

RECOVERING LEWIS MUMFORD'S *THE PENTAGON OF POWER*

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With a life that spanned the greater part of the twentieth century, Lewis Mumford (1895–1990) witnessed the rapid rise of a wide-range of technologies, from mechanical and nuclear to early electronic developments, and the resulting increase in industrial and economic production. However, instead of a tendency towards democratization and a decrease in social and economic disparities that would seem to be made possible by industrialization and its abundance, he observed, rather, a growing global propensity towards war, violence, scarcity, inequality, and a general disregard for human life. As we solidify control of our environment by constantly increasing our power and productivity through the use of scientific reason, why does our world seem to become more fragmentary, more alienating, and less humane? The examination and critique of this paradox is at the heart of Mumford's two-volume tome, the little known, and even less studied, *The Myth of the*

Machine, which represents the culmination of philosophical work he began in *Technics and Civilization*.

Technics and Civilization (1934) was published prior to World War II and the onslaught of technologies that would rise in its wake. In this book, Mumford traces modern technology, and specifically the development of the machine and the parallel process of societal mechanization, to the Middle Ages instead of to the industrial development of the eighteenth and nineteenth centuries, which was a view commonly held by his intellectual contemporaries. His historical narrative of “machine civilization” starts around 1000 ACE and is divided into three periods, each defined by an increasing tendency towards mechanization that often came at the expense of humaneness. He asserts throughout that this mechanization was not an inevitable outcome of technics, nor was it necessarily a result of a human striving towards efficiency, but rather it was the product of a series of intentional choices made in the pursuit of power, power over nature and power over other humans. The machine became the end in itself and ultimately took on a life of its own, treated as if it were the creative principle instead of just one possible creation. And this “myth of the machine” in the early twentieth century, at the time he was writing *Technics and Civilization*, must have seemed more powerful than ever with the expansion of industrial farming practices, the popularization of processed foods, the replacement of traditionally handmade arts and crafts with factory-produced goods, and the consolidation of large-scale mass production. All of this contributed to greater output and expediency, but with a drastic reduction in quality, durability, safety, and by extension human expression, creativity, and autonomy. Yet, *Technics and Civilization*, ends on a hopeful, if not a bit trite,

note: "...however far modern science and technics have fallen short of their inherent possibilities, they have taught mankind at least one lesson: Nothing is impossible."¹

The second and final volume of *The Myth of the Machine, The Pentagon of Power*, Mumford's last in the series of writings on technology and civilization, was published in 1970, in the aftermath of not only the atrocities of World War II, but also in the midst of the Cold War and during the War in Vietnam, which was only the latest manifestation of nearly thirty years of continuous war operations on the part of the solidified US military-industrial complex. In the context of the degradation of the American project, the American Dream, and the American Way of Life, the titular reference to the Pentagon is clearly intentional, yet Mumford does not limit himself to a critique of the American version of the myth of the machine. Like *Technics and Civilization*, this book covers a broad scope. However, whereas that book and the similarly focused first volume of *The Myth of the Machine, Technics and Human Development* (1967), were essentially historical narratives of the rise of the mechanical age over the last thousand years, *The Pentagon of Power* looks to the past to specifically single out the building blocks in the Power Complex, which is the ultimate expression of the mechanization of nature and the automation of humanity into a totalizing system, what Mumford refers to as a 'megamachine,' and which revealed itself as an anti-human, anti-life configuration driven by a pentagon of ends: power, profit, productivity, property, and prestige. At the time of publication, this Power Complex was exemplified by the US Pentagon and the Kremlin, which is still the case today with several additions.

Mumford compares the compulsive force of the Power Complex to the behavior of the pleasure center in the brain; when it is activated any physiological, emotional, or intellectual limits are disregarded and the only desire becomes the continuous activation of its receptors. The principal stimulus for the Power Complex is money as the material expression of power. Mumford outlines the way in which this drive for power through the unlimited development of technology became irresistible, to the point of denial, to the point of cultivating a view of technological development immune to critique, or reflection. He pins a date to this shift from the understanding of technology as a tool for human advancement to a blind faith that, in a large part due to the complex economics of war, gave way to a refusal to reflect, think, or view it in any other light even as the stakes got higher in the face of nuclear development:

Up to 1940 it was still possible to regard the continuation and acceleration of modern technology as, on the whole, favorable to human development; and so firmly has this conviction been implanted, so completely has the Myth of the Machine taken hold of the modern mind, that these archaic beliefs are still widely regarded as well-founded, scientifically accredited, indubitably 'progressive'—in short, practically unchallengeable.²

In *The Pentagon of Power*, Mumford takes up the arduous task to challenge the unchallengeable by revealing the darker sides of those developments which are commonly taken for granted as triumphs of the Power Complex and as evidence of the omnipotence of the megamachine.

The book opens with an overview of three foundational figures of modern science: Galileo, Descartes, and Bacon. First, he outlines Galileo's "crime," his role in laying the groundwork and erecting the guideposts towards the extirpation of the human experience from the scientific method. From this analysis, Mumford critiques the subsequent championing of science as the principal vehicle for human development and the undermining of art and creativity, the reflection of the untestable, the mysterious, the ephemeral, and the unexplainable as a means to understand the world we live in:

In denying the importance of subjective factors, that is human propulsions, projections, and autonomous responses, the followers of Galileo unfortunately fended off any inquiry into their own subjectivity; and in rejecting values, purposes, and non-scientific meanings, fantasies, dreams, as irrelevant to their positivist methodology, they failed to recognize the part such subjectivity had played in creating their own system. What they had actually done was to eliminate every value and every purpose but one, the one they regarded as supreme: the pursuit of scientific truth. In this pursuit of truth, the scientist sanctified his own discipline and what was more dangerous placed it above any other obligations of morality. The consequences of this dedication have only begun to appear in our own age. Scientific truth achieved the status of an absolute, and the incessant pursuit and expansion of knowledge became the only recognized categorical imperative.³

According to Mumford, it was Descartes, and his equation of life to a mechanical process, who "paved the way for the eventual militarization of

both science and technics.”⁴ The problem with this mechanical view of life is that machines are closed systems whereas living organisms are always subject to change and this leaves their future open and unpredictable. This is a condition of life that clashes with the understanding of the world as a series of mechanisms that run according to a grand design. Mumford draws out this difference between the functioning of organisms and mechanisms, a distinction which can, on the micro and macro levels such as in the minute processes of the human body, often be quite subtle and difficult to perceive when the body runs as expected:

Unlike an organism, which is an open system, subject to chance mutations and to many external forces and circumstances over which it has no control, mechanisms are closed systems, strictly contrived by the inventor to achieve clearly foreseen and limited ends. Thus a full-fledged automatic machine is a perfect example of pure teleology, and every part of it bears the same imprint: no machine, however rudimentary, was ever put together by chance or random accretions or natural selection. By contrast, even the lowest species of organism, according to the doctrine of evolution, has remarkable potentialities that no machine can boast: it can alter its species' character and re-program itself, so to say, in order to seize new opportunities or resist unwanted external pressures. That margin of freedom no machine possesses on its own right.⁵

Thus, to insist on uniformity, clockwork regularity, and predictability as features of the optimal functioning of nature, and by extension the human body even equipped with reason, is a way to impose on it, by definition, a lack

of freedom. The reduction of organisms to the status of “automatons” that perform a series of set “mechanisms” translates to the definition of a well-functioning societal machine as one in which the operators have complete control over the various moving parts, human beings. And this view, which still guides the way in which institutions, businesses, cities, countries, and even the “global village” are organized into hierarchies of people assigned to certain, often imposed, functions, contributes to a societal model that increasingly undervalues and seeks control over the faculties that Descartes himself insisted set men apart from other animals, the use of language and individual free will, in an effort to consolidate the power of the few over the many.

Bacon took up this view of the machine as the model for life and demonstrated how it could be used to organize communities in order to achieve greater knowledge and power. With his lack of qualifications as a mathematician, or physicist, Bacon, more than any other sixteenth-century thinker, “brought science down to earth.”⁶ He made it accessible, by his own example, to anyone curious and passionate enough to seek greater knowledge, and he swept away the notion that the sciences should deal with only “lofty” things, stressing the fact that the very mundane and even the “filthy” were worthy of exploration, and potential economic exploitation. But his principal intellectual contribution lies in his vision of scientific endeavor as a collective enterprise and the delineation of scientific community as a systematized, organized hierarchy of individual minds that, by working together on large-scale projects, would speed up the process of discovery and invention, lead to deeper insights, and ultimately, result in greater power over nature and “the enlarging of the bounds of Human Empire, to the effecting of all things possible.”⁷ In Mumford’s view, Bacon’s outline for an organized scientific

apparatus, combined with the Galilean valuation of objective experience over the subjective and the Cartesian understanding of life as a mechanical process, laid the ground work for the type of collective, global scientific knowledge machine in place today, which views unlimited technological advancement as the means and ends of scientific work:

So it was not only the Royal Society or the American Philosophical Society that Bacon actively influenced by his anticipations. His quaint account of the future in 'The New Atlantis' provided in imagination for our present-day foundations for scientific research and our specialized institutes and laboratories, which utilize hundreds and even tens of thousands of workers in what has increasingly become a factory system for the mass production of knowledge—technologically exploitable, financially profitable, bellicosely employable. What Bacon did not foresee is that science itself might in time become demoralized by its very success as an agent of technology, and that a large part of its constructive activities might be diverted by heavy governmental subvention, to destructive anti-human ends on a scale that mere empirical day-to-day technics could never achieve.⁸

Following this examination of the roots of the Power Complex, Mumford reconstructs the solidification of the twentieth-century megamachine that was initially powered by increasing militarization across the globe that took place just prior to World War I, and which came to fruition with the introduction of nuclear weapons of mass destruction, and whose objective on a global scale is to achieve "the domination of nature and the

subjugation of man.”⁹ According to Mumford, this new, “nucleated” megamachine is a resurfacing of tendencies—strengthened, empowered, and solidified by Renaissance and Enlightenment philosophy—that trace to the Pyramid Age. The ancient megamachine was characterized by societies that worshipped an omnipotent Sun God whose power was made manifest in divinely elected kings who governed by means of a depersonalized state apparatus branched into the mechanized arms of a maze-like administrative body of functionary priests and an elite army. The “rebirth of the Sun God” came in the form of the Copernican Revolution, which set modern technical science on its current trajectory and, when viewed in this historiographical context, functioned as the first announcement of the rise of the modern megamachine. Mumford offers this unsettling reading and, following the critical interpretation of the legacy of Galileo, Descartes, and Bacon, further turns upside down the understanding of modern science and technology as necessarily progressive, pioneering, or revolutionary:

And first, there was the cosmic religious preparation, which I have already described as the rebirth of the Sun God, or, to put it in more commonplace terms, the heliocentric system of Copernicus. The exponents of this religion, once called natural philosophers, later scientists, for long bore themselves with such modesty and self-effacement, and brought forth such an abundance of useful knowledge, applicable in mining, hydraulics, navigation, war—and eventually in medicine, agriculture, and public health—that no one suspected that their methods might also become a prime instrument of dehumanized authority.¹⁰

Although the ancient and modern megamachines have much in common in terms of their organization of masses of people to bring to fruition technical projects that could not be completed on small or individual scales, the modern version differs in obvious ways such as its planetary scope, its ability to constantly downsize the need for human workers, and the fact that workers have become 'free' to be cogs in the machine, as opposed to the ancient system that imposed slave, or indentured labor. But, Mumford points out, the underlying message of both versions remains constant—the pursuit of power at all costs:

The ideology that underlies and unites the ancient and modern megamachine is one that ignores the needs and purposes of life in order to fortify the power complex and extend its dominion. Both megamachines are oriented toward death; and the more they approach unified planetary control, the more inescapable does that result promise to become.¹¹

The Manhattan Project, with its deeply hierarchical organization, fragmentation of the intellectual community through secrecy and threats, and systematic refusal to reflect on the immediate or long-term consequences of nuclear development geared toward armament, and its product which makes possible the complete eradication of all life is presented by Mumford as the negative end point of the trajectory put in motion by Galileo, Descartes, and Bacon. It is also the ultimate expression of the megamachine as a system that uses science to develop technology that does not concern itself with human flourishing, but that is instead oriented towards death. In the following passage, which I quote at length, Mumford illustrates the extreme gap in the

destructive power accessible to the divine rulers of the ancient megamachine and that available to the superpowers of the modern one:

Until now, human violence had been limited by the meager physical resources at the disposal of the governments. In so far as earlier megamachines were forced to rely upon manpower to exercise control, they were kept to the human scale... But the new megamachine knows no such limitations: it can command obedience and exert control through a vast battery of efficient machines, with fewer human intermediaries than ever before... This high degree of dehumanization increases the lethal automatism of the megamachine. Those who plan its strategic objectives contemplate the extermination of a hundred million human beings in a single day with less aversion than the killing of a few hundred bedbugs. For them, the sacrifice of an equivalent number of their own countrymen has become equally 'acceptable,' once the 'balance of terror' fails.

In plain words, the religion of the megamachine demands wholesale human sacrifice, to restore in negative form the missing dimension of life. Thus the cult of the Sun God turns out, in its final scientific celebration, to be no less savage and irrational than that of the Aztecs, though infinitely more deadly. After all, the Aztec priests disemboweled their victims by hand, one by one; and human nausea at this spectacle was so great that the priests were compelled to ensure themselves against unfavorable reactions by threatening a similar fate for those who even turned their eyes away. The priests of the Pentagon and the Kremlin have no need for such threats: in their underground control centers they can do their job more neatly, merely by pressing a

button. Untouchable: unchallengeable: inviolable. Such are these new controllers of human destiny.¹²

After the systematized killing of millions in Hitler's concentration camps came to light and with the threat of Axis domination, the creation and usage of the atomic bomb was presented as a necessary evil, justified by its purpose as an end to the war and further killing. This justification, so cynical now in retrospect, not only created a world full Hitlers, and Eichmanns, but it also brought humanity to its knees before the possibility of the complete eradication of life. Finally, the megamachine had reached its goal to create the ultimate tool of power: the power of total destruction.

Following World War II, the Manhattan Project solidified the military-industrial complex as the primary model and goal of scientific development. Although the achievement of nucleation represented the pinnacle of scientific and technological achievement for our modern megamachine, the power to control all life on earth under threat of extinction, there was still work to be done in terms of developing technologies to enhance control over human behavior and expand property, production, prestige, and profits. With this in mind, Mumford dedicates a large portion of the book to an analysis of the new large-scale communication technologies that were just developing, or that were on the horizon when he was writing the text, as well as the reactions, tendencies, and behaviors that accompanied them. These analyses, written several decades ago, relied on intuition and extrapolation and, instead of seeming completely outdated or even outlandish, their prediction of the current technological trajectory is quite striking. For instance, he describes a "technological compulsiveness" that was beginning to crystallize:

One may without exaggeration now speak of technological compulsiveness: a condition under which society meekly submits to every new technological demand and utilizes without question every new product, whether it is an actual improvement or not; since under this dispensation the fact that the proffered product is the result of a new scientific discovery or a new technological process, or offers new opportunities for investment, constitutes the sole proof required of its value.¹³

This passage applies just as much, if not more, to the consumer society in our digital age; what he describes is now a recognized condition whose symptoms range from internet addiction to the non-stop consumption of visual media as a way of life to the constant purchase of devices that promise to be newer, faster, and more integrated but that don't really do anything except facilitate more effective advertising, more efficient, frequent, and compulsive purchasing, and increasing detachment from a face to face, which is to say, human, existence.

Mumford's prescient critiques of the popularization of communication technologies, the expansion of mass media, and McLuhan's pronouncement of the "global village" as the ideal human utopia do not deny the great potential for inventions such as the telephone, the television, or the computer to enhance the human experience, but he points out the dangers inherent in erasing the limits of contact and communion between humans made possible by these electronic technologies. His thoughts on McLuhan and the possible

outcomes of his call for a wired and connected world are particularly thought provoking when read today:

McLuhan's ideas about the role of electronic technology have been widely accepted, I suggest, because they magnify and vulgarize the dominant components of the power system in the very act of seeming to revolt against its regimentation. In treating the planet as a 'tribal village' by instant electronic communication, he has, in fact, united the crippling limitations of a pre-literate culture, which made the scattered, farming population of the world an easy prey to military conquest and exploitation, with the characteristic historic mischief of 'civilization': the subjugation of a large population for the exclusive benefit of a ruling minority.

So far from there being any spontaneous communication under this regime, these electronic media are already carefully controlled to make sure that 'dangerous,' that is, unorthodox views do not slip through. Such a system permits neither colloquy or dialogue, as in genuine oral intercourse: what takes place is for the greater part only a meticulously arranged monologue, even if more than one person is present on the screen. A population entirely dependent upon such controlled oral communication, even though it reached every human soul on the planet, would not merely be at the mercy of the Dominant Minority but would become increasingly illiterate and soon mutually unintelligible. Thus once again the parallel between the Pyramid Age and our own forces itself upon the observer: here in prospect is actually the electronic Tower of Babel. Instant planetary communication, conducted on

these principles, would bring about eventual excommunication from any identifiable community.¹⁴

Mumford did not live to see the extent to which electronic communication technologies would explode as a result of the Internet, he did not live to observe Twitter, or Facebook and the rapidity with which one person can communicate with another instantaneously from any point on the globe, but his concerns for the way in which this ability would not facilitate more human justice and autonomy, but instead make the conditions more ripe for a world-wide subjugation of the majority by the minority who control these modes of communication are particularly relevant in light of the demonization of WikiLeaks and its founders, the arrest, alleged torture, and conviction of Bradley Manning, the more recent Snowden debacle, or in view of the complex, and problematic, role of social media in the Occupy Movements and the Arab Spring. The question of whether or not the digital, global village powered by the Internet and social media presents truly new possibilities for humanity, and there are countless arguments in either direction, is a question that Mumford never directly grappled with. However, it is possible to conclude that he would not see it as a new beginning of any kind. Forty years ago, his perspective on the coming computer age was that it just represented more of the same. In fact, he envisioned the computer itself, which he referred to as the “All-Seeing Eye,” as the ultimate tool for the megamachine to control, systematize, and sterilize the human experience.

Even in the face of this repetitive historical tendency towards the increased fortification and expansion of the anti-human megamachine and the bleak picture he paints of the technological future, Mumford still remains

hopeful about the human capacity for change he expressed at the end of *Technics and Civilization*. However, in *The Pentagon of Power*, he takes a more radical stance and, instead of suggesting that a greater balance between man and machine will be enough, he recommends a casting off of the machine and its myth as a by-product of a more primitive mode of thinking. And, as the first step on a path towards a new life-centered way of life, he proposes the denial of the megamachine as an inevitable human destiny. The megamachine was created by humanity, so humans can destroy it and create something new in its place. And this doesn't mean to completely cast off the old, or to raze the basic structures to the ground. In fact, this disregard, ignorance, or repression of the past is part of the reason we have been incapable of creating a more life-friendly existence; we repeat and replay past traumas incessantly as they are forgotten from one century to another, from one generation to another, from one year to another. As an alternative, Mumford offers as a starting point the refutation of the commonly held view of humans as technical animals whose main drive is to control nature. He insists that humans are driven by creativity, curiosity, and a desire to live, and that there is a collective need to recuperate the primacy of human ingenuity and imagination in order to reconfigure our way of life. In other words, we need to take back the world for the use and flourishment of living beings—not for the unlimited development of the machine. And the way to do this, according to Mumford, is to move from megatechnics to biotechnics, from “power to plentitude:”

If we are to prevent megatechnics from further controlling and deforming every aspect of human culture, we shall be able to do so only with the aid of a radically different model derived directly, not

from machines, but from living organisms and organic complexes (ecosystems)...These new models will in time replace megatechnics with biotechnics; and that is the first step toward passing from power to plenitude.¹⁵

One of the principal ideas at the heart of biotechnics is the fact that organisms function best in a state of balance, and not unlimited expansion. The balanced body and mind are considered to be healthy and whole, whereas the body that has either an excess or a shortage of energy is a diseased body, unfit for life, for reproduction, for survival. Mumford suggests that this same concept of balance brought to the societal level would eventually contribute to greater ecological equilibrium and result in a state of plenitude. And this plenitude, which would undoubtedly be created with the help of science and technology, would, from its earliest manifestation, be characterized by an “indifference to money incentives, the liberation from self-inflating publicity, the diversification of vocational activities, the deliberate slowing down of the tempo of production, whether industrial or intellectual, the renewed concentration on superior human functions and cultural values, not least the active ‘resorption’ of government.”¹⁶ In other words, collective work towards plenitude would include the complete dismantlement of the pentagon of power.

Mumford makes clear the fact that the seeds have already been planted for this type of change by great thinkers, and doers, from Da Vinci to Thoreau. Many others can be added to this list not least Martin Luther King Jr., or more currently Vandana Shiva, who outlines the conditions for a human-centered way of life in *Earth Democracy: Justice, Sustainability, Peace* (2005).

Even though the last millennium has been ruled by megatechnics, there have always been strong models for a biotechnical existence. This is not a new concept and communities have existed and still exist that live in balance with nature. In this text, Mumford advocates for, or dreams of, the intentional installment of a biotechnical model for the human way of life on a mass scale in an effort to promote happiness, health, and life, which would be a complete and powerful reconfiguration of the meaning of civilization.

Now, more than forty years after its publication, *The Pentagon of Power* remains a powerful statement on technology and the human condition that serves as a prototype for bold, critical writing unencumbered by the limits of academic field or discipline. Yet, this book, as well as most of Mumford's writing, aside from his architectural and urban planning work, has remained largely ignored or unknown, even in academic circles. The question of why such an important, incisive, and rigorous book, which is on par with, or even surpasses, the scope of many of his contemporary thinkers, is disregarded, or ignored, or downplayed, is not included on graduate school reading lists in the social sciences and the humanities, or more frequently referenced by interdisciplinary intellectuals, eludes an easy answer.

The book itself epitomizes multidisciplinary; it is at once an anthropological, historical, literary, and theoretical text. And perhaps this in itself is the problem—its span and scope may be too broad for academic disciplines, even those that consider themselves to be interdisciplinary, that have become increasingly focused on micro-specialization. This book certainly doesn't fit easily into any category, formula, or methodological model. But

even in fields that are more open to broad historical readings, such as those in the social sciences, Mumford's work is not well known.

Perhaps the problem lies with the fact that Mumford's approach to his subject matter does not conform in any way with the writing standards, guidelines, and formulas that are generally required by the academic community in order to be considered for peer-reviewed journals, or highly-regarded presses, starting with his lack of footnotes or endnotes, not to mention his personal style and tone. His lively prose is full of generalizations, digressions, and imaginative, creative, and playful analysis. A cardinal transgression: he writes well and brutally critiques institutions, groups, and movements, academia first among them, that claim to maintain distance, or a "counter-cultural" stance, or to be focused on humanitarian issues, but which in fact are completely tied to the institutions and the systems that they critique and supposedly wish to "tear down."

Yet, all of the above does not explain the virtual absence of this text from the footnotes and bibliographies of the majority of studies on science, technology and civilization. There are many books, written from within and outside of academia, that are frequently read and studied in spite, or, perhaps, because, of their critical perspective, their disregard of conventional formats, and their treatment of broad topics which challenge the idea of a specialized field of expertise. And with the republication of *Technics and Civilization* by the University of Chicago Press in 2010, it seems that the institutional disregard of Mumford may be coming to an end, perhaps a sign that people are looking for broader perspectives on the old, persistent problems faced by humanity. But, even with renewed interest in Mumford's philosophical work, I would be

surprised if any publisher were rushing to reissue *The Pentagon of Power*, although, I would argue, it is the more immediately relevant and challenging example of his later philosophical writings. Two fundamental issues stand out as potential impediments to republication. On the one hand, Mumford's insistence on the validity of intuition and extrapolation as a part of the philosophical process flies directly in the face of a world steeped in the value of the empirical at the expense of the imagined. In some sense, Mumford, in his predictions for the future and his envisioning of something new, performs the ultimate intellectual act of defiance against a progress-centered worldview created long ago out of this same process: he dares to imagine a complete reconfiguration of the status quo and by extension the creation of new myths. In doing so, he treads a dangerous line between fact and fiction, fantasy and reality, hope and expectation, not to mention the fact that he proposes the dismantlement of the global market economy as well as a fundamental revision of the concept of democracy. On the other hand, as a humanist par excellence—he has been called “the last of the great humanists” by some of his peers and followers—his optimistic view of the human being as a capable, thoughtful creature has become harder and harder to believe in increasingly cynical times. In academia there has been, over the past thirty or so years, a turn away from humanistic historical readings and theoretical work rooted in great hope and faith in our species in favor of more sterile, depersonalized scientific approaches to literary and cultural studies, even, or especially, in the so-called humanities. Regardless of one's stance for or against Mumford's style, his approach, or his audacity, this text has proven more relevant with the passing of time. Written for the future at the height of the darkness of the Cold War, *The Pentagon of Power* was a call for coming scholars, thinkers, and writers unfettered by disciplinary requirements or field

limitations, to boldly and audaciously weave narratives that demand the transformation of the human way of life away from the pursuit of power and production and towards an economy of plenitude concerned with greater freedom, increased awareness, and ecological balance. Currently, in our world besieged by wars on drugs and terrorism, bombarded with global ad campaigns that push towards homogenization and mediocrity powered by the internet and social media, and the continuous dismantlement of free speech, democracy, and human rights in the name of freedom, patriotism, or protection, this book reads as if it were written specifically as a travel guide to navigate away from our present age of destruction. The question now, after all of these disquieting years, is whether or not there are any writers, thinkers, and scholars equipped to take this journey.

¹ Mumford, *Technics and Civilization* (Chicago: University of Chicago Press, 2010), 435.

² Mumford, *The Pentagon of Power* (New York: Harcourt Brace Jovanovich, 1970), 237.

³ Mumford, *Pentagon*, 74.

⁴ *Ibid.*, 84.

⁵ *Ibid.*, 97.

⁶ *Ibid.*, 106.

⁷ Francis Bacon, *New Atlantis in The Major Works* (New York: Oxford UP, 2008), 480.

⁸ Mumford, *Pentagon*, 114.

⁹ *Ibid.*, 238.

¹⁰ *Ibid.*

¹¹ *Ibid.*, 260.

¹² *Ibid.*, 267–8.

¹³ *Ibid.*, 186.

¹⁴ *Ibid.*, 298–99.

¹⁵ *Ibid.*, 395.

¹⁶ *Ibid.*, 405.
