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Roundtable Review 15-17

Benoît Pelopidas, *Repenser Les Choix Nucléaires*. Paris: Les Presses de Sciences Po, 2022. ISBN: 9782724627404

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Editor: Diane Labrosse
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Production Editor: Christopher Ball
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Introduction by Lori Maguire, University of Reims, France

This important and well-researched book appears at a time when concern about nuclear weapons, which lapsed after the end of the Cold War, has resurfaced because of the war in Ukraine and anxieties over Iran. The recent film *Oppenheimer* gives eloquent expression to these fears, with the main character worrying that the development of the atomic bomb during World War Two may have set in motion a chain of events that would ultimately lead to the end of the world—not because of some scientific cause and effect, but because of the use (or misuse) international leaders would make of that technology, notably through the arms race.¹

Pelopidas's book focuses primarily on France and its decision to become a nuclear power. It is no accident that both France and the UK decided to become atomic powers and to join the arms race (albeit in a relatively minor role) at the time of decolonization, since this seemed to offer a new way of asserting great power status. Pelopidas re-examines and criticizes the political reasoning behind this decision and its continuing justification. He questions two major tenets of the French government's reasoning: that proliferation is unavoidable, and that the French population supports the policy. He also criticizes many French scholars who write on the subject for being too close to officialdom and too ready to give their support to the politicians' arguments in favor of that policy.

The book is divided into two parts, the first one of which deconstructs and refutes the claim about the inevitability of proliferation. Pelopidas argues that the threat has been overblown. He shows that the number of states possessing nuclear weapons is much lower than had originally been predicted, and that some nations have even given them up. In the second part he criticizes the tendency to limit debates on the question to those involving experts, which leaves the general public with no clear comprehension of the issues. Pelopidas argues in favor of greater democratic participation in nuclear decisions.

The four reviewers in this roundtable are recognized specialists of the subject from both Europe and America. They are historians, international relations specialists, sociologists, and political scientists.² The reviews are thus interdisciplinary and international. While they make some important criticisms of the book, they are generally positive about Pelopidas's contributions to this highly important and topical debate—one that obviously has repercussions outside of France.

The sharpest critique comes from Grégoire Mallard. He does not deny the importance of the book, describing it as “must-read for the French public,” but argues that “its epistemological and methodological assumptions are, however, debatable.” He then goes on to explain what he means by this. Beatrice Heuser calls the book an “excellent study,” agreeing with Pelopidas that “the results of opinion polls depend on how you word them,” but observes that this “also applies to the polls commissioned for this study.” Matthew Evangelista discusses Pelopidas's entire career, demonstrating how he has repeatedly attacked conventional ideas about nuclear weapons—and not just with regard to France. For Evangelista, the book is a “well-researched” and “carefully argued” study that should initiate a re-thinking of nuclear policy (although he admits that this is not guaranteed). John Krige also praises the book, notably for its deconstruction of the idea that “one does not attack a country that has nuclear weapons,” and for the ethical questions it raises.

¹ Christopher Nolan, dir., *Oppenheimer*, Universal Pictures, 2023.

² Their many publications include: Matthew Evangelista, *Lam, Ethics, and the War on Terror* (Cambridge, UK: Polity, 2008); Beatrice Heuser, *The Bomb: Nuclear Weapons in their Historical, Strategic and Ethical Context* (London: Routledge, 2014); John Krige, *American Hegemony and the Postwar Reconstruction of Science in Europe* (Cambridge, Mass: MIT Press, 2006); Grégoire Mallard, *Fallout: Nuclear Diplomacy in an Age of Global Fracture* (Chicago: University of Chicago Press, 2008)

In his reply, Pelopidas stresses the “continued and increasingly clear struggle between two possible futures: one in which nuclear weapons remain and act as security guarantors, and one in which they have been abolished because they have appeared as security problems.” He emphasized that his aim was “to recreate the possibility of democratic choice on nuclear weapons policies based on a clear series of alternatives that are grounded in consistent justifications,” and states that France is not the only country where justifications are based on presumptions.

Ultimately, Benoît Pelopidas’s book calls for a freer and wider public discussion on all aspects of nuclear power in order to create a truly informed citizenry and to avoid the possible chain of events that so worried Oppenheimer. As such, its subject reaches well beyond France, as the upcoming publication of the book in English reveals.

Contributors:

Benoît Pelopidas is an Associate Professor and the founding Director of the Nuclear Knowledges (<https://www.sciencespo.fr/nk/en>) program at the Center for International Studies, Sciences Po, Paris. *Nuclear Knowledges* is the first scholarly research program in France on the nuclear phenomenon which refuses funding from stakeholders of the nuclear weapons enterprise or from antinuclear activists in order to problematize conflicts of interest and their effect on knowledge production. The program mobilizes interdisciplinary methods to become able to assess accepted claims about nuclear realities. Pelopidas is an affiliate with the Center for International Security and Cooperation (CISAC) at Stanford University and has been a visiting fellow at Princeton University working with the Global Systemic Risk research community. He is the PI of the NUCLEAR project funded by the European Research Council (grant agreement n°759707) and the editor of the forthcoming volume *Nuclear France: New Questions, New Sources, New Findings* (London: Routledge, 2024).

Lori Maguire is Professor of British and American Studies at the University of Reims in France and a member of the editorial board of *Cold War History*. A specialist of the Cold War, she has published extensively both in French and English. Her main focus has been on the political history and foreign policy of Britain, France, and the United States. She did post-doctoral work on the Nuclear History Project, compiling a report on the history of French nuclear weapons. She has also published extensively on the Vietnam War. Her latest book is *Consuls in the Cold War* (Brill, 2023), co-edited with Sue Onslow.

Matthew Evangelista is President White Professor of History and Political Science at Cornell University and a member of the graduate faculty at University of Roma Tre and the Catholic University of Milan, Italy. He recently co-authored with Agnieszka Nimark an introductory essay for the digital collection, “Randall Forsberg and the Nuclear Freeze Movement: Selected Materials from the Institute for Defense and Disarmament Studies Archive,” <https://digital.library.cornell.edu/collections/idds>.

Beatrice Heuser holds the Chair in International Relations at Glasgow University. Her degrees are from the Universities of London (BA, MA) and Oxford (DPhil), and the Philipps-University of Marburg (Habilitation). She is currently seconded to the General Staff College of the Bundeswehr in Hamburg. From 1991–2003 she taught at the Department of War Studies, King’s College London, ultimately as Chair of International and Strategic Studies. She has also taught at Sciences Po and the Universities Paris I, IV (Sorbonne) and VIII (Vincennes/St Denis), and at two German universities. From 1997–1998, she worked in the International Staff at NATO headquarters in Brussels. Between 2003 and 2007 she was Director for Research at the Military History Research Office of the Bundeswehr in Potsdam. Beatrice Heuser has worked primarily on aspects of strategy, publishing *Reading Clausewitz* (Pimlico, 2002); *Strategy before Clausewitz* (Routledge, 2017),

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and *The Evolution of Strategy* (Cambridge University Press, 2010) which covers the period from antiquity to the present; specifically on nuclear strategy: *Nuclear Strategies and Forces for Europe* (Macmillan, 1997); *Nuclear Mentalities?* (Macmillan, 1998); and *The Bomb* (Longman's, 1999). She has researched and edited volumes on insurgencies and counterinsurgency. Her latest publication is *WAR: A Genealogy of Western Ideas and Practices* (Oxford University Press, 2022).

John Krige is the Kranzberg Professor Emeritus in the School of History and Sociology at Georgia Institute of Technology in Atlanta. His recent publications include *Knowledge Regulation and National Security in Postwar America* (University of Chicago Press, 2022), co-authored with Mario Daniels (reviewed on H-Diplo XXIV-8, October 2022; <https://issforum.org/roundtables/PDF/Roundtable-XXIV-8.pdf>), and an edited collection, *Knowledge Flows in a Global Age. A Transnational Approach* (University of Chicago Press, 2022).

Grégoire Mallard is Director of Research and Professor in the Department of Anthropology and Sociology at the Graduate Institute of International and Development Studies (Geneva). After earning his PhD at Princeton University in 2008, Pr. Mallard was Assistant Professor of Sociology at Northwestern University until he joined the Institute. He is the author of *Fallout: Nuclear Diplomacy in an Age of Global Fracture* (University of Chicago Press, 2014) and *Gift Exchange: The Transnational History of a Political Idea* (Cambridge University Press 2019). From 2017 until 2022, he has led an ERC project titled Bombs, Banks and Sanctions, which focused on the evolution of unilateral sanctions in the global context of the Iran nuclear negotiations. He is also the co-editor of *Contractual Knowledge: One Hundred Years of Legal Experimentation in Global Markets* (Cambridge University Press 2016), and *Global Science and National Sovereignty: Studies in Historical Sociology of Science* (Routledge 2008). His other publications focus on prediction, the role of knowledge and ignorance in transnational lawmaking and the study of harmonization as a social process.

 Review by Matthew Evangelista, Cornell University

Benoît Pelopidas is a leading scholar of nuclear weapons whose work, even as a young pre-doctoral student, posed fundamental challenges to his field's conventional wisdom. His early scholarship, based on his dissertation, offered a critique of the 'proliferation paradigm,' the assumption within policy circles and academia that many states would seek to obtain nuclear weapons and that the number of nuclear-armed states would inevitably grow at a fast pace. Over time, government officials and experts extended expectations of proliferation of nuclear weapons to non-state actors who were assumed to want to employ nuclear materials for terroristic purposes. These assumptions, in the author's view, led to a limitation on the possibilities of envisioning alternative futures that did not entail extensive proliferation, and an inability to understand other risks implied by the existence of nuclear weapons besides their further spread to other countries and groups.

During his years as a visiting scholar at Princeton, Stanford, and the Monterey Institute, and as a faculty member at the University of Bristol, Pelopidas oriented most of his publications toward an English-language readership. After taking up a position as founding director of the Nuclear Knowledges program at Sciences Po in Paris, he began directing more of his work to a French audience, with *Repenser les choix nucléaires* as the main exemplar. The book represents both a culmination and further development of his previous research. In the preface, and again in the conclusion, he addresses his intended readers as "fellow citizens, whether elected officials, civilians or military, activists, teaching or research colleagues, or simply those concerned about their future and that of their children" (15). In this review, I summarize some of Pelopidas's earlier work to put the new book in context and consider its contribution to current debates over nuclear issues in France.

From the beginning of his career, Pelopidas's work has been characterized by its distinctive voice. Although from an outsider's perspective, the study of nuclear weapons may seem a narrow field, in fact it is quite capacious, represented by many theoretical and methodological approaches, some of which barely engage with each other. Numerous historians, for example, have taken advantage of the availability of archival materials and participant interviews to compile histories of national nuclear-weapons programs throughout the world.¹ Quantitatively oriented scholars have sought to understand the determinants of states' decisions to develop nuclear weapons, or the impact of nuclear weapons on crises, by amassing sets of data and submitting them to statistical analysis.² Philosophers and lawyers have pondered, respectively, the ethical and legal aspects of the possession and use of nuclear weapons.³ Political scientists have devised experiments to evaluate the public's views on the morality and legality of nuclear weapons.⁴ Pelopidas does not fit neatly into

¹ For some examples, see: David Holloway, *Stalin and the Bomb: The Soviet Union and Atomic Energy, 1939-1956* (New Haven: Yale University Press, 1994); Pavel Podvig, ed., *Russian Strategic Nuclear Forces* (Cambridge, MA: MIT Press, 2001); Or Rabinowitz, *Bargaining on Nuclear Tests: Washington and its Cold War Deals* (Oxford: Oxford University Press, 2014); Avner Cohen, *Israel and the Bomb* (Columbia University Press, 1998) and *The Worst-kept Secret: Israel's Bargain with the Bomb* (New York: Columbia University Press, 2010); Thomas Jonter, *The Key to Nuclear Restraint: Swedish Plans to Acquire Nuclear Weapons During the Cold War* (London: Palgrave Macmillan, 2016); Peter Liberman, "The Rise and Fall of the South African Bomb," *International Security*, 26:2 (2001), 45–86.

² For a review, see Matthew Kroenig and Eric Gartzke, "Nukes with Numbers: Empirical Research on the Consequences of Nuclear Weapons for International Conflict," *Annual Review of Political Science* 19 (2016), 397-412.

³ Henry Shue, ed., *Nuclear Deterrence and Moral Restraint: Critical Choices for American Strategy* (Cambridge, UK: Cambridge University Press, 2008); Gro Nystuen, Annie Golden Bersagel and Stuart Casey-Maslen, eds., *Nuclear Weapons under International Law* (Cambridge, UK: Cambridge University Press, 2014); Scott D. Sagan and Allen S. Weiner, "The Rule of Law and the Role of Strategy in U.S. Nuclear Doctrine," *International Security*, 45:4 (2021), 126–166.

⁴ Scott D. Sagan, Benjamin Valentino, and Daryl Press, "Atomic Aversion: Experimental Evidence on Taboos, Traditions, and the Non-Use of Nuclear Weapons," *American Political Science Review*, 107:1 (2013), 188-206; Charli Carpenter and Alexander H. Montgomery, "The Stopping Power of Norms: Saturation Bombing, Civilian Immunity, and U.S. Attitudes toward the Laws of War," *International Security*, 45:2 (2020), 140–169.

any of these groups, yet he has read widely on all aspects of nuclear weapons. In effect, he follows his own agenda, and in doing so, makes contributions to many aspects of this disparate field and other fields as well.

Pelopidas attracted attention early in his career when, as a postdoctoral fellow at Stanford, he wrote an article in a local newspaper that caught the attention of former US Secretary of State George Shultz.⁵ The subsequent events represent several elements of Pelopidas's style of work and contribution. First, the article drew from his scholarly work, and, in particular, his critique of the proliferation paradigm. Second, its purpose was to reach a broader public audience in order to inform a policy debate—namely on the merits of and prospects for nuclear disarmament. Third, his initiative had an impact on that debate and led to his involvement in projects and publications carried out by Shultz and former Ambassador James Goodby—even though his critique questioned the way they understood the prospects and need for nuclear disarmament (as a response to the threat of nuclear proliferation and terrorism).⁶

The pattern was set for Pelopidas's subsequent work. It is characterized by extensive research, using archives, interviews, and public-opinion surveys, informed by political philosophy (particularly the ideas of Hannah Arendt) and posing a direct challenge to an important pillar of conventional wisdom. His arguments are thorough and systematic (he is a clear and effective writer in English and French). For the most part his tone is respectful, but his criticisms are direct and unsparing. He pulls no punches. Not all of his targets accept the criticisms with the grace that Secretary Shultz could afford. Pelopidas's 2021 article on France's nuclear policy effectively takes on much of the scholarly and policy establishment and undermines some of its core claims on the history and purpose of French nuclear capabilities.⁷ His article with Kjølvs Egeland, on “Zombie Debates and Nuclear Realities,” does much the same for the broader European community of scholars and policymakers.⁸ Nor does he spare US nuclear specialists. Pelopidas accuses them of “self-censorship” and criticizes them for limiting the possible ways to understand nuclear dilemmas and the future by their ways of understanding the past.⁹ His archive-based evidence is particularly persuasive, as are the claims about the risks to democracy of such a constrained, historically ill-informed debate. He takes up these points in the concluding chapter of *Repenser*.

The book begins with Pelopidas's core critique of the field's preoccupation with nuclear proliferation, which, he argues, reflects the official orientation of the nuclear-armed states. To make the point to his French audience, he cites Bertrand Goldschmidt, the eminent French chemist, Manhattan Project member, and longtime French nuclear adviser. Goldschmidt favored the formulation, “Nuclear proliferation is like adolescents' sexuality: you can slow it down, but you can't stop it” (39). Pelopidas argues—thankfully, without pursuing the metaphor—that the steady proliferation of nuclear weapons to new states is hardly inevitable and has not met previous predictions. Moreover, the vast majority of states have not evinced any interest in obtaining nuclear weapons, and several have renounced their existing programs or eliminated their arsenals. One hundred twenty-two states signed the Treaty on the Prohibition of Nuclear Weapons, which entered into force in January 2021. Nevertheless, political and military leaders of the nuclear-weapon states

⁵ Benoît Pelopidas, “Nuclear weapons' future ripe for discussion,” *San Francisco Chronicle*, 11 December 2011.

⁶ Pelopidas, “A Bet Portrayed as a Certainty: Reassessing the Added Deterrent Value of Nuclear Weapons,” in *The War that Must Never Be Fought*, George P. Shultz and James E. Goodby, eds. (Stanford, CA: Hoover Institution Press, 2015), 11-22.

⁷ Pelopidas and Sébastien Philippe, “Unfit for Purpose. Reassessing the Development and Deployment of French Nuclear Weapons (1956-1974),” *Cold War History* 21:3 (2021), 243-260.

⁸ Pelopidas and Kjølvs Egeland, “European Nuclear Weapons: Zombie Debates and Nuclear Realities,” *European Security* 30:2 (2021): 237-58.

⁹ Pelopidas, “Nuclear Weapons Scholarship as a Case of Self-censorship in Security Studies,” *Journal of Global Security Studies* 1: 4 (2016), 326-336.

have criticized the treaty as dangerous folly and its goal of nuclear disarmament as unrealistic and undesirable. Most nuclear experts have followed their lead.

The first part of *Repenser le choix nucléaires* addresses this skepticism about the prospects for nuclear disarmament. The conventional wisdom assumes that all states will inevitably pursue nuclear arsenals—the premise behind the expectation of steady nuclear proliferation—rather than renounce their possession. In his reading of the literature, Pelopidas finds that the majority of experts consider cases of renunciation rare, and, instead, explain the persistence of states’ non-nuclear status on the basis of three arguments: 1) that those states are not capable of developing nuclear weapons because of technical or economic constraints, what Pelopidas dubs “capability determinism” (*déterminisme capacitaire*); 2) that states renounce nuclear weapons only in the aftermath of a “shock,” in the form of preventive war, destruction of nuclear facilities, or assassination of figures key to the nuclear program; or 3) that states rely on “extended” nuclear deterrence of a nuclear-armed state (as in the case of NATO members or South Korea, ostensibly protected by an American “nuclear umbrella”) as an alternative to developing their own nuclear arsenal. Pelopidas devotes chapters two, three, and four, respectively to a close analysis of each of these claims and a focus on key cases that would undermine them. He carries out a careful comparison, based on the latest empirical evidence, for cases including Iraq, Libya, South Africa, Ukraine, and Norway (for extended deterrence) and presents his findings in a series of two-by-two matrices. He finds that the majority of nuclear-free states do not conform to any of the expected conditions: They are neither incapable of producing nuclear weapons, nor have they experienced a shock, nor are they protected by a nuclear-armed ally. Pelopidas does not entertain a possible counterargument that his critics might offer—that most states do not face a grave enough security threat to consider developing nuclear weapons—although he does explore historical cases of states facing a threatening security environment that decided, nevertheless, against pursuing the nuclear option.

The second part of Pelopidas’s book is devoted to the question of choice in the nuclear realm and the way expert treatment of the topic of nuclear weapons has hindered public understanding and frustrated democratic accountability. Here, he hones in on the community of French nuclear experts as his main targets. He claims, for example, that the French preoccupation with the threat of proliferation of nuclear weapons to states beyond the acknowledged nuclear powers has distorted the public’s understanding of nuclear risks. Pelopidas makes good use of surveys—existing ones and some that he carried out with his research team—and other quantitative data to bolster his points. Thus, in surveys conducted in 2018 and 2019 that asked which countries possessed nuclear weapons, more than forty percent of the French respondents incorrectly named Iran. Only twenty-five and thirty percent, respectively, knew that Pakistan and India were nuclear-armed states. Pelopidas and his team found comparable results throughout Europe (23-24). A study of the reports of three main French newspapers across the political spectrum—*Le Monde*, *Le Figaro*, and *Libération*—found that during the period 2001 to 2019, references to “proliferation” outnumbered all of the other nuclear-related topics combined (e.g., disarmament, abolition, modernization), with most of the proliferation articles mentioning Iran (49). “Nuclear proliferation” appeared more frequently in the three main French dailies “than all other material vulnerabilities associated with nuclear arms (nuclear war, nuclear terrorism, the possibility of accidents—never mentioned—arms race, modernization, 185).”

Pelopidas puts the blame directly on his fellow French specialists on nuclear weapons for this state of affairs. His main criticism is that they have adopted the language and framing of official policy. By equating the French nuclear arsenal with “deterrence” (*dissuasion*) or “nuclear defense” (*nucléaire de défense*), they replace an *aspiration*—that French nuclear weapons will deter or defend against an attack, rather than, say, provoke one—with the *assumption* that nuclear weapons do reliably serve as a deterrent (199). We have witnessed a similar abuse of language and logic in the case of other nuclear powers. At periods of high tension and conventional armed conflict between India and Pakistan, for example, one has sometimes heard the fear expressed that the two states might launch their “nuclear deterrents” against each other. At that point,

however, the South Asian nuclear weapons would no longer be deterrents, but rather instruments of retaliation or revenge, employed in the wake of a *failure* of nuclear deterrence.

Pelopidas is clearly incensed at the “irresponsibility” of experts who continue to make what he generously calls a “methodological error” of incorporating “elements of the language of official discourse” into their analyses, and at their inability or unwillingness to offer alternatives (235). They “naturalize the postulates of the official discourse” by: 1) failing to cite or translate “scientific publications that offer tools for establishing analytical distance;” 2) denying “the validity of these tools that would call into question the evidence for the pre-established answer—the need to preserve and modernize nuclear weapons at all costs;” and 3) characterizing as activists those who offer alternatives (198). Pelopidas’s evidence of the status-quo bias of French nuclear experts is persuasive. He quotes Nicolas Roche as claiming that raising any moral concerns about French nuclear weapons would automatically undermine faith in the effectiveness of French nuclear deterrence, and Lucien Poirier as suggesting that manifesting any skepticism about the credibility of nuclear deterrence “plays into the hands of the adversary (249).” He faults Bruno Tertrais for expressing confidence in the ability to control nuclear weapons during crises, without acknowledging the potential for accidents (211).

By presenting French nuclear weapons as necessary and effective as deterrents, experts eliminate any hope for democratic choice—the topic of Pelopidas’s final chapter. He challenges the notion of a popular consensus in favor of the French nuclear arsenal. That consensus seems evident in surveys that show sixty-nine percent of the public believes that France must maintain both nuclear and conventional forces for its defense and eight percent think nuclear weapons alone would suffice (225). Yet Pelopidas wonders what would be the response if the public were aware of the evidence he assembles here and that other French nuclear experts ignore or dispute: 1) that according to French military and political authorities, as well as allies (US, UK) and adversaries (USSR), French nuclear forces remained vulnerable to attack and were not considered to pose a credible threat of retaliation until at least the mid-1970s, yet France faced no invasion or nuclear strike to that point (discussed in chapter 6); 2) that the history of nuclear accidents and near-launches (covered in an appendix) means that one must take account of sheer luck as a factor in having prevented nuclear catastrophe heretofore; and 3) that, as we saw in Part 1 of the book, most other countries in the world have not pursued a nuclear arsenal to achieve security, and some have actually given up their nuclear weapons voluntarily.

Not only does Pelopidas wonder about the public’s reaction to more accurate nuclear knowledge—he evaluates it in a cross-national European survey. His team put forward the proposition that “it is acceptable that residents of this country be the targets of a nuclear attack from other countries because that is part of a national policy of nuclear deterrence” (229). The survey included countries, members of the NATO alliance, that depended on US “extended” nuclear deterrence, as well as countries that possessed their own nuclear weapons. The proportion of respondents willing to express total or partial agreement with their country’s policy of nuclear deterrence, once apprised of the risks it entailed, ranged from 12.5 percent in Belgium to 26.5 percent in Turkey. In France (and Britain), no more than nineteen percent expressed any support for French nuclear deterrence—a sharp contrast to the responses offered when the public was given no real choice or accurate information about what a policy of nuclear deterrence means, namely vulnerability to nuclear attack (229-230).

Another facet of Pelopidas’s work is its ability to stake a highly original claim in nuclear studies while also finding common cause with other subfields of political science and beyond. His study of the role of luck provides the clearest example. Through historical research and counterfactual analysis Pelopidas convincingly shows that luck has been a key element in avoiding nuclear explosions and that good luck during crises has likely spared the world from a nuclear war. This insight, pursued in the appendix and developed in several articles, has profound implications for the field because it undermines the assumptions of control at the heart

of much of what passes for nuclear strategy.¹⁰ While speaking directly to the community of nuclear-weapons and security-studies scholars, Pelopidas' insights about luck also engage a broader literature on risk vs. uncertainty in the study of economics and political economy, as well as the work carried out by Peter Katzenstein, Lucia Seybert, and their colleagues on control power vs. protean power.¹¹

This well-researched, carefully argued study constitutes, as its title indicates, a call to rethink French nuclear policy. Its author offers his readers a “fundamental choice”—to “preserve the sacred status of nuclear weapons” or “restore them to the status of means, in the service of clearly defined policies.” “To make the first choice,” he argues, “amounts to admitting that our regime has become a techno-theocracy of nuclear deterrence in which the sacralization of the object renders invisible profane choices, made by men and women of flesh and blood,” on the weapons to be built, the targets to aim at, their costs, and the prospects for replacing them (265). There is no guarantee that French leaders will heed Benoît Pelopidas's plea for transparency and democratic deliberation on nuclear-weapons policy, but one hopes at least that his fellow citizens give it the attention it deserves.

¹⁰ The main contributions include: Pelopidas, “The Unbearable Lightness of Luck: Three Sources of Overconfidence in the Controllability of Nuclear Crises,” *European Journal of International Relations* 2:2 (July 2017), 240-262; and Pelopidas, “Power, Luck, and Scholarly Responsibility at the End of the World(s),” *International Theory* 12:3 (November 2020), 459-470.

¹¹ Peter J. Katzenstein and Lucia A. Seybert, *Protean Power: Exploring the Uncertain and Unexpected in World Politics* (New York: Cambridge University Press, 2018).

 Review by Beatrice Heuser, University of Glasgow

This excellent study is a reckoning with the predominant French State approach to nuclear weapons, and the collective mentality that has been fostered in France relative to this subject. It is a bold endeavour, going against the tide of this wide consensus in French political and military circles which has supposedly prevailed ever since in the 1970s the French Socialist Party came out in support of nuclear weapons.¹

Benoît Pelopidas evaluates two claims which were ritually cited in the 1960s when France acquired nuclear weapons and have been central to the government's explanation of their retention: first, that the majority of the French population supports France's possession of nuclear weapons, and second, that nuclear proliferation is inevitable and that divestment by nuclear powers of their nuclear weapons unlikely. Thus, French strategists tend to argue that so long as other states have nuclear weapons, France, in order to demonstrate that it is also a sovereign state, needs them too. The first is exposed partly as a myth in chapter 7. There, the author illustrates that the consensus which the French government claims is supported by regular opinion polls is in fact based on leading, i.e. manipulative, questions: crucially, if the French population is asked whether it supports the French deterrent, the implication is that it will keep all major war at bay, and will not be used in war fighting. The author, who commissioned polling agencies to ask alternatively worded questions, in which support for nuclear weapons is stripped of the attribute "deterrent," demonstrates that the results are very different. When faced with such alternative wording, the majority of the French and Britons who are asked are much less supportive of their governments' policies on nuclear weapons—not to mention an overwhelming rejection of the idea that it would be acceptable for their countries to become targets of enemy nuclear strikes if that is part and parcel of nuclear warfighting. As the manuscript illustrates here and elsewhere, however, public opinion is not well informed: almost fifty-five percent of the respondents in France and forty-four percent in the UK dodged the questions they were given, as they felt they did not know enough about the subject (227-234; esp. 232). Classically, the results of opinion polls depend on how you word them—admittedly something that also applies to the polls commissioned for this study.

The second argument fundamental to the French nuclear posture, that France needs nuclear weapons just like other sovereign states as nuclear proliferation will continue, is the main subject of this enquiry, and is shown to be tenuous at best. Pelopidas points out that there have, in fact, not been many more countries that have opted for the acquisition of their own nuclear arsenal since France first acquired hers in the 1960s. Several of the chapters consider why further proliferation did not take place. Is it due to nuclear powers extending a defence guarantee to the potential proliferators, if necessary, using their own nuclear weapons? Was a particular shock necessary to turn countries away from their own nuclear programmes? In an impressive survey of all countries about whose nuclear programmes enough is known to be able to say when they abandoned them, he shows that generally, no "shock" was needed. The countries in question did not even necessarily receive an *explicit* (albeit often secret, as in the case of Sweden) US guarantee in lieu of the pursuit of a nuclear arsenal of their own.

The study argues that greater prominence should be given to the countries that have renounced a nuclear pathway. The particular configurations of the factors that led each of these countries to renounce nuclear status are particular, the clustering of motivations vary, and yet it is impressive that so many governments decided to entrust their future either to a foreign nuclear guarantee, or else had the conviction that they did not need nuclear weapons to keep a large-scale foreign attack at bay, or else feel that no such direct threat

¹ I say supposedly, as a recent excellent PhD thesis completed at the Sorbonne nouvelle has shown that this consensus was always at best fragile, or even absent: Yannick Pincé: "La dissuasion en débat : les partis politiques et la fabrique du 'consensus' nucléaire français, des années 1970 aux années 1980," PhD diss., (Sorbonne, 2022).

exists. Admittedly, though, many countries have—so far—not chosen to acquire their own nuclear weapons, or have abandoned their programmes as they believe they fall under the protection of a more or less explicit American nuclear guarantee—what the British government strategist Sir Michael Quinlan used to call an “insurance policy,” into which his country, like many others, paid by complying with many American requests in terms of defence expenditure, force configuration, and security policy. This one should keep in mind when calling for nuclear disarmament. One should also keep the power relations in the Far East in mind, and the importance of extended deterrence there.

As it is not possible to go into the secret government archives of all those countries that abandoned their nuclear programme, Pelopidas relies on secondary literature where necessary, but also, in part, on opinion polls. These demonstrate much ignorance about the facts of the world (e.g. which are nuclear weapons owning states and which are not) but also an astonishing degree of distrust of nuclear weapons and of the promise that they increase the respective populations’ safety (even in France!). Given the public’s ignorance, the public opinion polls hardly explain why governments decided not to pursue in the first place, or to terminate, their nuclear programmes. But they do demonstrate that these governments’ decisions roughly fitted their populations’ majority views.

The book moves on to criticise other aspects of the predominant discourse on nuclear weapons in French specialist literature. French “faith” in nuclear weapons and nuclear deterrence (Lucien Poirier²) is indeed almost religious, as Pelopidas points out (264 f). He therefore pleads for a “desacralisation” (265) of the stunted debate about the continuing utility of nuclear weapons for France, as most political parties and authors treat it as a taboo, a holy subject that must not be questioned.

A stand-alone chapter at the end of the book that heralds more work that the author has embarked upon concerns the danger of accidents surrounding nuclear weapons. It is linked to the main body of the book in that it contains the accusation that most French authors writing on nuclear strategy fail to appreciate this danger. Pelopidas argues that they and all other authors professing their belief that nuclear weapons make the world safer underestimate the importance of good luck in pulling through significant numbers of accidents, each one of which could have had catastrophic consequences, yet most were barely reported or even remained unreported. While NATO always points to the dangers of accidents, it is true that in the French debate surrounding nuclear weapons, this subject is largely passed over in silence.

In short, the book rightly illustrates (a) that proliferation was and is not inevitable, and (b) that nuclear weapons, their storage, and handling, are more risky and dangerous than is generally admitted by proponents of ownership of nuclear weapons. Accidents can happen and have happened, and in several known cases—many remain covered up by governments—it was only extreme luck that prevented catastrophic consequences. On both points, one cannot but agree with Pelopidas. France distinguishes itself from the United States and Britain in that it only adhered to the Nuclear Non-Proliferation Treaty in 1992, until then taking the stance that proliferation was inevitable, and that nuclear ownership was something the nuclear powers would find ethically difficult to deny to other sovereign states, thus defining nuclear ownership as a symbol and tool of sovereignty. France actively helped Israel develop its own nuclear weapons. By contrast, France never espoused the alternative US (and British) view that the states owning nuclear weapons could justify their active opposition to nuclear proliferation by extending their “nuclear umbrella” to allies and friends, thus obviating their need to acquire nuclear weapons. Indeed, France itself based its own procurement of nuclear weapons on the logic of the rejection of the feasibility of extended deterrence. Britain and France were both rescued by America in both world wars, but Britain escaped any occupation, while France did not, and arguably, the rescue each time came too late to prevent the rape and corruption of

² Lucien Poirier, *Essais de théorie stratégique* (Paris: Fondation pour les Etudes de Défense Nationale, 1982).

France. The Suez expedition, which both countries were forced to abandon by US pressure, was thus interpreted in diametrically opposite ways: Britain henceforth generally sagely towed the American line, while France felt confirmed in its fear that the US either came too late or was altogether unreliable, and that therefore, France needed its independent ability to defend itself, i.e. nuclear weapons.³

With no faith in American extended deterrence, French governments nevertheless have from time to time experimented with lesser forms of extended deterrence, especially *vis-à-vis* (West) Germany and Italy, holding out possibilities of creating a European nuclear force (meaning different things at different times: sometimes simply proclaiming that France's nuclear force was a European nuclear force due to the very fact that it was positioned in Europe). This was generally done to prevent these neighbours from developing nuclear weapons of their own, i.e. to prevent nuclear proliferation. Thus, French insistence on the formula that sovereignty equals nuclear ownership seems to be okay for some powers that are "more equal than others," but ideally not for France's former enemy of the twentieth-century world wars.

There is a lacuna in Pelopidas well-researched study, however, which also weakens his overall plea for nuclear divestment. The most important reason for France's ownership of nuclear weapons is *not* primarily the fear of further proliferation, or even the weapons' utility to prop up France's and Britain's tenuous great-power status (or even just sovereignty). Instead, it is the fear of an invasion by the armed forces of a great military power, with or without nuclear weapons: only nuclear weapons, so the argument goes, would make such a move entirely unattractive for a nation that would have to fear retaliation against its own country. French ownership of nuclear weapons is designed to make an invasion of French soil like that of 1940 unthinkable.⁴ Even if Russia divested itself of nuclear weapons, Russia could pose a conventional threat to France that would easily stand comparison with the German forces of 1940.

One might add to this the argument that French defence elites want their government to retain the option of military intervention abroad with France as world policeman (as a member of the UN's P5 with special responsibilities to uphold international norms including by armed force if necessary). This France could only hope to accomplish if France itself continues to be an unassailable sanctuary which the object of such French intervention (Iraq, Libya, etc.) would not dare target with its own long-range missiles, nuclear or conventional, or with Lockerby-style state-sponsored terrorism. Interestingly, other powers have picked up the French argument that the ownership of nuclear weapons make their home country a "sanctuary," but they have taken it a step further: they take it to mean that they can get away with aggression elsewhere without any danger of a counter-attack arising for their own country. The Russian invasion of Ukraine in 2014 and in stepped-up form in 2022 is a case in point.

How, then, does one deal with such a nuclear-protected aggressor, when he does not abide by the rules of non-aggression set down in the UN's Charter? That question is left unaddressed here. As Sir Michael Quinlan put it, one has to confront the dilemma of wanting to avoid "all large-scale war—not just nuclear war" on the one hand, and on the other avoiding

the terrible cost of failure to defend ourselves. ... the Second World War left us two awful legacies—the image of what nuclear weapons can do and, equally frightening, the memory of

³ Beatrice Heuser, "Britain, France, and the Bomb: the Parting of Ways between Suez and Nassau," *Storia delle Relazioni Internazionali* 13:3 (Autumn 1997): 75-94.

⁴ Heuser, "Dunkirk, Dien Bien Phu, and Suez, or Why France Doesn't Trust Allies and Has Learned to Love the Bomb," in Heuser and Cyril Buffet, eds., *Haunted by History: Myths in International Relations* (Oxford: Berghahn, 1998): 157-174.

what a rampant totalitarianism meant for the nations and peoples on whom it turned its power. The problem is to continue to avoid both.⁵

However well put, sadly, no argument in favour of nuclear divestment can ultimately be convincing unless a convincing alternative solution to this dilemma can be found.

⁵ Tanya Ogilvie-White, ed., *On Nuclear Deterrence: The Correspondence of Sir Michael Quinlan* (London: The IISS, 2011), 72.

Review by John Krige, Georgia Institute of Technology

The war in Ukraine will, we are told, provoke further nuclear proliferation:

If Ukraine had kept the nuclear weapons it had when the USSR broke up, Russia would not have gone to war against it. And if the Western powers don't go to war against Russia, but did so against Yugoslavia, it's because Yugoslavia did not have nuclear weapons, but Russia does.¹

Thus spoke a senior expert of the prestigious French think tank IRIS (*Institut de relations internationales et stratégiques*, Institute for International and Strategic Relations) in July 2022. Most European citizens would probably agree with him, just as most European citizens were probably reassured when the French foreign minister responded immediately to the Russian President's veiled threat to use nuclear weapons as his tanks rolled into Ukraine in February 2022: "Vladimir Putin must also understand that the NATO alliance is a nuclear alliance," said Jean-Yves Le Drian.² There is, it seems, one obvious lesson of the Ukraine war. It is that the horizontal proliferation of nuclear weapons keeps the peace between rival powers in an anarchic world system. Correlatively, Ukraine made a major strategic blunder in surrendering its nuclear arsenal when the Soviet regime imploded.

"One does not attack a country that has nuclear weapons." This was the supposedly uncontroversial statement by the presenter that provoked the claims made above on French television. And it is precisely the uncontested nature of such claims that Benoît Pelopidas challenges in this stimulating analysis of the arguments given by civilian experts and officials in nuclear weapons states for having and consolidating their arsenals. He does not take sides for or against any government's nuclear weapon's policies. His concern is that the "justifications" offered by the nuclear weapons establishment (notably, but not only, in France), and their "expert" advisers, presume what they are supposed to establish, i.e. that nuclear weapons are necessary for the defense of the realm. Rather than encouraging a wide-ranging democratic debate over whether or not it is strategically (and financially) necessary to have and to maintain a nuclear arsenal, the prevailing consensus takes it as self-evident. The horrors of the war in Ukraine, and the intrinsic asymmetry in military power between the belligerents deriving from Kyiv's decision to dismantle its nuclear capability, adds grist to their mill.

Pelopidas's study is divided into two parts. In the first he considers the argument that states have no option but to acquire nuclear weapons, and its implication that there is no point in discussing whether they should do so or not. The second challenges this argument. It seeks to reopen a space in which the need for nuclear weapons is democratically debated and in which a nation's nuclear policy is a political choice not a foregone conclusion. His overall aim is to stress that there is nothing inherently desirable or inevitable in acquiring nuclear weapons, and that it is possible to dismantle one's nuclear program, as countries like South Africa and Ukraine have done.

The "paradigm of proliferation" is at the heart of his critique. It is based, Pelopidas says, on a narrow reading of nuclear history. It affirms that states have an almost irresistible desire to acquire nuclear weapons, and that they will do so if they can. From this perspective, the decision to reject the nuclear option is epistemically

¹ Here and throughout this text all translations from French into English are mine. The statement was made by Pascal Boniface during a popular French TV program on channel France 5, *C'est dans l'air*, on 19 July 2022 at 64 minutes.

² "France Says Putin Needs to Understand NATO Has Nuclear Weapons," Reuters.com, 24 February 2022, <https://www.reuters.com/world/europe/france-says-putin-needs-understand-nato-has-nuclear-weapons-2022-02-24/>, accessed on July 20, 2022.

“unimaginable” and politically “impossible” (34). Of course, we know that some states do not acquire nuclear weapons. Pelopidas cites three standard arguments to account for this: the lack of the resources (financial, technical, human, industrial) required to build a nuclear arsenal; an external shock that overwhelms nuclear desire; and the provision of security guarantees by an existing nuclear power. These arguments do not challenge the paradigm of proliferation, however. On the contrary, they reinforce its architecture, for each of them presuppose that states would acquire nuclear weapons if they could, and seeks to explain why they fail to do so. They also provide policy directives for maintaining the prevailing asymmetries in the global nuclear order. The first and the third define what nuclear weapons states need to do to curb proliferation by combining supply-side resource management with political guarantees. The second justifies the use of violence to destroy a nuclear facility or to assassinate leading nuclear scientists or engineers. The paradigm of proliferation does not only explain why states acquire nuclear weapons; it also offers an explanation for why some states do not, and places the burden of stabilizing the world order on those that have nuclear weapons.

In the second section of his book, Pelopidas challenges the pervasive claim that security lies in having nuclear weapons. In fact, he turns it on his head. He stresses that our *vulnerability* is “the central and existential fact” of the nuclear age that is overlooked, if not masked, by the paradigm of proliferation (177).³ Not only has the risk of nuclear war been repeatedly under-estimated, if only to avoid panicking the general population, in addition, “since the 1960s, a substantial and increasing number of political and military officials have said that chance played a role in the outcome of the nuclear crises that they were involved in” (208). And let us take no comfort from the reasons given above for why states do not acquire nuclear weapons. Each is fallacious. Industrially backward states like China in the 1960s or Pakistan in the 1980s or North Korea today have all built nuclear weapons, even if it meant letting their people starve. Iran has been subject to multiple attacks on its nuclear infrastructure, yet it is on the cusp of becoming a nuclear weapons state even as I write. And Ukraine renounced its nuclear arsenal even though it shared a geographical border and a complex history with a belligerent Russia and was given only the vaguest security guarantees by the West to reassure it (145-151). The global nuclear system is far more fragile than the paradigm of proliferation would lead us to think.

Why are defense intellectuals trapped in the analytical frame defined by national nuclear weapons establishments? Because, Pelopidas says,

civilian experts of nuclear weapons issues, in France but not only there, reproduce the official claims on the ability to control nuclear arsenals that is part of the paradigm of proliferation, without taking sufficient distance to expose the performative function of discourse on nuclear deterrence, neglecting the criticisms and objections published for decades in scientific journals, and being more concerned to discredit any attempt by other scholars that criticise their approach, rather than alerting the public to the range of nuclear vulnerabilities that they face (213).

Pelopidas also offers a more prosaic argument. Defense intellectuals are not intellectually independent because they are not financially independent, as he is. The singular importance of this consideration is a matter of personal pride for him and for the outstanding group of scholars involved in his Nuclear Knowledges program at SciencesPo in Paris. It is also officially recognized. As a five-star French general recently put it, “in France [Benoît Pelopidas] is the only independent researcher among a plethora of researchers who are all financially dependent on the State or on the French CEA” [the *Commissariat à l'énergie atomique*, the equivalent of the United States Atomic Energy

³ Richard Falk and Robert Lifton, *Indefensible Weapons. The Political and Psychological Case Against Nuclear Weapons* (New York, NY: Basis Books, 1982), 23.

Commission, or USAEC].⁴ He who pays the piper calls the tune. It's a sad comment on the betrayal of intellectual autonomy in a country known for its intellectual giants in the social sciences, people like Pierre Bourdieu, Michel Foucault, and Bruno Latour.

As I mentioned earlier, Pelopidas engages with experts and officials in nuclear weapons states, and deconstructs their justifications for acquiring, not to say expanding, their nuclear capabilities. But what do we find if we take a quite different perspective, and analyze the justifications used by states that refuse to acquire nuclear weapons? Consider the reasons given by the signatories to the Treaty for the *Prohibition* (my emphasis) of Nuclear Weapons in Latin America and the Caribbean (the Treaty of Tlatelolco) that was opened for signature in February 1967. Its states signatories also made the point that nuclear weapons, rather than increasing their security, actually made them targets for nuclear attacks while squandering their scarce resources on extremely expensive armaments. They also insisted that the proliferation of nuclear weapons seemed “inevitable” unless states, in the exercise of their sovereign rights, banished “from their homelands the scourge of a nuclear war” that involved using “weapons whose terrible effects are suffered, indiscriminately and inexorably, by military forces and civilian population alike, [weapons that] constitute, through the persistence of the radioactivity they release, an attack on the integrity of the human species and ultimately may even render the whole earth uninhabitable.”⁵ Their concern for “strengthening a world at peace, based on the sovereign equality of states, mutual respect and good neighbourliness” was also one factor on the minds of Ukrainian leaders. They renounced nuclear weapons after the fall of the Soviet empire for many reasons: the shadow of anti-nuclear sentiment produced by the Chernobyl accident; the need to be decoupled from centralized Russian operational command and control over the arsenal; intense US and Western pressure—but also “for the country [they] wanted [Ukraine] to be: part of Europe and of the community of nations that are bound by common rules and values,” with a “commitment to the idea of an international order maintained not by the threat of violence but by the commonly agreed principles and rules of cooperation...”⁶

In fact, the global scale and human suffering caused by a nuclear attack can even act as a brake on the use of nuclear weapons by the United States itself. Listen to President Nixon speaking to his National Security Adviser, Henry Kissinger late in the night of 15 April 1972: “We’re going to do it. I’m going to destroy the goddam country, believe me. I mean destroy it if necessary...By a nuclear weapon. I mean that we will bomb the living bejeezus out of North Vietnam. A nuclear bomb, does that bother you?...I just want you to think big Henry, for Christ’s sake.”⁷ Why did Kissinger not take up the suggestion? Because he feared for the domestic and international backlash if the nuclear option was added to the already lethal cocktail of weapons that was raining down on Vietnam.⁸ Indeed, from the dawn of the nuclear age the concern that nuclear weapons violated the humanistic norms of acceptable behavior that underpin democratic societies has nagged persistently at US decisionmakers who thought of themselves as leaders of the free world.

Pelopidas’s book deconstructs the paradigm of proliferation that justifies the acquisition of nuclear weapons. Looking at the global nuclear regime through the eyes of countries that renounce them makes us ask quite different questions, questions like “What kind of country are we, and do we want to be?” “What kind of military interventions by the government will the population tolerate?” “What are the most durable and

⁴ Bernard Norlain’s review of the book in *Revue de defense nationale*, No. 852, Été 2022, 199-202.

⁵ “Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean,” Opanal.org, <https://www.opanal.org/en/text-of-the-treaty-of-tlatelolco/>, accessed on July 20, 2022.

⁶ Mariana Budjeryn, “Was Ukraine’s Nuclear Disarmament a Blunder?”, *World Affairs* 179: 2 (2016): 9-20.

⁷ Cited by Francis Gavin in *Nuclear Statecraft: History and Strategy in America’s Atomic Age* (Ithaca, NY: Cornell University Press, 2012), 116.

⁸ This was the answer given to me by Jeremi Suri when I asked him the question at an annual meeting of the American Historical Association.

desirable strategies to maintain world peace and a stable international order?” These politico-ethical arguments complicate decisions to use nuclear weapons by democratic states that have them. They are also key justifications for the strategic choices made by non-nuclear weapons states. And while we are thinking about policy options for Ukraine, we can surely agree with Mariana Budjeryn that its major blunder was not to surrender its nuclear weapons to pursue its sovereign autonomy, “but rather the utter neglect of its /conventional armed forces.”⁹ Vladimir Putin invaded Ukraine again in February 2022 as part of a grand strategy to absorb the country back into his authoritarian regime and to snuff out the Ukrainian peoples’ aspirations for democracy. There is no guarantee that he will not use nuclear weapons against Ukraine to pursue his obsessive ambitions, or indeed against any of the countries that have come to its assistance in defense of democracy, be they members of NATO or not, and even if they are armed with nuclear weapons of their own. The deep reluctance to be responsible for a nuclear apocalypse serves as a brake on the use of such weapons by democratic societies. Dictatorships that feed on fear and violence have fewer, if any such scruples.

⁹ Budjeryn, 19

 Review by Grégoire Mallard, Geneva Graduate Institute

Repenser les choix nucléaires is an important book. Its epistemological and methodological assumptions are, however, debatable. Putting them into question may be the best way to accept the author's invitation to rethink common knowledge about the French bomb—and, beyond, nuclear weapons possession in general. This review essay will try to explain why this book is a must-read for the French public, but also why it may fail to settle the case about French nuclear weapons once and for all. It quickly surveys Benoît Pelopidas's epistemological assumptions and demonstrative methods, and, second, his normative argument about the role of social scientists vis-a-vis policymakers.

How to Approach (Nuclear) Myths?

The question of how one should approach myths is at the heart of how one will receive *Repenser les choix nucléaires*. Pelopidas's book exposes the central tenets of French nuclear doctrine to be a myth, and maybe beyond, the world's nuclear doctrines developed by the “orthodox” strategists in the five nuclear weapon-states (which are also the five permanent members (P5) of the United Nation Security Council).¹ Pelopidas takes issue with the realization that the French public's confidence that the possession of French nuclear weapons ensures the “sacralization” of the French territory. To him, it amounts to a religious faith, which should be properly challenged by scientific analysis. Furthermore, he finds ways to “desacralize” the French public's confidence in nuclear deterrence: by changing how questions about nuclear policy are generally framed in French opinion polls, he finds that the so-called “consensus” about nuclear doctrine in France is largely overstated.

Before examining in detail the content of Pelopidas's argument, I will take a short detour, to quickly discuss classical epistemological concerns in the study of myths. There are two main ways to approach myths. The first one is to test their “truths” against robust facts in the hope of offering definitive conclusions about their historical veracity or implausibility. As far as ancient myths are concerned, this has long been the preferred path of late-nineteenth-century archaeologists in search of the remnants of ancient Troy, who systematically read Homer's *Iliad* with the hope of finding clues they could compare with geological and urban formations they excavated in Middle Eastern soil. They had the bravery of modern Don Quixotes, but also the naivety of positivists who fail to consider that their interpretation of ancient texts is largely filtered by the cultural context of their times and their own professional goals.

The second approach to myths is encouraged by Paul Veyne's book, titled *Did the Greeks Believe in their Myths?*, to which question he answers “no,” or at least, not in the way a late-nineteenth-century positivists would have believed.² Taking an anthropological approach to ancient Greek myths, Veyne demonstrates that the dichotomy between Ancient absolute “believers” and Modern “skeptical” believers doesn't operate well to describe differences between Ancient and Modern regimes of truth, in the sense that in both periods, various epistemological rules prevailed in “history” (as in Thucydides' narratives) and “mythology” (as in Homer's fictions)—just like, in the nineteenth and twentieth centuries, most contemporaries would have agreed that “historical” and “religious” truths were established differently in the disciplines of history and theology. Thus, Veyne (following many anthropologists before him) proposed that social scientists should avoid considering mythical discourses from the point of view of epistemological rules that didn't apply to them, as doing so would inevitably end up proving that myths constituted less serious, if not outrightly deceptive, discourses. Rather, myths should be studied through the rendering of knowledge practices associated with their

¹ The question of generalizability beyond the French case is not addressed in the book.

² Paul Veyne. *Did the Greeks Believe in their Myths? An Essay on the Constitutive Imagination*. (Chicago: Chicago University Press, 1988).

interpretation, the social rituals in which they are enacted, and the social effects that such rituals enable, as ritualized invocations of myths often constitute key acts of community-building and alliance-formation for the political community.

If modern-day beliefs espoused by experts and the general population about nuclear weapons operate as myths, then how should one study these myths? If we use Veyne as a model, we can argue that in all likelihood modern scholars will seek to debunk them, by decomposing their general narrative into a series of empirically testable propositions linked together by specific inference claims, which, when set against observable facts, would be either eliminated or proven. Pelopidas's book clearly falls into this category of myth studies: he does not consider what social practices are made permissible through the enactment of such myths and which truths they may still contain, but rather, he debunks all the dubious assumptions contained in present-day myths about nuclear deterrence and proliferation, which he sums up into a series of testable propositions that he squashes systematically throughout the first half of the book. Pelopidas may be applying epistemological standards that producers of nuclear myths may have never claimed to abide by, but by doing so, he claims to do an immense service to the cause of nuclear disarmament. Within the epistemic community of nuclear strategists and political scientists working on nuclear weapons, Pelopidas engages in direct criticisms of his peers who believe in the desirability of nuclear weapons: he is especially critical of policy recommendations against nuclear disarmament since he believes that the latter "confiscate" rather than open the debate about their real uses.

The combative tone of the book makes for entertaining reading, as the prose articulates both clear, direct, and logical arguments in a demonstration that seems effortless only because the author has thought so deeply about most aspects of the topics he covers. Pelopidas has carefully read the most recent monographs published on nuclear histories in a variety of contexts—and even added original archival research, especially on the French context and the 1960s–1980s period, during which France had no nuclear deterrent but merely nuclear weapons, as he beautifully shows. Pelopidas's scholarship uses archives and oral history, as well as public opinion surveys that show interesting correlations between the framing of questions and the observed responses. This is not a surprising finding in itself, but one with deep consequences as far as nuclear policy is concerned. Pelopidas commissioned polling agencies to ask alternatively worded questions about nuclear weapons, in which weapons are not presented as having "deterrent" but rather destabilizing effects that increase "vulnerabilities." The results show that public support is far from the so-called French "consensus" about their desirability: French citizens no longer desire nuclear weapons when they are told that their possession would make France a target of choice for Russian nuclear weapons. From this realization that nuclear weapons possession increases "vulnerability" as much as it increases prudence in foreign nations' behavior, the French public may be led to understand that not all nations wish to acquire the same nuclear "deterrent" as France when resources and opportunities allow. Changing public opinion about vulnerability seems to be a key aim of the author, and we can only hope it accomplishes this goal. One wonders if the next step for Pelopidas would be to run "citizen conferences" whereby a random group of French citizens would be educated for some weeks about nuclear weapons, before being later put in charge of drawing policy recommendations for the government—a popular methodology in the field of science and technology policy in France.

Having seemingly demolished orthodox assumptions in French strategic nuclear doctrines, Pelopidas concludes that we should be bolder and more optimistic about the conditions in which nuclear weapon states could be led to choose disarmament rather than nuclear weapons modernization programs, which commit countries like France to another 70 years or so of heavy financial investments in rebuilding their nuclear deterrents. If, indeed, the theoretical infrastructure of orthodox nuclear doctrines is based on historical misinterpretations of the past, Pelopidas argues, orthodox nuclear deterrence theory can only lead to bad policy advice and would be best characterized as myths which are ritualistically invoked to justify non-choices, as he explains in further detail in the second half of the book.

The Pertinence of John Stuart Mill's Methodology to the Study of Strategic Nuclear Doctrines

The direct challenge mounted by Pelopidas's critique against orthodox nuclear doctrines not only comes from the adoption of a certain narrative style that favors clarity over jargon, but also from the adoption of a very systematic structure of argumentation. In fact, his demonstrative apparatus, at least in the first half of his book, largely draws upon John Stuart Mill's classical mid-nineteenth-century logical precepts—especially the methods of similarity and difference, which are still taught in US graduate schools in many sociology programs,³ in order to help students learn how to demonstrate that certain historical propositions are neither necessary nor sufficient conditions. Pelopidas devotes the first half of his book to disproving three common arguments at the core of the orthodox nuclear deterrence doctrine, according to which 1) every technologically advanced state wants a nuclear deterrent to protect its sovereignty, and that 2) only an (external) shock, or 3) a promise of protection by a nuclear-armed ally can prevent such states from acquiring their nuclear deterrent. Surveying second-hand empirical material from historical monographs on cases like Iraq, Libya, South Africa, and Ukraine,⁴ Pelopidas concludes each chapter with two-by-two tables that prove that none of these assumptions about set conditions for nuclear disarmament are observed in the wide range of nuclear weapons renunciation cases under examination.

These two-by-two tables are quite exemplary of the analysis of the causal inferences that John Stuart Mill long tasked social scientists with conducting, as they make clearly visible that so-called “necessary” or “sufficient” conditions of nuclear disarmament that “orthodox” nuclear foreign policy analyses assume to exist are neither one nor the other. Following this logic, Pelopidas uses secondary literature to show that some states should have been technologically/financially incapable of producing nuclear weapons but did so anyway (like Pakistan or North Korea), while others which were capable did not (Norway, Germany), although without obtaining either an extended nuclear deterrence promise (Ukraine or South Africa), nor suffering any external shock—although what Pelopidas considers to constitute a shock can be disputed, as he seemingly excludes in his definition of shocks the pressure resulting from either domestic social movements and sanctions, which put an end to South Africa's racist regime for instance. By restricting the nature of shocks to targeted assassinations and threats of military invasion, Pelopidas does not fully address the role that governmental changes, economic sanctions, or a mix of all these domestic and external factors, have really had on the state decisions to refrain from acquiring nuclear weapons.⁵ But this is a secondary concern.

Before we survey the more prescriptive and normative discussion that takes place in the second half of the book, it is important to develop some general considerations about the validity of using John Stuart Mill's—and thus Pelopidas's—methodology. For the sake of inter-disciplinary conversation, it should be noted here that there is an important debate in the field of historical sociology, at least since Charles Ragin's

³ Mill's “method of similarity” entails that one compares two historical cases that contain the same desired outcome but that nonetheless do not present the same “factors” one would expect, so as to prove that such “factors” are not necessary to produce the outcome; whereas his “method of difference” requires that one compares two cases, one of which contains the desired outcome, and the other which does not, but which nonetheless both also present a range of expected “factors,” so as to prove that such “factors” are not sufficient to produce the said outcome. John Stuart Mill, *A System of Logic, Ratiocinative and Inductive* (London: Longmans Green and Co., 1843).

⁴ Iran is discussed in much less detailed terms in this book, although arguments about massified targeted sanctions and their relation to what Pelopidas considers to constitute a shock could have made up an interesting section of the book, particularly since he takes issue with French hawks who see in the US “maximum pressure” sanctions a cause for Iran's acceptance to come to the negotiating table—an argument that is challenged by Trita Parsi, *Losing an Enemy: Obama, Iran and the Triumph of Diplomacy* (New Haven: Yale University Press, 2017).

⁵ Otherwise, quite classically, the cases of Ukraine and South Africa would have been cited on the side of “orthodox” nuclear doctrines as they suffered massive shocks in the sense of experiencing regime change.

methodological reflections were first published,⁶ which has led a large minority of “non-positivist”⁷ historical sociologists to dispute the epistemological assumptions behind Mill’s methodology. In fact, that positivist blend of history, in which Pelopidas’s monograph can be easily classified, distinguishes itself by 1) its largely uncritical use of “facts” found in second-hand literature to study multiple cases for comparative purposes, in the sense that other historians’ monographs are treated as repositories of “facts” rather than developing intellectual perspectives worth discussing on their own terms; 2) its adherence to an atheoretical approach to social sciences, in the sense that like most comparativists in the Millian tradition, he does not attempt to develop new theories of history, but rather, tests already-developed theories against the “facts” and eliminates those that do not pass the test; 3) a position of value-neutrality, as if the positionality of the author vis-à-vis broader political debates and their own trajectory could be hidden from the reader’s view. This approach has long been given the highest recognition when developed in the writings of eminent Harvard-based professors like Theda Skocpol⁸ or Peter Hall,⁹ and the two generations of scholars they trained at Harvard starting in the 1980s. In many ways, Pelopidas’s book is the product of such a collective intellectual endeavor, although there are few references to the methodological reflections developed by historical sociologists in the book.

The charge against this positivist Millian approach to comparative history has been led most famously by Berkeley Professor of sociology Michael Burawoy, who provocatively sketched the alternative by drawing from Leon Trotsky—the Marxist revolutionary—rather than Skocpol.¹⁰ Burawoy presents several reasons for abandoning Mill’s precepts. First, the second-hand reading of complex monographs—whether the topic is “revolution” in government affairs, military thinking, or the international system—for the sole purpose of extracting “facts” can be deceptive. True, the latest monographs, based on the latest archives—in Pelopidas’s book, nuclear histories of Iraq, South Africa, etc.—may provide richer understanding of the histories, but they are still the product of their time and place, and the historiography is bound to requalify beliefs we know as “facts” in the near future, making any attempt to permanently disqualify theories based on the facts of their time quite deceptive. The use of other historians’ work should rather be conceived in the discursive mode, combining attention to both new archival facts they unearth, and to the theoretical principles that guided the search for such facts as well as their interpretation.

Second, one should be wary of treating “cases” as if they were independent and only meant for the scholar to logically test existing theoretical propositions. Burawoy indeed asks historical sociologists to re-claim their right to formulate grand narratives about the evolution of world history. National-level histories which are typically treated as “cases” take place in broader dynamics of capitalism and broader evolutions of the world system—toward capitalist globalization, deglobalization,¹¹ fragmented regionalisms, etc.—, whose dialectics need to be uncovered so that we understand the dynamics of the system within which cases take their meaning. For instance, when discussing the 1789 French Revolution and the 1917 Russian Revolution—two

⁶ Charles C. Ragin, *The Comparative Method: Moving beyond Qualitative and Quantitative Strategies* (Berkeley, CA: University of California Press, 1989).

⁷ I write “non-positivist” in the sense that these historical sociologists paid particular attention not only to the changing contexts in the objects they study, but also to the changing paradigms used to study such contexts, and the interactions between the two, see Michael Burawoy, “Living in Sociology: On Being in the World One Studies,” *Annual Review of Sociology* 47 (2021):17-40.

⁸ Theda Skocpol, *States and Social Revolution: A Comparative Analysis of France, Russia and China* (New York: Cambridge University Press, 1979).

⁹ Peter Hall, ed., *Keynesianism Across Nations: The Political Power of Ideas* (Princeton, NJ: Princeton University Press, 1989).

¹⁰ Michael Burawoy, *The Extended Case Methods: Four Countries, Four Decades, Four Great Transformations, and One Theoretical Tradition* (Berkeley, CA: University of California Press, 2009), 143-192.

¹¹ Grégoire Mallard and Jin Sun, “Viral Governance: How the US Unilateral Sanctions Against Iran Changed the Rules of Financial Capitalism,” *American Journal of Sociology* 128 (1) 2022:144-188.

revolutions that Theda Skocpol studied as if they were independent from one another—Michael Burawoy argues that the main difference between them is that the latter took place after the former produced world-level effects, which makes any attempt to treat them as “independent” cases problematic.

Here, the same can be said about cases of “nuclear restraint.” The big difference between Germany in the 1970s, and South Africa in the 1990s, for instance, is that when West Germany, Italy and Japan signed the Nuclear Nonproliferation Treaty (NPT) and the “full-scope” safeguards of the International Atomic Energy Agency (IAEA) that became part of the NPT package, they not only made the decision to (temporarily) abandon the nuclear weapons option for themselves, but changed the rules of the game for every nation that would later show its willingness to abandon the nuclear option. Forever after (and even more after the NPT was permanently extended in 1995), the renunciation of nuclear weapons meant adhering to the NPT and the IAEA safeguards agreements it designated for verification of compliance, whereas before the 1970s, this definition of nuclear abandonment was not the only one available—and the NPT regime foreclosed other options.¹² Thus, whereas some nuclear historians, like Pelopidas, approach History as a repository of independent cases, others may find the global historical dynamics that make these cases to be non-independent.

Third, and last—but not least—any attempt to convince the reader that one’s approach is “value-neutral” may be problematic, at least according to Burawoy and many others. Indeed, much epistemological writing on the positionality of our theoretical viewpoints has amply showed, primarily in feminist scholarship, science and technology studies (STS), and critical race studies,¹³ that our viewpoints are often situated, and rather than claiming an impossible value neutrality, we should in fact be reflexive about our value positionality, and espouse the latter. It is easy to read in this difference between Burawoy’s and Skocpol’s approaches to social movements and activism a larger division between Berkeley’s more activist sociological tradition and Harvard’s fascination with the Ivory Tower, which, paradoxically, may be the condition for maintaining its discreet and privileged access to policymaking cabinets—a similar position that Sciences-Po’s political scientists have sought to obtain within French elite circles.¹⁴ If the book is intended to open a democratic debate in France vis-à-vis nuclear weapons, this conception of democratic debate seems to derive from an elitist conception of democracy, where the terms of the debate are given by the power holders, and the main tasks of the academic critics are to confirm or challenge their veracity—at the risk of excluding (or appearing to exclude) from their attention other (radical) discourses that are clearly more value-oriented and hence often considered as “radical.” As noted above, the next logical step for Pelopidas would perhaps be to organize a “citizen conference” on nuclear weapons policy, but he has yet to take this turn to more experimental (although still far from radical and not always that democratic) techniques of consultation and governance.

The debate within the nuclear abolitionist community between those who defend an elitist conception of democracy, which leads them to argue against the nuclear doctrines developed by the P5 (among whom Pelopidas may be the most prominent voice today) and those who defend a more radical conception of democracy, and who engage on the side of social movements—like those active in the International Campaign to Abolish Nuclear Weapons (ICAN)—whose members simply choose to discard the orthodox nuclear doctrines, and favor consciousness-raising campaigns that center around values, images, actions, which have been responsible for the adoption of the Nuclear Abolition Treaty, will certainly continue long

¹² Grégoire Mallard, *Fallout: Nuclear Diplomacy in an Age of Global Fracture* (Chicago and London: University of Chicago Press, 2014).

¹³ For a few references, see Susan Hekman, “Truth and Method: Feminist Standpoint Theory Revisited,” *Signs* 22:2 (1997): 341-365; Charles Mills, “Alternative Epistemologies,” *Social Theory and Practice* 14: 3 (1998): 237-263; Donna Haraway, “A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century,” *Simians, Cyborgs and Women: The Reinvention of Nature* (New York: Routledge, 1991), 149-181.

¹⁴ Jean Leca. “Une relecture cavalière des débuts,” *Revue française de science politique* 51:1 (2010): 5-17.

after the publication of this book. Having an “independent” scholar like Pelopidas (in the sense that he claims to never accept an “expert” contract, and not in the sense of being financially independent of academic institutions) draw from historians’ monographs some complexification of nuclear doctrines is interesting, and may be useful for the cause of disarmament. It may be more fruitful to ask original research questions that are theoretically innovative for the social sciences and humanities and better aligned with the values that one holds dear, and the liberty one has to engage with the ongoing social and academic debates, rather than concentrate on challenging military doctrines whose fabrication largely depends on the needs of the industry or military state agencies. The debate is not going to be settled with this book.

The Blind Spots of the Debate on Nuclear Weapons Acquisition as Featured in Pelopidas’s Book

Independent of whether one shares Pelopidas’s positivist epistemology or not, and his elitist approach to opening the debate about nuclear weapons acquisition and modernization, one can also critically examine some limitations in the author’s demonstration of why the French still “believe” they need nuclear weapons. Indeed, the list of arguments that Pelopidas considers worth testing and eliminating thanks to his Millian methods is not exhaustive, but surprisingly limited, as the author ignores perspectives from the social scientific works—as referenced in the footnotes of the present review—that provide very different explanations of nuclear weapons acquisition and modernization than the three main arguments developed by nuclear strategists. A more complete analysis of all arguments in favor of the French bomb may be the object of a sequel to the present book, and in the future, the author could consider other arguments, in particular the links made between the French bomb and military Keynesianism, postwar colonial wars, European integration, or the entry into the Anthropocene. Indeed, these four other dimensions are worth considering to fully explain why a country like France would not seriously consider nuclear disarmament, and they are different from the three main arguments under consideration in Pelopidas’s book.

The first argument not considered here has long been developed by political economy scholars who emphasize the role of a powerful French military industrial complex with economic interests intricately linked to government military spending. With powerful *corps d’État* deeply invested in the pursuit of modern weaponry, strong domestic forces oppose nuclear disarmament in France because producing and modernizing nuclear weapons is believed to give jobs to the French engineers and highly-skilled workers in this and many other technological fields.¹⁵ Today, private and/or public conglomerates export weapon systems that play essential parts in France’s nuclear deterrence—like the French Rafale, a version of which Dassault has exported to the United Arab Emirates, making France the third exporter of military goods behind the United States and Russia, or the submarines that Australia bought from France until it unilaterally reneged on the 55 billions euros “*contrat du siècle*” (contract of the century) in 2021 when it suddenly turned to US submarine technology. The fact that these systems—some of which could be weaponized with conventional or nuclear-armed technologies—are modernized as part of the French nuclear modernization effort may drive the confidence of foreign buyers, according to those who believe in the theory of “spin-offs” between nuclear and conventional military sectors. The French seventy-year modernization plan that Pelopidas criticizes may be therefore defended by lobbyists of the French military industrial complex as a powerful engine for the French exporting industries which compete with other conglomerates in a tight market. At times of high unemployment, with French exports in military technologies being so “successful,” French policymakers are going to think twice before disinvesting in high technology research and development associated with the modernization of nuclear weaponry.¹⁶ This argument in favor of nuclear

¹⁵ James M. Jasper, *Nuclear Politics: Energy and the State in the United States, Sweden and France* (Princeton, NJ: Princeton University Press, 1990).

¹⁶ Emanuel Adler, *The Power of Ideology: The Quest for Technological Autonomy in Argentina and Brazil* (Berkeley, CA: University of California Press, 1987).

weapons modernization has little to do with the need to “deter” the Russians, but much to do about the logics of capital accumulation, which Pelopidas excludes from the discussion, whereas the logic of monopoly capitalism and military Keynesianism has long been associated with key dynamics of the nuclear age, and should be criticized on its own terms, as the consubstantial ties between public and private interests that are assumed by such military Keynesianism inevitably foster the confiscation of the democratic debate and open opportunities for corruption of the democratic process.

The second argument is that after French losses in postwar colonial wars, the French government thought to heal the wounded French (racial) sense of military superiority by projecting their imperialistic dreams in the techno-diplomatic field.¹⁷ The French bomb was a way for governmental parties (from the Gaullists to the radicals and socialists) to reestablish the “honor” of the French nation after the political defeat inflicted by anti-colonial movements, first in Vietnam, then in Algeria.¹⁸ Some would even add that the flurry of French nuclear tests that turned the Sahara and other Pacific islands into toxic wastelands demonstrated a taste for revenge after these losses.¹⁹ Unfortunately, the link between colonial history and nuclear history is unexplored in the book. For instance, Pelopidas also does not consider that French nuclear weapons possession may still allow France to count as one member of the P5 in charge of military affairs in Western Africa, with France acting as one of the five world policeman in a post-imperial age. The fact that “orthodox” nuclear think-tankers (or the French public) do not talk about the post-colonial perspective developed by nuclear historians does not mean the topic had no place in this book,²⁰ even if the French broad public constitute his target audience. In the latter case, if racism and neo-imperialism are so important in explaining the French attachment to the bomb, and if notions of manhood and/or whiteness are at the (hidden) core of the nuclear myths, the gendered and racialized hierarchies on which such practices and discourses rest, and whose authority is reproduced through rituals of nuclear adoration, will have to be challenged if nuclear disarmament is to have a chance to happen.

The third argument that Pelopidas does not explore is also linked with world diplomatic history, but this time the context is that of European integration and its relationship with globalization, rather than post-colonial consolidation. France is not the only European nuclear weapon state that has strategically used the promise to integrate other European nations—especially Germany and Italy—in the construction of a European nuclear deterrent as a lever in critical diplomatic negotiations about the future of Europe and the articulation of its (nuclear) legal order with the global (nuclear) trade regime.²¹ When examining reasons why states have abandoned the prospect of building nuclear weapons, quite surprisingly, Pelopidas does not consider the diplomatic negotiations that led to the signature of the Nuclear Nonproliferation Treaty (NPT). The scholarly literature on the NPT and the IAEA shows that many signatory states have signed the treaty as non-nuclear weapon states only after making advances in the acquisition of dual-use nuclear technologies and getting promises from France or the UK to get a right to develop dual-use technologies. As the cases of Italy and Germany clearly show, the French promise of giving those countries a right to participate in key dual-use technological projects—especially in uranium enrichment—was so vastly important that when the Italians and Germans no longer trusted the Gaullist French government to be true to its promise to include them as

¹⁷ Gabrielle Hecht, *The Radiance of France: Nuclear Power and National Identity after World War II* (Cambridge, MA: MIT Press, 1998).

¹⁸ Lawrence Scheinman, *Atomic Energy Policy in France under the Fourth Republic* (Princeton, NJ: Princeton University Press, 1966).

¹⁹ Samia Henni, “Colonial Toxicity: France’s Architecture of Ecocide in the Sahara” (Presentation at the Graduate Institute, April 2022). On the French nuclear essays, Benoît Pelopidas’s team at Sciences-Po has published a path-breaking study of their health effects in Polynesia; see Sebastien Philippe and Tomas Stadius, *Toxique: Enquête sur les essais nucléaires français en Polynésie* (Paris, PUF, 2021).

²⁰ Gabrielle Hecht, *Being Nuclear: Africans and the Global Uranium Trade* (Cambridge, MA, MIT Press, 2012)

²¹ Mallard, *Fallout*.

equal partners in the French nuclear enrichment project, the West Germans turned to the British and Dutch government to help them create “*faits accomplis*” by creating Urenco—the nuclear enrichment conglomerate—at exactly the same time as the NPT was being discussed and entered into force. In this history, it was the destiny of the European integration project that was at stake. The important entanglements between European political integration, the creation of global trade rules, and the diplomatic negotiations in which the French (and British) often used their status as nuclear weapon states, are left completely unexplored in the book. Losing this status would mean abandoning an important, if mythical, diplomatic advantage for France at a time when the European integration project is still under defined. As we see today, each time there is a conflict in Europe, the French ritualistically invoke the notion of “European defense,” and play with the idea of extending the French nuclear deterrent to the whole of Europe to reaffirm their political and diplomatic leadership as an “ordering” power on the continent. This may be myth, but who (except for the Moderns) said that myths have no real political effects, especially alliance-producing effects? This reflection shows the extent to which the “law and society” approach to international rulemaking that takes at its heart the issue of legal pluralism in nuclear orderings could be useful to address the question of nuclear disarmament. Looking at the socio-legal entanglements in which the French bomb has been variously situated allows legal sociologists to map new ways to think about the plurality of orders that need to be disentangled so that a nuclear-free world can be imagined.

The fourth argument on why the French policymakers may not seriously consider nuclear disarmament is linked to the notion of “vulnerability” that Pelopidas discusses in his book, but within a different context. Arguments in favor of French nuclear weapons that are sometimes discussed in expert communities, is that a country that relies as heavily as France on nuclear power to produce electricity is eminently vulnerable in case of conventional warfare or terrorist attacks. Think of Ukraine today, and the blackmail that Russia has exerted on the Ukrainian (and European) population by threatening to destroy civilian nuclear reactors in Ukraine with conventional weapons. In France, there are more than fifty nuclear reactors that produce France’s largest share of electricity, making the territory highly vulnerable to any enemy which would threaten the country with military strikes on its reactors. The reason why France may need a nuclear deterrent, according to those deterrent theorists who believe that the possession of nuclear weapons ensures the “sanctity” of the national territory, would then be to protect itself from such blackmail by any nation (in the far future rather than today) or state-sponsored terrorists who would threaten to attack nuclear power plants. Such a “Maginot-like mentality” mentality being well alive in French defense community and maybe even in the French public, this reflection shows to us the necessity of linking reflections about nuclear disarmament to reflection about the Anthropocene, and the role that nuclear energy will play in the French energy mix in general in a context of increasing “vulnerabilities” of (and not just in) the French territory. On this regard, Pelopidas’s reflections on the concept of epistemic vulnerability and its relationship with democratic process seem to bear the highest promises of opening up a new field of interesting investigations.

Pelopidas may be justified in not considering these other dimensions of the problem raised by the French Bomb in his book. Although the book is very scholarly, it may appeal to the French broad public and not the academic public, especially not readers in “critical fields” and scholarship does not abide by the gospel of “value-neutrality,” like the neo-Marxist political economy scholarship, or STS, or law and society scholarship, not to mention feminist scholarship—some of whom have famously written on nuclear weaponry.²² It is odd, however, that Pelopidas does not engage with literatures in political economy, science and technology

²² Carol Cohn, “Sex and Death in the Rational World of Defense Intellectuals” *Signs* 12:4 (1987): 687-705. Taking this literature seriously, Pelopidas could have considered arguments about the association between toxic masculinity and the fact of “petting” nuclear weapons as an explanation for why the men who “control” nuclear weapons do not want to relinquish their “control” over them.

studies,²³ and law and society studies,²⁴ and that his book stays within a narrow epistemic reference community, in the sense that Pelopidas's argument is mostly oriented toward demolishing the literature produced by nuclear strategists from the P5 countries—many of whom are retired generals or contemporary think tankers—rather than engaging with other academic communities, which could have given more breadth to the book. The nuclear strategic debate is quite a narrow field, if it does not comprise scholarship coming from these other multiple disciplines and multiple perspectives. The fact that Pelopidas does not consider these other fields is problematic in that these other histories of the French bomb could expand the list of arguments explaining why French policymakers (and the public, to some extent) may cling to a problematic love of the bomb; and how to deconstruct that “love.” Rather than “opening” the debate about nuclear weapons to multiple perspectives, Pelopidas's exclusive focus on debunking strategists' doctrines risks shrinking it instead.

This reflection underlines an important risk in Pelopidas's strategy, which is to discuss (in order to criticize) the non-academic work by military and civilian strategists (or some form of policy research written by academics) that are over-represented in high-level policymaking circles and in the French military industrial complex, rather than the work of his academic peers in the social sciences— whose scholarship Pelopidas has usually engaged in his articles in English.²⁵ Doing so risks reinforcing their epistemic authority as well as delegitimizing the perspectives developed by “militant” or “activist” associations from within and outside academia: for instance, those who articulate their fight for nuclear disarmament with other fights like those in favor of reparations for victims of nuclear tests especially within communities of formerly colonial subjects. With this book, having imported into academia some debates that are mostly non-academic (dividing nuclear abolitionists and nuclear legitimists), while ignoring at the same time the questions raised by academic scholars of the nuclear age, it may not be a surprise if Pelopidas's book will gain the attention of retired generals or nuclear strategists, although the latter's ability to ignore counter-arguments and develop strategies of “willful ignorance” is at the core of their craft. But this strategy of recognition may come at the cost of hiding from the public's view the exciting academic debates in STS, international law, or international relation, which could enter into debate with more activist perspectives on nuclear disarmament—especially outside the world of think tanks in P5 countries. The related question that one may ask is whether the publication of this book has given a more critical edge to voices that seek to open a debate on the French Bomb (and the whole nuclear civilian industry in the age of the Anthropocene).

As will be clear from this review, this book will in any case enrich the debate about nuclear myths. As I hope to have suggested in this review, it does not close the debate about other dimensions (industrial, colonial, socio-legal and environmental) in the history of the French bomb, that are not addressed by the book. It also leaves open the path for other scholars who prefer to adopt the second, more anthropological approach, to myth studies, which looks at how myths participate in the making of communities understood through their

²³ Pelopidas does include a very small list of ten or so monographs at the end of the book which supposedly represent “good” work that does not fall under his criticisms (292), most of which come from the field of science and technology studies (STS)— although some work by the contributors to this forum are missing, like John Krige, *American Hegemony and the Postwar Reconstruction of Science in Europe* (Boston: MIT Press, 2008). This gesture toward only a handful of works, relegated to an Appendix, unfortunately prevents the author from engaging with this scholarship.

²⁴ For one example, see Mallard, *Fallout*. Many other works exist in international law or law and society on treaty-making practices in the nuclear non-proliferation and disarmament fields, which are not considered by Pelopidas—including works that pay attention to the Global South perspective on the elaboration of treaties like the Nuclear Nonproliferation Treaty (NPT), or the so-called Nuclear Abolition Treaty (UNODA), which could have been topical for this book.

²⁵ For only a few, see, among others, Benoît Pelopidas, “Power, Luck and Scholarly Responsibility at the End of the World(s)”, *International Theory* 12:3 (2020): 459-470; Pelopidas, “The Birth of Nuclear Eternity” in Jenny Andersson and Sandra Kemp, eds., *Futures: interdisciplinary perspectives* (Oxford: Oxford University Press, 2021), 484-500.

association with other myths about race, capital, honor or nature. If nuclear deterrence myths work like myths and not like scientific truth, the most pressing task would seem to be to understand what effects these myths produce in the societies that organize rituals around the celebration of nuclear weapons possession rather than trying to prove or disprove a limited set of assumptions about their utility once and for all. What kinds of social functions do these myths of nuclear grandeur and control play in the French political imaginary, which explains why their gripping power is left unchallenged, even though no one “believes” in the veracity of nuclear deterrence doctrines? These are questions not asked by Pelopidas, but which others could answer. In any case, we can only hope that this book will help place the discussion back on the agenda, at a time when unfortunately, Russian President Vladimir Putin’s nuclear threats have given heightened policy relevance to the question of when and why states make certain decisions regarding the acquisition or abandonment of nuclear arsenals.

 Response by Benoît Pelopidas, CERI, Sciences Po

I am delighted that H-Diplo decided to organize a roundtable on my book *Repenser les choix nucléaires* even before I have completed an English version of it. The book just won an award in France for Best Geopolitical Book of the Year and has been very favorably reviewed by fellow scholars in France as well as by General Bernard Norlain; I am keen to receive feedback from abroad.¹ I am all the more grateful to Matthew Evangelista, Beatrice Heuser, John Krige, Lori Maguire, and Grégoire Mallard for their thorough engagement with it. Their comments, suggestions, and criticisms are important and precious, as this book is the outcome of twelve years of research and part of a much broader project to make independent research on global nuclear history possible in France. They are also particularly relevant in the context of the current war being waged in the shadow of nuclear threats, which started after I completed the writing and has now been ongoing for a year and a half. A broader element of context is worth mentioning, which is the continued and increasingly clear struggle between two possible futures: one in which nuclear weapons remain and act as security guarantors, and one in which they have been abolished because they have been understood to be security problems. The first one is manifested by the plans of nuclear weapons states to modernize their arsenals for several decades, and the second one took an institutional form with the Treaty on the Prohibition of Nuclear Weapons which entered into force in 2021.

I will therefore articulate my reply along two lines: I will restate the purpose, scope, and intended contributions of the book first, and will then engage with the issues of political possibility and scholarly responsibility in conversation with my reviewers, citing evidence that I have found since the submission of the book manuscript a few years ago.

Repenser les choix nucléaires as a Defense and Illustration of Independent Scholarship on Global Nuclear Weapons Policy

The main purpose of this work is to recreate the possibility of democratic choice on nuclear weapons policies based on a clear series of alternatives that are grounded in consistent justifications.² It is perhaps best defined as a “plea for transparency and democratic deliberation on nuclear-weapons policy” in Evangelista’s words. My “concern is that the ‘justifications’ offered by the nuclear weapons establishment (notably, but not only, in France), and their ‘expert’ advisers, presume what they are supposed to establish” as Krige writes.³ That

¹ The two most in-depth reviews so far have been Christine Fassett’s in *Revue européenne des sciences sociales*, 61:1, 2023, 284-288 and Mathieu Calame’s « Parler (enfin) de la bombe », *La vie des idées*, 9 January 2023, available at <https://laviedesidees.fr/Parler-enfin-de-la-bombe>; Bernard Norlain, note de lecture sur *Repenser les choix nucléaires*, *Revue de Défense Nationale* n°852, été 2022, p. 199-202, available at <https://www.defnat.com/e-RDN/vue-article.php?carticle=22961> and « Prix de l’essai géopolitique de l’ILERI », <https://www.ileri.fr/prix-de-lessai-geopolitique-laureat-2023/>.

² I gave a detailed presentation of it at the Center for the Study of Existential Risk (CSER) at Cambridge University on 14 June 2023. A video is available here <https://www.youtube.com/watch?v=rP0N6B1moRU>.

³ This is why I did not engage with the argument suggested by Professor Mallard that proponents of French nuclear weapons may reason that they deter countries without nuclear power from attacking the numerous French nuclear power plants. I am not aware of anyone claiming this in France or anywhere else. Three remarks may be of interest on this argument. First, nuclear weapons are not a necessary deterrent in that case, but items that some actors value as a necessary deterrent while others do not. Out of the thirty-three countries with nuclear power on their territory, only six have built and kept nuclear weapons (United States, Russia, the UK, France, China, India, Pakistan), one has built and dismantled a small nuclear arsenal (South Africa) and thirteen have never pursued nuclear weapons (Armenia, Belarus, Belgium, Bulgaria, Czech Republic, Finland, Hungary, Lithuania, Mexico, The Netherlands, Slovenia, Slovakia, United Arab Emirates) Mycle Schneider et. al., *World Nuclear Industry Status Report 2022* fig. 1, 38. Second, as suggested in the book, building on the work by Harald Mueller and Andreas Schmidt, most states have given up on their weapons

creates two democratic problems: a mismatch between the proposed policies and the publicly available justifications for the arsenals built and a sense that alternative policy options are superfluous, impossible, or undesirable. In scholarship, these problems take the form of at least four gaps between accepted knowledge and available evidence.

Four Gaps in the Scholarship and Why They Matter

First, Lynn Eden, Georges Le Guelte, Beatrice Heuser, and other colleagues have established a systematic disconnect between either the doctrines or public justifications of nuclear arsenals on the one hand, and the arsenals actually built on the other.⁴ This disconnect, which is observable across nuclear-weapons states, is entirely ignored by the return of rationalism and “grand strategy” as modes of explanation for nuclear weapons related behavior in nuclear security studies.⁵

Second, the field of nuclear security studies has been excessively focused on the phenomenon of horizontal proliferation at the expense of the phenomenon of nuclear renunciation and nuclear vulnerabilities. At the same time, the fields of critical security studies and international political sociology have largely neglected nuclear weapons and their consequences with the exception of a special issue of *Critical Studies on Security* in 2016 and one in *International Affairs* in 2022.⁶

Third, while after US Secretary of State Dean Acheson talked about “plain dumb luck” as a way of explaining the non-violent outcome of the Cuban Missile Crisis in a 1969 interview with *Esquire*, policymakers and members of the military have made claims about the role of luck in the absence of unwanted nuclear explosions, the different fields of nuclear studies have not made the epistemological and methodological

program after acquiring a research reactor, which would have been a decisive component of a military program (92-94). So, this desire to protect nuclear reactors with nuclear weapons does not seem to be present even when research reactors to be protected have been built and make it easier to build weapons supposed to protect them. Third, what we see is the opposite of Mallard’s argument, i.e. the invocation of supposed requirements of the nuclear weapons programs as ways to justify nuclear power programs. In France, in 1962, the construction of the Pierrelatte uranium enrichment facility was justified by claimed requirements of the thermonuclear program which turned out not to be required (267-8). On 8 December 2020, at the Creusot factory, President Emmanuel Macron rejected the distinction between civilian and military uses of nuclear technology and emphasized the complementarity, stating: “without civilian applications of nuclear technology, no military applications of nuclear technology.” <https://www.youtube.com/watch?v=fEyxT3bSPMk> (18’55 to 20’22s) This was not improvised by the President; those are the words written in the [prepared version of the speech](#). It would be interesting indeed to investigate further how lock in effects have been created across time and space.

⁴ Lynn Eden, “The U. S. Nuclear Arsenal and Zero: Sizing and Planning for Use - Past, Present, and Future,” in Catherine McArdle Kelleher and Judith Reppy, eds., *Getting to Zero: The Path to Nuclear Disarmament* (Palo Alto, Calif.: Stanford University Press, 2011), 69-89; See also Fred Kaplan, *The Bomb: Presidents, Generals, and the Secret History of Nuclear War* (New York: Simon & Schuster, 2020), 2; Georges Le Guelte, *Armes nucléaires: Mythes et réalités* (Arles: Actes Sud, 2009); Beatrice Heuser, *Nuclear Mentalities* (London: Palgrave, 1998); Richard Moore, *Nuclear Illusion, Nuclear Reality: Britain, the United States and Nuclear Weapons 1958–1964* (Basingstoke: Palgrave, 2010).

⁵ See among many others, the works by Francis J. Gavin and Matthew Kroenig on US grand strategy and nuclear weapons and those by Alexander Debs and Nuno Monteiro: Francis J. Gavin, *Nuclear Weapons and American Grand Strategy* (Washington D.C.: Brookings Institution Press, 2020) and Matthew Kroenig, *The Logic of American Nuclear Strategy. Why Strategic Superiority Matters* (Oxford: Oxford University Press, 2020); and Debs and Monteiro, *Nuclear Politics* (Cambridge: Cambridge University Press, 2016).

⁶ A special issue of *Critical Studies on Security* (4:1), 2016 was entitled “Nuclear Politics: Beyond Positivism,” and there was also a 2022 special issue of *International Affairs* (Feminist Interrogations of Global Nuclear Politics) 98: 4 (July 2022): 1129-1288.

moves that would allow them to assess the role of luck in nuclear policy.⁷ Instead, they are written as though the issue either does not matter or is settled. Within the historical discipline, the allergy of most diplomatic historians to the counterfactual methodology is often turned into unwarranted causal claims suggesting that luck did not play a role or that this type of role could not possibly be measured (208-213).⁸

Fourth, and finally, studies of democracy and studies of nuclear weapons have largely operated in mutual neglect since the end of the Cold War. As a result, the possible effects of the institutionalization of nuclear weapons on the possibility of democratic governance remain unknown and under-researched.

This leads me to a few additional peculiarities of the French-speaking nuclear field. Academia has given up on nuclear weapons issues beyond diplomacy and international law. No article on the possibility of nuclear war has been published in any premier social science journal in French since 1995.⁹ Not one. The most substantive treatment was published in a work of philosophy, not in political science.¹⁰ There is no freedom of information act in France, and a July 2008 law substantively limits access to nuclear-related primary sources in the name of non-proliferation. Discourse on the matter has been largely monopolized by think tanks, which are almost exclusively funded by state institutions that are in charge of nuclear weapons as well as manufacturers of the French nuclear arsenal even though a few nuclear disarmament activists are also occasionally vocal on the matter.

It is true that a strand of diplomatic history has unearthed and documented important elements of the story of nuclear weapons in France, but when academics address those issues, categories of the official discourse are commonly incorporated in analysis as if they were neutral analytical categories, as I demonstrate in chapters 6 and 7 of the book, and the boundaries of available knowledge such as the absence of a freedom of information act are simply acknowledged and accepted.¹¹ As a result of such faith in the sacrality of nuclear weapons, it seems normal that scholarly standards cannot be applied to nuclear weapons in the way that they are applied to other objects. For instance, in France, claims of a “French consensus” about nuclear weapons policy have been repeated without any independent survey being conducted on the matter.¹² Claims about the

⁷ Dean Acheson, “Dean Acheson’s Version of Robert Kennedy’s Version of the Cuban Missile Affair,” *Esquire*, February 1969, 44-45, 76-77.

⁸ This is visible in the many claims about nuclear weapons causing peace, from John Lewis Gaddis’s “long peace” onwards (“The Long Peace: Elements of Stability in the Postwar International System”, *International Security* 10:4 [1986]: 99-142), which have been formulated without assessing claims about the role of luck as though such an assessment were unnecessary, impossible or both. The recent contributions of Martin Sherwin and Serhii Plokhy – (*Gambling with Armageddon. Nuclear Roulette from Hiroshima to the Cuban Missile Crisis* (New York: Albert A. Knopf, 2020) and Serhii Plokhy, *Nuclear Folly. A New History of the Cuban Missile Crisis* (New York: Allen Lane, 2021) – stand out in their attempt at taking the role of luck seriously in nuclear history. Additional evidence for the inadequate treatment of luck can be found in Richard Ned Lebow and Benoît Pelopidas, “Facing Nuclear War. Luck, Learning and the Cuban Missile Crisis” in Mlada Bukovansky, Edward Keene, Christian Reus-Smit, and Maja Spanu (eds.), *Oxford Handbook of History and International Relations* (Oxford: Oxford University Press, 2023): 705-720.

⁹ This assertion is based upon a search of the tables of contents of *Revue Française de Science Politique, Politix, Cultures & Conflits, Raisons politiques, Critique internationale, Revue suisse de science politique* and *Revue canadienne de science politique* since 1995.

¹⁰ Jean-Pierre Dupuy, *La guerre qui ne peut pas avoir lieu* (Paris: Desclée de Brouwer, 2019), forthcoming in English as *The War that Must Not Occur* (Stanford: Stanford University Press, 2023).

¹¹ Dominique Mongin, *La bombe atomique française 1945-1958* (Paris: LGDJ, 1997), foreword by Admiral Marcel Duval.

¹² Among many examples cited in the book, Dominique Mongin, “La dissuasion nucléaire a-t-elle encore un avenir?”, *Esprit*, 7-8, July-August 2018, 202.

credibility and rationality of French nuclear strategy have similarly been repeated for three decades.¹³ Key questions remain unasked.

Repenser les choix nucléaires *as an Illustration of Nuclear Knowledges' Two Commitments to Address those Flaws*

In order to address these gaps between stated knowledge and evidence, I thought that two commitments were necessary. They are the defining features of this book as well as its companion volume, *Toxique*, by Sébastien Philippe and Thomas Stadius, which was published a year earlier, and more broadly of the *Nuclear Knowledges* program since its foundation in 2017.¹⁴

First, given that existing knowledge production practices in France have normalized a conflict of interest, excluded nuclear weapons issues from academia, and treated them as sacred, it was crucial to categorically avoid such conflicts of interest and only seek funding on the basis of scholarly merit and peer-review. One would then see whether that made it possible to apply normal scholarly standards to this object. This is where Grégoire Mallard fundamentally misunderstands the nuclear weapons policy field in general and the French context in at least three ways which distort his analysis of the book. He does not discuss, and, as a result, underestimates the problem of, conflicts of interest and the attempts at policing the writing of nuclear history when he writes that: “in academia, one is not only free to choose the answers to certain questions [...] but to choose the questions themselves.” Since the publication of the book, additional attempts at delegitimizing any assessment of French nuclear weapon policy beyond blind validation of the desires of French elites have been published¹⁵ as well as additional evidence of the effects of conflicts of interest on the production of nuclear weapons policy analysis in think tanks.¹⁶ Krige’s review reveals much greater awareness of this problem as he writes about the “betrayal of intellectual autonomy in a country known for its intellectual giants in the social sciences.” Mallard is certainly correct that reflexivity is crucial, but he wrongly assumes that the conditions for the possibility of reflexivity were always already there.

As I discuss above, in France, they were not. It is exactly why I chose to establish the program there and to write this book in French first. Mallard similarly has it backwards when he worries that the framework of the book may delegitimize “those in favor of reparations for victims of nuclear tests especially within communities of formerly colonial subjects.” On the contrary, one of the key resources of such victims in their quest for reparation has been the findings of Sébastien Philippe in *Toxique*, which he co-wrote while he was an affiliated researcher with the *Nuclear Knowledges* program and in line with the ethos of interdisciplinary and independent scholarship I describe above as defining the program. The two books are companions and pillars

¹³ Among many examples cited in Christian Malis, *Pierre Marie Gallois. Géopolitique, histoire, stratégie* (Lausanne: L’Âge d’homme, 2009), 411; Avery Goldstein, *Deterrence and Security in the 21st Century: China, Britain and France and the Enduring Legacy of the Nuclear Revolution* (Stanford: Stanford University Press, 2000), 184; Vipin Narang, *Nuclear Strategy in the Modern Era* (Princeton: Princeton University Press, 2014), 2 and Debs and Monteiro, *Nuclear Politics*, 418–36.

¹⁴ Sébastien Philippe and Thomas Stadius, *Toxique. Enquête sur les essais nucléaires français en Polynésie* (Paris: PUF, 2021). In English, the main results are summarized on the platform *Moruroa Files* and in the article by Sébastien Philippe, Sonja Schoenberger and Nabil Ahmed, “Radiation Exposures and Compensation of Victims of French Atmospheric Nuclear Tests in Polynesia,” *Science and Global Security* 30:2 (2022): 62–94.

¹⁵ Dominique Mongin and Maurice Vaïsse, Reply to the article “Unfit for purpose,” *Cold War History* 23(3), 2023 <https://www.tandfonline.com/doi/abs/10.1080/14682745.2023.2207316> and our reply documenting blind validation of official discourse and attempts at limiting and policing scholarship: <https://www.tandfonline.com/doi/full/10.1080/14682745.2023.2207314?src=recsys>

¹⁶ Kjølv Egeland and Benoît Pelopidas, “No Such Thing as a Free Donation. Research Funding and Conflict of Interest in Nuclear Weapons Policy Analysis,” *International Relations* (December 22, 2022), online first.

of the program.¹⁷ Third, and finally, Mallard's concern that proponents of alternative nuclear weapons policies may be delegitimized by an approach in terms of value neutrality wrongly assumes that they are not already delegitimized as utopian, incompetent, dangerous, or futile.¹⁸ The purpose of rethinking the role of the public intellectual as a mediator to create a debate between competing imagined futures consistently is to open a space in which the voices of proponents of alternative nuclear policies can be heard on an equal footing, an opportunity they so far have not had. It does not validate their position but certainly does not delegitimize them.¹⁹

The second key commitment that gave birth to the *Nuclear Knowledges* program consisted in creating an interdisciplinary team and research program that would avoid the blind spots of each discipline outlined above so as to ask the key questions articulated above. In order to assess the disconnect between the justifications and the arsenals which were actually built, we started with the French case, for which that remained to be done. To do so, I joined forces with a nuclear physicist and engineer—Dr Sébastien Philippe—so as to be able to assess the performances of the French nuclear arsenal and cross technical analysis with primary sources from around the world instead of relying on stated intentions and the limits of available French archives. On the flip side of assessing this disconnect, in the concluding chapter of *Repenser les choix nucléaires*, I tried to identify which set of justifications would be consistent with the policy being pursued and the arsenal actually being built.

In order to counter the excessive focus on “horizontal proliferation” that characterizes the field, I problematized the effects of an understanding of history that would naturalize proliferation as inevitable and offered to investigate nuclear vulnerabilities more broadly, in their material as well as epistemic dimensions. This opens a space to think about the challenges of imagining the possibility of nuclear war and to bring nuclear weapons issues back into critical security studies. Mallard's claim that the book's “epistemic reference community” is “the literature produced solely by nuclear strategists—many of whom are retired generals or contemporary think tankers” is mistaken. Evangelista disagrees in his review, as do I, given the persisting importance of the “proliferation paradigm” within positivist security studies and most of diplomatic and Cold War history.

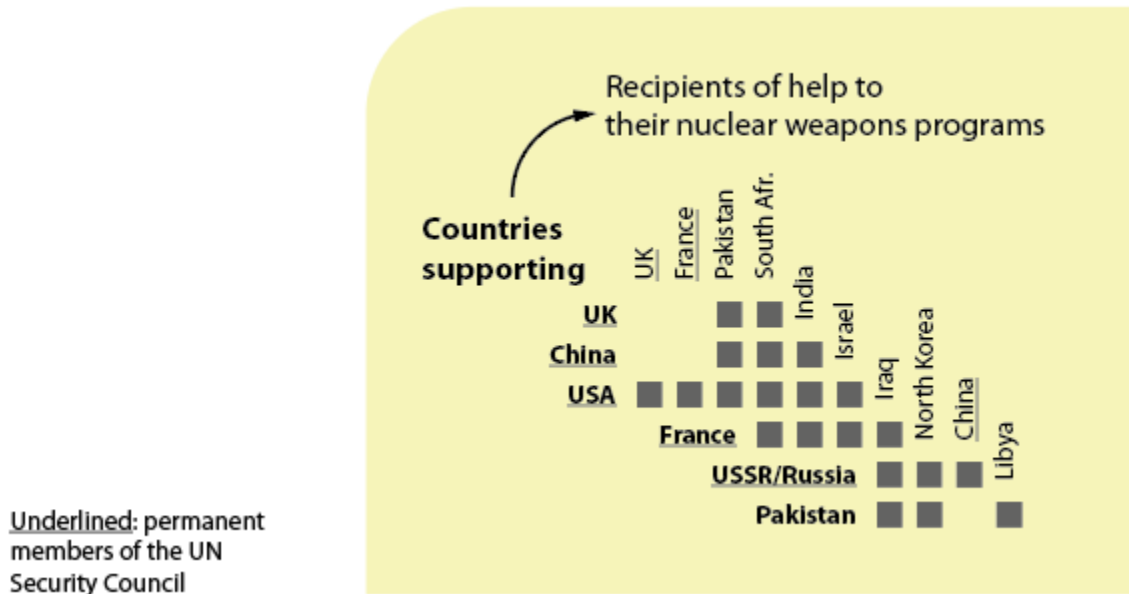
I would claim that beyond academia, the fact that this belief persists in the French press and public opinion, as demonstrated in the book, makes it worth engaging with. The stated purpose of the book is to make democratic choice possible on this matter for elected officials or, as Evangelista observes, to “reach a broader public audience in order to inform a policy debate.” This critical engagement with the proliferation paradigm has also allowed me to show that no nuclear-armed state today has acquired this status without the help of at least one state that is recognized as a nuclear-weapon state under the 1970 Treaty on the Nonproliferation of Nuclear Weapons (NPT) and permanent member of the UN Security Council. I have also established that

¹⁷ The program's website shows it clearly <https://www.sciencespo.fr/nk/en> and the two books reference each other. *Toxique* cites *Repenser les choix nucléaires* under an earlier title on page 11 footnote 1 and is cited in *Repenser les choix nucléaires* footnote 10, on page 101 and again, in detail, with praise in footnote 74 page 241 and footnote 84 page 246.

¹⁸ Multiple examples of such stigmatization of proponents of alternative nuclear weapons policies can be found in this paper: Pelopidas, “Re-imagining Global Nuclear Ordering beyond Proliferation and Deterrence,” https://posse.gatech.edu/sites/default/files/pubfiles/Pelopidas_Re-imagining_POSSE2015.pdf

¹⁹ Mallard is right that the book does not explore the issue of European nuclear weapons and how they relate to future and democratic possibilities. My colleague Kjølv Egeland and I had published an article on this subject which Evangelista engaged with in his extensive review. I should explicitly re-mobilize it for the English version of the book. Kjølv Egeland and Benoît Pelopidas, “European Nuclear Weapons. Zombie Debates and Nuclear Realities,” *European Security* 30:2 (2021): 237-258. I did not explore military Keynesianism because my colleague Claude Serfati has done it very convincingly in a series of books. Claude Serfati, *Le militaire. Une histoire française*. (Paris: Amsterdam, 2017) and Serfati, *L'Etat radicalisé* (Paris: La Fabrique, 2022) chap. 3.

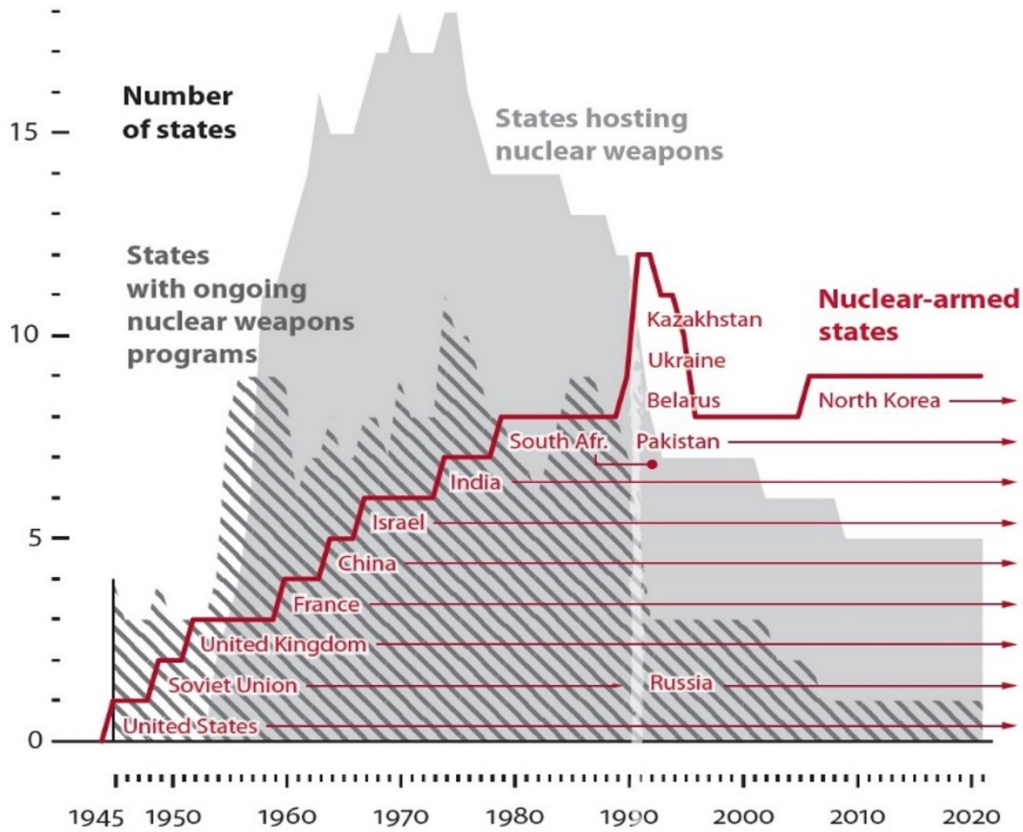
none of the Permanent members of the UN Security Council has a clean track record when it comes to horizontal proliferation. This finding from the book builds on and is indebted to collaborations with Jayita Sarkar and Anna Konieczna on French-Indian and French-South African nuclear and strategic relations as well as work with Avner Cohen to update his classic book on Israel and the bomb.²⁰ Beyond that, framing the problem of the spread of nuclear weapons as a “proliferation” problem shifts the focus towards the demand side of the problem and it retrospectively makes invisible the P5’s responsibility for this. (72-80, 105-107 and 254 for detailed evidence and the graph below.)²¹



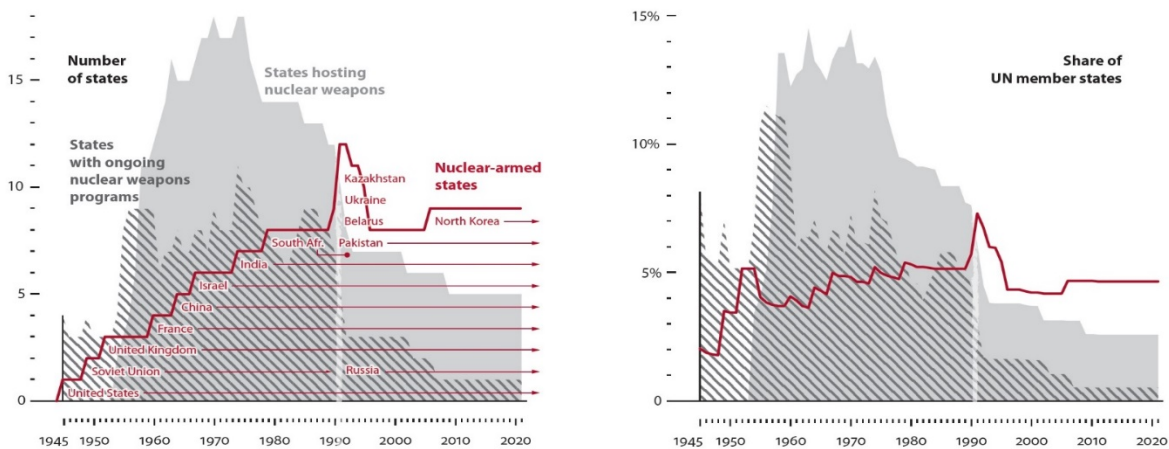
My point is certainly not to make the claim that each of those cases are “independent and only meant for the scholar to logically test existing theoretical propositions” as Mallard suggests. It is instead to shed light on the fact that at least 143 states have never been interested in nuclear-weapons production and that the absence of the ability to do so cannot explain the phenomenon. The assumption of the inevitability of proliferation is therefore unwarranted. It also serves to demonstrate that contrary to common claims, the pace of horizontal proliferation after the Cold War has been unprecedentedly slow, regardless of which metric one uses to measure it (see graphs below). As I am revising this in mid-September 2023, a year and a half after the publication of the book, the point still stands.

²⁰ Anna Konieczna, “Nuclear Twins: French-South African Strategic Cooperation (1964-79),” and Jayita Sarkar, “From the Dependable to the Demanding Partner: The Renegotiation of French Nuclear Cooperation with India, 1974–80,” both of which were published in a special section of *Cold War History* 21:3 (2021): 283-300; 301-318; and Avner Cohen, *Israël et la bombe: l’histoire du nucléaire israélien* (Paris, Demi-Lune, 2020), 129-133. Those are pages which have been added by the author for the French translation of the book.

²¹ I am grateful to cartographer Benoît Martin who has done fantastic work on the graphs for the book and the English translation here.



Nuclear weapon programs in the world 1945-2021



Note: once a state has nuclear weapons, it is no longer counted as having programs.
 Sources: H. M. Kristensen, « Where the Bombs Are », Federation of American Scientists, 9 nov. 2006 ; M. Fuhrmann and T. S. Sechser, « Signaling Alliance Commitments », *American Journal of Political Science*, 58 (4), 2014, p. 919-935 ; R. S. Norris, W. M. Arkin and W. Burr, « Where they Were », *Bulletin of the Atomic Scientists*, 55 (6), 1999, p. 26-35 ; E. N. Rózsa and A. Péczelli, « Nuclear Attitudes in Central Europe », *Non-Proliferation Papers*, 42, 2015 ; S. D. Sagan, « The Causes of Nuclear Weapons Proliferation », *Annual Review of Political Science*, 14, 2011, p. 225-244.
 Updated by Benoit Pelopidas, *Nuclear Weapons Knowledge program (CERI)*
 © Atelier de cartographie/Sciences Po, octobre 2021



Mallard has interesting things to say about the causes of nuclear weapons choices and how one should treat myths and the role of global capitalism. Those are however outside the scope of the book I intended to write. As building blocks towards alternatives to the proliferation paradigm's unwarranted assumptions of nuclear protection, desirability of nuclear weapons, and perfect control over them, the second part of the book offers three categories: vulnerability, renunciation, and luck. Krige's review sheds light on what an engagement with nuclear realities in terms of vulnerability allows. I also redefine the role of the public intellectual as a mediator that makes a debate between different nuclear futures possible and shows how consistent bets on the future that underpin existing nuclear weapons policies fundamentally differ from publicly available justifications. My "concern," as Krige argues "is that the 'justifications' offered by the nuclear weapons establishment (notably, but not only, in France), and their 'expert' advisers, presume what they are supposed to establish."

Tackling the issue of luck required multiple efforts. The first was a conceptual effort to define lucky cases of the absence of unwanted nuclear explosions distinctively, as cases that cannot be reduced to the success of control practices. Lucky cases can take three forms: cases in which the desired outcome required something that is *independent from* any control practice; cases in which the desired outcome happened *in spite of* and not because of practices of control; and cases in which the desired outcome happened *thanks to the failure* of control practices. Only the second type is a sign of robustness of the systems preventing unwanted nuclear explosions, but even it cannot be treated as a success of control.²² Once I had conceptualized the opposition between lucky and controlled cases of unwanted nuclear explosions, an empirical effort was necessary, based on archival research and interviews aimed at assessing whether each case was going to be a case of control or a case of good luck. This finally required rigorous use of the counterfactual methodology. I am delighted that all the reviewers find this effort convincing, with Heuser clearly and strongly stating that, on the role of luck in the avoidance of unwanted nuclear explosions, "one cannot but agree" with my argument. This has profound implications for the justifications as well as the study of nuclear weapons policies.

Reconnecting nuclear studies with studies of democracy required articulating the commitments that the nuclear state assumes its citizens have made. On that basis, one can survey citizens in a meaningful way about their attitudes and not simply ask them whether they support the existing policy. By bringing in public opinion researchers to design and conduct surveys that do not have the biases of official polls, we have started work on this reconnection.²³ We have also established that the claims of a consensus around nuclear weapons policy in France or the UK are not sound. The book is based on our first two surveys and I am delighted that no reviewer disputes this finding of absence of consensus in the present or the past. I would only disagree with Heuser's claim that "governments' decisions roughly fitted their populations' majority views." They did not in France, and I rely on the work of Michal Onderco, Michal Smetana, Stephen Herzog, and Rebecca Gibbons to show that they did not in Germany or Japan either (233).²⁴

²² Early formulations of this typology in English can be found in my "Power, Luck and Scholarly Responsibility at the End of the World(s)," *International Theory*, 12:3 (2020): 463.

²³ Thomas Fraise's PhD dissertation *Restricted Democracies. Nuclear weapons, secrecy and democracy in the United Kingdom, France and Sweden (1939-1974)* (Paris, Sciences Po, 2023) is a key contribution to this effort.

²⁴ Additional evidence that the French public did not agree with the government policy even in the 1960s could be found in Karl W. Deutsch, "Integration and Arms Control in the European Political Environment: A Summary Report", *American Political Science Review* 60:2, 1966, 363. This is consistent with the views of Jean Monnet and Robert Bowie in 1961 and 1962. During a dinner at his house on 15 December 1961, the former reportedly told US Diplomat Russell Fessenden that "the majority of thinking people in France today do not favor [the nuclear weapons program]." Russell Fessenden, "Memorandum for the record," December 15, 1961

Overall, nuclear-weapons related issues can be subjected to the same scholarly standards as any other object of enquiry provided that one avoids conflicts of interest and does not let disciplinary boundaries get in the way of important questions.

Thinking about Future Possibilities with the Reviewers of My Book

Heuser ends her review with a dilemma for the foreseeable future or at least for as long as the next generations of nuclear weapons are supposed to last. The dilemma derives from the following challenge: “How...does one deal with...a nuclear-protected aggressor, when he does not abide by the rules of non-aggression set down in the UN’s Charter?” she asks. She concludes her review with the statement that “no argument in favour of nuclear divestment can ultimately be convincing unless a convincing alternative solution to this dilemma can be found.” In other words, the possibility of a “nuclear-protected aggressor” who does not abide by the rules of the international order would force leaders of today to keep their nations’ nuclear weapons given the weapons’ capacity to protect national territory from aggression and the leaders’ double goal of avoiding nuclear war as well as large scale war and invasion. Overlooking this fact would be a flaw in my argument. I don’t think it is a fact. Instead, it is what I would call a pro-nuclear weapons utopia, widely shared among nuclear optimists. Indeed, it only makes sense only if one accepts three pro-nuclear weapons assumptions about the shape of the future.²⁵

First, it assumes that no existential disaster that could affect France, and turn nuclear weapons into opportunity costs if not liabilities, would take place *before* the “nuclear protected aggressor” invades.²⁶ In the nuclear weapons realm, that means no nuclear war between India and Pakistan that could trigger a nuclear winter affecting food supplies in Europe, no unwanted explosion in the French nuclear arsenal, either accidental or caused by terrorists, no inadvertent escalation between nuclear-armed adversaries such as the US and Russia or the US and China in which France would be impacted in ways that would make the possibility of a later invasion much less relevant.²⁷ Beyond that, it assumes that no non-nuclear existential disaster will make a significant part of France uninhabitable before the “nuclear protected aggressor” invades. If it does by the end of the lifetime of the generation of nuclear weapons we are building now, that would be 2090. By then, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) as well as the Intergovernmental Panel on Climate Change (IPCC) and scholarship about possibilities for

<https://www.jfklibrary.org/asset-viewer/archives/JFKNSF/375/JFKNSF-375-005>. A few months later, on March 15, 1962 in a meeting with JFK’s national security team, Director of Policy Planning Robert Bowie reportedly claimed that “The French were by no means united in their support for a national nuclear capability. This was the idea of [President Charles] de Gaulle and a rather small group around him. Many other Frenchmen opposed it.” “Memorandum of Meeting, Washington, March 15, 1962, 5–5:30 p.m.” in Charles S. Sampson and James E. Miller (eds.), *Foreign Relations of the United States* (Washington D.C.: United States Government Printing Office, 1994), vol. XIII doc 130, 366, available at <https://history.state.gov/historicaldocuments/frus1961-63v13/d130>. Many thanks to Austin Cooper and Debak Das for bringing those documents to my attention. Michal Smetana and Michal Onderco, “German Views on US Nuclear Weapons in Europe: Public and Elite Perspectives,” *European Security* 30:4 (2021): 630-648; Jonathon Baron, Stephen Herzog, and Rebecca Davis Gibbons, “Japanese Public Opinion, Political Persuasion and the Treaty on the Prohibition of Nuclear Weapons,” *Journal of Peace and Nuclear Disarmament* 3:2 (2020): 299-309.

²⁵ In order to keep this short, I will accept the assumption that an entity will want to invade France between now and 2090, but one does not have to accept it.

²⁶ Proponents of this argument could also be thinking in probabilistic terms and simply assume that invasion is more likely than existential disasters of equal significance in the face of which nuclear weapons would be liabilities or opportunity costs in the considered timeframe. Given the elements listed in this paragraph in terms of probable catastrophic climate change and the established role of luck in the avoidance of unwanted nuclear disasters so far, this probabilistic assumption would also appear as pro-nuclear.

²⁷ Lili Xia et. al. “Global Food Insecurity and Famine from Reduced Crop, Marine Fishery and Livestock Production Due to Climate Disruption from Nuclear War Soot Injection,” *Nature Food* 3 (2022): 586-596.

catastrophic climate change between now and then suggest that this is an optimistic assumption. It is worth remembering that in its Sixth Assessment Report, the IPCC notes that fifty to seventy-five percent of the global population could be exposed to life-threatening climatic conditions by the end of the century due to extreme heat and humidity.²⁸ So, the future scenario which Heuser seems to present as unavoidable is a pro-nuclear utopia because it assumes that large scale nuclear harm will not happen in the next 70 years and overlooks the fact that in a very deteriorated environment such as the one foreseen by the IPCC and adjusted for compound hazards, guaranteeing the safety and security of nuclear weapons will require resources that will be badly needed for the well-being of the planet's populations.

Second, the related claim that the future possibility of a nuclear-armed aggressor alone justifies keeping existing French nuclear forces assumes that nuclear weapons would be *necessary* to deter the “nuclear protected aggressor.” Geography would not be enough. For France, the only currently conceivable “nuclear-protected aggressor” is Russia. In order to reach the French border, the Russian military would need to invade or at least cross Poland and Germany, Belarus, or Ukraine, or Latvia and Lithuania. To make the case that geography would not be sufficient to deter a Russian invasion of France, one has to treat as irrelevant that even in the face of very severe crises in 1956 and 1981, the Soviet military decided not to invade Poland, let alone Germany. One would have to further assume that US nuclear weapons based in Germany as well as NATO conventional forces would not be sufficient to stop a Russian invasion. What could pass for a fact appears as a pro nuclear utopia upon closer examination as it assumes that only nuclear weapons could achieve the desired objectives. Norway and Denmark did not accept that as fact. They were also occupied during World War II but chose not to develop or host nuclear weapons on their soil since then and were not invaded by Russia in spite of the fact that they are much closer than France. The absence of fear of land invasion is not a necessary condition to renounce nuclear weapons that would modify the validity of the book's argument. Sweden, Finland, Norway during the Cold War, Ukraine and Kazakhstan post-Cold War, had an intense fear of invasion but did not build or keep nuclear weapons.²⁹

²⁸ Luke Kemp, Chi Xu, Joanna Depledge, Kristie L. Ebi, Goodwin Gibbins, Timothy A. Kohler, Johan Rockström, Marten Scheffer, Hans Joachim Schellnhuber, Will Steffen, and Timothy M. Lenton, “Climate Endgames: Exploring Catastrophic Climate Change Scenarios,” *Proceedings of the National Academy of Sciences* 119:34, (2022): 1-9, here 5. Recent research has shown that IPCC predictions are largely blind to accelerating factors towards catastrophic effects of three kinds: the possibility that higher temperatures cross tipping points beyond which dynamics towards much worse outcomes could be triggered, the possibility of “synchronous failures” in different sectors leading to a systemic deterioration, such as synchronous “breadbasket failures” and the possibility that those cascading disasters could be aggravated by human responses to them. The loss of carbon sinks and the re-release of large quantities of CO₂ that have been absorbed so far due to intense droughts and fires in the Amazon as well as the thawing of the arctic permafrost are possible tipping points not considered in most predictions for instance.

As Adriana Petryna observes, “climate research has focused on producing linear extrapolations from recent history that imply a false sense of stability. The study of change in various fields, from biology and ecology to economics, is often predicated on the assumption that transitions are smooth. The statistical unlikelihood of stair-step, nonlinear, or abrupt transitions has lulled us into thinking that they are impossible. [...] The scenarios hide magnitudes of peril that climate science cannot anticipate.” Adriana Petryna, *Horizon Work. At the Edges of Knowledge in an Age of Runaway Climate Change* (Princeton, Princeton University Press, 2022), 24, 34. On the fact that foreseeing tipping points may not be possible, see Miguel Centeno, Peter Callahan, Paul Larcey, Thayer S. Patterson, “Globalization and Fragility. A Systems Approach to Collapse” in Miguel Centeno, Peter Callahan, Paul Larcey, Thayer S. Patterson, eds., *How Worlds Collapse. What History, Systems, and Complexity Can Teach Us About Our Modern World and Fragile Future* (London: Routledge, 2023), 13. And this is only looking at CO₂ emissions and climate, i. e. one of the nine planetary boundaries that make human life on earth livable, ignoring others such as biodiversity, which is currently collapsing at unprecedented rates.

²⁹ Kazakh elites were worried about the Northern parts of the country being invaded because they had predominantly Russian population. Indeed, a member of the Russian parliament claimed that the Gur'yev (now Atyrau)

Third, the claim that nuclear weapons need to be kept in order to avoid land invasions assumes that the nuclear weapons that the world powers are building would be *sufficient* to deter this very determined “nuclear-protected aggressor”.³⁰ This is a non-trivial assumption because, as I suggest in the book, summarizing findings from T.V. Paul and Paul C. Avey, the prospect of nuclear retaliation has not always produced a deterrent effect in history.³¹ This is also why I call this position a pro-nuclear utopia: in it, nuclear weapons technology always produces the desired effects and none other.

This brings us to an important point about long-term futures in the nuclear weapons realm. As I have argued in the book (281-2) and elsewhere, such long-term futures create a “utopian imperative.”³² In other words, there is no escape from utopia other than assuming a catastrophic non-nuclear disaster affecting our nation before nuclear catastrophe hits.

The position Heuser presents seems to fall in the category of an unacknowledged technological/pro-nuclear weapons utopia in which the technology fails only in ways that are not harmful to human beings. It is true that her argument on the dilemma remains open to the possibility of something going wrong with nuclear weapons and ends up willing to take that risk rather than an increased risk of a conventional war. But the claims she cites suggesting that the dilemma currently has a solution, i.e. keeping existing nuclear arsenals, and that: “no argument in favour of nuclear divestment can ultimately be convincing unless a convincing alternative solution to [the] dilemma can be found” have a different meaning. They turn this risk assessment and preference into the indisputably correct ones. If we knew for sure that nuclear weapons technology will only fail in ways that are not catastrophic in the next seventy years, this risk assessment and preference—a consequentialist tradition—would indeed be the correct ones.³³ But we do not know that. This is why there is space for alternative arrangements, from abolition to world government. So, the position that existing nuclear arsenals are obviously the best way of avoiding invasion and nuclear war requires hoping for a technological utopia.

On the other side of the spectrum, abolitionists take a political utopian position in the sense that they advocate for an unprecedented level of cooperation to get to zero and stay there. The only third path in the long term is the end of civilization as we know it. This is why the book advocates for a clarification of which utopia one wants to stand for, based on which bets on the future, which memory of the past, and which value choices. In the short term, this call for consistency between justifications and arsenals already allows for a very large reduction of existing nuclear arsenals if one treats “deterrence” as their only mission, since they are

and Tselinograd (now Akmola) regions of Kazakhstan were ancient Russian territories. Needless to add that Finland did not build or keep nuclear weapons even though it was attacked by Russia in 1939.

³⁰ If one is thinking about the scenario of a Russian invasion of France, such a scenario assumes that the Russian army has successfully crossed over 5500 km of enemy territory to reach the French border.

³¹ Paul C. Avey, *Tempting Fate: Why Nonnuclear States Confront Nuclear Opponents* (Ithaca: Cornell University Press, 2019), 1; Thazha Varkey Paul, *The Tradition of Non-use of Nuclear Weapons* (Stanford: Stanford University Press, 2009), 145.

³² Early formulations of this idea in English can be found in Pelopidas, “Nuclear Weapons Scholarship as a Case of Self-Censorship in Security Studies,” *Journal of Global Security Studies* 1:4 (2016): 331-3 and Pelopidas, “Power, Luck and Scholarly Responsibility at the End of the World(s),” *International Theory*, 12(3), (2020): at 466-7.

³³ The facts that 1) we do not know, cannot know and will never know when a catastrophic nuclear event will take place and that 2) when we assume it will take place fundamentally modifies the scope of conceivable and desirable actions are two of the reasons why I argue that imagined catastrophic future events should be explicit in our nuclear weapons policy discussions. For evidence supporting those claims, see my “Nuclear Weapons Scholarship as a Case of Self-Censorship in Security Studies,” at 330-331.

far in excess of the requirements of nuclear deterrence as defined by their own militaries, as I show in the book, building on the works by Lynn Eden and Daniel Ellsberg.³⁴

One of the problems of this utopia is that granting unwarranted properties to nuclear weapons makes them desirable items, as Heuser aptly acknowledges. This is indeed one of the tensions I point to in the book (280).³⁵ This is why, as Krige's generous review suggests, in the context of the war in Ukraine, it is crucial not to fall for the retrospective illusion that Ukraine would not have been invaded had it had kept the Soviet nuclear weapons it inherited. As Maria Rost Rublee and Mariana Budjeryn have shown, this is a "fantasy counterfactual."³⁶ Beyond the facts that a desire for nuclear weapons at the time was almost non-existent, that the Ukrainians were not thinking about nuclear weapons as serving goals of deterrence but rather as weapons of use, and that they still needed to acquire the launch codes to retarget the weapons, this outcome was simply not possible.³⁷ Ukraine lacked the uranium enrichment and plutonium reprocessing facilities to fabricate nuclear fuel, nuclear warhead production and nuclear—and missile—testing ranges, and tritium gas, which has a half-life of twelve years and must be replaced periodically for warheads to remain stable; it did not have the fissile material and the determination to maintain the arsenal. It is also very unlikely that the Russian Federation and the other nuclear-armed states that were interested in enforcing non-proliferation would have let that happen in the first place. As Budjeryn observes, "it is not farfetched to conclude that, had Ukraine embarked on such a program, it would have lost Crimea and possibly Donbas at a much earlier date."³⁸ Detering Russia from invading with threats based on those capabilities was also inherently not credible. Ukrainians knew that Russia had the ability to sabotage the weapons before they left so the deterrent value of those weapons vis-à-vis Russia was non-existent.³⁹ As early as May 1992, all tactical nuclear weapons, the category which may have claimed some credibility as a deterrent against Russian invasion, had been removed from Ukrainian territory and the service life of ICBMs on Ukrainian territory was ending by the end of the 1990s.⁴⁰

For one or more of those reasons, the debates about whether Ukraine should have kept its weapons at the time is moot, as it is about a quasi-impossible outcome. If one overlooks the extremely low likelihood of the

³⁴ Eden, "The U. S. Nuclear Arsenal and Zero"; Daniel Ellsberg, *The Doomsday Machine: Confessions of a Nuclear War Planner* (New York: Bloomsbury, 2017), 344; more recently, see Sharon Weiner, "The Biden Nuclear Posture Review: Resetting the Requirements for Nuclear Deterrence," *Arms Control Today*, (January/February 2022) available at <https://www.armscontrol.org/act/2022-01/features/biden-nuclear-posture-review-resetting-requirements-nuclear-deterrence>.

³⁵ Orion Noda has dedicated an interesting article to this notion of "symbolic proliferation." Noda, "A Wolf in Sheep's Clothing. The NPT and Symbolic Proliferation," *Contemporary Security Policy* 43:1 (2022): 134-160.

³⁶ Maria Rost Rublee, "Fantasy Counterfactual. A Nuclear Armed Ukraine," *Survival* 52:2 (2015), 145-156, updated in podcast form in 2022 under the title "Ukraine and the Bomb", <https://soundcloud.com/user-954653529/ukraine-and-the-bomb>; Mariana Budjeryn, "Was Ukraine's Nuclear Disarmament a Blunder?," *World Affairs* 179:2 (2016): 9-20.

³⁷ Mariana Budjeryn, *Inheriting the Bomb. The Collapse of the USSR and the Nuclear Disarmament of Ukraine* (Baltimore: Johns Hopkins University Press, 2022), 231 and Polina Sinovets and Mariana Budjeryn, "Interpreting the Bomb. Ownership and Deterrence in Ukraine's Nuclear Discourse," *NPIHP Working Paper*, 12, December 2017.

³⁸ Budjeryn, "Was Ukraine's Nuclear Disarmament a Blunder?," 15; a similar point is made in Rublee, "Fantasy Counterfactual," 152. Seven years later, Maria Rost Rublee maintained the point in a podcast, "On the Brink", on April 4, 2022 at 4' and 16'35s. Mariana Budjeryn expands on her perspective at 32 and 33'. <https://www.youtube.com/watch?v=wCsFRjYmRYE>

³⁹ Budjeryn convincingly shows this for every category of weapons in "Was Ukraine's Nuclear Disarmament a Blunder?" 13-14.

⁴⁰ Budjeryn, "Was Ukraine's Nuclear Disarmament a Blunder?," 13; Nikolai Sokov, "Ukraine: A Post-Nuclear Country" in William Potter and Gaukhar Mukhatzhanova (eds), *Forecasting Nuclear Proliferation in the 21st Century. Vol. 2. A Comparative Perspective*. Stanford: Stanford University Press, 2010, 266.

outcome and still wants to think through the counterfactual, one needs to take into account that had Ukraine not joined the NPT, it would have lost thirty billion dollars of Western aid between 1994 and 2014. It would also have had to maintain the arsenal, which President Leonid Kuchma claimed would have cost more than three times the cost of the health and education policy of Ukraine. So, an effort at keeping the arsenal would have fundamentally changed the face of the country and, according to Budjeryn, made its independence impossible in the first place.⁴¹ The story that Ukrainian nuclear weapons would have kept Ukraine safe from Russia's invasion starts from a quasi-impossible outcome and unnecessarily attributes benefits that nuclear weapons possession does not provide. In the name of non-proliferation, it is crucial to remember this. And indeed, most arguments in my book can be effectively mobilized to serve the goal of non-proliferation consistently.

Given the problems of the pro-nuclear utopia and the massive scope for arms reduction even within a deterrence framework, it is crucial to avoid binary thinking between the status quo and an idealized version of the world. Such a way of thinking always makes the status quo look more appealing than it is and discourages efforts to progress towards better non ideal worlds.

The utopian imperative also forces us, as political communities, to ask ourselves the question of what kind of a community we want to be. Krige shows in his review that such questions have already mattered in the history of nuclear weapons policy. One series of political communities claim that they will not threaten to, plan, or communicate their readiness to commit large scale nuclear violence, which is likely to kill hundreds of thousands of civilians, including possibly one's own citizens, under any circumstances. They choose to develop another type of national security strategy. The alternative is to remain a political community that believes itself incapable of guaranteeing its security without threatening, preparing, and accepting responsibility for the mass death of civilians, and presenting itself to the world as such. Most countries have an understanding of their national security that does not share this requirement. So if that is how we, citizens of Western nuclear-armed democracies, define ourselves, we must articulate it clearly. If decision-makers justify this by telling themselves that they would definitely choose not to retaliate with nuclear weapons, citizens cannot know that, yet citizens' understanding of the nature and defining values of their political community fundamentally depends on this choice.

The argument that the use of nuclear weapons would only take place as a last resort for the survival of the community is not adequate. As I show in the book, it overlooks the fact that the act of using nuclear weapons would fundamentally transform the community that uses them, all the more so if it previously self-defined on the basis of liberal and/or democratic values. Assuming that this community has *physically* survived the nuclear events it has participated in and their consequences, the community that would have survived would have become a very different one (276).

Another question that needs to be addressed clearly, and has not yet been in the existing scholarship or policy debates, is how to treat nuclear weapons in the discussions of what kind of communities we want to be. The challenge is desacralization without conventionalization of nuclear weapons. Evangelista concludes his review with a quotation from the book on this crucial choice: either we “preserve the sacred status of nuclear weapons” or we “restore them to the status of means, in the service of clearly defined policies...to make the first choice amounts to admitting that our regime has become a techno-theocracy of nuclear deterrence in which the sacralization of the object renders invisible profane choices, made by men and women of flesh and blood,” on the weapons to be built, the targets to aim them at, the costs of these weapons, and the prospects for replacing them (265).

⁴¹ Budjeryn, *Inheriting the Bomb*, 230.

In the face of such existential challenges, we are already affected as tax-payers, targets, and citizens delegating our authority to our head of state to implement the national nuclear weapons policy, even though a nuclear disaster does not happen in our lifetime. This is why independent scholarship intends to help clarify consistent justifications, memories of the past, and imagined futures underpinning pro as well as anti-nuclear policy proposals so that citizens can make an informed decision. The choice we have is not to be affected or not, but to be active or passive in the face of this existential threat.