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Few studies in practical philosophy are as essential as those in the ethic of martial technologies. It is an interdisciplinary, didactic process that reveals and addresses the tensions that emerge when humanity's capacity for imaginative creation is applied to its predilection for war. The ethic therefore draws as much from ontologic, axiologic, and epistemologic foundations as it does from political theory and physical science. Each of the contributing fields are well developed, and theorists have leveraged the evolving concepts of being, value, and knowledge to establish martial and technological ethics

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Ethics of Emerging Military Technology
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"Foundations of the Ethics for Martial Technologies"

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Office of the Director of National Intelligence

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On the Foundation of an Ethic

Few studies in practical philosophy are as essential as those in the ethic of martial technologies. It is an interdisciplinary, didactic process that reveals and addresses the tensions that emerge when humanity's capacity for imaginative creation is applied to its predilection for war. The ethic therefore draws as much from ontologic, axiologic, and epistemologic foundations as it does from political theory and physical science. Each of the contributing fields are well developed, and theorists have leveraged the evolving concepts of being, value, and knowledge to establish martial and technological ethics. However, much of the existing scholarship fails to consider the distinctions in the two moralities, the relevance of their geneses, and the challenges of their synthesis. Consequently, the ethic is insufficiently developed to fully consider specific technics, from both one's own sensibilities and those of allies and adversaries. The government, military, and people therefore rely upon legal criterion and international norms, which dictate the constraints imposed by major powers but are ill-suited to singularly address moral issues. Thus, as a subject of study, ethics of martial technology returns to the foundations of morality, specifically to identify, consider, and address incongruities between the two ethics. As postmodernity, emergent technics, and distributive threats increasingly challenge international norms, laws, and security, the ethic has never been as intricate nor as important as it has become in the 21st century.

The ethic is a dialectic process. Axioms that define utility, virtue, justice, duty, and rights are inherited from the evolving truth and value claims that shape communities' and individuals' distinctive concepts of authority, identity, and agency. The impersonal determinism of antiquity and existentialists, for example, sharply contrast with the personal freedom of monotheists and

some humanists. Postmodern analyses further obscure the foundation of morality, as the objective *either/or* contrasts with the subjective *both/and*, and as the deconstruction of language revealed *aporia*, or contradictions, in knowledge. In other words, the dramatic shifts in ontologic and epistimologic views have not only affected historical truth and value claims, but they have diminished the very concept of moral certainty – leaving no single source as *the* commonly recognized authority for delineating good from evil, right from wrong. Consequently, there is no comprehensive, final judgment on the ethic of martial technology. And analyses must therefore rely upon the evaluation of technics against the subjective truths and relative values. Where then, in this complicating uncertainty, might one find the necessary components for such moral considerations?

Drawing upon the interdisciplinary character of the study, modern psychoanalysis provides an instructive point of departure. It describes, in absolute terms, *the* human condition, from which all war, invention, and symbols emerge, irrespective of period or culture. From this catholic foundation, emerged subjective truths, notably the opposing concepts of determinism and freedom. The coexistence of morally-distinct civilizations and the innate drive to totalitarianism led to war and its technologies. Inflection points across history reveal the dramatic evolution – *not* succession – of moralities, from utility, virtue, justice, duty, and rights. Since human development is dialectical, emergent values reflect its antecedents. Thus, from psychoanalysis, one can trace the evolution of truth and value claims, from the hedonism and virtues of antiquity to theonomous laws of the medieval and to the heteronomous and autonomous of modernity. And these, even in broad generalization, can establish a foundation for evaluating and *synthesizing* martial and technological ethics within contemporary and anticipated realities.

On the Origins of War and Technology

From antiquity to modernity, philosophers generally regarded war as a product of natural law, original sin, or other external factors – as exemplified in Hobbes' and Thucydides' oft-cited descriptions of the world's brutishness[1] and the strong's callousness[2], respectively. By the 19th century, however, intellectuals had begun to explore apparent incongruities between the rational mind and consciousness, in which powers were making choices that "completely foul reality and put into jeopardy [their] own well-being and survival."[3] Early psychoanalyses by Freud and Rank revealed that certain irrationality – and the ultimate source of war – was actually the innate tensions of consciousness. Thus, regardless of culture or period, war originates from *within* and is therefore part of the human condition. This suggests that the classic reduction of war to matters of rational "honor, fear, and interest" is incomplete and that moral considerations should focus on the character *and* nature of war. Consciousness and its centrality to human behavior is detailed in existing scholarship, but a brief explanation of its irreconcilabilities provide a point of departure for analyses of the ethic of martial technology.

The coexistence of freedom and captivity underlies the tension within the human condition. Consciousness provides a glimpse of the infinite and, therefore, one's capacity to understand the world beyond sense experience and natural instinct. This is the source of human imagination and invention. But this freedom is also paradoxically limited. Consciousness brings to the infinite mind an awareness of one's own captivity in bodily finitude, or death. This

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[1] Thomas Hobbes and C. B. Macpherson, *Leviathan* (Baltimore: Penguin Books, 1968), 57.

[2] Thucydides, Robert B. Strassler, and Richard Crawley, *The Landmark Thucydides: A Comprehensive Guide to the Peloponnesian War* (New York: Free Press, 1996), Kindle edition, 11847.

[3] Ernest Becker, *The Birth and Death of Meaning, a Perspective in Psychiatry and Anthropology* (New York: Free Press of Glencoe, 1962), Kindle edition, 151.

'existential frustration' is distinguished from natural concerns, such as satisfaction of desires, because it derives from mysteries of existence, meaning, and will – a suffering of the mind Frankl termed as *noögenic* neurosis.[4] Individuals attempt to deny their finitude, by developing symbols of perceived permanence onto which they project their identity. This is an immortality system that evolves into elaborate schemes that are 'covertly religious,' such as those of nationalism.[5, 6, 7] These provide "highly involuted and meaningful schema of action," [8] as human beings necessarily pursue 'worthwhile goals,' in the creation of works or deeds, experience in things or encounters with others, or the acceptance of the unavoidable suffering of the human condition.[9] Consciousness, therefore, is both the basis *of* and relief *from* dread, and the 'immortal' symbols human beings develop to ease their anxiety of death also provide meaning to the absurdity of the human condition.

While these symbols might provide subconscious relief, they create the condition for conflict. They are inherently catholic and totalitarian. If they are at risk, then so too is individual meaning and perceived immortality. The logical contradiction is the source of the dialectic, for "no two beings and no two situations are really commensurable with each other. To be aware of the fact is to undergo a sort of crisis."[10] This is reflected in the etymology and

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[4] Viktor E. Frankl, *Man's Search for Meaning : An Introduction to Logotherapy,* 4th ed., (Boston: Beacon Press, 1992), Kindle edition, 100.

[5] Ernest Becker, *The Denial of Death* (New York: Free Press, 1973), Kindle edition, 26, 40, 69.

[6] Bertrand Russell, *Authority and the Individual* (New York: Routledge, 1995), Kindle edition, 18.

[7] Richard J. Bernstein, *Beyond Objectivism and Relativism : Science, Hermeneutics, and Praxis* (Philadelphia: University of Pennsylvania Press, 1983), Kindle edition, 16.

[8] Becker, *The Birth and Death of Meaning, a Perspective in Psychiatry and Anthropology*, 83.

[9] Frankl, 101-03, 09.

[10] Gabriel Marcel, *Man against Mass Society* (South Bend, Ind.: St. Augustine's Press, 2008), 1.

contemporary definition of war – derived from the German *Gewin*, it is a struggle[11] between irreconcilable moralities.[12] Its perpetuity is further highlighted by Clausewitz, in his description of war as "never final."[13] Non-violent coexistence, or détente, is only temporary, as it necessarily gives way to intercommunal tensions in the dialectic. Thus, as a facet of the human condition, the ubiquity of war provides a point of departure for moral analysis that is historically and culturally independent. It relieves the *fact of* war from consideration. And, it suggests that an ethic can be at least partially assessed by the degree to which the means and technics employed by a community, or state, correspond to its symbolic character.

In addition to being the source of anxiety, the freedom of consciousness also provides the imaginative capacity for scientific reason and technology. This is revealed in Aristotle's scientific method, in which he leverages deduction and induction to identify dependencies and necessity. An individual's capacity for scientific knowledge reveals *first philosophy*, being *qua* being; *unchangeable objects*, such as mathematics; and *separable and changeable entities*. Analysis of the structure of knowledge and connection of things enables one to deduce unqualified knowledge, to know "the cause on which the fact depends, as the cause of that fact and of no other, and that the fact could not be other than it is."[14] And for knowledge beyond perception and deduction, *nous* – or intuition – are impressions "retained in the human soul" that

[11] Julian Lindley-French and Yves Boyer, *The Oxford Handbook of War* (Oxford: Oxford University Press, 2012), Kindle edition, 17.

[12] Kenneth N. Waltz, *Man, the State, and War : A Theoretical Analysis* (New York: Columbia University Press, 2001), 12.

[13] Carl von Clausewitz, Michael Howard, and Peter Paret, *On War* (Princeton, N.J.: Princeton University Press, 1984), Kindle edition, 79.

[14] Aristotle, *Prior and Posterior Analytics* (Oxford: Clarendon Press, 1949).

inductively reveal primary premises, such as the necessity of a first cause.[15, 16] As Aristotle concludes *Posterior Analytics*, "…it follows that there will be no scientific knowledge of the primary premises, and since except intuition nothing can be truer than scientific knowledge, it will be intuition that apprehends the primary premises."[17]

In the 17th century, Descartes further explored the connection between consciousness and knowledge. His caution on the vulnerability of sensory perception and his proposition of innate and universal reason – i.e., intuition – introduced pervasive skepticism in the 'third estate.' The succeeding enlightenment undermined the dominating feudal and religious orders in the west, ushering in modernity and the industrial revolution.[18] It was a paradigm shift that served both science and philosophy; it introduced a new 'lens' for viewing the world[19], guiding scientific activity, assumptions, and techniques. Science and technology became understood in the west as "human practices with historical and social contexts." [20] In other words, consciousness provides a common capacity for deductive and inductive reason, but culture shapes scientific approaches and craft.[21] Philosophy is, therefore, as central to understanding the truth and value of science and its derivative technology as it is to morality.

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[15] Aristotle and Richard McKeon, *Introduction to Aristotle* (New York: The Modern library, 1947), 3.

[16] Aristotle.

[17] Ibid.

[18] René Descartes and Donald A. Cress, *Discourse on the Method for Conducting One's Reason Well and for Seeking Truth in the Sciences*, 3rd; (Indianapolis, Ind.: Hackett, 1998), Kindle edition, 576.

[19] Thomas S. Kuhn, *The Structure of Scientific Revolutions*, 3rd ed; (Chicago, IL: University of Chicago Press, 1996), Kindle edition, 41.

[20] Val Dusek and Robert C. Scharff, *Philosophy of Technology : The Technological Condition : An Anthology* (Malden, MA: Blackwell, 2003), Kindle edition, 92.

[21] Ibid., 95.

On Evolving Concepts of Being, Knowledge, and Value

One's response to *noögenic* neurosis is generally reflected in one of two distinct worldviews, from which emerge concepts of being, knowledge, and value. The first is the 'heroic,' and it reflects the human struggle with the impersonal forces of fate and necessity. The world is, essentially, indifferent to the existence of the individual. And this view is representative of Greco-Roman secular humanism. The second view is the 'saintly,' and it describes an immutable covenant between persons, human and divine. In this, the world is actually defined by the connection between individuals. And it is representative of the Abrahamic religions.[22] The worldviews regard meaning dramatically differently, resulting in opposing ethical systems. In the former, meaning is found in one's individual honor, while in the latter it is found in one's commitment to an other. And these competing perspectives form the foundation of the speculative and revealed moralities. The evolution of and competition between the competing views is reflected in the course of western philosophy; however, speculative morality – that which is *not* revealed – is the most influential in the contemporary ethic of martial technology, from antiquity but especially since modernity.

Two of the most enduring ethical views from antiquity are hedonism and virtue, the former describing extrinsic good, that which is a means to an end, and the latter incorporating intrinsic good, that which has a quality unto its own self. Early hedonism was developed by Aristippus – Socrates' contemporary and founder of Cyrenaic philosophy. The Cyrenaic reasoned that one's own, immediate, physical pleasure was *the* highest happiness, and it endures with sentiments of 'eat, drink, and be merry, for tomorrow might never come.' Three

[22] Francis J. Ambrosio, "Heros and Saints" (Washington DC, 2014).

generations later and after Aristotle, Epicurus introduced a qualitative approach to hedonism, arguing that one's own pleasure was, in fact, the highest happiness, but it must be regarded within the context of other considerations – one's desire for pleasure is also accompanied by the desire to maximize the intensity and duration of this pleasure, while avoiding pain and overindulgence. Additionally, he argued, the pleasures of the mind were the greatest and most enduring. Much later, altruistic hedonism emerged during modernity under Bentham and Mill, and it is in this social form that hedonism, or 'utilitarianism,' continues to be referenced during debates regarding the ethic of martial technology.

Where hedonism focuses on the acquisition of pleasure or, as introduced by the modernists, maximization of the 'good,' virtue instead measures morality against what is understood to be the 'final cause' of a thing. According to Aristotle, human beings have this final cause, and it can be understood through reason. The final cause for a person includes virtues of the intellect, such as knowledge, good judgment, and practical wisdom, and it also includes virtues of character, such as courage, generosity, fair-mindedness, and self-respect. By acting on this knowledge – by doing with excellence that which a virtuous person would do – one would be satisfying a condition necessary for the achievement of his or her purpose in life and, therefore, of *eudemonia*, or happiness.[23] In other words, by knowing one's final cause, even in a general sense, and acting in a manner consistent with that cause is virtuous. This teleological philosophy has remained influential in the development of moral theory, deeply influencing even theologians, such as Aquinas who added Christian virtues of faith, hope, and love to Aristotle's 'final cause' criterion. The morality that emerged with monotheism, such as

[23] Aristotle, Robert C. Bartlett, and Susan D. Collins, *Aristotle's Nicomachean Ethics* (Chicago: University of Chicago Press, 2011).

Christian agapism, introduced the 'saintly' worldview and shaped western development, but the era that most significantly influenced the ethic of martial technology was after the religiously-dominated medieval period and with the enlightenment.

Late modernity's major accomplishment was in redefining the subject and object of human knowledge, thereby challenging presuppositions of existing epistemology and the foundation of morality. Historically, the knowledge process was structured to accommodate our mind to the world; we considered ourselves mere artifacts and our knowledge wholly derivative. And this was reflected in our social structures and norms, codified in law. But the intersection of calamity and innovation during the late medieval period provided an opening for doubt, and we reconsidered the foundational assumptions of belief. In stark opposition to convention, we drew primarily upon reason and experience to place ourselves, as the subject, at the center of the human knowledge process and with the world as an object. Within a century, the pedagogical skepticism of Descartes and Hume had inspired a revolution of mind that would culminate in the enlightenment and, ultimately, transform the very bases of our truth and value claims.

Modernity assumed various forms and emphases, but our assumption as the subject – as the basis for knowledge – generally resolved to three conclusions. First, nature is self-contained; causality is confined to the phenomenal world. Second, our reason provides the world's very structure and meaning and makes accessible all truths necessary for achieving human potential. And third, progress is inevitable, possible through our reasoned cultivation of the natural world. These developments, however, began to move us toward logical contradiction to mystery, particularly the personal. Consequently, our individual covenant with God, that of Abraham, became the first casualty of our 'inevitable progress,' and much of modernity was centered on

reconciling the two worlds. As our modern presuppositions failed to do so, we abandoned them in favor of relativism and nihilism, resulting in the deconstruction of *being*.

Kant may be credited for first establishing our centrality to the knowing process and therefore our place as subject. It is, he argued, an artifact of our access to and synthesis of two antinomous worlds. One, the phenomenal, is the world of empiricism. It is rich with the tactile content of our knowledge, and these precepts are the experience of our material discoveries. But, Kant reasoned, while this sensory information is entirely necessary, it is singularly insufficient for human knowledge. The phenomenal world, for example, does not itself contain organizing patterns, leaving the human mind incapable of interpreting the world perceived. Additionally, in the case for God, it extends the category of causation beyond its limits, assuming that He acts causally between worlds. Kant therefore departed from strict empiricism and reasoned a second world – one beyond experience that could provide the necessary context for human knowledge. Kant's synthesis of experience and reason serves as a foundation for modernity, both in content and method. From the natural world's inherent isolation to our applied rationality and inferred freedom, Kant describes how human knowledge works and its relation to the world. His, of course, was far from being the last synthesis of modernity; in fact, in reaction to Kant, Hegel developed a synthesized idealism that in many ways critiqued the former's foundational principles. Where Kant's truth, the eternal essence of things, is in the *external* and remains elusive; Hegel's, the transformed existence of things, is in the *internal* becoming and is accessible – though only at the end of history.[24]

[24] Immanuel Kant, Paul Guyer, and Allen W. Wood, *Critique of Pure Reason* (Cambridge: Cambridge University Press, 1998).

As perhaps the most recognized example of modernity's emphasis on progress, Hegel argued that all human thought is a structured, onward march toward knowledge. And this evolution continues until our final synthesis into the Absolute Spirit at which time we have collectively *become* truth. In other words, with existences comes change. And the process, Hegel's dialectic, is comprised of three dynamic facets. The first two facets are the coexistent thesis and antithesis, where the latter is the immediate contradiction of the former. Importantly, this is a 'logical contradiction,' so the antithesis is defined in terms of distinction rather than opposition. In other words, the thesis and antithesis could actually be variations of a single theme but with only minor differences. Regardless of the degree of distinction, the existence of the 'other' – according to Hegel's dialectic – necessitates *mutual* change. This becoming, which simultaneously abandons and preserves elements of the existing facets, moves us to a higher truth in the synthesis. Because the synthesis then exists, it immediately acquires the role of thesis which then necessitates its logical contradiction and continued participation in an even higher becoming.

Hegel thus distinguishes himself from Kant in several ways. First, he denies the existence of 'ideal' things into themselves, since such perfection has not yet manifest as the Absolute Spirit. In other words, there is no *das Ding an sich* and no truth in the process. The real world *is* the one we perceive. Consequently, Hegel places his emphases on phenomena; there is, in Kantian terms, no noumenal and therefore no antinomy – only theses and their logical contradictions, that are brought together in the becoming. This then diminishes Kant's bases for freedom, moral objectivism, and individual agency. For Hegel, our freedom is in our self-awareness, as we are subsumed into the synthesis of greater history; we are, then, at once all subject *and* object. But without an existent truth – or ideal – value claims become practically

irrelevant. Though there is value in his analysis, Hegel's greatest influence is in the dialectical process. Through it, his influence on modernity was felt immediately in Prussia and extended westward well into the 20th century. Locally, his collectivism formed the basis for two competing schools, which were distinguished largely by their alignment with or opposition to Christian theology. Later, Marx and Sartre incorporated the dialectic into their own works on materialism and existentialism, respectively. But, even with its wide adoption, Hegel's system was not *the* final synthesis. Indeed, Kierkegaard, his near contemporary, was highly critical of the Hegelian system's simplicity and relegated it to an exercise of abstraction.[25]

Kierkegaard reproves the Prussian idealists' purported completeness and – in his critical '*un*scientific *post*script' – applies the dialectic to a new origin of truth. Like Hegel and Kant before him, Kierkegaard acknowledges our place as subject and our potentiality. However, as apparent in his work, our earlier optimism that has been characteristic of modernity has begun to fade and with it our confidence in objectivism. Notably, Kierkegaard's lived experiences deeply impacted his perceptions, and this is portrayed in his work quite recognizably. So, to borrow from his own terms, this makes his philosophy relevant not simply in content but also form. Thus, in his systematic approach, Kierkegaard actually pulled faith from the noumenal world – the realm of reason – and described it as something that could *only* be experienced subjectively. All other objects and, in fact, world history become irrelevant. In true modern form, subjective history becomes crucial. This is, in Kierkegaard's philosophy, because we must fulfill myriad stages in life to achieve peace. Acquiring a wealth of aesthetic goods or a network of moral obligations but still lacking surrender to God denies the transcendent foundation and, necessarily,

[25] Georg Wilhelm Friedrich Hegel, Arnold V. Miller, and J. N. Findlay, *Phenomenology of Spirit* (Oxford: Clarendon Press, 1977).

perpetuates a world of despair and anxiety. But, even during Kierkegaard's lifetime, philosophers would begin inflating modernity's subject-man to the point of mortally wounding faith. The materialism and existentialism that followed would fundamentally change the fabric of western society.[26, 27]

By the turn of the 20th century, we had assumed agency over human knowledge and therefore the responsibility for determining moral absolutes. Despite Kierkegaard's insistence on seeing ourselves 'at the foot of the cross,' our relationship with the divine had become even more impersonal; we had, in our humanism, concentrated our passions to the aesthetic and to the secular-moral. As Kierkegaard described, we experienced despair, frustration, and guilt, but we attributed the discomfort to *secular* unauthenticity and not a longing for the divine. The discordance we perceived was within or amongst ourselves. So, as we suffered the world wars and threat of nuclear annihilation, we turned our search for peace inward. In the process, we discovered the apparent irreconcilability of objective truth and plurality and have since resolved to perspectivism – where truths are necessarily defined by the subject; are equal among subjects; and, as the subject and context evolve, are fleeting. But, by the century's end, we had begun to see the effects of postmodern assumptions. Far from being a world of mutual respect and productive dialogue, we had found ourselves isolated in an increasingly impersonal world, particularly those societies that most completely embraced secular humanism, namely the Marxists.

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[26] Søren Kierkegaard et al., *Concluding Unscientific Postscript to Philosophical Fragments,* 2 vols., Kierkegaard's Writings (Princeton, N.J.: Princeton University Press, 1992).

[27] James Daniel Collins, *The Mind of Kierkegaard* (Princeton, N.J.: Princeton University Press, 1983).

Nietzsche recognized the fall of modernity and expects the catastrophic socio-cultural challenges that would succeed him well into the 20th century. According to Kaufmann, Nietzsche's most famous pronouncement, "God is dead," describes not simply his own religious conviction but also that of contemporaneous cultural and intellectual elites. Belief in God, he argues, is simply no longer plausible. But this phenomenon was much more than a shift in ideological demographics; rather, it marked the beginning of the west's collapse. He therefore advocated for a 'transvaluation of values.' This transformation would stem from our common recognition that the world is truly without objective meaning and would lead to a rejection of all religion – whether of faith or state. Avoiding the drop to nihilism, we will instead achieve perfect self-mastery. Such are the *Übermenschen*. And they will establish an unshakable foundation for society, based on the single legitimate moral authority – our individual, subjective will. Thus, we will recognize modern presuppositions, like their objective bases, as absurdities to be abandoned. Our determining moral factor will be only in our *form* not our *content*; materialism and spiritualism will themselves be morally indistinguishable. There will be no Kantian *ought*, only individual *will*. And this revaluation and subjective evolution will permeate through western society. The naturally superior of the Übermensch be will-to-power incarnate. They will, as a matter of course, elevate socially and drive humanity across 'the roped bridge,' away from the slave mentality, and to the actualization of each individuals' potential. And, on this new ground of morality will rise an authentic social order, defined by individuals' exercised power over the *free* self.[28]

[28] Friedrich Wilhelm Nietzsche, Oscar Levy, and Robert Guppy, *The Complete Works of Friedrich Nietzsche : The First Complete and Authorised English Translation*, 18 vols. (New York: Gordon Press, 1974).

A generation after Nietzsche's asylum death, Hitler ascended to party leadership and, through an imitation of transvaluation, forever changed Germany as he drove it toward *his* will. Though the Nazi's demand for perfection aesthetically resembles the will to power, their totalitarianism starkly contrasts Nietzsche's subjective perfection; indeed, even the party's supreme will – the Führer – evidently lacked the self-mastery of the Übermensch. Regardless, Nietzsche's posthumously -organized and -published *Will to Power* provided the fascists a philosophical basis for their movement; consequently and for the next century, his reputation would be tarnished and, more importantly, his works viewed with skepticism. Even so, Nietzsche still had his admirers within the intellectual community. Heidegger, for example, drew from the same texts as the Nazi propagandists, but his metaphysical concerns were far more academic and personalized – exploring not the geopolitical but, instead, the nature of our very *being*.

We have, Heidegger opens *Being and Time*, forgotten the essential question of life – why is there anything at all? Though the question of being, *Sein*, has been posed since Antiquity, historical deduction has produced little more than the existence of particulars. Heidegger, therefore, borrows from modernity and places us at the very center of human knowledge, but he then inverts the analytic method and, in doing so examines our own self and, in a glimpse, Sein. Heidegger's approach rests on the fact that we are more than simply 'featherless bipeds.' Rather, we are a once-authentic *being* that had been 'thrown' into a world in which we at once became consciousness, phenomenologically defined and defining. Now *being*-there, *Dasein*, we are both necessarily aware-of and present-in the world. And this enables us to glimpse the historically elusive Sein through introspective, inductive analysis. But, because consciousness necessitates experiential impressions on *being*, we are ourselves paradoxical, creating our own

unauthenticity, and limiting our full comprehension of Sein. Thus, to more precisely understand the perfection of Sein, we must first account for our own unauthenticity.[29]

Heidegger notes that, while we are innately flawed by phenomenal and temporal experience, there remains potential for approaching authenticity. And he centers this on the preservation of that which defines our humanity – the subjective freedom of *being*. If we assume our own agency and unshackle ourselves from the bonds of the past and of materialism, then we have made progress. If we transcend natural and social limitations, then we have made even more progress still. However, our highest potential is also contained within our deepest anxiety. Since there is no greater fear than the unknowable, and there is no unknowable greater than our own non*being*, then the dread of our death is what actually provides us the greatest opportunity for approaching authenticity. To passively accept death's inescapability is progress. But we would still be time's object and therefore unauthentic. So, as Heidegger describes, we will achieve our greatest authenticity by again becoming the dominant subject over time – embracing death, thereby fully integrating our non*being* antithesis into our *Dasein* future.[30]

With authenticity presented as a *being's* own will and the ideal form as unsullied purity, Heidegger reveals Nietzsche's influence. *Being and Time*, though, also relies heavily on modern concepts, such as antinomies, syntheses, and progress. Further, Heidegger's work resembles, in certain respects, the characteristics of the Abrahamic faiths. Though written in an impersonal context, his objective description of Sein, the innate limitations of Dasein, and the prospect of making peace with non*being*, roughly coincide with God, original sin, and afterlife concepts of faith. Within a generation, though, even indirect references to modernity and faith would be

[29] Martin Heidegger, *Being and Time* (London: SCM Press, 1962).

[30] Ibid., Kindle Location 1571.

erased, as Sartre further extended Heidegger's theories, he ultimately upturned them with a proposition that would wholly unbind freedom.

In 1940, while Heidegger taught *Nietzsche: Der europäische Nihilismus* from a Freiburg lectern, Sartre consumed *Being and Time* from the confines of a German Prisoner of War camp. As Nietzsche's work had done a generation before for the German professor, Heidegger's work proved deeply influential. After three years, Sartre published his response – his objection prominently displayed in the title: *Being and Nothingness*. Though, in several respects, the work reflected Heidegger's influence, it is its distinction that most directly attacked modernity and served as the inspiration for contemporary social movements. Sartre begins with Kant's noumenal world, a concept that had, in its various forms, mostly survived to Heidegger's Sein. And while this transcendent reality was often the basis for our idealism, it was also typically inaccessible and the source of, as he described, 'embarrassing' dualism. Sartre thus returned us to a single world of 'appearances' – the phenomenal. But while this necessarily ended dualism, it also eliminated the potential for an external ideal. In other words, there is no transcendence, so morality is determined by our own selves and for our own ends.[31]

Our 'faith,' or authenticity, is determined not by what we *are* but what we are *becoming* – a measure against our unbound potentiality and freedom.[32] Sartre, then, epitomizes heroic isolation, describing our very existence as contingent on an *other*. Indeed, Sartre even opened *Nothingness* with a challenge to Descartes' venerable *Cogito*, citing the necessity of becoming another's object for even our own awareness. In other words, though we cherish our own individual freedom, within context of plurality there is only potential freedom, that is realized

[31] Jean-Paul Sartre and John Matthews, *Between Existentialism and Marxism* (New York: Verso, 2008), 2842.

[32] Walter Arnold Kaufmann, *Existentialism from Dostoevsky to Sartre* (New York,: Meridian Books, 1956), 3, 25.

only when lose it by our own objectification. We and the other are, therefore, ontologically bound, even if it necessitates surrendering our freedom. So, for Sartre, perspective, truth, and value are *communal* propositions, which corresponds with the broader cultural evolution that followed the Second World War. Together with the Hegelian Left, Sartre provided the philosophical basis for the Marxist revolutions that challenged the west's modern liberalism during the second half of the 20th century.

Thus, ethic of martial technology reflects our perceptual and moral evolution, from centrality to the knowing process to the challenges of plurality. According to Kant, we had awareness of – but not access to – our potentiality, and we established our place as subject and become morally responsible. Though Hegel shared Kant's idealism, he denied the existence of the antimonial wall and created an objective, dialectical system that would iteratively progress the world to (essentially) pantheism and absolute truth. A half century later, Kierkegaard shared in these modern notions of progress and even borrowed the dialectic, but he turned to individual passions, where we needed to feel the commitment to gain authenticity.

By the second half of the 19th century, though, cultural and intellectual elites had become mired in materialism and had abandoned belief – as demonstrated in the spread of Marxism. We had, as Nietzsche would later remark, 'outgrown religion' and with it our modern optimism. The century that followed was a celebration of our independence – of our humanism – but with the 'death of God' emerged Nietzsche's Übermensch as the model of heroic perfection and self-determinism. Heidegger and Sartre would then focus on the challenges of individual authenticity, studying the corrupting influence of our objectification – whether by time or by other persons. The practical impact of modernity on our moral sensibilities is most apparent in theories of just war.

On the Morality of War

Though war is a part of the human condition, our transition from natural and theonomous law to the heteronomous and autonomous illustrate our evolving 'immortality' symbols and sensibilities. Despite these dramatic shifts, some of the earliest *just war* doctrine continues to shape our conduct of war. In one of the most significant changes to war, Saint Augustine shifted the object of war from the personal honor of the heroic worldview to the transcendent God of the saintly. Since and with intentional secularization of the theonomous precepts, the justice to and of war (*jus ad bellum* and *-in bello*) was broadly accepted by multiple cultures, it survived modernity, and remains a cornerstone for just war theory.

The deep influence of Christianity within western society extends to Constantine's conversion – which roughly coincides with Christianity's entrance into warfare. Early Christians, as ardent pacifists, were on the furthest end of the morality spectrum – 'on Earth, as in Heaven,' was how they related to the world. They naturally objected to taking up arms in the defense of Rome. Augustine, however, transformed the faith when he asserted that war and faith were, in fact, *not* logically incompatible. He continued to strongly discourage violence but acknowledged that extreme circumstanced permitted war. With jus ad bellum, then, he introduced situational ethics regarding the faith and war, allowing war in the defense of peace and common well-being. He, in effect, provided theological substantiation for Rome to call upon and therefore objectify its Christian citizens, in their geo-political struggles. Augustine's proclamation remains the cornerstone of Christian war theory and has in fact been adopted by

secular scholars. After Augustine, the faith remained relatively silent on war theory until, during the medieval period, Saint Aquinas emerged with amplification.[33]

Far from challenging Augustine's earlier allowance to war, Aquinas criticized his predecessor's two conditions as unnecessarily limiting. An Aristotelian and realist, Aquinas modified the criteria for war, adding qualifications of good, progressive (toward peace), and properly authorized. Of the three, the 'proper authority' is particularly significant, as in it he includes the state, for its role an arbiter of 'peace for the sake of man's true end.' Notably, Aquinas also leaves open the possibility for intervention, to preserve national sovereignty.[34] As exemplified by Augustine and Aquinas, early Christianity regarded authority in terms completely opposite of antiquity. The Christian God was considered an objective reality that established the basis for morals to whom all were individually accountable. So, with Christianity, not only was mystery accessible, but we were free with our own agency and not subject to determinism.[35]

Similarly, Islam established a just war tradition that was based on theonomous law but subject to interpretation. The 'natural religion' of Islam is an inherently catholic system, in which all wars of religious conversions – to spread God's peace – are not only just, but they are the duty of all Muslim individuals and political bodies.[36] Since the Sixth century, caliphs, sultans, and ayatollahs dialectically studied – and interpreted – revelation and the Prophet's example. Scholars established precedency of revelation over practice and codified social

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[33] Augustine, *The City of God*, 2 vols. (Edinburgh,1871).

[34] Brian Davies and Eleonore Stump, *The Oxford Handbook of Aquinas* (Oxford: Oxford University Press, 2011).

[35] Thomas and R. J. Henle, *Saint Thomas Aquinas, the Treatise on Law : [Being Summa Theologiae, I-Ii; Qq. 90 through 97]*, Notre Dame Studies in Law and Contemporary Issues (Notre Dame: University of Notre Dame Press, 1993).

[36] John Kelsay, *Arguing the Just War in Islam* (Cambridge, Mass.: Harvard University Press, 2007), Kindle edition, 2310.

responsibilities. Interpretive license has, therefore, been held by the faith's religious and political authorities since its inception. Regardless of interpretation, though, the object of war for Islam generally remained within the realm of belief.[37] With the introduction of modernity, however, the cleavages between the two Abrahamic faiths' war theories grew, as the west began to distance itself from revelation and embrace reason.

This western departure is exemplified in one of the earliest modern statutes on war. Grotius, a pious Dutch jurist, recognized both the authority of the Christian God and the contemporaneous limitations of theonomous law. So, to create an 'agnostic' system of international law, he based his work on revelation but made any reference to God tertiary and replaceable, ensuring the law was accessible to those beyond the faith. For example, he removed the exclusionary language of tradition from *De jure belli ac pacis (On the Law of War and Peace)* and then emphasized the code's broadly-accepted humanitarian aspects.[38, 39] Though the law was widely accepted, the process inherently altered the emphasis of the law from the theonomous to the heteronomous.

With Aquinas and Augustine before him, there was a direct connection between divine authority and the absolution. And this was ideologically consistent with Islam. But with the introduction of modernity, western reliance on revelation diminished. Shared humanism became the binding authority and standard for war, in which violations of territorial integrity or political sovereignty were aggressions against the dignity of persons of the aggrieved community – an

[37] Ibid., Kindle edition, 2409.

[38] Christoph A. Stumpf, *The Grotian Theology of International Law : Hugo Grotius and the Moral Foundations of International Relations*, Religion and Society (New York: Walter de Gruyter, 2006).

[39] Hugo Grotius, *Hugonis Grotii De Iure Belli Ac Pacis Libri Tres : In Quibus Ius Naturae & Gentium, Item Iuris Publici Praecipua Explicantur* (Parisiis: Apud Nicolaum Buon ... 1625).

offense not against God but against man. Though the rules of war within the west remained relatively unchanged, the object had shifted dramatically, which further distinguished the west from those cultures that had not experienced the enlightenment, even those with a shared monotheistic lineage, such as Islam. Developments in science and reason further lessened confidence in the objective system, just war began to shift to moral relativism.

Two concepts of political community emerged in the west with modernity, one conceptually similar to the heroic worldview and the other similar to the saintly. Hobbes, in his rejection of mystery, reduced all 'real' things to the natural world, to include our moral bases. The source of virtue, therefore, was reduced from the social responsibility of Christendom to the individual. Offering a rather bleak outlook for humanity, he said, "the notions of Right and Wrong, Justice and Injustice, have there no place. Where there is no common Power, there is no Law: where no Law, no Injustice." The authority for war, he suggested, was nature itself, which made life 'nasty, short, and brutish.'[40] Only a power, which he represented as a leviathan, could bring order to nature. Though most early modernists shared a general understanding of nature, not all agreed with his prescription for authoritarianism.

Locke's liberalism was one such contrast, as it introduced a secular social responsibility to the natural world. Warning against the dangers of a belief *in* violence and likening war to a state of slavery, Locke optimistically proposed a system of relationships that would provide an alternative to Hobbes' leviathan. We are, Locke reasoned, all essentially good, and we share certain inalienable rights. Therefore, we ought to be able to freely surrender a portion of our freedom by way of a social contract, gain collective security, and live free from fear.[41] With

[40] Hobbes and Macpherson.

[41] John Locke and C. B. Macpherson, *Second Treatise of Government*, 1st ed. (Indianapolis, Ind.: Hackett, 1980).

early modernity, then, we acknowledged the ubiquity of war and that we were, effectively, alone and beyond divine intercession. By the Eighteenth century, we had moved beyond 'covertly theonomous' law, as prepared by Grotius, and relied upon heteronomous law. Though it continued to regard nature as 'self-contained,' modernity restored our optimism by recognizing the reach of our reason and adopting an assumption of inevitable progress.

Prevailing contemporary just war theories rely on historical theonomous and heteronomous precepts as much as they do postmodern sensibilities. Walzer, the west's leading just war scholar, unapologetically concedes that tracing morality to its specific sources would be excessively complicated. But from what he does describe, he has borrowed at least from antiquity, Christendom, and modernity – synthesizing the various concepts into an ethic that recognizes a universal potential for civility and would, in his estimate, provide sufficient protection for human dignity for both the aggrieved and the aggressor. The aim of his theory, then, is not simply the absence of fighting; rather, it is "peace-with-rights, a condition [for the individual] of liberty and security that can exist only in the absence of aggression itself."[42]

Aggression is the singular necessary and sufficient cause for war. It is, the "criminal policy of a government" that lethally interrupts the existing 'peace with rights.' Since no war can be just on both sides, the breach delegitimizes the aggressor, reduces his claim to sovereignty, and allows the victim or third party to justly respond with violence.[43] Since a state's rights are derived from its people, the criminal policy that could invite intervention extends to its domestic commitments. Altogether, Walzer offers six propositions of rights and

[42] Michael Walzer, *Just and Unjust Wars : A Moral Argument with Historical Illustrations*, Fifth ed. (New York: Basic Books, 2015), Kindle edition, 1451.

[43] Ibid., Kindle edition, 1613.

response: that there is a society of independent states, that this society has a law that establishes the rights of its members, and that any use of force or threatened use of force against another constitutes aggression and is a criminal act. Further, aggression constitutes two kinds of response, those of self-defense and those of external enforcement; nothing but aggression justifies war; and aggressors can be punished.[44] In other words, despite his idealism, Walzer acknowledges the irreducible tensions found within international politics, as described by Thucydides and Hobbes, but he argues a Lockean alternative to international anarchism. Indeed, he suggests, even without a supreme political authority or appealing to a transcendent religious authority, peaceful and dignified coexistence is possible.

In anticipation of charges of ethnocentrism, Walzer acknowledges the general origins of his foundational principles and explains those principles' universal applicability. Though his theory, "looks back to that religious tradition within which western politics and morality were first given shape,"[45] universal morality is set and is consistent with western history – as demonstrated by historical norms across times and societies. After offering with Agincourt a brief example on the universal repugnance to slaughter, he says, "the clearest evidence for the stability of our values over time is the unchanging character of the lies soldiers and statesmen tell … [so] I am going to assume we really do act within a moral world."[46]

[44] Ibid., Kindle edition, 1669.

[45] Ibid., 436.

[46] Ibid., 867.

Like war, technology – through science – is a part of the human condition. Innovative presumption "favor[s] the invention, adoption, and use of emerging technologies." And it often reflects key themes of modernity, to include the liberty of persons, technical optimism, and technical determinism (i.e., progress). Yet, not all technics are inherently 'good,' as some have the potential to compromise justice, rights, and identity of human beings. The ethic, which is relative to its cultural and ecological context, is determined by the technic's potential for efficiency and power; its associated extrinsic and intrinsic concerns; and its effect on the form of life. In other words, the morality of technology is less concerned with the fact *of* innovation, and it focuses on which technologies ought to be promoted or discouraged to maximize human flourishing.[47] Martial technics' value is considered in both social and military terms.

Reflecting the hermeneutical tendencies of postmodernity, Kranzberg affirms the relative value of technics, in his 'laws.' Technics are, he describes, neither good nor bad; rather, their value depends upon the outcomes of their use, as considered within the historical context. If the technics contributed to the contemporaneous wellbeing of persons, then they are good. And regardless of their relative value, technology changes existent man and creates a new, evolved man. Consequently, though all history is important, the history of technology is *the* most relevant. Technics enable us "to comprehend how [our] world came into being." In other words, we *can* only know the world through artifacts; therefore, it is in the study of such that we can understand the past, even if the object is a mere representation of the form. Kranzberg's laws are

[47] Ronald L. Sandler, *Ethics and Emerging Technologies* (New York: Palgrave Macmillan, 2014), Kindle edition, 4-10.

materially dialectical and, therefore, resemble modern and postmodern suppositions of Marx and Heidegger, respectively.[48]

Other theorists rely more heavily on the classical tradition to evaluate the ethic of technology. Vallor, for example, dismisses the rule based ethics of modernity and rejects the necessity for consistency on moral issues. Instead, she advocates for a 'renewal' of virtue ethics. In her use, it is "a range of approaches" that is consistent with our evolving psychology and is centered on the idea of individually-cultivated excellence.[49] This is a departure from the deontic or consequentialist morality and returns us to the technics' purpose, or Aristotle's *final cause*. This provides the opportunity to not only achieve excellence in the specific incidence but to also "move toward the accomplishment of a good life."[50] This is, however, logically incompatible with consequentialism or moral relativism, as described by Sandler and Kranzberg, since such potentially decouple the moral worth of acts from the moral worth of persons, subordinating the wellbeing of the individual for that of the greater good.

Human excellence is also central to Postman's analysis of technological ethics, though his appraisal is more analogous to Kierkegaard's experiential authenticity than Aristotle's virtue. As described by Postman, technology can have a deleterious effect on humanity. The transformative nature of modernization, he argues, does not simply add nor subtract from what exists; rather, it fundamentally changes the foundational concepts of being and knowing. Further, the effects of the practical Kuhnian paradigm shifts are not evenly distributed, as most

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[48] Melvin; Cutcliffe Kranzberg, Stephen H.; Post, Robert C., *In Context : History and the History of Technology : Essays in Honor of Melvin Kranzberg*, Research in Technology Studies (London: Associated University Presses, 1989).

[49] Shannon Vallor, *Technology and the Virtues : A Philosophical Guide to a Future Worth Wanting* (New York: Oxford University Press, 2016), 312, 491.

[50] Ibid., 446.

culturally-impoverished societies lack the historical foundations necessary to moderate modern transformations. America is, he argues, just such a society and has completely surrendered to "the sovereignty of technique and technology" – making it the first 'technopoly.'

Thus, even within a shared worldview or society, judgments regarding the morality of technology are inconsistent. Some moralists evaluate the technology based on its intrinsic value and relation to human excellence, while others consider it within terms of consequence or moral absolutes. The application of technology in war necessarily synthesizes the moralities of society, of war, and of technology, and they are not always aligned. When the cannon emerged during the gunpowder revolution, for example, it was simultaneously celebrated it as a testament of human excellence in science and reviled as an offense to chivalric ethics in war.[51] Particularly since the Fifteenth century and around the time of Grotius, this phenomenon has become increasingly commonplace, as technological revolutions have created 'sudden tempests' that rapidly transformed the fundamental conduct of war and challenged prevailing norms and moralities. [52] A brief example illustrates the ethic of martial technology – an accepted martial technic that was employed within the parameters of social acceptability but quickly succumbed to evolving moral sensibilities.

On the morning of August 6, 1945, America unleashed an emergent martial-technic that redefined the character of warfare. The atomic bomb, President Truman announced, is the "greatest achievement of organized science," loosing "the force from which the sun draws its

[51] Steven J. Barela, *Legitimacy and Drones : Investigating the Legality, Morality and Efficacy of Ucavs*, Emerging Technologies, Ethics and International Affairs (Farnham, Surrey, England ; Burlington, VT: Ashgate, 2015), 134.

[52] Max Boot, *War Made New : Technology, Warfare, and the Course of History, 1500 to Today* (New York: Gotham Books, 2006), Kindle edition, 228.

power … against those who brought war to the Far East."[53] For the Japanese, as eloquently described by the surviving Okura, the "sky split open" with a blue-white brilliance, the ground trembled, and Hiroshima fell underneath an impenetrable cloud.[54] In the flash, 80,000 people died from this new war-technic. Yet, even before the massive, radioactive pillar dissipated, the president promised to meet any further recalcitrance by Japan with even more powerful bombs – bringing them a "rain of ruin." Nagasaki followed three days later, doubling the Japanese toll. The following week, Emperor Hirohito radioed his intent to surrender. In Clausewitzian terms, America unapologetically used maximum force to effectively disarm Japan and erode its political will. And atomic means and its efficient, total destructive power has since defined international relations and the conduct of warfare.

As represented by the president, military leaders, and press reporting, early views on atomic warfare were mostly positive, and they interestingly extended beyond martial considerations and included how it would affect humanity's 'new relationship to the universe.'[55] With the assumption of moral superiority, Americans generally regarded the technic as an unparalleled, efficient means to achieve political ends. The president marveled at the scientific and martial achievement, and he justified the weapon's use in terms of both efficiency and reciprocity.[56] The people, from Los Angeles to New York and as suggested by the week's headlines, were optimistic (albeit cautiously) about the weapon's potential to end the war that

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[53] Harry S. Truman, "Statement by the President Announcing the Use of the a-Bomb at Hiroshima," The White House.

[54] Toyofumi Ogura, *Letters from the End of the World : A Firsthand Account of the Bombing of Hiroshima*, 1st ed. (Tokyo: Kodansha International, 1997).

[55] Henry L. Stimson, "Notes of Meeting of the Interim Committee, May 31, 1945. Miscellaneous Historical Documents Collection. 736.," ed. The Interim Committee, Notes of the Interim Committee (Washington: US Government, 1945), 2.

[56] Vicente Sanfélix Vidarte, "Wittgenstein and the Criticism of Technological and Scientific Civilization," in *Forms of Life and Language Games*, ed. Jesús Padilla; Gaffal Gálvez, Margit (Verlag: De Gruyter, 2011), 154.

had already killed nearly a third of the global population, often referring to the adversaries 'doom' with bigoted enthusiasm.[57, 58, 59] Though the military was skeptical about Japan's capacity for a protracted war,[60] it still sought to avoid the estimated quarter-million troop loss of an invasion of the home islands. There was, therefore, general coherence across the Clausewitzian trinity – the technic conformed to calculations and rationality, passions and morality, and chance and probability.

Notably, however, intelligentsia was more skeptical of the technology's application. The small scientific community that developed the bomb generally accepted its potential use, but, they recognized the danger of the new paradigm. Oppenheimer recalled, "We [scientists] knew the world would not be the same. A few people laughed, a few people cried, most people were silent. I remembered the line from … the *Bhagavad-Gita* … 'Now I am become Death, the destroyer of worlds.' I suppose we all thought that, one way or another." The day after, 70 of the scientists petitioned the government, imploring that the technic be reserved as a means of last resort – to be used only after America made its terms public, after Japan rejected surrender, and after the commander-in-chief considered the breadth of moral implications.[61] The petition was blocked by incoming Secretary of State Byrnes, and many of those scientists were expelled from positions of trust within the government. Though the president never received the petition, he

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[57] Associated Press, "Man's Most Destructive Force, One Equal to 2000 B-29 Loads, Blasts Nips," *Lost Angeles Times*, August 7 1945.

[58] Sidney Shalett, "First Atomic Bomb Dropped on Japan; Missile Is Equal to 20,000 Tons of Tnt; Truman Warns Foe of a 'Rain of Ruin'," *The New York Times*, August 7 1945.

[59] "Atom Bomb Crew's Story! 60% of Jap City Wiped Out," *Chicago Daily Tribune*, August 8 1945.

[60] Henry L. Stimson, "Notes of Meeting of the Interim Committee, June 18, 1945. Miscellaneous Historical Documents Collection. 736.," ed. The Interim Committee, Notes of the Interim Committee (Washington: US Government, 1945), 7.

[61] Leó Szilárd, "Petition to the President of the United States, July 17, 1945. Miscellaneous Historical Documents Collection. 345.," Manhattan Project (Washington: US Government, 1945).

apparently shared some of the concerns expressed by the scientists, independently implementing some of the conditions they put forward. At the Potsdam Conference, he declared America's terms for Japan's unconditional surrender; offered assurances for their just treatment; and described, albeit without specificity, the alternative as "prompt and utter destruction."[62] But neither the terms nor warning were sufficient to compel Japan's surrender.

After the atomic attacks, other intellectuals quickly echoed the American scientists' concerns. Mumford's response to the bomb was "immediate and passionate," and his 1946 *Gentlemen, You Are Mad!* article captures the essence of his criticism, charging political and military leaders with madness and with "acts which will lead eventually to the destruction of mankind."[63] And, in his remarks, Russell expressed similar sentiments, as he captured the moral paradox – "it is," he said, "impossible to imagine a more dramatic and horrifying combination of scientific triumph with political and moral failure than … the destruction of Hiroshima." By 1946, the United Nations had begun to take measures to limit the development and proliferation of the bomb that was, arguably, morally acceptable the previous year. It sought to eliminate atomic weapons from national armaments, using a series of treaties that limited atomic testing.[64] Though the International Court of Justice would not rule on the legality of atomic weapons for another two generations, the bomb had effectively become *mala in se* within a year of its first use. What had changed since 1945?

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[62] Yale Law School, Avalon Project, "The Berlin (Potsdam) Conference, July 17-August 2, 1945: Protocol of the Proceedings, August L, 1945," http://avalon.law.yale.edu/20th_century/decade17.asp

[63] Paul S. Boyer, *By the Bomb's Early Light : American Thought and Culture at the Dawn of the Atomic Age* (Chapel Hill: University of North Carolina Press, 1994), 284.

[64] United States Office for Disarmament Affairs, "Nuclear Weapons," United Nations, https://www.un.org/disarmament/wmd/nuclear/.

A brief consideration of the criteria for the ethic of technology reveals that the primary difference between the bomb's moral acceptance in the year between its use and prohibition is what Sandler referred to as its effect on the form of life and what Postman described as the fundamental change in our concepts of being and knowing. Aside from the absence of an active theater of war, the cultural and ecological contexts were relatively unchanged. And the technic's potential for efficiency and power were only increasing, as the greater hydrogen bomb was already under development, suggesting that any calculous regarding the wellbeing of persons was the same. Additionally, the virtue of scientific excellence (or paucity of political morality, as Russell would charge), were also consistent with what was displayed before the bomb was used.

Form of life considerations, as describe by Sadler, are those that identify "how the technology might restructure the activities in which it is involved."[65] Even in America, the earliest reactions, as reported in contemporaneous polls, were a mixture of awe, confusion, and fear. As Boyer described, "in the earliest moments of the nuclear era, the fear that would be the constant companion of Americans for the rest of their lives … had already found urgent expression."[66] This introduced a new lens from which to view the world, not just with the means of science but also with respect to the omnipresence of an existential threat. The individual self and all the symbols the conscious had constructed to ensure immortality – from the state to the worldview – were at once threatened with nonexistence. Even if one was unaware of *noögenic* neurosis or its connection to the bomb, the threat of annihilation was nonetheless real enough to introduce a shift in acceptance of the bomb. Within a decade and with exponential growth in the

[65] Sandler, 19.

[66] Boyer, 5.

American nuclear arsenal, the introduction of nuclear competition by the Soviets, and increased awareness of the pervasive dangers of radioactive contamination dramatically strengthened opposition to the bomb.

Conclusion

Thus, war is more than simply a primal response to a brutish world; it is, instead, a phenomenon predicated on consciousness and the drive to preserve our inherently catholic symbols of identity – such as nationalism.[67] And though its cause has been remarkably consistent, war's character has changed dramatically with the evolution of our reason, sensibilities, and capabilities. The means that are developed to preserves our 'honor and interest' from what we fear reflects our intellectual, cultural, and technical disposition. Consequently, the ethic of martial technology draws from multiple disciplines and branches.

Existing scholarship on emergent technologies considers ethical and legal considerations, but it is mostly limited to modern concepts and largely neglects psychological and philosophical developments of the 19th and 20th century. Kant's deontic and Mill's utilitarian ethics offer only a narrow perspective of contemporary truth and value claims, and they could be strengthened with increased attention to the foundations of morality. This not only deepens awareness of western philosophical lineage, but – as briefly mentioned with Islam – it illuminates the character of non-western worldviews. Coupled with an understanding of the prevailing issues of technological morality, this awareness would better prepare one for the challenges that

[67] Becker, *The Denial of Death*, 120.

accompany emergent technologies, such as the world's experience after the introduction of the bomb.

Recent advancements in technology introduce significant challenges to our post-modern sensibilities, overshadowing even last century's development of the atomic bomb and the associated risks of absolute war. These emerging technologies – such as lethal autonomous weapons, neuro manipulation, and bioengineering – return us to threats beyond the concepts of physical survival and to our evolved notions of humanity dignity. We will, therefore, increasingly face questions about what technologies we ought to pursue. Responding with simply the technic's relative utility to preserve primordial interests is inadequate; rather, the calculous should include how the developments risk to our postmodern concepts of being. Consequently, the ethic of martial technology should seek to understand existing concepts of being, its origins, and its contemporary social implications, and it should critically examine how the development of technology affects these ontological concepts.

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