deterrence strategy.

Introduction

In January 2021, President Biden assumed office after having made unusually explicit commitments to reduce the role of nuclear weapons in US national security strategy. In his primary articulation of his campaign’s foreign policy, Biden declared that “the sole purpose of the US nuclear arsenal should be deterring—and if necessary, retaliating against—a nuclear attack.” Since assuming office, Biden has not repeated the pledge, though his initial national security guidance and his Secretary of State have reiterated the goal of reducing reliance on nuclear weapons. As the Pentagon begins its review of nuclear weapons policy, Biden and his national security officials will have to determine whether to adopt sole purpose and, if so, what it means. The established language on sole purpose offers the administration considerable latitude in how it chooses to reduce reliance on nuclear weapons. Depending on how sole purpose is defined and implemented, it could have transformative consequences for nuclear force structure and strategy, or it could end up as a rhetorical commitment that has few practical effects at all.

Though the language dates back decades, there has never been a precise or agreed definition of sole purpose. The first published use of the phrase is in a piece Albert Einstein related to the eminent journalist Raymond Swing that was published in the Atlantic in 1947. Einstein argued while the United States must stockpile the bomb, it should forswear its use. “Deterrence should be the only purpose of the stockpile of bombs.” If the United Nations were granted international control over atomic energy, as President Truman had proposed, it should be “for the sole purpose of deterring an aggressor or rebellious nations from making an atomic attack.” Since the idea was popularized in the 1960s, sole purpose has become a persistent staple in ongoing debates about the role of nuclear weapons, but it has rarely been attached to a precise definition or a plan to implement it.

Sole purpose is more ambiguous than other declaratory policy proposals (such as no first use) because it purports to define, or constrain, the purpose of nuclear weapons. Depending on how the terms of


the statement are defined and how the statement is implemented in practice, its effects could be broad, narrow, restrictive, permissive, or ambiguous. For example, President Biden’s sole purpose language could be construed to proscribe nuclear weapons from performing a wide range of functions or from being used in wide ranges of contingencies. Slight variations in the wording of a sole purpose declaration can produce dramatically different policies and be perceived differently by allies and adversaries, who will examine the policy closely. Depending on how sole purpose is defined and implemented, sole could reduce or eliminate requirements for each piece of the triad or for nuclear use in a variety of different contingency plans.

Sole purpose is one potential option in declaratory policy, that aspect of nuclear weapons policy that publicly communicates when and why the United States would consider the use of nuclear weapons. It can be combined with or can subsume a range of other potential declaratory policy options. Because the president has sole authority to order the use of a nuclear weapon, only the president can set limits on that power. Though changes in declaratory policy should consider the views of civilian national security officials, uniformed military officials, members of Congress, US allies, and the American public, the president should provide clear guidance on how to modify US declaratory policy. Like all presidents, President Biden should provide clear guidance to the officials conducting the national defense strategy about nuclear declaratory policy.

Because sole purpose could potentially be defined in many different ways, some definitions will be better or worse. Advocates or opponents should be clear about what constitutes a better or worse definition. The administration should not accept the argument that a good definition is one that preserves existing force structure or plans, maintains ambiguity for its own sake, or comports with the preferences of certain allies or services. This piece argues that a good definition of sole purpose is one that assists with the development and implementation of a credible, integrated posture by which the United States and its allies deter aggression and nuclear use; reflects the president’s preferences about how to manage escalation in limited conflicts with nuclear-armed adversaries as well as his assessment of the requirements of deterring a major strategic attack; reduces the risk of misperception and adversary nuclear first use incentives; and can be implemented in force structure and plans so that it is resilient to leadership changes in the United States. Because the president has expressed a preference to reduce the nation’s reliance on nuclear weapons, a good definition of sole purpose should help to do so in ways consistent with his preferences.

This piece examines the range of options available to officials working to define sole purpose and reduce reliance on nuclear weapons. It explores the practical implications of different definitions of sole purpose and the steps necessary to ensure that they are implemented in a way that is responsible, effective, and most likely to endure over time. There are two central arguments. First, sole purpose should not be understood as a nuclear declaratory policy but as critical component in an integrated deterrence strategy. Understood in this way, sole purpose is not only a valuable means of reducing the risk of nuclear escalation and of meeting US commitments to reduce reliance on nuclear weapons but because it is a substantive judgment about how US nuclear and nonnuclear forces can best manage escalation in a limited conflict with a nuclear-armed adversary. Second, an effective sole purpose policy cannot simply be a sentence in a paragraph on nuclear declaratory policy. If the administration is serious about attaining the benefits of sole purpose, the policy should be comprised of the declaratory statement, additional language to clarify and contextualize the policy, and a set of directives that communicate the president’s guidance for how the policy should affect force structure and plans.

Each of these arguments is critical for attaining the benefits of sole purpose and for maintaining an effective deterrence posture. Sole purpose will be a contentious idea under any circumstances. Allied
governments, political opponents, and advocates of various aspects of the previous administrations’ policy are understandably concerned about the president’s statements. Clearly defining the policy, explaining how it will strengthen an integrated deterrence policy, and moving resolutely forward with implementation will help to convince allies and many deterrence experts that sole purpose will increase rather than decrease deterrence credibility.

What is a sole purpose policy?

- Sole purpose is not only a nuclear declaratory policy but a critical component of an integrated deterrence policy.
- It rests on the conviction that providing additional clarity about when and why the United States might consider nuclear employment can reduce the risk of nuclear escalation and enhance US deterrence credibility.
- In order to achieve the benefits of a sole purpose policy, ambiguity in the definition should be a deliberate decision, not a means of forging bureaucratic compromise or retaining the status quo.

The 2010 Nuclear Posture Review explicitly considered sole purpose but declined to adopt the policy. Its discussion of sole purpose follows a statement that a chemical or biological attack from a state that is party to and in compliance with its Nonproliferation Treaty obligations “would face the prospect of a devastating conventional military response.” The document held that for nuclear-weapon states not in compliance with the NPT, a very small number of states, “there remains a narrow range of contingencies in which US nuclear weapons may still play a role in deterring a conventional or CBW attack against the United States or its allies and partners.” Together, the statements retain the option to respond to a North Korean chemical or biological attack against South Korea with nuclear weapons. The NPR concluded that it was “not prepared at the present time to adopt a universal policy that the ‘sole purpose’ of US nuclear weapons is to deter an attack on the United States and our allies and partners, but will work to establish conditions under which such a policy could be safely adopted.”

Little more was heard on sole purpose until the final weeks of the administration, when then-Vice President Biden delivered a speech on nuclear weapons policy. Biden noted that the administration had “steadily reduced the primacy nuclear weapons have held.” He continued, “given our non-nuclear capabilities and the nature of today’s threats, it’s hard to envision a plausible scenario in which the first use of nuclear weapons by the United States would be necessary. Or make sense.” He declared that he and the president were confident that they can deter “non-nuclear threats through other means” and that they “strongly believe we have made enough progress that deterring—and, if necessary, retaliating against—a nuclear attack should be the sole purpose of the US nuclear arsenal.” However, they declined to make the change, leaving it as an option for a Clinton administration that never came.

In his own campaign for president three years later, Biden stated, “I believe that the sole purpose of the US nuclear arsenal should be deterring—and, if necessary, retaliating against—a nuclear attack. As president, I will work to put that belief into practice, in consultation with the US military and US allies.” The language was also written into the party platform.

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6 Biden, “Why America Must Lead Again.”
There are several potential benefits from a sole purpose policy, each of which will be discussed in greater detail below. First, by providing additional specificity about when and why the United States would consider employing a nuclear weapon, sole purpose could reduce the risk that an adversary mistakenly perceives itself under nuclear attack. This could decrease the risk of inadvertent escalation of a limited nonnuclear conflict to the nuclear level, could increase the ability of US nonnuclear forces to prosecute a nonnuclear conflict at higher intensity or in different geographic areas, and could increase the credibility of US nuclear deterrent threats by removing ambiguity around circumstances in which nuclear use may not be necessary or likely.

Because this first benefit depends on the conviction that additional clarity in declaratory policy can be advantageous, it is important to consider the benefits and risks of ambiguity in the current policy. Ambiguity can be a valuable asset, affording a president flexibility to select his or her preferred option in a crisis and forcing an adversary to consider the possibility of nuclear use in a range of circumstances. If the president states that the United States will not consider nuclear use in a certain set of contingencies, the shift could embolden an adversary to take that action if it had been deterred by the potential effects of nuclear use or the risk of future escalation. Whether or not deliberate ambiguity has its intended effects depends to some extent on force structure and posture: if the president intends to reserve an option to employ nuclear weapons in a particular contingency, he should also take steps to acquire and maintain the forces required to make this threat credible.

However, ambiguity is not necessarily a virtue. Consider three risks in allowing too much ambiguity. First, if ambiguity is not a deliberate strategic decision but rather a rhetorical compromise between conflicting bureaucratic positions, the resulting policy may not reflect the president’s preferences. If the president does not clearly define what he means by sole purpose, what missions should be abandoned, and what types of attacks would receive a nonnuclear response, the Pentagon policy will likely produce a definition that falls short of significantly reducing reliance on nuclear weapons. In this case, a sole purpose declaration could be highly ambiguous because it is purely rhetorical. Second, excessive ambiguity could weaken deterrence credibility. Many deterrence experts, for example, warned that the threat in the 2018 NPR to consider nuclear use in response to “non-nuclear strategic attacks” would weaken deterrence credibility. If an adversary assumed that vague term to include cyber attacks—and there is still conflicting information about whether the administration intended it to—it might weaken the credibility of nuclear threats in other contingencies. For this reason, most US strategists have argued that, if at all possible, US declaratory policy should not depend on a bluff. Any US nuclear statements should be backed by the resolve and the capabilities to employ nuclear weapons in the specified circumstances. Third, ambiguity could confuse or concern allies that rely on US declaratory policy to shape their own planning.

In crafting its definition of sole purpose, the Biden administration should cautiously assess the value of ambiguity on plausible contingencies. Biden’s belief in sole purpose relies on the assumption that providing clarity about when and how the United States would consider nuclear employment helps to assure allies, assists planners in developing effective cross-domain campaign plans and deterrence options, reduces the risk an adversary will misperceive itself as being under nuclear attack and escalate, and increases the credibility of US nuclear deterrence for the most critical contingencies. If the administration

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chooses to retain ambiguity about certain contingencies, it should be a deliberate choice rather than a bureaucratic compromise.

A second potential benefit of sole purpose is its effects on nuclear strategy and operational planning. It is the job of military officers and civilian strategists to maximize the options available to the president in a crisis consistent with the president’s guidance about how to structure and posture the force. The military’s job is to ensure that their forces are ready and capable to perform their assigned missions. For this reason, it is important that the president delivers realistic guidance to the force about the missions assigned to the nuclear force. In this sense, sole purpose represents an opportunity for the president to review the role and mission of nuclear forces and to present guidance for force structure and planning that reflect his understanding about when he might consider nuclear weapons use and what limits he expects the force to abide by in order to limit the risk of inadvertent escalation.

It is not necessarily the case that more options are better: maintaining certain options could be unnecessary, unrealistic, or destabilizing and could detract from the fiscal prioritization, the readiness, or the credibility of the president’s preferred nonnuclear options to respond to specific contingencies. For example, in July 2019, Biden stated that the W76-2 low-yield warhead option for the Trident II D5 was a “bad idea” that made US presidents “more inclined to use them.” Biden’s statements about nuclear weapons policy signal that he does not see the role of the NPR as maximizing the options available to him, but as implementing an integrated deterrence policy that maintains stability, prioritizing nonnuclear options and eliminating nuclear options that detract or distract from this goal. Sole purpose is an important opportunity to define the requirements of deterrence and to eliminate the capabilities that the president determines to be in excess of those requirements or otherwise destabilizing. Rather than simply cutting systems, understanding sole purpose as the mechanism for doing this can ensure that force structure, declaratory policy, and plans all match.

In order to attain its intended effects, declaratory policy must be reflected in force structure and planning. For this reason, the administration should assess potential definitions of sole purpose on the basis of how they affect operational plans and acquisitions policies. For this reason, a complete and effective sole purpose policy is not a single sentence but rather a set of policies that reflect the president’s guidance about how to manage escalation and shape the US nuclear arsenal. Importantly, sole purpose policy will not only effect nuclear force structure and planning but also conventional, space, and cyber capabilities. As the administration reduces reliance on nuclear weapons, it should also prepare with allies a set of complementary or compensatory measures to assume those functions removed from the nuclear folder. Reduced reliance on nuclear weapons may require adjustments to the readiness, deployment, or operational missions of advanced conventional forces, for example. In short, sole purpose is not just a nuclear declaratory policy but a critical component of an integrated strategy to deter aggression and nuclear use.

Definitions of sole purpose

- A sole type declaration would state that the United States would only consider nuclear employment in response to a certain type of attack. This could affect planning for specific contingencies of chemical, biological, cyber, or conventional attack.

- A sole function declaration would define deterrence as requiring some missions but not others, which could affect planning for a wider range of contingencies at the strategic and nonstrategic level, and potentially force structure requirements.

The Biden administration has considerable latitude in defining sole purpose. How that definition is crafted, communicated, and implemented will determine the effects of sole purpose on US deterrence credibility, strategic stability, operational plans and force structure, and allied assurance. Depending on the definition, sole purpose could have transformational or modest effects.

The practical task of crafting a sole purpose declaration depends on two steps. First, what is the format of the declaration? A definition of sole purpose might take the form of a simple sentence or several paragraphs of text to define its terms, explicitly discuss specific types of contingencies when the United States would or would not consider nuclear employment, or introduce the definition as part of an integrated deterrence strategy that includes associated nonnuclear measures. The language Biden has already presented is succinct and does not connect or contrast sole purpose with other related policies. The existing language would permit a wide range of divergent interpretations among allies and adversaries. So while it is suitable as a placeholder for the administration, it should be further defined and clarified before it is issued.

The second step in defining sole purpose is to determine how and to what extent to define the terms involved. A definition could choose to articulate or not to articulate a range of features about the circumstances in which the United States would consider nuclear weapons use: before or after an attack has occurred, the severity or effects of an attack, the type of weapons used in an attack, and a variety of other considerations. For example, the language that Biden has used could imply a range of consequences for US nuclear weapons policy, depending on how to the administration defines “deterrence,” “allies,” and “attack.” Does a nonlethal nuclear demonstration blast qualify as an “attack”? A nuclear airburst over a forward operating base designed to produce an EMP? Does the statement refer to treaty allies, or should it follow past practice and refer to “allies and partners” to accommodate Israel, Taiwan, and Middle East partners? If so, which countries qualify and is the United States prepared to extend deterrence to each of them? If not, does a “sole purpose” statement decrease ambiguity surrounding which partners qualify and should the change entail a modification of the pertinent regional campaign plans? In some of these definitional questions, it will be helpful for US policy to maintain ambiguity—but sole purpose may change how allies or adversaries interpret this ambiguity, so each decision should be deliberately and carefully assessed to ensure it does not have dangerous unintended consequences.

What does “deterrence” entail or require? Depending on how the term is defined, sole purpose could have transformational consequences or modest ones. US officials will tend to shy away from these kinds of “theological” questions, but they shouldn’t. In issuing a sole purpose policy, they will be giving a new answer to the question, one way or another. Because each sole purpose definition in some way decreases reliance on nuclear weapons, one of the clearest ways to define sole purpose, and the deterrence requirements it entails, is to ask: what is the opposite of a sole purpose policy? What missions would conflict with a given definition of sole purpose or what capabilities would be rendered unnecessary? What do nuclear weapons deter and what is required to deter? In defining deterrence
as the sole purpose of nuclear weapons, the president may well define or redefine the requirements of deterrence, an important opportunity in a strategic environment that is changing rapidly.

**Deterring a sole type of attack**

In one sense, Biden’s sole purpose language has a clear implication: if the sole purpose of nuclear weapons is to deter or respond to nuclear attacks, nuclear weapons are not intended to deter or respond to nonnuclear attacks. This reading comports with the definition presented in the 2010 NPR. It is possible that this is all sole purpose is: the sole purpose of nuclear weapons is to deter or respond to a sole type of attack.

If sole purpose were defined as pertaining to a sole type of attack, it would have a significant effect on a single contingency: the risk of a North Korean chemical or biological attack against South Korea. Though information is scarce in public, North Korea is known to have stockpiled significant quantities of chemical agents that could be delivered by tube or rocket artillery in range of the Seoul metropolitan area or further by ballistic missile. The regime is also believed to be capable of producing biological weapons, though government statements about the extent of these programs are contradictory and unclear. Are nuclear weapons necessary to deter or respond to a North Korean chemical or biological attack? It is not clear why Kim Jong Un would opt to do so with chemical weapons instead of nuclear or conventional options. The allied conventional response would be overwhelming, at least destroying significant DPRK artillery or long-range strike capabilities along with any supporting infrastructure and at most removing Kim Jong Un from power. Adding US nuclear strikes to these operations could not only complicate allied operations, but would also do little to deter future chemical weapons use by NPT-noncompliant nuclear weapons states because there are no analogous circumstances. If there is a hardened and deeply-buried chemical or biological weapons facility in North Korea that would require nuclear weapons to destroy with certainty, a possibility that has received considerable speculation in the public literature, the value of that nuclear operation would have to be measured against the disadvantages and the alternatives. The facility could most likely be attrited through other means, the allies could likely find alternative target packages that impose similar costs on the regime, and a nuclear ground burst would impose major costs on US diplomatic efforts, alliance cohesion, and public health in the region. These considerations broadly apply to Syria or any other regional adversary seeking to develop chemical or biological weapons.

North Korea’s rapid advancements in its nuclear weapons program also affect the calculation, both because the regime is less reliant on chemical weapons for deterrence and because a US nuclear response to a chemical weapons attack would raise a significant risk of a North Korean nuclear strike. The United States learned in the 1950s and 60s that the credibility of a nuclear response to an invasion of Europe decreased as Soviet nuclear capabilities increased. In this situation, the objective should be to ensure that the United States and its partners have credible nonnuclear options to respond to a chemical weapons attack.

A sole type statement would also eliminate any ambiguity about whether the United States retains the option to respond to a major cyberattack with nuclear weapons. The question was raised when the

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12 International Crisis Group, “North Korea’s Chemical and Biological Weapons Programs,” June 18, 2009.
14 Maxwell D. Taylor, The Uncertain Trumpet (Harper and Row, 1960). General Taylor has devoted his life to a realistic study of defense without national suicide, victory without total destruction. Since 1955, when he was appointed Chief of Staff of the U.S. Army, he has devoted every effort to develop every waking moment to an effort to develop the fighting forces, and particularly the Army, into an effective instrument of national policy without complete reliance on massive retaliation (i.e., total war)
2018 NPR clarified that “extreme circumstances could include significant non-nuclear strategic attacks,” which include attacks on “civilian population or infrastructure.” Some observers have considered the prospect alarming, warning that any such use would be illegal under the law of armed conflict and that it would degrade US deterrence credibility. If US declaratory policy applies nuclear deterrence to too broad a range of attacks, failure to respond to instances of these events could deplete nuclear deterrence credibility, an example of disadvantageous ambiguity. US military and civilian officials at the time downplayed the idea that the statement applied to cyberattacks but the ambiguity remains.

Lastly, a sole type statement would decisively state that the United States does not need nuclear weapons to deny or respond to a conventional attack. After US nuclear weapons destroyed Hiroshima and Nagasaki, their initial purpose was to respond to a Soviet invasion with strategic bombing to deplete the enemy’s industrial and military capacity in order to permit allied conventional forces to invade the Soviet homeland, a role that was perceived as necessary to compensate for massive allied conventional inferiority. Today, though US forces are losing some capability for forcible entry into areas defended by nuclear-armed adversaries, they still retain a considerable margin of qualitative advantage. When combined with allied forces, they are capable of repelling most limited attacks against US and allied territory. For major attacks that cannot immediately be repelled by US conventional forces, for example over Taiwan or the Baltics states, limited US nuclear strikes would not enable the United States and its allies to prevail on the battlefield and a US president is unlikely to order a strategic nuclear attack. It is unlikely to be the case that the United States could tip the balance of a conflict by destroying isolated concentrations of enemy forces with limited nuclear strikes. Most enemy military targets could be destroyed equally well with advanced conventional munitions.

Likewise, it is difficult to imagine targets that require nuclear weapons that could convince a determined aggressor to back down in a conflict; if there were, there is no guarantee that a nuclear-armed aggressor would not simply follow the United States to the nuclear level in this case, carrying out nuclear strikes against US forward operating positions that are far more scarce and more valuable than more numerous targets in an aggressor’s homeland. In cases where the burden of escalation is on the United States, nuclear escalation is unlikely to help secure US war aims.

In general, US first use would probably not significantly affect the situation on the battlefield in its favor, but would significantly raise the risk that an adversary would carry out its own nuclear operations. US second use might in some circumstances detract from alliance cohesion and the ability of US conventional forces to prevail on the battlefield, which would be the top priority in the conflict. The United States would likely incur higher diplomatic, economic, and military costs than an adversary that does not rely on global standing and allies to achieve its objectives. For these reasons, the US interest is in keeping a conventional conflict conventional. Targets relevant to a conventional conflict can and should be destroyed by conventional munitions if at all possible.

In a limited conflict in defense of an ally, it will almost certainly be necessary to prevail in the conventional conflict to secure the ally’s interests. By reducing reliance on nuclear weapons for circumstances cases where they are not necessary, sole purpose could increase the credibility of...
conventional deterrence by denial or punishment while increasing the credibility of nuclear forces to deter adversary nuclear escalation.

Relation between sole purpose and no first use

The effort to define sole purpose is complicated by its relationship to a related norm of nuclear restraint, no first use. Some observers, both critics and proponents, have equated the two concepts. For example, Rep. Adam Smith, Chairman of the House Armed Services Committee, has stated, “I think the sole purpose approach is just a weaselly way to not actually have a no first use policy.” To confuse matters further, although Biden has never clearly stated an intention to institute no first use as he has with sole purpose, he is frequently understood to also support no first use.

In fact, the policies are not identical. For one thing, sole purpose may or may not be compatible with first use of nuclear weapons. If deterrence is the sole purpose of nuclear weapons, does deterrence depend on a threat to preempt an adversary’s nuclear first use, or a plan to use nuclear weapons before an enemy does represent a mission other than deterrence?

Ankit Panda and Vipin Narang offer a helpful distinction in arguing that, “no-first-use declaration is an explicit ex ante constraint on the employment of nuclear weapons, whereas sole purpose is statement about why the United States possesses nuclear weapons, without necessarily imposing constraints on their use.” However, a sole purpose policy could very well represent a constraint on employment. For example, most definitions of sole purpose will impose a constraint on employing nuclear weapons in response to a conventional attack. Furthermore, any sole purpose declaration could impose additional constraints if the requirements of deterrence, and the term “deter” in the statement, are defined in a way that creates such a constraint. Sole purpose could include no first use, could be issued in parallel to no first use, or either policy can be issued independently.

To take one example, an administration could accommodate no first use in sole purpose by stating that “the sole purpose of our nuclear arsenal is to deter a nuclear attack by credibly threatening a nuclear response,” and could clarify that this means that the United States does not regard the ability to preempt a nuclear attack as necessary to deter that attack. In this context, deterrence by denial would be a function of conventional counterforce, missile defense, and resiliency of targeted assets, while nuclear weapons would be available for deterrence by punishment subsequent to an attack. Alternatively, the administration could state that “the sole purpose of nuclear weapons is to deter a nuclear attack on the United States or its allies by credibly threatening to preempt or respond to a nuclear attack” or that “the sole purpose of nuclear weapons is to prevent a nuclear attack through deterrence or, if necessary, preemption.” This diction, and an accompanying statement, could clarify that the United States reserved the right to employ nuclear weapons to preempt adversary first use and could be combined with other statements to place further restrictions on the circumstances in which nuclear employment would be considered. The


22 During the campaign, Biden sometimes stated his support for no first use in town halls or other unscripted settings. Union of Concerned Scientists, Why the US Needs a No First Use Policy, accessed July 19, 2021, https://www.youtube.com/watch?v=p2A70cBaoYk. He is widely reported to support no first use, though this is sometimes conflated with his sole purpose pledge. Burns, “Biden Would Push for Less US Reliance on Nukes for Defense.”

What is the sole purpose of US nuclear weapons?

The preemption question could be left ambiguous, thereby preserving the option, or it could be omitted from the NPR text but asserted in subsequent statements.

Did President Biden intend to include a no first use concept in his sole purpose statement? Again, there is no way to know for certain without clear presidential guidance. It is suggestive that his discussion of sole purpose in 2017 immediately followed not only the claim about deterring “non-nuclear threats through other means,” but also his claim that it is difficult to “envision a plausible scenario” of US nuclear first use. However, as vice president, candidate, and president, Biden has been consistent in using the sole purpose language in written statements rather than no first use. The sole purpose formulation was likely appealing to campaign advisors who prefer its flexibility and ambiguity and prefer to allow the new administration to consider alternative definitions in an orderly policy process.

Another reason that sole purpose and no first use are not equivalent is that the effects of sole purpose could in principle be much further reaching. No first use could force changes to an important range of operational plans: counterforce strikes against incipient nuclear launches, preventive strikes against hardened nuclear storage or production facilities, preemption or response to conventional, chemical, biological, or cyber attacks, or preemption or response to a range of other attacks that might be considered strategic, like strikes against enemy leadership, conventional or nuclear command and control, dual-purpose US military aircraft, or others.

But while no first use could affect planning for a broad range of contingencies, sole purpose could be defined so as to eliminate certain roles or functions of nuclear weapons in all contingencies. If it were, sole purpose might also eliminate the requirement to maintain or acquire forces necessary to perform those missions, in addition to the range of operational plans that support that mission.

In summary, sole purpose does not necessarily require no first use. However, if we consider what Biden’s preferred language implies about the functions nuclear weapons perform, the issue becomes more complicated.

**Performing a sole function**

Sole purpose could be more than a statement that nuclear weapons pertain to a sole type of attack. The 2018 Nuclear Posture Review and the Pentagon’s increased focus on the risk of conventional conflict between nuclear-armed adversaries has shifted the country’s understanding of the mission of nuclear weapons away from means of preventing nonnuclear attacks from rogue nations and toward escalation management in limited conflicts. Nuclear weapons could play a variety of roles in a managing escalation in a limited conflict and they each qualify as “purposes” of nuclear weapons. If sole purpose constrains the reasons a president might employ nuclear weapons, rather than just the types of attacks they might respond to, it could affect US strategy for how to manage escalation in a range of contingencies, from a limited theater conflict all the way up to a strategic exchange.

Over the years, strategists have assigned a number of functions to the nuclear arsenal. At various times, strategic nuclear forces have been expected to provide a capability to:

- respond to an all-out surprise attack (retaliation),
- limit damage from a major attack by striking an adversary’s nuclear forces before they launch (damage limitation or strategic warfighting),

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• shock an adversary into capitulating through the sheer level of destruction (a specific means of war termination),
• provide prompt limited options in regional contingencies with a variety of weapons effects and from various ranges (escalation control or prompt strike),
• cast a shadow on limited conflicts to deter escalation at lower levels (escalation management or intrawar deterrence), provide additional US bargaining leverage for war termination (intrawar deterrence or coercion),
• dissuade adversaries from pursuing technological advancements, expanding their arsenals, or shifting force posture in order to attain a strategic advantage (hedging).

Nonstrategic nuclear forces have been expected to:
• attride an enemy’s conventional forces (retardation of an enemy attack or tactical warfighting),
• degrade any enemy’s capability to project power (destruction of war-making capacity),
• shock an adversary into recalculating its plans by raising the risk of further escalation (war termination),
• provide graduated options to signal US intentions to an adversary (escalation management or flexible response),
• provide options to respond symmetrically to adversary nuclear first use options (escalation management or maintaining a reputation for credibility),
• convince adversaries of US resolve to employ strategic nuclear weapons in a limited conflict (trip-wire),
• assure allies of US resolve to employ conventional or nuclear weapons in defense of their interests (assurance).

At one time or another, strategists have believed that each of these missions were critical to deterrence of a conventional attack or nuclear use. For this reason, a declaration that states, “the sole purpose of the US nuclear arsenal is to deter a nuclear attack” could potentially accommodate any or all of these missions.

Did President Biden intend sole purpose to affect the functions of nuclear weapons or only the types of attacks they might respond to? Without more information, it is not possible to know for certain. It is worth noting his emphasis on the need to “reduce the role of nuclear weapons in our national security strategy” in the interim national security guidance and Secretary of State Blinken’s statement that the next nuclear policy review will “look at how we can continue to reduce reliance in the role of nuclear weapons in our strategy.”25 It is also worth noting Biden’s comment that W76-2 is a “bad idea” because a president might be “more inclined to use them,” which is a general statement about US reliance on a weapon designed to reduce reliance on nonnuclear response options, and not a statement about the need to respond to specific types of contingencies. The role of nuclear weapons is not primarily to deter chemical and biological weapons. In order to significantly reduce the role of nuclear weapons, or to reduce the country’s reliance on nuclear weapons, the president should have to remove the requirement for nuclear weapons to perform certain functions.

The text that Biden adopted also suggests that sole purpose pertains to the functions of nuclear

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The added proviso that the sole purpose of the nuclear arsenal is to “deter and if necessary to retaliate” strongly implies that deterrence is a function of nuclear weapons that excludes other potential functions. If deterrence is not thought of as a function of nuclear weapons but rather a term that broadly accommodates any potential function nuclear weapons are expected to perform with respect to a specific type of attack, it would not be necessary to add a proviso clarifying that there are other functions nuclear weapons are expected to perform. The proviso indicates that deterrence is inconsistent with retaliation and its inclusion indicates that nuclear weapons are intended to provide these two distinct functions. Deterrence in this sense is not the use of nuclear weapons but rather a threat to use them after an adversary’s first use, while retaliation is actual employment of nuclear weapons after an adversary uses nuclear weapons first.

At the same time, the proviso also implies exclusivity: the sole purpose of the US arsenal is to perform these two functions and not others. The term “retaliate” commonly carries an implication that US second use would be to punish an adversary for nuclear use, to signal resolve to employ nuclear weapons to deter an adversary from using nuclear weapons in a future conflict, or potentially to cause proportionate damage to an adversary’s nuclear first use in order to deny military advantage from the first strike. In this way, the proviso seems to imply that the functions “deter” and “retaliate” rule out other potential functions. For example, the following functions do not seem to fit the definition of deterrence or retaliation: preemptive strikes on an adversary’s strategic systems (preemption), damage limitation strikes on warning or on attack (strategic warfighting), first use employment to control escalation by manipulating an adversary’s decision calculus (escalation control), first use to attain a military advantage on the battlefield (nonstrategic warfighting), or first use for a nonlethal demonstration strike. Depending on how different observers translate or read the term “retaliate,” it may rule out some of these functions as second strikes as well. No statement from Biden or his advisors have offered grounds for implying that the language was intended to have these effects. If these meanings are unintended, or if they are intended, the administration should append clarificatory language to the sole purpose declaration to say so.

Why shouldn’t sole purpose just be left ambiguous in this regard? If sole purpose is intended to improve strategic stability and provide additional clarity for the conditions in which the United States would consider using nuclear weapons, it would be counterproductive to allow adversaries and allies to misinterpret these terms or to arrive at differing interpretations. If sole purpose is intended to be a “sole type” declaration, the NPR should make that clear. If sole purpose is instead intended to define and limit the functions of nuclear weapons, it should clearly delineate those functions to the greatest extent possible. Any ambiguity about the roles, missions, or functions nuclear weapons are expected to perform should be deliberate and not the result a bureaucratic compromise or failure to agree.

The simplest way for the NPR to reduce the risk of uncertainty or misperception is to omit the proviso (“and, if necessary, to retaliate”) and follow the sole purpose declaration with a paragraph that defines its terms. For example, the NPR could state that “the sole purpose of our nuclear arsenal is to deter a nuclear attack,” and then clarify what deterrence means. For example, it could assert that deterrence requires the ability to reliably respond in a proportionate way to a nuclear attack, to limit damage from limited attacks, or to simply deny the benefits of nuclear first use (which could simply mean that US alliances will remain cohesive and resolved to prosecute a conventional conflict to a favorable conclusion). Omitting the proviso would provide additional flexibility because it does necessarily imply that “deter” and “retaliate” are separate functions or an exclusive list of all possible functions. On the other hand, if these functions are intended to be exclusive, this should be explained clearly in order to provide as much specificity as possible to guide planning and enhance the credibility of US deterrent threats.

The phrase “deter, and if necessary, retaliate” is not new or unique to this particular debate. The phrase was used to refer to US deterrence posture during the cold war. Advocates adapted it to describe sole purpose around 2000.
Other options for sole purpose

In defining a sole purpose formulation, the administration should also consider how to define the object of deterrence. While most proposals for a sole purpose statement identify a nuclear attack as the sole case in which the United States would consider a nuclear response, other formulations are possible. For example, an administration could state that the sole purpose of nuclear weapons is to “deter WMD attacks,” which might create a sole function but not a sole type statement, permitting preemption or response to nuclear, chemical, or biological attacks. Stating that the sole purpose of the nuclear arsenal is to deter strategic attacks could in principle cast an even broader net, though in this case the administration should avoid the mistakes of its predecessor and provide a clearer definition of the term “strategic” in this context.

The officials drafting the statement might also choose to modify the object of deterrence with a qualifier that would specify the scope, target type, or potential consequences of an attack. For example, George Perkovich and Pranay Vaddi have suggested that the sole purpose of the nuclear arsenal is to deter an “existential” nuclear attack on the United States and its allies. This statement would imply that the United States would consider nuclear use not in response to all nuclear attacks but only those that threaten its existence or the existence of its allies. An existential threat statement could also leave out the word “nuclear” to specify the object of deterrence as any attack that threatens the existence of the United States or an ally. While it is certainly possible that there are some types of nuclear first use that the president would not order a nuclear response to, it is another matter to imply that the president would not consider nuclear use to respond to nuclear attacks below a certain threshold.

Specifying that nuclear weapons deter “existential” attacks would probably lead to interminable debates about what qualifies as an “existential” attack and what does not. The statement would probably lead allies to wonder about US resolve to confront limited nuclear attacks against their territory and could permit adversaries to wonder the same thing. In short, this option would incur many of the costs and risks of sole purpose and few of the benefits. If the administration does decide to include a qualifier about the severity of an attack, it should consider alternative or additional language to clarify what represents a threat to the existence of a state.

One particularly appealing option for sole purpose is that it could subsume the “nuclear necessity principle,” a requirement proposed most recently by Jeffrey Lewis and Scott Sagan that “nuclear weapons never be used against any legitimate military target that could be reliably destroyed by other means.” To include this principle, a sole purpose statement might clarify that “the sole purpose of our nuclear arsenal is to deter a nuclear attack in circumstances where we have no other reliable option.” The proposal could bring US nuclear planning into compliance with a more expansive understanding of the law of armed conflict and could represent important and realistic guidance for planners: no president is likely to employ a nuclear weapon when they have a reliable conventional option available.

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28 Alternatively, the previous two options could be combined, stating that “the sole purpose of US nuclear weapons is to deter existential attacks against the United States and its allies.” This formulation would imply that the United States could consider a nuclear response to any attack, nuclear or nonnuclear, that posed an existential threat. This formulation would carry the risks discussed in the next paragraph.


30 The statement is backed by decades of wargames that consistently reveal the hesitancy of senior officials to order nuclear employment. Reid B.C. Pauly, “Would U.S. Leaders Push the Button? Wargames and the Sources of Nuclear Restraint,” International Security 43, no. 2 (November 1, 2018): 151–92, https://doi.org/10.1162/isec_a_00333. As I have argued, one reason is that the outcome of the crisis is the primary consideration for civilian officials. Nuclear weapons are unlikely to create a clear military advantage absent the cognitive reactions of adversary officials and these would be uncertain. Other reasons derive from the costs of US nuclear use, which are likely to be higher than an adversary’s
significant reduction in the number of targets in the nuclear war plan and, consequently, requirements on the number and types of nuclear weapons in the arsenal.

This discussion makes clear that sole purpose is not a single discrete policy option but can only be defined by assessing and choosing whether to adopt a range of potential shifts in US policy. The reason is that a sole purpose declaration would define the role of the US nuclear arsenal, which will be read to encompass not only that narrow range of contingencies pertaining to chemical or biological weapons use, or the broader range of contingencies pertaining to major conventional attack, but the complete range of functions that the weapons are expected to perform. In other words, sole purpose will likely be read as a general statement of nuclear weapons policy rather than a qualification of that policy as it pertains to a specific range of contingencies. In addition, it will be read for indications of what it entails for the role, requirements, and posture of US nonnuclear forces. This means that it is not only a nuclear weapons policy but a broader statement about US defense strategy.

**Effects on posture and plans**

- Depending on how it is defined and implemented, sole purpose could affect nearly every component of US nuclear force structure, posture, and operational plans.
- The effects of sole purpose on US posture and plans cannot be inferred or assumed from the diction of any sole purpose statement but depends critically on a set of orders to guide implementation.
- Understanding sole purpose as a component of an integrated deterrence strategy is critical to determine the consequences of the policy for nonnuclear forces and for continuing to meet US extended deterrence commitments as adversaries expand and modernize their forces.

In general, declaratory policy, force structure requirements, and operational plans all derive from a deterrence strategy. Because strategic deterrence is no longer solely a matter of nuclear forces but includes conventional, cyber, and other military forces, the deterrence strategy that drives nuclear weapons policy should be integrated across domains of conflict. Recognizing this fact, Secretary of Defense Lloyd Austin has made integrated deterrence a priority and Undersecretary of Defense for Policy Colin Kahl has confirmed that the next nuclear policy review will be understood as a subsidiary component of the National Defense Strategy.

In practice, the debate about sole purpose could drive debate on operational plans and, to a lesser extent, force structure. One reason for this is that it is a clear rhetorical statement that the president has backed, so the practical necessity of drafting nuclear declaratory policy will force policymakers to define it. A more important reason is that, again, sole purpose means defining what is and what is not the purpose of the nuclear arsenal. If the president selects a certain set of functions as comprising the purpose of the arsenal, he will have effectively eliminated certain requirements currently placed on the triad and forced US combatant commands to revise operational plans that fall outside of that range.

The salient fact regarding the implementation of a sole purpose policy is that adopting the declaratory change does not by itself mandate changes to operational plans or force structure. Sole purpose is simply a costs, and the added risk of further nuclear escalation. Mount, “The Strategic Logic of Nuclear Restraint”; Mount, “The Case Against New Nuclear Weapons.”


rhetorical statement that describes when and why the president would consider employment of a nuclear weapon. Different definitions may imply different changes to plans or forces, but the Secretary of Defense would have to issue a separate order to implement any changes directed by the president.

It is possible that sole purpose has limited or no effect on nuclear weapons policy. One potential outcome is that the president does not define sole purpose or does not issue sufficient direction to the Nuclear Posture Review to guide implementation and as a result sole purpose is issued as a simple rhetorical statement with few practical consequences. Without presidential guidance, it will be difficult to maintain momentum to tackle the difficult substantive and bureaucratic challenges inherent in moving to a robust sole purpose definition.

It may also be the case that the president decides to issue a sole purpose declaration but not to implement changes in force structure or plans that are implied by the statement. For example, a sole purpose declaration might implicitly or even explicitly eliminate a certain role assigned to nuclear weapons but the administration does not take the practical measures to eliminate forces made redundant by the policy or to modify operational plans. If this were the case, any intended consequences that the statement was to have would likely be diluted and possibly altered significantly. Some audiences would likely find the declaration not credible, which may affect their assessments of other aspects of US declaratory policy or deterrence. Declining to modify forces or plans would almost certainly not assuage the disapproval expressed by political opponents of the policy. It may help to assure allies concerned about a shift to sole purpose if US officials were willing to say in private, “we didn’t really mean it, see that our forces and plans haven’t changed,” but it is doubtful that this would significantly improve US credibility.

To resolve these issues, President Biden’s top advisors should directly guide the policy review process to ensure that the president’s preferences are reflected and the review stays on course. When the review process produces the requested result, the options or outcome should be presented to the president for his approval along with a set of recommended orders required to implement the policy. In this way, the president and his senior advisors would have an opportunity understand all the implications of the selected definition of sole purpose—which, as this discussion makes clear, is not an obvious or simple task. If the president signs these orders, it would provide clear guidance to military and civilian officials on how to operationalize sole purpose, including any implications for force structure, acquisitions, budgets, force posture, and plans. Without clear guidance on implementation, the process is likely to break down as different groups become engaged in interpretive debates about what the president did or did not mean. These debates could inhibit implementation, dilute the benefits of sole purpose, alarm adversaries, and stretch into a subsequent presidential term where the policy could be rescinded.

Many administration officials will likely be concerned that if the president provides a clear definition of sole purpose and implementation guidance, it will be more difficult to establish sole purpose given internal resistance. This view will argue that the perfect is the enemy of the good and it is better to establish an ambiguous or mostly rhetorical concept of sole purpose, which can be implemented gradually in planning after the fact, than to run into resistance. If sole purpose becomes a battleground, it could make it more difficult to establish sole purpose or to define it clearly and could affect a range of other defense and nuclear policy questions, including on nuclear force structure.

However, the arguments presented above suggest that sole purpose will always be contentious. In defining the purpose of nuclear weapons and adjusting the circumstances in which the United States would consider using them, sole purpose will likely be perceived as a major step in US nuclear weapons policy in any event. Ambiguity and uncertainty about its effects will lead to more protracted and more intense disagreement about the policy, which would likely increase the risks associated with the policy and decrease the benefits. By contrast, if the president exerts his authority to clearly define sole purpose in a
way that conduces to a stronger deterrence posture and to communicate this understanding publicly, it can convince allies who might otherwise be uncertain or inclined to assume the worst about the policy. Some partisan figures, analysts, or allies will object to any concept of sole purpose regardless of how it is defined and implemented or indeed any nuclear weapons policy issued by a Democratic president. There are relatively few stakeholders who would be more reassured or convinced by an ambiguous or rhetorical sole purpose policy.

Sole purpose will inevitably elicit concern until it is defined and implemented, because it is both highly ambiguous and potentially transformative. Depending on how it is defined and implemented, sole purpose could have significant effects on nearly every component of US nuclear weapons policy. Consider two different interpretations of a statement that said, “the sole purpose of our nuclear arsenal is to deter an existential nuclear attack on the United States and its allies by credibly threatening a nuclear response.”

One way sole purpose might affect operational plans and force structure is to eliminate certain functions currently assigned to nuclear weapons. In this sense, the Biden administration could choose to clarify that this statement eliminates the requirement for nuclear weapons to limit damage from a surprise attack from a large proportion of the Russian strategic arsenal on the grounds that such an attack is highly unlikely and a preemptive strike would be unlikely to significantly limit damage in any case. This posture could dramatically reduce the readiness and numerical requirements of US nuclear forces. The requirement would probably, but not necessarily, eliminate the requirement for the Minuteman III ICBM force to remain on high alert and could reduce the urgency, scale, or requirement for the Ground-based Strategic Deterrent Program (GBSD) to replace the Minuteman. The statement could also be used to justify a reduction in the numerical requirements for SSBN tubes; SLBMs; W88, W76-1, and W93 warheads; SSBN deterrent patrols; and Columbia SSBNs; as well as B-21 bombers, W80 warheads, LRSO cruise missiles, and more. Alternatively, eliminating the damage limitation mission may simply retain and replicate the existing nuclear triad but instead lead to major modifications in the plans for how to posture forces and ensure continuity of government in the unlikely event the US government receives warning of a major incoming attack. In this case, the existing triad might be justified on the grounds that its redundancy represents a hedge against technological change, though this policy would certainly raise questions about the sincerity of the pledge and so limit its consequences for strategic stability.

Another way sole purpose might affect plans and forces is to eliminate certain requirements for nuclear weapons to control escalation in a limited conflict. The statement above could be read in this way. If nuclear weapons only deter existential nuclear attacks by threatening a response, this would appear to remove the requirement for preemptive nuclear strikes not only against conventional, chemical, biological, and cyber attacks but also against limited nuclear attacks that do not threaten the existence of the United States or its allies. It would seem to imply that the United States would not consider ordering nuclear use to respond to an adversary’s nonlethal employment of a nuclear weapon, limited lethal nuclear strikes, or to coerce an adversary to make certain decisions critical to allied national security interests, like terminating a conventional conflict or a nuclear weapons program. If this sole purpose statement were read as reducing or eliminating the nonstrategic nuclear mission, it could affect requirements for B61 nuclear gravity bombs, W80 warheads, LRSO cruise missiles, and more, as well as a range of campaign plans and operational plans developed by geographic combatant commands to respond to specific contingencies.

This exercise demonstrates that a simple sole purpose statement could permit a wide range of interpretations about what it meant for when and why the president would consider employing nuclear
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More likely, the rate of expansion of China’s nuclear forces will continue to lag considerably behind the rate of expansion in its nonnuclear forces. It is unlikely to fully abandon its decades-long tradition of restraint and instead develop an arsenal that mirrors US and Soviet capabilities and operational concepts. As the president defines sole purpose, he should do so in a way that supports not only an integrated deterrence concept but also a diplomatic strategy that maximizes the chance that we can lock in the restraint that has characterized the Chinese arsenal for decades.

Effects on allies and adversaries

- US officials should present sole purpose as an essential component of an extended, integrated deterrence posture that will strengthen US deterrence credibility and assurance measures.
- US officials should consult closely with allies on how to define and implement sole purpose throughout the NPR process.
- To reinforce these messages, not only nuclear weapons policy experts but also military strategists engaged in the NDS process and the senior-most defense officials should engage with allied counterparts on sole purpose from a common set of talking points.

The most important effects of sole purpose are on the ability of the United States to deter adversaries and assure allies. As with all potential shifts in US nuclear weapons policy, some allies have raised concerns about the implications for US deterrence credibility. There have been a number of cases where allies have expressed particular concern about no first use or sole purpose, which are often conflated. These episodes reflect reasonable skepticism about how a shift to sole purpose might affect their security. Eastern NATO allies may raise concerns about the alliance’s ability to deter a major conventional attack or limited nuclear use; Asian allies in particular may worry about decreased ability to deter limited chemical, biological, or strategic conventional attacks. More generally, some officials in some allied countries tend to see US reliance on nuclear weapons as indicative of a broader US commitment to their security and reduced reliance as indicative of retrenchment or else an acknowledgement of mutual vulnerability that could decrease US resolve to defend them in a crisis. These misconceptions have unfortunately been encouraged by opponents of reduced reliance in the United States, to the detriment of an effective dialogue on integrated deterrence. Addressing allied concerns is critical to determining the effects and the durability of a sole purpose commitment.

The critical message to convey to allies is that the United States is not shifting to sole purpose in spite of the risks but rather because it is a necessary component of an integrated deterrence policy that helps strengthen US deterrence and assurance credibility.

In many ways, the assurance implications of a potential shift to sole purpose resemble the Kennedy administration’s decision to shift to flexible response in the 1960s. While some allies harbored increasing reservations about the credibility and implications of Eisenhower’s massive retaliation strategy, exclusive reliance on that strategy became associated with alliance commitment. Once the alliance had committed to the strategy, any move to change it compounded concerns that the US commitment to NATO’s defense was in decline—even as the Berlin crisis and the Korean War demonstrated that massive retaliation was insufficiently flexible and credible to deter limited aggression. When the alliance had officially recognized nuclear weapons as the only viable deterrent, it was natural to associate reducing reliance on them with

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35 Jane Stromseth, Origins of Flexible Response (Springer, 1988) is the classic text not only on US development of flexible response but the inflexible allied response to it.
decreased deterrence credibility. Even development of limited nuclear options, and certainly development of the Live Oak nonnuclear contingency plans to respond to limited aggression over Berlin, seemed to imply to some that the new administration lacked the resolve to initiate a strategic nuclear exchange at even a limited attack. Many US observers, and most allies, raised strident objections. However, after consistent pressure from successive US presidents, NATO had adopted flexible response some five years later and it became an indispensable part of allied strategy. The episode is only one example of how close coordination between the United States and its allies can produce shifts in allied deterrence strategy that strengthen allied posture.

Though the United States does not now rely exclusively on nuclear weapons to deter adversaries and assure allies, some allies have come to understand nuclear assurance as the premier signal of US commitment. US combatant commands have frequently held up visible displays of extended deterrence, including port visits from SSBNs or joint exercises with nuclear-capable aircraft, as evidence of the US commitment to defend these allies. At times, some observers have associated specific nuclear-capable weapons systems with specific allies. Naturally, US allies concerned with the temperament of certain US leaders or with rapid military developments by adversarial neighbors then turn to US officials for new signals of assurance. However, nuclear weapons are a very poor instrument of assurance. No flyover can assuage the ineradicable credibility concern inherent in extended deterrence: would the United States really employ a nuclear weapon to defend an ally? Speaking plainly, the reason the concern is ineradicable is that there are many circumstances in which it would not be in the interest of either the United States or its ally to employ a nuclear weapon. The solution to this deficit is not to attempt to develop more credible nuclear options, because these would only marginally narrow those circumstances, leading to additional calls for assurance and new capabilities. More nuclear weapons cannot resolve rational concerns about the credibility of nuclear weapons. Reducing reliance on nuclear weapons can not only improve allied deterrence posture but also lay more stable foundations for assurance in the future, even if the transition will be difficult.

The United States and its allies should understand that the central problem is not how to increase the credibility of US nuclear extended deterrence guarantees, but how to maintain an effective integrated deterrence posture. Displays of nuclear-capable hardware might modestly supplement extended deterrence credibility, but the critical task is to develop effective and credible nonnuclear options to respond to limited aggression and nuclear use from nuclear-armed adversaries. US and allied security, and alliance cohesion, depends on establishing a more durable paradigm that exploits the added flexibility and credibility of advanced conventional forces for managing escalation in limited theater conflicts, which in many cases provide more capability at less risk of escalation and collateral damage. The close integration of US and allied conventional forces, preparing to contest a limited conflict against a nuclear-armed adversary, should be understood as the preeminent signal of US commitment and not the distant specter of nuclear weapons. Ultimately, deterrence is the best assurance.

Sole purpose should be understood as a component of an effective integrated deterrence strategy both in US strategy and in all discussions with allies. Just as the Nuclear Posture Review will be integrated into the National Defense Strategy, all allied consultations pursuant to strategic stability that occur in support of the strategy reviews should include both sets of officials, including at meetings of the most senior civilian and military defense officials. Rather than having one room for discussions on nuclear strategy and

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another for discussions on conventional strategy, officials should wherever possible seek to include both sets of functional experts in the same discussion. This integrated process will help to demonstrate that sole purpose is not simply reducing reliance on nuclear weapons but that nonnuclear forces are developing new concepts and capabilities to perform those missions, providing additional flexibility, visibility for allies, and credibility. While nonnuclear escalation management planning is commonplace among US and allied officials, the practice of conducting separate discussions on nuclear strategy would prevent US officials from fully communicating the value of sole purpose.

The shift to sole purpose should be accompanied by a revitalization in how the United States interacts with its allies on strategic stability issues. For years, allies have expressed dissatisfaction with lack of specificity in deterrence dialogue mechanisms. US officials have been understandably reticent to speculate on counterfactuals about conditions in which the United States might consider use of a nuclear weapon, but this approach has impeded joint planning, frustrated allies, and cultivated the fiction that mysterious nuclear use concepts can be relied on for a range of contingencies. One major advantage of the shift to sole purpose is that US and allied officials and planners should be able to discuss cross-domain responses to adversary aggression and strategic attacks in more detail. However, at the same time they should also develop procedures to more explicitly discuss the costs and benefits of employing nuclear weapons in categories of situations permitted by the sole purpose policy. This should not only clarify the policy, but also demonstrate the ways in which it improves on the previous policy and lead to more effective combined military planning for the most threatening contingencies. Without a more explicit discussion, allies will be left to wonder exactly how sole purpose has changed US plans and why.

In any case, the debate about sole purpose should not be distracted by the uninformed and alarmist claim that allies will be so worried by the policy that they will feel compelled to build their own nuclear weapons. If implemented properly, sole purpose will strengthen rather than weaken allied deterrence posture. If allies are understandably concerned about the shift, it is all the more reason for senior US defense officials and diplomats to engage closely with them on how to define and implement the change. Calls for allies to pursue their own nuclear arsenals face enormous costs and risks. The United States has a wide range of counterproliferation and assurance tools to discourage new nuclear aspirants and should not hesitate to deploy them if there were significant risk of allied proliferation.

Implementation

- As a component of an integrated deterrence strategy, definition and analysis of sole purpose should take place in the context of the broader National Defense Strategy, not only its nested Nuclear Posture Review.
- Sole purpose represents an opportunity to develop an integrated strategy for escalation management in a limited conflicts with a nuclear-armed adversary, the critical challenge facing US deterrence posture today.
- Following a decision to adopt sole purpose, civilian officials should review existing operational concepts and plans, and participate in the development of new ones, to ensure that plans comport with the president’s guidance for these critical contingencies.

Sole purpose represents a critical step toward an effective integrated extended deterrence posture. Issuing a sole purpose policy would be a powerful mechanism to ensure that operational concepts and

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campaign plans are predicated on the realistic assumption that for a range of contingencies, nuclear weapons use would be disadvantageous, risky, and unlikely to be authorized by the president. For any liminal contingencies, it would focus attention on the major impediments to an effective and flexible strategy, forcing planners to develop operational concepts and the services to acquire capabilities to provide the president with credible nonnuclear response options to limited aggression and nuclear use in regional contingencies. Rather than seeking ways to ensure that nuclear weapons can perform certain missions, a practice that will tend to increase reliance on nuclear weapons, the process of defining and implementing sole purpose would incentivize planners to develop effective nonnuclear escalation management concepts, increasing US credibility and presidential flexibility.

If President Biden chooses to adopt sole purpose, US officials, from the president down to the nuclear weapons experts that participate in alliance dialogues, should plan to dedicate time to consistently implementing and communicating the policy. Especially because sole purpose is a component of an integrated strategy, simply stating the sole purpose policy is not sufficient to attain its stability or assurance benefits. Instead, it must be implemented by: ensuring that operational concepts and campaign plans developed by both functional and regional combatant commands reflect the president’s guidance; that acquisitions programs reflect the president’s concept of sole purpose; and that US delegations to alliance deterrence dialogues and planning processes for nuclear strategy, military planning, and multilateral nuclear diplomacy all represent a common definition of the policy and its benefits.

If Biden administration chooses to establish a sole purpose policy, it should also seek to ensure that his policy is as resilient as possible to future political challenges. It would pose a considerable risk if a future president were to rescind a sole purpose policy, if he or she specified additional roles for nuclear forces or left them up to the imagination of allies and adversaries.

The best way to increase the resiliency of sole purpose is to ensure that it is clearly defined and thoroughly implemented; that it is part of a responsible and integrated defense strategy that increases US deterrence leverage; that allies accept, value, and implement that strategy; and that the president’s guidance for how the policy affects force structure is implemented before the end of the Biden presidency. Embedding the policy in plans, force structure, and alliance relationships is not only critical to attaining its benefits but can increase the cost of rescinding the policy, maximizing the potential that those benefits last beyond the next elections.

The administration’s decision to “nest” the Nuclear Posture Review in the National Defense Strategy creates a promising opportunity to develop and implement a sustainable concept of sole purpose a component of an integrated deterrence strategy. Definition and analysis on sole purpose should take place in the broader NDS context so that the administration can fully assess not only the effect of sole purpose on nuclear weapons policy and assurance but also compensatory or complimentary actions across the defense toolbox. That presents an additional opportunity to fully assess the readiness, acquisitions, and budgetary implications of the policy on both nuclear and nonnuclear forces. This process will also encourage defense officials to recognize that implementation of sole purpose falls to all combatant commands and offices whose work has implications for strategic stability.

To ensure that sole purpose fully reflects the president’s preferences, the NSC should also provide presidential guidance for how to implement that policy. Ideally, this guidance would include directives or requests for information on what roles he intends to assign to nuclear forces, what roles are retired, any weapons systems he intends or is considering retiring, areas where he understands the policy as accepting additional risk, and any compensatory or complimentary steps needed from nonnuclear forces. For example, the president should clearly indicate if he intends sole purpose to eliminate certain missions, like strategic damage limitation or nonstrategic warfighting. He should issue directives or request analysis on
the implications of any particular components he intends to include in his definition of sole purpose, like, for example, the nuclear necessity principle. One important result of this guidance will be to communicate how the president intends plans to manage escalation in a limited conflict with a nuclear-armed adversary, which will help guide the development of the NDS and new operational concepts. The more guidance and oversight the NSC can provide to the NDS process, the more likely it is that the process will be orderly and produce a result that conforms with the president’s intentions.

Following a presidential decision to adopt sole purpose, and guidance on definition and implementation, senior civilian Pentagon officials should undertake a concerted effort to ensure that operational plans reflect the new policy. Sole purpose should be written into the nuclear and nonnuclear components of the Guidance for Employment of the Force (GEF), the Joint Strategic Capabilities Plan (JSCP), and the Nuclear Employment Guidance. Then, senior civilian officials should conduct a broad review of operational concepts and plans to ensure that they comport with the decision. The shift to an integrated deterrence posture represents a major opportunity to develop campaign plans to manage escalation in a limited conflict with a nuclear-armed adversary that benefit from presidential guidance about how to manage these processes. In recent years, the concentration of planning expertise and authority in the hands of the military has not only raised problems for civilian control of the military, but introduced an element of uncertainty as the plans may build in unrealistic expectations about what the president may be willing to authorize in a delicate nuclear crisis and when. Therefore, consistent involvement of civilian officials can not only improve nuclear weapons policy but military planning more generally.

It is likely that some officials will propose to condition the adoption of sole purpose on certain benchmarks. Under this concept, the administration would examine the current role of nuclear weapons in contingency plans, identify cases in which the services would have to develop specific nonnuclear options to compensate for reductions in the role of nuclear forces, and then plan to adopt sole purpose when those acquisitions, deployments, or operational plans are in place. As with all cases of reduced reliance on nuclear weapons, this process should not be seen as a one-to-one replacement, where for example conventional forces substitute for nuclear forces by performing the same tasks. Conventional weapons cannot and should not replicate the effects of nuclear weapons. Instead, the processes should occasion a broader reconsideration of operational plans and options to find alternative means of meeting US and allied interests. Alternatively, the administration could establish aggregate conditions that identify, for example, an overall increase in manpower or budgets for conventional forces, that will be met before sole purpose is adopted.

Similarly, the United States should not condition its adoption of sole purpose on conclusion of an arms control treaty with Russia, China, or both. A treaty that defines limits on the quantity or types of nuclear weapons might well be another factor that affects US numerical requirements, but it would be unlikely to affect the chemical, biological, conventional, or command and control targets that a sole purpose debate should consider closely, and it would also not affect when or why the president might consider nuclear employment.

Both types of conditionality are likely to be ineffective. For one, proponents of this plan would have to show clear reasons why President Obama and then-Vice President Biden were mistaken to conclude that the United States had made enough progress in reducing reliance on nuclear weapons to support no first use. Though the last four years have seen rapid evolution in several technologies relevant to strategic stability, proponents of conditionality would have to argue that the 2017 conclusion was imprudently

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myopic, highly sensitive to foreseeable changes or, more likely, that it was predicated on a mistaken concept of the role of nuclear weapons. This would put them at odds with the president’s stated policy objectives. Furthermore, establishing conditions would set the stage for significant bureaucratic struggles over the course of the coming administrations led by Democratic presidents, as different groups debate whether the conditions have been met or should be adapted. Any thresholds defined would be arbitrary, difficult to measure, and subject to reconsideration later. This process would lead to considerable uncertainty among allies and lead to the impression that the United States is adopting a speculative policy based on tenuous conditions. For these reasons, placing conditions on sole purpose would compound the risk that a future Republican administration could revert the sole purpose policy. It is best to think of these kinds of conditions as either a “poison pill” from observers who disagree with the president’s preferences and want to keep them from being implemented, or as an unserious argument that gestures to prevailing geopolitical concerns as a way of avoiding detailed discussions about US nuclear force structure and plans.

However, an important advantage of defining and implementing sole purpose as a central component of an integrated deterrence strategy is that this format can identify any necessary compensatory or complimentary changes required of nonnuclear forces. If the president determines that nuclear weapons are no longer necessary for performing certain missions, he may also direct changes to conventional or other nonnuclear forces to enhance their ability to perform these missions, ideally in ways that expand flexibility or credibility. Furthermore, US and allied officials may identify new deployments, capabilities, or arms transfers that can strengthen extended deterrence credibility under the new integrated strategy, and sole purpose may affect these decisions. Sole purpose should not be conditioned on benchmarks for nonnuclear forces, but it should be defined and implemented as part of an integrated strategy.

Conclusion

How President Biden intends to define and implement sole purpose is not yet certain. A close reading of his 2017 remarks and subsequent statements suggests that the president thinks of sole purpose as at least entailing a sole type statement, no first use, and a nuclear necessity principle.

“The sole purpose of our nuclear arsenal is to deter a nuclear attack on the United States or an ally by threatening a credible nuclear response in extreme circumstances where there is no other effective option available.”

This statement does not provide guidance about the functions of strategic or nonstrategic nuclear forces. President Biden’s public remarks do not allow us to infer his views on these questions. However, if the president wants to define deterrence in contrast to warfighting, he could follow the first sentence with another that eliminates the requirement for nuclear forces to limit damage in a strategic exchange or to achieve military advantage in an ongoing conflict. This additional statement would bring US declaratory policy into line with the principle, recently reaffirmed by Biden and Putin, that a nuclear war cannot be won and must never be fought.

The president should also add an additional constraint on the nuclear necessity principle that

40 If the president opts not to subsume no first use in his sole purpose policy, he could replace “respond to” with “deter.”
establishes that a nuclear response will only be considered in cases where nuclear use is the only means of generating a required military effect, as opposed to a cognitive effect. Nuclear weapons would likely generate a range of cognitive effects, by causing strong emotions, psychological reactions, or by shifting an adversary’s expectations about the conflict. However desirable it might be to imagine military operations that can elicit a set of desired cognitive reactions among an adversary’s leadership or population, this will be highly unreliable. We cannot know with confidence how an adversary will perceive or react to a nuclear detonation. Moreover, reliance on nuclear weapons to produce cognitive effects opens up a wider range of use cases, for example, operations intended to provoke terror to undermine a regime or a demonstration strike to cause an adversary to reassess its expectations. None of these are reliable propositions and also strain the requirement in the law of war to only conduct operations necessary to achieve military objectives. For these reasons, the president should only consider a nuclear option when it is necessary to destroy a specific military target.

A sole purpose statement that adopted all of these principles might look like this:

“The sole purpose of our nuclear arsenal is to deter a nuclear attack on the United States or an ally by threatening a nuclear response in extreme circumstances where there is no other effective option available to generate the required military effect. Our nuclear forces exist solely to deter nuclear use, not to fight a nuclear war: we will not require our forces to limit damage from a major strategic attack by launching our forces preemptively or upon receiving warning of the attack and we will not consider nuclear first use to gain a military advantage in an ongoing conflict.”

Together, these two sentences would significantly adjust not only the types of attacks that nuclear forces would be prepared to respond to but also the functions that nuclear weapons are required to perform and the types of situations in which they might be used. The definition retains the option for a US president to order employment of a nuclear weapon in response to an adversary’s first use of nuclear weapons, but makes clear that this would occur only under the following commonsense conditions:

1. An adversary had used nuclear weapons first;
2. The president and his advisors had determined that the US response must achieve a specific military effect, for example destruction of specific military targets that the adversary depends on to achieve the advantages of nuclear use or to continue a nuclear exchange;
3. There are no available conventional or cyber options that could achieve that effect.

However, this is not a complete sole purpose policy. Whatever definitions of sole purpose the president selects should be accompanied by a set of orders to guide implementation of the policy. These orders should direct how sole purpose should affect strategic and nonstrategic nuclear force structure and regional or strategic campaign plans.

Biden’s clear and consistent support for sole purpose presents him with a mandate to not only transform US nuclear weapons policy but to develop a credible and flexible integrated extended deterrence strategy at a time when it is desperately needed. To make the shift, he will have to clearly define sole purpose in a way that limits the functions nuclear weapons are expected to perform and provide his national security appointees with firm guidance for how to implement the shift.
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What is the sole purpose of US nuclear weapons?


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