NUCLEAR WEAPONS AND INTERGENERATIONAL EXPLOITATION

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**Abstract:** Nuclear weapons’ defenders claim that they lower the risk of war, at the price of devastation if war breaks out. But sooner or later, on a realist analysis, catastrophic nuclear war will come. Nuclear deterrence thus buys *us* a better chance of dying in bed, while each post-holocaust generation will have to pick up the pieces. If the nuclear optimists are wrong, hoping to spread or perpetuate nuclear deterrence is foolish. But if they are right, it is exploitative.

States that do not already have the bomb should not get it. Russia and the United States should slash their arsenals. Minimum deterrence should be equally stable, but most nuclear optimists, being neorealists who hold that war will continue, should want deep cuts even if it is not. Liberals, Marxists and constructivists may argue that a failed attempt at minimum deterrence could stymie trends toward world peace. But if Washington or Moscow should defend their huge arsenals on this ground, they ought to be doing much more to promote a peaceful world.
Nuclear weapons, it is sometimes said, are a Faustian bargain. Their terrifying power lowers the risk of war, though at the risk of appalling carnage should one nonetheless break out.\(^1\) Nuclear weapons’ defenders, in rejecting disarmament, insist that they play a key role in keeping the peace.\(^2\) In the debate over nuclear proliferation, they hold that the bomb has prevented war in the past and will do so in the future. Some maintain that we should tolerate—perhaps even welcome—its spread.\(^3\) Disarmament advocates and critics of proliferation attack both claims.\(^4\)

But if this is a Faustian bargain, it is an odd one. If the nuclear optimists are right, these weapons make the risk of war very small. We ourselves, maybe even our children and grandchildren, are unlikely to pay any costs at all. But that does not mean that the bill will never come due. Even leading nuclear optimists do not claim that nuclear weapons bring the risk of war down to zero. Many also hold that competition and war will persist.\(^5\) In the long run, barring vast changes of a sort that most


optimists consider utopian, deterrence must thus break down. Claims that “[n]uclear
deterrence provides the United States with security and stability”\textsuperscript{6} or that “[t]here is
no inevitability of nuclear accident or miscalculation between the United States,
Russia, or any other nuclear power”\textsuperscript{7} are true at best in the short to medium term.
Nuclear weapons may make us safer, but at the expense of our descendants. Every
generation benefits until war breaks out; every postwar generation will pay the bill.

Analysts have long recognized that nuclear weapons threaten future people.\textsuperscript{8}
Contemporary debates over disarmament and proliferation nearly always assume,
however, that they are good or bad for a given country in general. In fact, we can no
more assume a harmony of interests among generations than among nations. Just as
the belief that all states benefit from the international status quo muddles analysis,\textsuperscript{9} so
too does the assumption that all generations gain or lose from nuclear deterrence. To
say, for example, that nuclear disarmament could “reduce U.S. security” by making
conventional war more likely\textsuperscript{10} is misleading because it fails to specify which
Americans. Compared with the status quo, disarmament might well reduce present
people’s security, while benefiting those born three hundred years from now.
Similarly, if Ukraine had retained its nuclear weapons, as John Mearsheimer urged,
this might have discouraged Russian attack.\textsuperscript{11} But if he is right that war is endemic to
international politics, it would surely have meant losing Kiev later. Seen like that,

\textsuperscript{6} Robinson and Bailey, “To Zero or Not to Zero,” 156.
\textsuperscript{7} Payne, “Case Against Nuclear Abolition,” 25.
\textsuperscript{11} Mearsheimer, “The Case for a Ukrainian Nuclear Deterrent.”
nuclear deterrence seems a less savory bargain. Unlike Faust, who took his sins on his own head, we are sending our descendants to hell.

This article builds a bridge between recent nuclear debates and philosophical writings on intergenerational justice. Most critics of nuclear deterrence and proliferation have argued either that it is intrinsically wrong to target civilians, or that war is more likely than we think. Here I assume that enemy civilians are fair game, and show that nuclear deterrence leads to morally rotten consequences if the nuclear optimists are right. First, I summarize the logic of optimism and argue that, even if these weapons reduce the risk of conflict, catastrophic war remains inevitable. Next, I outline three theories of intergenerational justice—based in social contract theory, theories of rights, and utilitarianism—and show that in each case nuclear deterrence fails the test. As when we drive SUVs or run up budget deficits, here too we scoop the benefits while passing on the costs. It is a wicked bargain, but does much to explain why both fossil fuels and the bomb are so hard to give up.

Third, I contend that states that have not yet obtained nuclear weapons have no justification for doing so—even if, in the short term, it would make them more secure. Sooner or later war will come, and instead of Baghdad or Tehran they will inherit rocks and radioactive ash. Advocates of horizontal proliferation like Mearsheimer and Kenneth Waltz are unwittingly inviting people to exploit their own descendants.

Nevertheless, it is Russia and the United States with their huge arsenals, not “rogue states,” that pose the greatest threat to the planet. Ideally, they should abandon all their nuclear weapons, but no nuclear state can reliably bind itself to remain disarmed. A failed attempt at disarmament could make catastrophic war more likely rather than less. The best that Moscow and Washington can do under present international conditions is to slash their arsenals.

Minimum deterrence at around 200 warheads each should be at least as stable as the status quo. But neorealists should support deep cuts in Russian and American forces even if it is not. They believe major war cannot be banished from world politics. Given a choice between war sooner with limited damage, and war later with unlimited damage, we ought to prefer the former, since we internalize more of the costs of our own defense. In the fourth section I note that liberals, Marxists and constructivists may contend that nuclear war is not inevitable, and that a failed attempt at minimum deterrence could stymie trends toward international peace. But if Moscow and Washington should seek to justify huge arsenals on this ground, they ought to be working much harder to promote a lasting peace.

This article strips away the fig leaf in which optimists have clothed the bomb. If nuclear weapons do not make war less likely, seeking to spread or perpetuate them is foolish. But if they do, it is exploitative. States that face a severe threat will go nuclear regardless of the long term consequences. Nevertheless, my argument has practical implications. Not all states confront dire existential threats. Sometimes whether they acquire the bomb will depend on fierce internal battles in which ethical considerations may tip the balance. For outsiders to encourage proliferation in such cases is not just a blunder, but a crime. Moreover, the logic of nuclear optimism suggests that nuclear states can and should go down to minimum deterrents.
Nevertheless, critics of the status quo face the same challenge as do other environmental activists of convincing people to reject policies from which they reap most of the benefits, and pass on most of the costs.

**A Faustian Bargain—But Who Pays the Bill?**

Nuclear weapons, so goes the case for the defense, make aggression hard and deterrence easy. States can hope for only small gains if they go to war. We may chip away at the border of an adversary, but if we march on his capital, we risk our own annihilation. Even gamblers grow cautious when faced with the bomb. Whereas states may start a conventional war without being sure that they can win, any state that provokes nuclear retaliation against its cities can be certain that it will lose. We need not even know that the opponent will strike back; we need only fear that he might. Nuclear weapons make calculating the costs and benefits of war easy. “Do we expect to lose one city or two, two cities or ten?” asks Kenneth Waltz. “When these are the pertinent questions, we stop thinking about running risks and start worrying about how to avoid them.”

Nuclear weapons make calculating the costs and benefits of war easy. “Do we expect to lose one city or two, two cities or ten?” asks Kenneth Waltz. “When these are the pertinent questions, we stop thinking about running risks and start worrying about how to avoid them.” The bomb cuts the chance of war because it is so destructive.

Nuclear weapons have several other helpful effects. First, strategies based on mutual assured destruction mitigate the security dilemma. With MAD we do not need more nuclear weapons than the opponent, or even as many; we need only enough to inflict unacceptable damage. Sensible leaders see that they need not run arms races; indeed, they can tolerate huge changes in relative power. Territorial expansion is not necessary, nor does it add much security. States can pursue conventional arms control with less anxiety. In a crisis they have little incentive to strike first, since even after losing much of their force they can inflict intolerable damage on the opponent. Second, since most states covet their neighbors’ territory less than they value their
own, coercive threats are less credible than threats of retaliation. Deterrence thus favors defenders and reinforces the status quo. Finally, states do not have to mobilize public support for conventional armies. Because the bomb is an absolute weapon, they need no longer keep up with the Joneses (or Ivanovs), and in any case nuclear weapons cost less than soldiers. This spares leaders the task of whipping up support for high military spending, and makes nuclear states less prone to hypernationalism. On such grounds some optimists advocate limited proliferation.

NUCLEAR WAR IS STILL JUST A MATTER OF TIME

Most critics of the nuclear peace thesis have sought to show that war is more likely than the optimists claim. But even if nuclear deterrence makes war very unlikely, it is a good bargain only if the risk of nuclear war is so low that it is worth running to prevent another World War I or II. Since the first time deterrence failed could be the last, this is a high hurdle for it to clear. At times Waltz seems to have trouble seeing how war could break out at all. Nevertheless, even he admits that nuclear deterrence can fail. Fierce leaders may be willing to pay high costs. While only a fanatic would choose a nuclear war, we know from the Cold War that others will risk it. Since nuclear brinksmanship inevitably entails a danger that things may

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17 Steven Lee, Morality, Prudence and Nuclear Weapons (Cambridge, UK: Cambridge University Press, 1993), 139-140.

get out of control, states in a crisis can stumble into war. They have here a class of events whose probability of occurrence is low, but whose consequences if they occur are high, even catastrophic,” writes Robert Art:

In such cases, it is prudent to make expected value calculations: a small number (low likelihood of occurrence) yields an unacceptably high number. This is, after all, how the United States treated the chance of nuclear war with the Soviet Union throughout most of the Cold War—as a low-probability but high-cost event—and took the necessary steps to make certain it would not happen.

In reality, there was no way to be certain nuclear war would not break out, as Art himself acknowledges. Indeed, evidence from the Cold War shows that we were lucky not to blunder into it.

How low is the risk of war among nuclear states? Waltz claims that it “approaches zero.” But here “approaches” is not good enough. So long as nuclear war has any chance of happening, if we wait long enough it will. Joseph Nye denies this, arguing that both political and technological developments are likely to change the likelihood of war. Moreover, Nye says, there is a great difference between games of Russian roulette when the pistol has six chambers and when it has a hundred. That is true—if one plays only a few times. Nuclear deterrence, however, is Russian roulette played every day for decades. This is true even if relations among the nuclear

22 Waltz, “Nuclear Myths,” 740.
powers are good—on any day of the year there is some chance of nuclear war, as Russia’s 1995 activation of its “nuclear suitcases” after the launch of a U.S. research rocket showed. The risk of being “shot” need not rise over time; it may even decline. Still, one cannot expect to go on playing Russian roulette indefinitely. Seen from the perspective of a human lifespan, whether a pistol goes off within a few days or a few weeks makes little difference. Similarly, whether large-scale nuclear war comes next year or in two centuries matters little over the long haul of the earth’s history, though it makes a difference to us. So long as there is some chance of war—and Nye is surely not claiming it will go down to zero!—eventually it will come. As Martin Amis put it, “the trouble with deterrence is that it can't last out the necessary timespan, which is roughly between now and the death of the sun.” This grim reality led two founding fathers of postwar realism, Reinhold Niebuhr and Hans Morgenthau, to call in their later years for world government.

Waltz mocks such calculations, pointing out that in the 1960s C. P. Snow claimed it was a “statistical fact” that nuclear weapons would be used in the next ten years. “Apparently,” Waltz sniffs, “fifty-some years is not a long enough run to confirm the stability of nuclear deterrence.” Indeed, it is not. A few decades of uneasy peace are far too short a time to show the probability of nuclear war at all. Was the risk over the last half century forty percent, or was it merely fifteen? We have no way to tell. But barring revolutionary changes in technology or the states system, if we keep nuclear weapons for hundreds or thousands of years, they are going to be

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26 Campbell Craig, Glimmer of a New Leviathan: Total War in the Realism of Niebuhr, Morgenthau, and Waltz (New York: Columbia University Press, 2003), quotation at xvii.
used—by accident or design. We may have colonized nearby planets by then, or other changes may have made nuclear weapons irrelevant. Or they may not. Nuclear weapons would have posed a serious threat to humanity any time in the past three thousand years.

Given that realists believe that conflict is a fact of life and are skeptical of quick fixes to enduring international problems, it is odd that they are so sanguine about nuclear weapons. Keith Payne, for example, attacks abolitionists for combining pessimism about the prospects for war with faith that disarmament is possible. He has a point, but the argument can be turned around: Why assume that disarmament will fail, but that deterrence will succeed indefinitely? Surely realists should conclude that both pessimistic views are justified. Is anything more utopian (or despairing) than a British official’s remark that “we've got to try and make stable deterrence work for the rest of history”? “[S]imple statistical probability,” Campbell Craig observes,

shows that the continuation of anarchy and of nuclear deterrence will sooner or later result in war, thermonuclear war. In the long term deterrence is bound to fail: to predict that it will succeed forever, never once collapsing into a nuclear war, is to engage in a utopian and ahistorical kind of thinking totally contrary to traditional Realist philosophy, as well as to defy the irrefutable logic of infinite probability.

There are good realist reasons to think we may be stuck with nuclear weapons whether we like it or not. But we should not like it. Realism is a tragic philosophy, not a Panglossian one. Handed lemons, realists should not make lemonade.

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29 Nye, Nuclear Ethics, 67.  
34 Craig, Glimmer of a New Leviathan, 172.
The outlook is certainly bleak. Human casualties from an all-out nuclear war between NATO and Russia could be in the billions. At worst, the smoke from burning cities and oil facilities could plunge the earth into freezing darkness, though some claim that predictions of “nuclear winter” are overblown. The environment would remain poisoned for thousands of years. If a single Russian submarine fired its missiles at the United States, initial deaths might total nearly seven million. Waltz argues that if nuclear war breaks out, no state will be so crazy as to escalate it to apocalyptic levels, and that if weak states acquire and use nuclear weapons, “the world will not end.”

He is probably right—about the first nuclear war. But unless a nuclear exchange revolutionizes world politics, states will remain in competition. A small nuclear war might provide the jolt needed to get states to accept world government or other radical reforms, but this seems unlikely. Even if it did not teach states that nuclear weapons were usable, the brutality and resulting bitterness would more likely make their relations Hobbesian. What country would join a federation with a state that had just destroyed two of its cities? Eventually—in the second, third, or twenty-eighth nuclear war—large numbers of hydrogen bombs will be used.

NO HARMONY OF INTERESTS

“It is true that nuclear weapons, very attractive as a deterrent, begin to look awfully unattractive when the focus shifts to war fighting,” says Mearsheimer. “This

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is a Faustian bargain, attractive only because the alternative—a reasonable chance of
destructive great power conventional war—seems worse.”³⁹ Worse for whom? Who gains from this bargain, and who loses? If the optimists are right, the inhabitants of nuclear states have a better chance of dying in bed because of nuclear weapons. True, when major thermonuclear war breaks out, many or most of them will be killed, but that is unlikely to happen in their lifetimes, or even in their grandchildren’s. These benefits are not evenly shared out. Non-aligned states face the side effects of nuclear war—which could be huge⁴⁰—without the gains.⁴¹ Wild animals, who are more likely to suffer from nuclear than conventional war, also get the short end of the stick.

Notably, nuclear deterrence discriminates among generations. Nuclear deterrence, however stabilizing, is not foolproof. Stephen Van Evera argues that proliferation would be “a net benefit to peace in Europe,”⁴² but acknowledges that MAD “becomes a nightmare if nondeterrable nuclear actors appear.” A nuclear world with the likes of Hitler would be still more dangerous than a conventional one. He takes comfort in the thought that “[t]his danger is not at the world’s doorstep.”⁴³ But sooner or later, unless the world has been transformed, new Hitlers will appear. Proliferation might be a net benefit over the next fifty years, but not the next five hundred. Nuclear optimists falsely assume an intergenerational harmony of interests. If they are right, we all gain from deterrence until it breaks down. But it will break down. To stop worrying and love the bomb means to doom our descendants, to save our own miserable hides.

**Intergenerational Exploitation**

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⁴² Van Evera, “Primed for Peace,” 200.
Nuclear deterrence thus raises issues of intergenerational justice.
Intergenerational justice deals with our obligations to past or future generations, particularly those with which our own lives do not overlap.\textsuperscript{44} Certain actions—such as cutting down forests or producing radioactive waste—let us make gains at our descendants’ expense. Tax cuts now, debt repayment later can be a winning formula for re-election, as recent U.S. history shows.\textsuperscript{45} Intergenerational exploitation is particularly common in the environmental sphere. Nuclear power raises many of the same distributive issues as nuclear deterrence. We enjoy the electricity now; future generations face most of the risks. We exploit our descendants by creating an externality in our favor, since “future generations must bear very significant costs without having received the benefits of the activities prior to the accident.”\textsuperscript{46} So too with nuclear deterrence. The objection that “no reasonable person with even a limited acquaintance with the history of human affairs over the last 3,000 years could be confident of safe storage by methods involving human intervention over the enormous time periods involved”\textsuperscript{47} applies at least as much to nuclear weapons as to nuclear waste. Does any reasonable person, let alone a realist, expect deterrence to work for millennia without catastrophic “accidents”? 

\textsuperscript{43} Van Evera, \textit{Causes of War}, 249-250. Van Evera is less confident than other optimists, holding that nuclear weapons may prove “a curse or a blessing” (ibid., 254).
\textsuperscript{44} Auerbach, \textit{Unto the Thousandth Generation}, 3.
Many of us feel intuitively that to squander resources or hand down heaps of radioactive waste to future generations is wrong. Such intuitions draw support from three schools of ethics: contractarianism, theories of rights and utilitarianism.

SOCIAL CONTRACT THEORY

John Rawls argued that those institutions are just which rational egoists would choose if they were ignorant of the position in society they would occupy. If such egoists were to choose a rule which they wished all previous generations to have followed, it would be in their interest to avoid intergenerational exploitation. If we did not know whether we would be born in 1960, 2400 or 3700, surely we would not agree to our present squandering of fossil fuels that is heating up the planet. The risk of being born into a later generation would be too great. Nor would we agree to rely on thousands of nuclear weapons that may leave, by 3700, little planet to inherit. This is all the more true because the benefits of nuclear deterrence may last for only a century or two before it breaks down, while a nuclear war’s survivors will have to deal with the consequences for thousands of years. Even if we assume that the earth’s population would be much smaller after a war, the odds of being born into a post-holocaust generation would be high indeed.

RIGHTS

48 I set aside the question of whether nuclear power may harm future generations less than continuing to devour fossil fuels.
We can also appeal to theories of rights. Future generations deserve as good opportunities as we have had, and this includes the right to a livable planet. It also means the right to inherit what past generations have built up. It is true that past people were under no obligation to write *Crime and Punishment* or build the Library of Congress, and in that sense we have no right to inherit them. But since they did create those goods, future generations have the same right to enjoy them as we did. In one sense, I do not deserve to inherit a family fortune that I have not lifted a finger to earn. Still, if my father hocks the family heirlooms and squanders the money on champagne and caviar, he wrongs me as well as our ancestors. Likewise, we hold the planet in trust for future generations as well as our own.

Critics will object that mere existence is not the only thing worth handing down. Nuclear deterrence may protect other parts of the human heritage, such as free political institutions. “If we have benefited from ‘life, liberty, and the pursuit of happiness,’” Nye asks, “why should we assume that the next generation would want

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50 Some claim that people that do not yet exist cannot have rights (e.g., Beckerman and Pasek, *Justice, Posterity and the Environment*). Yet a terrorist who sets a time bomb that kills a dozen children eighty years later violates their rights even though the children were not born when the bomb was set and the bomb-maker is no longer alive when it goes off. Even an unborn child, as Joel Feinberg points out, can have the right to property, “contingent upon his birth, and instantly voidable if he dies before birth....Assuming that the child will be born, the law seems to say, various interests that he will come to have after birth must be protected from damage that they can incur even before birth.” That temporal logic precludes a future person from demanding her rights, whereas babies are merely physically and intellectually incapable of doing so, seems a morally irrelevant distinction. See Birnbacher, *Verantwortung fur zukünftige Generationen*, 98-101; Feinberg, “The Rights of Animals and Unborn Generations,” in Partridge, *Responsibilities to Future Generations*, 146; Clark Wolf, “Intergenerational Justice,” in *A Companion to Applied Ethics*, ed. R. G. Frey and Christopher Heath Wellman (Malden, MA: Blackwell Publishing, 2003), 280-281.


54 Weiss, *In Fairness to Future Generations*. 
only life?” After all, we take a risk every time we get into a car. But this confuses threats to individuals with threats to the environment. If I expect to live another fifty years, risking a car accident is a reasonable cost-benefit calculation. If the greenhouse effect threatens the future of life on earth, the calculus of driving becomes very different. So too with nuclear weapons. However desirable it may be to preserve the better aspects of our civilization for future generations, this pales against the obligation to preserve the natural world and favorable conditions for life on it, because they can last for so much longer. “If we do not soon destroy ourselves, but instead survive for a typical lifetime of a successful species,” note Carl Sagan and Richard Turco, “there will be humans for another 10 million years or so. Assuming that our lifespan and numbers do not much grow over that period, the cumulative human population—all of us who have ever lived—would then reach the startling total of about a quadrillion (a 1 followed by 15 zeros).” And this is only one species. Vertebrate animals have been around for some half a billion years; human beings for tens of thousands; sedentary civilizations for a few millennia, and the ideals of the Founding Fathers for about three centuries.

Barring catastrophe, sentient life, even human beings, will outlast Locke and Jefferson by a tidy few millennia. Past generations have thought their ideals worth preserving, but we would not want them to have put the planet at risk to do so. Suppose that nuclear weapons had been discovered in the twelfth century. Would the Crusaders have had the right to risk nuclear holocaust to save Christian Jerusalem from the Saracens? Would we countenance nuclear brinksmanship by Philip II in the name of the Counterreformation? As Barrie Paskins says, “Who are we, beings with a life expectancy of decades, to discuss the entire future of the planet in terms deriving

55 Nye, Nuclear Ethics, 45, 65, quotation at 65.
56 Sagan and Turco, A Path Where No Man Thought, 72.
exclusively from our concerns, concerns which may be expected to count for nothing
in a few millennia with or without nuclear war?"  

Some will claim that this argument allows the future to tyrannize over the present. Theories of rights, however, may establish limits on what we owe. We need not live in slums so that our grandchildren can live in palaces, because this would mean extreme and avoidable inequality. Nuclear deterrence, conversely, is in the long run almost sure to leave many future people worse off than we are. Any progress the future brings them will be cancelled out by a major thermonuclear war—to say nothing of the calculus for non-human animals. Nuclear deterrence thus violates the principle that we should “leave ‘as much and as good’ of the public goods previous generations have bequeathed”—such as a nonradioactive landscape—as we have enjoyed ourselves.

**UTILITARIANISM**

Nuclear deterrence is also incompatible with total utilitarianism, which says we should want the greatest good for the greatest number. Whatever benefits we presently draw from deterrence will be outweighed by centuries or millennia of suffering after it breaks down. Average utilitarianism, in contrast, says we should

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58 Nye, *Nuclear Ethics*, 64.
59 James Woodward, “The Non-Identity Problem,” *Ethics* 96, no. 4 (July 1986): 819-820. Utilitarianism might require earlier generations to make disproportionate sacrifices, as Birnbacher (*Verantwortung für zukünftige Generationen*, 111-117) concedes. Rights-based theories could conceivably require such sacrifices as well, if they were needed to prevent the greater violation of other generations’ rights (e.g., a threat to the species).
61 Birnbacher’s *Verantwortung für zukünftige Generationen* develops a detailed utilitarian theory of intergenerational ethics. Derek Parfit has famously argued that total utilitarianism seems to commit us to the claim that an overpopulated world where life was barely worth living could be better than a world of many fewer people where life was very much worth living (*Reasons and Persons*, chapter 17). As Birnbacher notes, however, a rational egoist might face analogous tradeoffs between the length of her life and its quality (66-68). Most of us presumably would not choose immortality if life from birth to death promised to be just barely more pleasant than not living at all, even though this too would maximize total utility. If Parfit’s “repugnant conclusion” is a problem for population theory, it is a problem for utilitarian theory in general. Nevertheless, many of us would accept that, all other things
maximize the welfare of however many beings exist. If war killed everybody, average utility might remain fairly high. We would enjoy the blessings of deterrence until war broke out, and after that we would all be dead. But research in the 1990s indicated that even catastrophic war should not kill everyone, and so long as some people or sentient animals survive a holocaust, nuclear deterrence will also reduce average utility. In any case, if nuclear war should drive us extinct, this is hardly a moral argument in its favor.

If only a single generation—call it generation H—stood to suffer from nuclear war, we might defend deterrence on contractarian or utilitarian grounds. Each generation, contractarians might claim, makes the Faustian bargain, and if war comes along on its watch, tough luck. Utilitarians might hope that the benefits that preceding generations A-G enjoyed from the nuclear peace would outweigh the suffering of generation H. But a nuclear war would penalize not only the generation that drew the short straw, but all generations that lived after it. We take a small risk of a nuclear conflict, and enjoy a low risk of conventional war. Wartime generation H enjoys the benefits of nuclear deterrence until it breaks down. But its descendants are left picking up the pieces. Here, if the optimists are right, is where the exploitation comes in. Should the first few wars remain limited, their survivors may continue to benefit from the lower incidence of war nuclear weapons provide. But as wars recur the costs of deterrence will mount compared to its benefits, and those benefits will be wiped out almost completely when at last the “big one” arrives.

THE NON-IDENTITY PROBLEM

being equal, we should seek to maximize the utility in any one person’s life. If we accept this, there seems no reason to reject intergenerational total utilitarianism.

62 Robock, “Scénario de notre dernier hiver.”
Some may question the foregoing analysis by citing what Derek Parfit calls the non-identity problem. Nearly any public policy affects who is born and who is not. Suppose we are choosing between building up our army or acquiring nuclear weapons. We decide to build the bomb. Because nuclear deterrence is effective, some wars never break out, saving many lives. Young men who would otherwise be drafted into the army get jobs in missile factories or in the civilian sector. All this affects which people meet, whom they mate with, and the moment that they conceive, resulting in genetically different children than if we had relied on conventional deterrence. These children mate with others in the population. Within a few generations, the genetic makeup of nearly the whole human race is different. (How many parents of people under sixty would have met and mated at exactly the same times had the atomic bomb never been invented?) After eight generations of nuclear peace, a war breaks out and kills two-thirds of the population. Every succeeding generation struggles to survive in a brutish and polluted world.

It seems we have committed a grave injustice. We bought ourselves and our descendants eight generations of peace at the price of a nuclear war. We may not have wronged the citizens of the belligerent powers who were living at the time of the war: They too stood to gain from the Faustian bargain, but happened to have bad luck. Every following generation, however, enters a ruined world. This seems unfair indeed. Yet we have not made these people worse off by choosing nuclear deterrence. Had we opted for conventional deterrence, other people would have been born instead. So long as the survivors find their blighted lives worth living, perhaps they should even be grateful to us for building nuclear weapons, since it was the only chance they had to live at all. Was our decision justified?

No. If we define intergenerational justice as rules, chosen from behind a veil of ignorance, that we would want all previous generations to have followed, this gets us around the non-identity problem. If we did not know whether we would be born in 1960, 2400 or 2800, it would be reasonable to reject nuclear deterrence, because the chance of being born after a nuclear war would be high. Since it is only our generation—whichever it may be—that chooses, we do not have to worry about the identity of future generations. Nor does the non-identity problem mean that we cannot violate the rights of future generations as a group. People often hold rights by virtue of roles, not identities. Students have the right to be taught and professors the obligation to teach them regardless of which students and professors they are. Similarly, future generations will have the right to inherit an intact planet. “[S]ince the rights of future generations exist only as generational rights, it does not matter who the individuals are or how many they may be. Only at the point where the individuals are born...do the generational rights attach to individuals.” Future people may hold a right to a healthy planet simply as human beings, whoever exactly they turn out to be. So long as we conceive of nuclear deterrence as privileging us at the expense of post-holocaust generations as a group, we need not worry that it determines their identities. Finally, nuclear deterrence is unacceptable on utilitarian grounds.

Philosophers have suggested other responses to the non-identity problem. But perhaps the best reason to reject it as an escape clause for nuclear deterrence is that it violates our basic moral intuitions. It means, for example, that squandering

resources harms no one in the far future, since different people will be born than if we conserve. Thomas Schwartz seize on this to argue that we have no obligations to future people. But such claims, as Parfit himself says, are not plausible. In any case, for the non-identity problem to apply, future people must find life worth living. If their lives are wretched—as could well be the case after nuclear war—they could conceivably blame us for creating the conditions for them to be born at all.

**What Is To Be Done?**

Nuclear deterrence, if the optimists are right, buys today’s inhabitants of nuclear states a better chance of a ripe old age. It buys future generations rubble. If the optimists are wrong, the bargain looks still worse. Even if apocalyptic war is not inevitable, we should do all we can to avert it. “Where there is any risk of something infinitely awful happening,” Robert Goodin remarks, “then probabilities simply do not matter. Just so long as that outcome is possible...we must do whatever we can to avoid it. Infinite costs, discounted by any probability larger than zero, are still infinite.” But barring major technological or political changes, in the long-run total war is inevitable—if not the first nuclear war, then the tenth or twentieth. Jacques Chirac asserts that “[o]ur [nuclear] deterrent guarantees…that France's survival will never be placed into question by a major military power.” Never? There is no security from long-term thermonuclear catastrophe.

In this devil’s bargain the archfiends are Russia and the United States, though other states have forces big enough to threaten global disaster. “States with large arsenals and faulty bureaucratic routines may accidentally fire warheads in large

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70. Parfit, Reasons and Persons, 378.
numbers,” Waltz concedes, before adding, “States with small arsenals cannot do so.... Efforts should concentrate more on making large arsenals safe and less on keeping weak states from obtaining the small number of warheads they may understandably believe they need for security.”74 Waltz is right. But while only the great powers hold humanity hostage, China, India and Pakistan are still buying security at their own descendants’ expense. “We ought to be disturbed by the apparently permanent position of nuclear weapons in the international system, even acknowledging that there is now little that can be done about it,” Lawrence Freedman wrote in 1989. “To believe that this can go on indefinitely without major disaster requires an optimism unjustified by any historical or political perspective.”75

Is there anything we can do about it? Mutual assured destruction may buy us security, but by mortgaging the future of untold future generations. We ought to prefer any policy that reduces the long-run threat to the world, even if it makes war more likely in the here and now. In principle, this can be done in two ways: by renouncing nuclear deterrence altogether, or by developing a form that externalizes fewer costs to future people, even if we internalize more ourselves. The first is morally preferable to the second, but it is open only to non-nuclear states.

NON-NUCLEAR STATES SHOULD RENOUNCE THE BOMB

States that have not already developed the bomb should not do so. Indeed, given the threat that it poses to future people, they should not even if this makes them more likely to be blackmailed or conquered by their neighbors. People five hundred years from now will not much care who ran the country in the twenty-first century or whether it retained a particular province, whereas if they have to live in ruined and

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radioactive cities, they may care very much indeed. States need not become pacifists, but they should restrict their defense to conventional means. North Korea has mounted a strong deterrent even without nuclear weapons. Rather than threaten the Middle East with a nuclear arms race, Iran could follow Libya’s example and appease the United States. Israel could have spent still more on its army, or done more to conciliate its Arab neighbors. Rather than doom many generations of South Asians to disaster, India and Pakistan should have relied on conventional weapons or relinquished Kashmir. Of course some countries will refuse to run such risks or make such sacrifices. But they do so at the expense of their own descendants.

**NUCLEAR STATES CANNOT RELIABLY DISARM**

Whether states that already have nuclear weapons—including new arrivals such as India and Pakistan—should give them up is another matter. Even if nuclear states agreed to disarm, they could rearm in a crisis. Whether conventional arsenals would be enough to deter a cheater from using nuclear weapons is hard to judge. While a denuclearized world would have strong incentives to punish proliferation, faced with a great power’s cheating or rearmament, states would more probably themselves rearm than to go to war to stop it. States in a rearmament race would likely have haphazard command and control, and the winner might launch a preventive war before the loser caught up. Ironically, nuclear disarmament could make nuclear war more likely rather than less. Unless they can somehow bind themselves not to rearm in a pinch—and it is hard to see how, short of wholesale deindustrialization, this is possible—nuclear states cannot renounce their weapons for

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76 McMahan, “Nuclear Deterrence and Future Generations.”
79 Payne, “Case Against Nuclear Abolition,” 33.
80 Glaser, “Flawed Case for Nuclear Disarmament.”
good. For the foreseeable future, they are stuck with the Faustian bargain. But since their present inhabitants gain the benefits of a lower risk of war, it is only fair for them to pay a larger share of the costs.

An ideal form of deterrence would target the inhabitants of Washington and Moscow, without endangering third party countries, wild animals, the Library of Congress or the future of the species. One might seek to achieve this, for example, by replacing present arsenals with enhanced radiation weapons aimed at cities. The neutron bomb is often accused of “destroying people, not property,” but from an international and intergenerational perspective this would be its greatest virtue. Americans and Russians would die in a war, but Brazilians, bears and St. Basil’s Cathedral would be spared. Unfortunately, relying on ERW will not work. Even neutron bombs do blast damage and, according to Carl Sagan, could start large fires which could contribute to nuclear winter.\(^{81}\) In any case, cellars a few feet below ground could protect civilians from radiation.\(^{82}\) Once simple measures of civil defense were adopted, ERW would no longer be a MAD deterrent.

Some analysts propose targeting military forces rather than cities, both to spare civilians, and also because it would be less likely to bring on nuclear winter. While targeting an enemy’s nuclear forces could prove destabilizing, attacking conventional forces that have already left their garrison need not be.\(^{83}\) But even if nuclear weapons were used only on the battlefield, millions could still die from radioactivity. Nor could such an agreement be verified. Missiles can be retargeted within seconds. Even if leaders did not aim at cities and oilfields on purpose, in the

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fog of war they might strike some by accident. Or they might change their minds in the course of the war and escalate to attacking cities. Without deep cuts, a “counterpower” strategy still entails the risk of catastrophe.\textsuperscript{84} A force comprised solely of many accurate but very low-yield warheads might limit damage, but this again would be hard to verify, could still cause huge fires, and might encourage policy makers to think they could fight a nuclear war at an acceptable cost.\textsuperscript{85}

MINIMUM DETERRENCE

Deterrence at very low numbers of nuclear weapons seems more promising. Disarmament does have two big advantages. It would limit the number of nuclear powers, even if states broke out of an agreement.\textsuperscript{86} And while a re-armament race could make nuclear war more likely, states would probably fight before both had achieved secure second-strike deterrents—and thus with small numbers of weapons.\textsuperscript{87} But if disarmament led to a limited nuclear war, things would not stop there. The survivors would most likely build large arsenals, and we would be back where we started, minus a handful of cities, a few million people, and any willingness to pursue either disarmament or minimum deterrence in the future. In the long run disarmament could thus increase the risk of catastrophic war. Minimum deterrence lacks disarmament’s advantage of limiting the spread of nuclear weapons. But the risk of

\textsuperscript{84} Harold A. Feiveson et al., The Nuclear Turning Point: A Blueprint for Deep Cuts and De-alerting of Nuclear Weapons (Washington, DC: Brookings Institution Press, 1999), 113; Sagan and Turco, A Path Where No Man Thought, 126, 131, 159, 186, 199-203, 360-361, n. 11.1.
\textsuperscript{85} Gertler, Policy Implications of Nuclear Winter, 12; Sagan and Turco, A Path Where No Man Thought, 131-132, 380, n. 13.25.
war would be lower, and thus in the long term states would be more likely to keep arsenals small enough to limit damage. It is the more sustainable policy.

HOW FEW ARE ENOUGH?

For damage reduction to be meaningful, nuclear arsenals would have to be small indeed. Hundreds of weapons could do almost as much harm as thousands. Even most of minimum deterrence’s advocates have seen it as requiring hundreds if not thousands of warheads. The logic of nuclear optimism, however, implies that we could go much lower. Waltz notes Bernard Brodie’s statement that the USSR could be deterred with a single hydrogen bomb that could and would reliably be used on Moscow: “I would change that sentence by substituting ‘might’ for ‘would,’” he remarks, “and by adding that the threat of a fission bomb or two would also do the trick.” Five warheads would wreck the Boston-Washington or San Diego-San Francisco corridors. Fifteen warheads could kill as many Russians as died in all of World War II. As Stansfield Turner observes, for Washington to deter the Russians “probably takes the same number as it does to deter the United States—one. But let us play it safe. Call it five, or ten, or some such number—still, it will not be in the hundreds or thousands.” We may need a few more weapons to ensure that some will survive and get through—but not more than a few. Even the chance that a couple of weapons might get through should deter attack. “To locate virtually all missiles and aircraft is not good enough,” Waltz observes. “...What political-military objective is

88 Glaser, Analyzing Strategic Nuclear Policy, 200.
worth risking Vladivostok, Novosibirsk, and Tomsk, with no way of being sure that Moscow would not go as well?  

A state run by zealots or lunatics may not be deterred, but fanatics are likely to be undeterable anyway.

Are states actually this cost- and risk-averse? Roger Barnett points out that Germany and Japan fought on through World War II despite devastating bombing raids, and that Iraq tolerated massive deaths from international sanctions. The relevant questions, however, are whether German and Japanese leaders would have initiated war in 1941 knowing that they could lose half a dozen of their biggest cities, and whether Saddam Hussein would have risked provoking a nuclear strike on Baghdad. Moreover, supposing that they were willing to run such risks, is there reason to think a larger deterrent would have changed their minds? Barnett cites Muammar al-Qaddafi’s claim that he would have struck New York in response to the bombing of Tripoli as evidence that leaders will accept huge losses. But if the Libyan dictator’s words were anything more than bravado, they suggest that size does not matter, since he claimed to be willing to attack a state with a huge nuclear arsenal.

A stronger challenge comes from Keir Lieber and Daryl Press, who point out that as late as the 1960s U.S. officials seriously contemplated nuclear war against the Soviet Union. They argue that the mere possibility that the opponent will be able to retaliate may not be enough to deter a first strike. The Eisenhower Administration’s strategy of “massive retaliation,” they note, envisioned nuclear strikes in response to a Soviet invasion of Western Europe, and President Kennedy made inquiries about the

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94 Goldstein, Deterrence and Security, 44-54.
95 Waltz, “More May Be Better,” 22.
96 Rajesh M. Basrur, “International Relations Theory and Minimum Deterrence,” India Review 4, no. 2 (April 2005): 125-143; Bogdanov and Kortunov, “On the Balance of Power,” 9. Basrur takes this too far, however, when he argues that states can afford to be relaxed about their arsenals’ survivability (136). The risk is not that vulnerable arsenals will encourage aggression, but that an enemy believing it is under attack will preempt. Rather than winning a bloodless victory, its hope would be to limit a catastrophic loss.
possibility of a disarming strike on the USSR. It has long been well-known, however, that U.S. officials made plans for the first use of nuclear weapons. They thought such plans necessary if the United States was to have a credible deterrent. The key question is whether they would ever have acted on them when they knew that an hour later nuclear weapons could be falling on Washington. Whether leaders will gamble on disarming the opponent if the odds seem good enough is, as Lieber and Press say, an empirical matter, and deserves further investigation.

In any case, a minimum deterrent need not be vulnerable. Some see the risk that one side would cheat on arms agreements as a barrier to very deep cuts. But strategically speaking, it is hard to see why cheating would matter unless a state thought it could destroy all the opponent’s warheads. China has made the most out of its arsenal by separating its missiles into small units. Any advanced industrial power could ensure survivability by fielding multiple submarines, each armed with one or two warheads. We can never be positive that force levels do not matter, but maintaining arsenals that threaten to wreck the world has its risks as well.

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99 Lieber and Press, “The End of MAD?” 11, 38. The possibility that the Soviet Union considered an attack on Chinese nuclear bases in 1969 may provide stronger support for the claim that first strikes on a nuclear state are thinkable, but it is unclear whether the Soviets were bluffing or in earnest. See Raymond L. Garthoff, *Détente and Confrontation: American-Soviet Relations from Nixon to Reagan, Revised Edition* (Washington, D.C.: The Brookings Institution, 1994): 236-238.
911 While arguing that cheating would likely have little strategic impact, Ullman opposes cuts to very low levels, chiefly on the grounds that the discovery of cheating “could bring on a crisis in the domestic politics of the detecting state.” Yet as Ullman himself notes, the result would almost certainly not be war but an arms build-up. Political tensions would rise, but deterrence should remain stable. Given the importance of deep cuts for limiting damage, this seems a risk well worth taking.
913 While warning that China’s and Russia’s existing deterrents have become increasingly vulnerable, Lieber and Press note (“The End of MAD?” 34) that “…Russia could keep 50 mobile missiles on continuous peacetime alert or substantially increase its nuclear submarine patrols. Either step would dramatically reduce Russia’s vulnerability.” They argue that financial constraints would make it hard
Carl Kaysen, Robert McNamara and George Rathjens argue that “forces of a size and structure that would permit the destruction of, say, a dozen or a few tens rather than hundreds or thousands of targets in a retaliatory attack” should be enough. Harold Feiveson and his colleagues recommend a minimum deterrent of 200 warheads, mostly deactivated, though they observe that this figure “could nearly as easily be 400 or 100.” While war with 200 warheads each could still make World Wars I and II look like tussles in a sandbox, Sagan and Turco conclude that it would risk far less serious climatic consequences. This creates a strong presumption in favor of deterrence at these levels, while continuing to explore the possibility of going still lower. Ironically, this is an agenda to which many nuclear optimists would agree.

**WILL DEEP CUTS ENCOURAGE PROLIFERATION?**

Some also worry that minimum deterrence could encourage non-nuclear states to compete with Russia and the United States. But on the dominant model of nuclear proliferation, which holds that states acquire nuclear weapons in reaction to external threats, it is hard to see why the size of the Russian and American arsenals should matter. Security-seeking proliferators, if they worry about survivability, will ask whether they can build a second-strike deterrent. A preventive or preemptive US strike would involve small numbers of warheads, if nuclear weapons were used at all.

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for Moscow to do this. Deep cuts, however, would free resources to protect the remaining weapons, assuming that Russia received Western aid to offset the cost of reductions.


A rational security-seeker contemplating proliferation will thus not care whether the great powers have three hundred or three thousand warheads. If, on the other hand, states seek nuclear weapons as a source of prestige, minimum deterrence might make proliferation more attractive by allowing small states to have as many as the great powers. But by signaling that nuclear weapons are bad and that the great powers were trying to kick the habit, it could also discourage proliferation.

Opponents of minimum deterrence also argue that it could promote proliferation among America’s allies. These might fear that Washington would not use a small arsenal unless the U.S. homeland came under attack. In fact it is hard to imagine any aggressor so reckless as to gamble on this assumption, given the cost of being wrong. Still, worst-case thinking might lead Germany, Japan, Taiwan or others to nuclearize. That would be too bad. The more states with nuclear weapons, the more chances that they will be used. In at least one case—Taiwan—proliferation could also lead to preventive war. Still, we should prefer a world with a higher risk of war but a lower risk of apocalyptic destruction. In such a world we pay more of the costs of our defense, and externalize fewer to future generations.

Some disarmament advocates argue that only the complete abolition of nuclear weapons can delegitimate their acquisition. They believe that continued reliance on nuclear deterrence—even at low levels—will ensure proliferation. But while a “low

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108 Reasoning along the lines discussed in the following paragraph, a proliferator might conceivably conclude that great powers with a minimum deterrent lacked sufficient spare weapons to use in a preventive attack. But it could never be sure just how many weapons these powers saw as the bare minimum they must retain for deterrence—and hence how many they could spare—and in any case, as I argue in the next paragraph, discouraging proliferation is not sufficient grounds for retaining enormous arsenals.


salience nuclear world” of few nuclear powers with minimum deterresses may not be sustainable,\textsuperscript{112} a world of many small nuclear powers probably would be. If states accept the logic of minimum deterrence, they should not depart from this equilibrium. What would either an aggressor or a defender gain from an arms build-up? While such a world would not be ideal, it would be better than the status quo—and more likely to be a stable solution than a premature attempt at nuclear disarmament. In any case, for now, steps toward minimum deterrence are also steps toward disarmament. So long as the latter remains our ultimate objective, deep cuts can only help legitimate the nuclear non-proliferation regime. As Ken Booth and Nicholas Wheeler observe, “[b]ecause we do not yet know how to get rid of the last few hundred warheads...is not a sufficient reason for not going in that direction.”\textsuperscript{113}

**The Noblesse Oblige of the Nuclear Club**

Minimum deterrence seems the best solution to our predicament that realism has to offer. There may be other answers. The most likely—and probably the only—way to escape nuclear deterrence altogether is to change the character of international politics.\textsuperscript{114} This is a tall order, but then, transforming Western Europe into a pluralistic security community seemed a tall order in 1945. As Ken Booth and Nicholas Wheeler argue, our aim should be to develop an “anti-nuclear non-violent conflict culture.”\textsuperscript{115} This raises a potential objection to my argument. Perhaps today’s apparently fairly stable form of deterrence is just what we need for peace-inducing phenomena such as democratization, economic interdependence and integration to take hold. Kenneth Oye, for example, holds that the prolonged superpower standoff of


\textsuperscript{113} Booth and Wheeler, “Beyond Nuclearism,” 54.


\textsuperscript{115} Booth and Wheeler, “Beyond Nuclearism,” 39, 44.
the Cold War led to the Soviet Union’s liberalization. If deep cuts undercut
stability, they could, like a premature attempt at disarmament, interrupt the very
processes we need to promote, harming future generations as well as ourselves.

Neorealists—who make up the majority of the nuclear optimists—cannot
appeal to this argument. They believe we are doomed to perpetual conflict. On this
logic, the worst that could happen if minimum deterrence proves less stable will be a
small nuclear war—still better than the large nuclear war which we can expect at
present. Liberals, Marxists and constructivists, however, may argue that a botched
attempt at minimum deterrence could interrupt processes that can create the
conditions for nuclear disarmament. On this account our situation can be compared
to a neighborhood in which houses are wired with dynamite and will blow up the
block if a burglar intrudes. Even neighbors whose houses were not booby-trapped,
Joseph Nye argues, might agree to allow the devices for the time being, rather than
insist on a risky attempt to defuse them. They would reasonably insist, on the other
hand, that a dynamite-owner “provide some compensatory benefits (such as warning
burglars that [her] house is protected too)” and “[t]ake steps to dismantle the system at
a time in the future when the incidence of burglary declines and relatively safe means
of dismantlement are found.” We can reject at once Nye’s requirement that the
burglary rate decline before we defuse the explosives. A desire to reduce burglary—or
conventional warfare—affords no right to risk blowing up the neighborhood. But the
other demands make sense. Householders with booby-trapped basements should
disarm them as soon as they safely can. In the meantime, they should not only warn

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116 Kenneth Oye, “Explaining the End of the Cold War: Morphological and Behavioral Adaptations to
the Nuclear Peace,” in *International Relations Theory and the End of the Cold War*, eds. Richard N.
Lebow and Thomas Risse-Kappen (New York: Columbia University Press, 1994), 57-84. For a
summary of liberal and constructivist arguments that nuclear weapons can lead toward peace, see
off burglars, but do their best to make disarmament possible. These efforts should cost at least as much as they gain from the booby traps.

Suppose that Harriet and Jane live in a town where sixty years ago past owners booby-trapped half a dozen houses. Harriet’s basement is empty; Jane’s is full of dynamite. If anyone burgles Jane’s house, both householders will be blown sky high, but because everyone knows about the traps, the risk is slight, and it does keep down the burglary rate. Jane may even think the risk is worth it. Harriet, understandably, does not. Moreover, sometime in the next few centuries a burglar—reckless, drunk, or simply confused about the address—is bound to break into Jane’s house. The resulting explosion will wreck her house and leave many others badly damaged. Clearly, for Jane to insist on retaining her dynamite forever would be supremely selfish. Not only would she put Harriet at risk, but she would also condemn future generations to a ruined neighborhood. If she tries to dismantle the booby-trap at once, however, she risks an explosion. What can Jane do? She should remove as much dynamite as possible without risk of triggering the trap. But she and her fellow dynamite-owners should also set up a bomb-removal fund, in the hope of someday defusing the rest. Jane and her ancestors have already benefited for sixty years from fewer burglaries than their neighbors. Moreover, Harriet still loses $1,000 every year to burglars, whereas the thieves leave Jane in peace. It is only fair for Jane to put at least $1,000 per year into the fund to compensate Harriet and both women’s descendants for the benefits she gains at their expense.¹¹⁹

¹¹⁷ Marxists who hold a teleological view of history would, of course, expect peace to result from quite different changes from those cited by liberals and constructivists.¹¹⁸ Nye, *Nuclear Ethics*, 84.
¹¹⁹ Jane cannot simply agree to give Harriet $500 per year. The $1,000 she saves comes not only at Harriet’s expense, but also at that of the neighborhood’s future inhabitants. Agreeing to retain the dynamite would exploit them.
Like Jane, on a liberal or constructivist analysis, today’s nuclear states should reduce their arsenals as low as possible without greatly increasing the risk of war. They should also contribute at least as much as they gain from nuclear deterrence toward creating conditions for disarmament. It is not easy to estimate how much “burglary” nuclear weapons spare them, but if the nuclear optimists are right, the sum is large indeed. Nuclear states spend less on their militaries than they would otherwise. More important, if nuclear weapons have spared us a third world war, they have saved millions of lives and trillions of dollars. Nuclear states ought then to be pouring enormous sums into creating a peaceful world.

These states might respond that they are already doing so. Even efforts to maintain U.S. dominance or the invasion of Iraq can be defended as promoting international peace. To count as contributions to the “bomb-removal fund,” however, efforts should be over and above those the nuclear powers would in any case make for narrowly self-interested reasons. They are, after all, compensation to third parties and future generations for the risks imposed on them. Here, the nuclear powers and their allies—who also benefit from nuclear deterrence—could clearly do much more. Many observers agreed that it was vital for international peace that Russia make a successful transition to liberal democracy, but by one 1999 estimate, whereas the Marshall Plan cost the United States two percent of its GDP, American aid to post-communist Russia amounted to 0.005 percent. Sums on the order of Marshall Plan aid might not have been well used, but even spending on direct democracy-assistance was paltry, amounting to $16 million in fiscal year 2000 for all of Russia. This was transparently “assistance on the cheap.”

long term progress to justify its enormous arsenal, it ought to be working much harder
to create the conditions for disarmament.

Conclusion

Most people think that the risk of holocaust evaporated with the end of the Cold War, and that the biggest nuclear threat comes from “rogue states” and terrorists. Most people are wrong. Losing a city or two will be horrible; a great power war may mean curtains for us all. While the chance of intentional world war is very low, the risk of accidental war remains. Indeed, with the decay of Russia’s command, control and communications, it has probably risen. Moreover, we are in the lull between storms. Nuclear rivalries and arms races are almost sure to resume in coming decades. Under conditions of multipolarity, the risk will be still greater than last time. Even if the West has reached the “end of history,” with war among stable liberal democracies seeming all but impossible, this is not true of the rest of the world, including some powerful states with nuclear weapons. To think that we can get through even a century without serious great power rivalry is to ignore all of modern history. Certainly, leading nuclear optimists do not believe this. If our present reliance on huge arsenals were the best realism has to offer, one could only agree that “[n]o serious thinker could...be satisfied with Realism...even if the scientific status of the theory were stronger than it is”—for it would be a death sentence.

In fact, realism suggests a partial escape: minimum deterrence. States that have not begun developing nuclear weapons should not start. “If deterrence works in the West,” asks Jaswant Singh, “as it so obviously appears to, since Western nations

122 Forrow et al., “Accidental Nuclear War.”
insist on continuing to possess nuclear weapons—by what reasoning will it not work in India?”

In reality, nuclear deterrence has only worked in the West so far—and only because we were lucky. Indians and Pakistanis who take pride in their bombs plume themselves on what will wreck their cities and kill their descendants. But still more important, states with bloated arsenals should slim them. Neorealists should want states to slash their arsenals even if it makes war more likely. As Paul Doty says, “The great gap is…between a grievous but recoverable wound and death to most of the world as we know it.” On a liberal, Marxist or constructivist analysis, a failed attempt at minimum deterrence could conceivably short-circuit trends that can make war obsolete. But even if so, nuclear states can only justify large arsenals by working much harder to create conditions for their abolition.

This article has argued that nuclear optimism should lead us to support nuclear nonproliferation as well as deep cuts in arsenals and—if it is ever possible—disarmament. Some pessimists hold that organizational routines, bureaucratic politics and bounded rationality make control over nuclear weapons less reliable than optimists claim. If so, this only reinforces my prescriptions. Not only is the spread of nuclear weapons a bad thing, but it is yet another reason for Russia and the United States to downsize their arsenals to more manageable levels.

MOTIVATING JUST BEHAVIOR

All these arguments may seem academic. Suppose that nuclear deterrence does exploit future generations—can any state be expected to stop? Nuclear war is one of

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many threats that humans pose to nature. Yet when the threat is not concrete, it is easy to ignore the problem, and hope that it is exaggerated, or will somehow go away. Global warming is starting, but will take some time to make itself felt. Likewise, nuclear weapons may not make themselves felt at all until it is too late. Faced with what activists believe is a threat to the very future of life on earth, mass publics remain infuriatingly complacent. Theorists, seeing that nuclear deterrence seems to benefit us, take for granted that it also benefits our distant descendants. This is not surprising, since, as E. H. Carr says, “[t]he doctrine of the harmony of interests... is the natural assumption of a prosperous and privileged class.”

Moreover, if the status quo benefits us, what is our incentive to act? By debunking the harmony of interests, Carr did not expect to turn the privileged countries into altruists; he hoped to make them more willing to bargain with revisionist states. But future people have little bargaining leverage. Schell’s advice that “[t]he living [should]...look on the gift of life the way any political representative should look on election to office—as a temporary trust to be used for the common good” is an ideal rather than an enforceable policy. Corrupt politicians

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128 Sagan, “More Will Be Worse,” 87. It could be argued, however, that minimum deterrence will be harder to achieve or less stable if new nuclear states are, as Sagan fears, dominated by military officers who are predisposed to favor preventive war.
129 Schell, Fate of the Earth, 111.
133 Carr, Twenty Years’ Crisis, 80. Theorists have more widely recognized the externalities we are creating for future generations with CO2, and most of all with nuclear power. Is that because nuclear waste provides the most tangible evidence?
134 Carr, Twenty Years’ Crisis, 214, 237.
136 Schell, Fate of the Earth, 177.
can anger living constituents. Unborn generations don’t vote. Anti-nuclear campaigners and other environmental activists concerned with the distant future face a common challenge and should develop common strategies.

Nevertheless, Robert Goodin has argued that people can be persuaded to forego exploiting even helpless victims if the moral case is clear—though his examples suggest that the sacrifice must also not be too great. This is particularly likely if they understand that their actions threaten their own descendants and any legacy they may hope to leave. States faced with a dire threat will proliferate and hang the long-term consequences. These states are the equivalents of a desperately poor state that by plundering resources robs its own future people for the sake of its present inhabitants. Just as outside aid may be needed to induce such a state to take the long view, here we must find ways to reduce the threatened state’s insecurity. But the dilemma is not always so stark. Indians debated for thirty years whether to build the bomb, and security concerns were only one factor—albeit an important one—in its development. Moral opposition to nuclear weapons discouraged India from pursuing them under Nehru. Even when China went nuclear only two years after the Sino-Indian war of 1962, “there was no consensus among officials in New Delhi that it was necessary to have a nuclear deterrent as a response.” Nor, after India’s 1998 nuclear test, was Pakistan’s counter-test a foregone conclusion.

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137 Kielmansegg, “Können Demokratien zukunftverantwortlich handeln?”
141 Weiss, In Fairness to Future Generations, 162-163.
whether to nuclearize will often depend on hard-fought domestic debates,¹⁴⁴ in which moral concerns may sometimes tip the balance.

For states that have already nuclearized, going down to minimum deterents may not cost anything. It will probably reduce the risk of accidental war,¹⁴⁵ while lowering the costs when war eventually breaks out. Waltz and his followers have made a strong case that nuclear weapons are superb deterents. As Waltz himself recognizes, this means that just a few should be enough.