

The Philosophical Impacts of Nuclear Weapons

Nuclear Weapons in International Security

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To answer the question of whether or not the invention nuclear bomb has been the most important event of human history is not an easy task. There are certainly numerous arguments in favour of such a statement; nuclear weapons have given us the thermodynamically most efficient form of releasing energy yet devised; they have given us the ability to quickly and easily destroy the major feats of our ancestors and possibly even those of our descendants; they have given us power beyond humanity's comprehension. And yet the nature of a question of this broad a nature requires us to think more deeply about technological evolution and of our place within it. What constitutes an invention, and what makes certain inventions more important than others? Have the impacts of nuclear weapons, on both our materialist world and the cultural *spiritus mundi*, been large enough to warrant such a description? The Manhattan Project, despite its tremendous success from seemingly out of nowhere, was not a gift of Prometheus. The project itself was an industrial effort of incredible proportions, and built upon the recent cumulative advances in nuclear physics, quantum mechanics, and special relativity. It is therefore difficult to see the invention of nuclear weapons as a being a particularly important event from the left-handed qua limit perspective, while for those looking in from a right-handed perspective may see the Trinity test as a defining point in human history, especially given the role in the popular consciousness nuclear weapons were given during the cold war.

Nuclear weapons are fundamentally a tool for destruction. The term often used, *the bomb*, signifies its place as the ultimate explosive, whose *Ding an sich* is destructive potential in the extreme. They are the ultimate tool of our modern industrial society when organised for murder. It allows for the quick, easy, efficient, and large-scale genocide of the human race. It is hardly necessary to produce a bigger explosive, only delivery systems can be improved. The power to destroy has been concentrated as much as it ever could. The fate of all mankind is now concentrated in *one* decision, made by *one* man¹. And yet the technology and industry involved is enormous. There are right now 2170² sailors dedicated to staffing American nuclear-armed ballistic missile submarines, spending great lengths of time under the waves ready to strike at any moment. Airbases are filled with pilots and planes ready to be armed, and a

massive system of Intercontinental Ballistic Missile (ICBM) launch bunkers wait in silence. All this is then supplied and organised, and an enormous technological machine is used to communicate relay information between them and the President of the United States. Can the individual sailor, pilot, telecom operator, truck driver, or taxpayer feel any remorse over their part in this system of death? Not even the person most clearly responsible can, as Truman, the only man who has ever ordered nuclear weapons to be used on a fellow man, supposedly did not have any 'pangs of conscience' in the slightest³. Each person involved has become alienated from the act of mass murder.

The subject that drives this development is that of *technique*, strictly different from that of *technology*. Jacques Ellul dedicates an entire chapter of his work *La Technique ou l'Enjeu du siècle* to trying to accurately define technique, and so summarising it here is difficult. But Ellul later uses a quote he sees as symptomatic of technique related to nuclear weapons.

We may quote here Jacques Soustelle's well-known remark of May, 1960, in reference to the atomic bomb. It expresses the deep feeling of us all: "Since it was possible, it was necessary." Really a master phrase for all technical evolution.⁴

Nuclear weapons were a logical next step after the discovery of nuclear fission and of its possibility for chain reactions. The scientific and engineering challenges that had to be overcome for the peaceful use nuclear fission were very similar to those involved in the creation of an explosive device⁵ (Perhaps with the exception of the development of exploding-bridgewire detonators for implosion-type weapons). The linear idea of progress toward efficiency means that a power source as efficient qua thermodynamics as the exploitation of the weak force was inevitable as a solution. Since it was possible, it was necessary.

But technique does not rest, it is ever expanding. The problems that followed the invention of the atomic bomb were not yet of a truly existential nature. While nuclear weapons were incredibly effective, they could still be reasonably defended against through the maintenance of air-superiority, and the requirements of large amounts of fissile

¹Elaine Scarry, "Thermonuclear Monarchy: Choosing Between Democracy and Doom". New York: W.W. Norton & Company, 2014.

²Federation of American Scientists. "SSBN-726 Ohio-Class FBM Submarines." Accessed 2024-09-10. <https://web.archive.org/web/20240910141737/https://nuke.fas.org/guide/usa/slbn/ssbn-726.htm>.

³Günther Anders, "Burning Conscience". New York: Monthly Review Press, 1959.

⁴Jacques Ellul, "The Technological Society". New York: Vintage Books, 1964.

⁵Robert Oppenheimer, "Public Lecture by Robert Oppenheimer." November 25, 1958. Accessed 2024-11-30. <https://archive.org/details/public-lecture-by-robert-oppenheimer-11-25-1958>.

material meant that they remained a scare tool. Ideas of nuclear weapons as simply more efficient bombs were not unheard of within the U.S. military establishment⁶. But the development of the thermonuclear bomb, with its orders of magnitude larger explosive potential and much smaller costs, created a true technical crisis. These fusion devices, placed atop ICBMs, allowed for the large-scale killing of entire nations states and continents. But more importantly, they were practically impossible to defend against. You no longer had to defeat your opponent militarily in order to coerce your opponent's civilian population⁷. War became totally disconnected from both industrial capacity and military techniques. It also became possible for your opponent to strike back after you had launched your nuclear weapons, bringing both sides to a quick and grisly demise. To use the terminology of Bueno de Mesquita⁸, nuclear weapons had destroyed the hope of any expected-utility that could be gained in any war involving them. This problem of course meant that the only rational use of nuclear weapons was to not employ⁹ them in a deadly conflict.

The invention of arms control is a technical invention to do nothing. The rational answer to the inquiry of nuclear weapons is to never detonate them, as in doing so the threat behind them becomes useless. But the industrial nations that have developed nuclear weapons — as well as the systems to maintain employment and constant readiness — can not readily give them up, only reduce their number. The answer to the self-inflicted problem of the uncontrolled nuclear arms race is then another solution, that of arms control. But this causes more problems; how to ensure compliance, the labour and organisation for monitoring stockpiles *et cetera*. A reason for the failure of the "five recognized nuclear weapon states" in fulfilling their obligations under the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and also the reason that the non-nuclear states do not feel betrayed over the nuclear armed states' failure at disarmament may be that they themselves would feel pressured to keep their nuclear weapons had they possessed them. Why South Africa *did* give up its weapons was because it did so through technique. South Africa did not leave its nuclear weapons program in disrepair, but decided to decisively rid itself of its limited number of weapons in exchange for improvement of international relations and prestige. The technical *use* of nuclear weapons were in this case their destruction not in explosive form, but in dismantlement.

Carol Cohn has described her experience with what she has christened as *technostrategic* thinking by defence intel-

⁶Marc Trachtenberg, "Strategic Thought in America, 1952-1966". Political Science Quarterly: Oxford University Press, 1989.

⁷Tomas Schelling, "Arms and Influence". New Haven: Yale University Press. 1966. 1-34. <https://doi.org/10.2307/j.ctt5vm52s.4>

⁸Bruce Bueno de Mesquita, "The War Trap". New Haven and London: Yale University Press, 1981. <https://archive.org/details/wartrap0000buen/mode/2up>.

⁹The definition of the *use* of nuclear weapons is one that is not straightforward. Most nuclear weapon use has been either rhetorical (threats), or demonstrative (nuclear weapons testing). Both of these fall under the umbrella of "nuclear signalling". The detonation of nuclear weapons on the population or military facilities of an enemy, like those dropped on Hiroshima and Nagasaki, is one that I will in this text refer to as the *employment* of nuclear weapons. In this case *Employment* \subset *Use*.

lectuals regarding nuclear strategy. She sees it as "based on a kind of thinking, a way of looking at problems — formal, mathematical modeling, systems analysis, game theory, linear programming — that are part of technology itself"¹⁰. This line of thinking that Cohn identifies is not unique to the study of nuclear strategy, but is present in nearly every field today. Every example of this form of thought she mentions is a form of pure logical and theoretical *reasoning*, perhaps the purest example of a form of action driven by technique. Everywhere in our modern society there is a movement toward formal rational thinking that serves to effectivize all aspects of life and society, but perhaps most clearly the trio of land, labour, and capital. The specialized language Chon describes that acts as a barrier against uninformed opinions and outside criticism¹⁰ is also a symptom of technique. Each sector of life becomes increasingly obtuse and specialized, to the point of being totally enigmatic to an outsider to the field. The terminology used by defence strategists (Reentry vehicles, countervalue, exchanging warheads *et cetera*) are of course descriptors of specific things (Not all vehicles exit the atmosphere and so only some reënter, countervalue *contra* counterforce, a mutual attack) but they also serve as a way to shape discussions qua Sapir-Whorf. There is of course no malicious intent behind this; it is merely the consequences of an increasingly technical field. Abstractions necessarily increase when detail increases, and so the expert is removed from the subject matter in some sense, the nuclear strategist no longer thinks of the horrors of nuclear war, of searing flesh and silently deadly radiation, but instead sees the subject through the eyes of countervalue, acceptable casualties, and mutually assured destruction. This is why those advocating for the total abolition of nuclear weapons are seen as malinformed activists, rather than subject matter experts. Because in some sense, *they are*. Becoming one of "them" requires adopting this language, and therefore the technostrategic thinking as Cohn also realizes.

Is there then no hope of stopping this technical development? It the only choice a nihilistic submission to its whims? This is not a particularly strange conclusion; technique is an inherently alienating force that removes meaning from not just our actions, but even our very lives themselves. What is the point in living on if your only accomplishment would be the continued advancement of an unsaid structure of society to which there is no alternative? Nietzsche was right in asking "Must we ourselves not become gods simply to appear worthy of it?" in reference to our murder of God. Humanity needed to take God's place because God did not give meaning to our lives any more. Instead the goal, the temple of human society, would be this tower of Babel. We would become masters of the physical world; "nothing that they propose to do will now be impossible for them"¹¹. We set out to control our surroundings absolutely, and through technique we had no choice but to do so. If technique is superhumanly powerful and leaves us no agency in human development it may be easy to fall into nihilistic lines of reasoning. But nihilism is inherently unstable, since according

¹⁰Carol Cohn, "Sex and Death in the Rational World of Defense Intellectuals." Signs 12, no. 4 (1987): 687-718. <http://www.jstor.org/stable/3174209>.

¹¹Genesis 11:6

to Kojève the nihilist

[...] disappears by committing suicide, he ceases to be, and consequently he ceases to be a human being, an agent of historical evolution.¹²

Kojève is not alone in this line of reasoning. Camus also agrees with this idea of the nihilist only having suicide as a true course of action¹³. In this void created by nihilism, existentialism finds its home. If we are genuine free beings we *do* have an ability to rid of our nuclear weapons, and every day choose not to. This then would be a source of existentialist *angst* over nuclear weapons, we do not only feel anxious over our possible demise due to their employment, but also over our moral failures at global disarmament.

The foundations of deterrence theory shares some similarities to the Kojève's interpretation¹² of Hegel's *Master-Slave dialectic*¹⁴ where the masters (in this case the nuclear powers) fight for self recognition by competing in a struggle with other masters. Nuclear-armed nations joust in a game of brinkmanship, needing the other to back down. This is necessarily a fight to the death for self-consciousness. However, if both parties refuse to back down and annihilate each other that is clearly a loss for both sides. And in the other alternative of one side dominating the other absolutely and killing them, there is no one left to recognize the victor for what he has done. In other words, if there are two Americans and zero Russians left alive, we lose¹⁵. To achieve recognition one of the parties must necessarily back down and recognize the master as human, and become the slave. But as the master then stops recognizing the slave as human, he looks onward to other masters whom he sees as worthy of loving him. This constant cycle of struggle for the master is what causes stability on different levels within the nuclear system (U.S.-Russia, India-Pakistan, India-China). Neither side is willing to back down because they require this prestige to continue to legitimise their existence as nation-states.

This dynamic underscores the paradoxical stability created by mutual recognition of the destructive potential inherent in nuclear deterrence. The system persists not because it ensures peace, but because it creates a deliberately uneasy equilibrium¹⁶. As each nuclear power seeks to maintain its position as a "master," it must engage in a delicate dance of demonstrating strength without triggering catastrophic escalation and risking destruction of the enemy it wishes to dominate. The recognition of mutual vulnerability — the "balance of terror" — forces adversaries into a perpetual state of brinkmanship, where neither side can afford to appear weak nor escalate beyond the point of no

return. In this sense, nuclear deterrence aligns with Kojève's existential reading of the Master-Slave dialectic: the master's identity depends on the slave's recognition, just as the credibility of a nation's nuclear posture depends on the adversary's acknowledgement of its willingness and capacity to retaliate. However, this precarious balance also breeds a deep-seated insecurity. A constant need for recognition requires equally constant displays of power — missile tests, military exercises, and rhetorical escalations — further entrenching the cycle of competition.

So if the development of nuclear weapons can be adequately explained by the march of technique and the actions of nations states be modelled as the struggle between masters, what then are the future developments of nuclear technology, and what impact has it made or will it make on human society or man in microcosm? In the event of catastrophic and cataclysmic nuclear war, a total war, that risks the extermination of the human species, the progress and continuity of history ends absolutely. Technical and industrial society will have destroyed itself and any future developments we might be interested in. We are then only interested in the existential dread that unemployment of nuclear weapons brings to people, or the effects of a limited nuclear war. A limited nuclear war is either the same as a total nuclear war, for the victims, or not too dissimilar as nuclear testing or a conventional war for those who survive. A limited war is mostly different in the restraint of the absolutist monarch, to use the language of Scarry¹. The subjects of the nation state have no say in whether a total or limited nuclear war is waged. For these reasons, it is mostly of interest to analyse the dread of *potential* employment.

The state that backs down becomes the slave. And since the slave is no longer obsessed with this struggle for recognition in the nuclear arms race his now submissive population is terrified by their incapacity to fight against the adversary; They are struck by the fear of death that made them back down to begin with. It is this fear that Jaspers describes as an enlightened fear¹⁷, a constant imposing fear, that will drive human development and society toward a future that can handle the *prometheisches Gefälle*¹⁸ of nuclear weapons. The enlightened fear Jaspers describes is not just an individual or collective apprehension; it is a force that reshapes the structure of civilization. This fear drives humanity to seek ways of containing its newfound power, not through transcendence but through regulation, negotiation, and a constant reevaluation of the precarious systems it has built. Yet this enlightened fear has a dual nature: while it can motivate coöperation and the pursuit of stability, it also perpetuates anxiety, creating a society perpetually on edge, defined by its ability to annihilate itself. If humanity can control this fear without resorting to the shackles of technique it will get the chance to become free in a way never before seen, but it also risks falling further into its clutches. In this framework, humanity's potential freedom

¹²Alexandre Kojève, "Introduction to the Reading of Hegel: Lectures on the Phenomenology of Spirit". London: Cornell University Press, 1969.

¹³Albert Camus, "The Myth of Sisyphus and Other Essays". Translated by Justin O'Brien. New York: Vintage Books, 1942.

¹⁴Georg Wilhelm Friedrich Hegel. "The Phenomenology of Spirit". Oxford: Oxford University Press, 1977.

¹⁵A reference to Thomas S. Power's famous quote in response to a RAND counterforce strategy avoiding Soviet civilian targets: "Restraint? Why are you so concerned with saving their lives? The whole idea is to kill the bastards. At the end of the war if there are two Americans and one Russian left alive, we win!"

¹⁶Thomas Schelling, "The Future of Arms Control". *Operations Research* 9, no. 5 (1961): 722–731. <http://www.jstor.org/stable/166817>.

¹⁷Karl Jaspers, "The Future of Mankind". Chicago: University of Chicago Press, 1963. <https://archive.org/details/futureofmankind0000unse>.

¹⁸Günther Anders, "The Obsolescence of Man, Volume II: On the Destruction of Life in the Epoch of the Third Industrial Revolution". Munich: C.H. Beck. 1980. <https://files.libcom.org/files/ObsolescenceofManVol%20IIGunther%20Anders.pdf>

hinges on its ability to navigate the tension between its mastery of destructive power and the enlightened fear that compels its restraint. Kojève's dialectical struggle, paired with Jaspers' notion of enlightened fear, reveals a profound paradox: the tools of annihilation that could spell humanity's end also serve as the catalyst for a collective awakening to its fragility and interdependence. This awakening, however, is not a singular event but an ongoing process — a process combining between the fear of extinction and the aspiration for a more stable, coöperative world order.

This dynamic reflects broader existential questions about freedom and control. What the master-slave dialectic teaches us the nuclear age transforms into a global condition. Nations, like individuals, are caught in a perpetual state of self-definition, reliant on both the acknowledgement of their peers and the restraint of their adversaries. The enlightened fear becomes a paradoxical source of empowerment, as it fosters a new kind of freedom: the freedom to act responsibly within the constraints of mutual vulnerability. This is the core idea behind arms control, that stability within this shared vulnerability will cause both fear, the fear to act, and enough security that both sides can focus on other matters within this fear. This balance between fear and security is what makes arms control a crucial mechanism in the nuclear age. By fostering stability through mutual agreements, arms control seeks to institutionalize the enlightened fear, transforming it into a structured and predictable element of international relations¹⁶. This does not eliminate the fear but channels it into a framework where its intensity can be managed. Stability arises not from the absence of tension but from the creation of systems that make escalation less likely and ensure that even in moments of crisis, the costs of catastrophic action remain prohibitively high.

The interplay between fear, control, and power in the nuclear age brings into question not only humanity's technological and political evolution but also its moral and philosophical trajectory. The existential implications of nuclear weapons extend beyond the realm of international relations and into the core of human identity, autonomy, and survival. Nuclear deterrence, while maintaining an uneasy peace, amplifies humanity's existential tension. The omnipresence of annihilation redefines freedom — not as liberation from constraint but as the capacity to exercise restraint in the face of overwhelming power. This reframing challenges the Enlightenment and technical ideal of progress, which envisioned technological advancement as a pathway to emancipation. Instead, nuclear weapons exemplify technique in that they shackle humanity to the perpetual threat of its own destruction. This tension resonates with Nietzsche's *eternal recurrence*¹⁹: the idea that humanity might be condemned to relive its choices endlessly unless it finds the courage to affirm them fully. The nuclear dilemma forces us to grapple with the ultimate recurrence — living perpetually under the shadow of weapons we have created but cannot fully control. The choice, then, is not between employment and non-employment but between continued existence within this precarious balance and a radical reimagining of

¹⁹Friedrich Nietzsche, "The Gay Science". Cambridge: Cambridge University Press, 1882.

what human progress entails. It is this choice that compels Sartre to see nuclear weapons as a liberator, that the conscious choice of nuclear weapons requires us to "every day, every minute, [...] consent to live"²⁰. We choose to maintain our arsenal of weapons in order to be granted this enlightened and authentic fear. If this fear will be a constant necessity or not is unclear, the use of nuclear weapons may perhaps be transformed by a global superstate into a tool for something other than death²¹. The dominance of technique makes it unlikely to lead to the total elimination of nuclear explosives however.

Achieving such a reimagining requires more than disarmament. It demands a cultural and philosophical shift — a collective recognition that humanity's worth is not tied to its capacity for domination or destruction but to its ability to foster creativity, love, and goodness in the world. This transformation parallels the existentialist call for authenticity; In that we should strive to live as we are innately. But this can only be driven by Jaspers' enlightened fear, mirroring Mencius' need for education to act morally. Heidegger sees this as a crucial point of technique, that "Unless humanity makes an effort to reorient itself, it will not be able to find revealing and truth"²². The nuclear age, then, is not just a historical epoch but a crucible for defining what it means to be human. It forces us to confront the duality of our nature: our capacity for boundless creativity and our potential for unparalleled destruction. Whether humanity can transcend this duality — or whether it will succumb to the very forces it has unleashed — remains an open question. But the answer lies not in the weapons themselves but in the choices we make about how to live with, and ultimately move beyond, their shadow.

The nuclear age compels humanity to confront the duality of its existence — its unparalleled capacity for both destruction and creation. The challenge is not merely technological or political but profoundly existential: to reimagine progress and security in a way that transcends the pursuit of power and embraces a vision of collective flourishing. This transformation demands a conscious reckoning with the ethical responsibilities of wielding such destructive potential and a commitment to embedding restraint and cooperation at the core of global civilization. Ultimately, the legacy of nuclear weapons will be defined not by their use or disuse but by the choices humanity makes in their presence. These choices reflect the broader question of what it means to be human in an age where the tools of annihilation coexist with the potential for boundless creativity. Whether we succumb to the nihilism caused by our inventions or rise to the challenge of building a new world remains an open question, but the stakes could not be higher. The future of humanity hinges on its ability to live authentically and wholly under the shadow of this technical evolution.

²⁰Jean-Paul Sartre, "The Aftermath of the War". Oxford: Seagull Books. 2008. <https://archive.org/details/aftermathofwarsi0000sart>

²¹The U.S. Department of Energy, "Executive Summary: Plowshare Program". Accessed 2024-11-30. <https://www.osti.gov/opennet/reports/plowshare.pdf>

²²Martin Heidegger, "Die Frage nach der Technik". Frankfurt am Main: Vittorio Klostermann. 1954. https://monoskop.org/images/2/27/Heidegger_Martin_1953_2000_Die_Frage_nach_der_Technik.pdf