

Atomic Atrophy: Bending the Bulwarks of Citizen Sovereignty Through the Curtains of Culture

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Abstract: Freedom is a complex concept with a rich history. It has been won at high cost but continues to pay high dividends to those who value it. This paper seeks to explore the relationship between technological instruments of power and their role in achieving and retaining freedom in the modern world in the face of contemporary challenges infused with age-old dilemmas particularly if scientific knowledge is allowed to eclipse ethics. Freedom is privilege that requires continuous dialogue and curation lest it decay and disappear within a single generation. The foregoing discussion attempts to grapple with how culture and technology interact to reflect the power structures and value systems in which they operate influence their character and propagation, particularly in the context of the United States and the United Kingdom.

KEYWORDS: *Technology, culture, literature, civilization, conflict, USA, UK*

I. INTRODUCTION

We live in a world of extremes: many of us would agree that we all deserve to live in situation which we could call ‘freedom’, yet this concept quickly becomes complicated by disagreements over its definition and application. Contemporary realities must be taken into account in any given age when we seek to explore the state of being of a particular society or people.

II. HAZARDS TO FREEDOM, FREEDOM FROM HAZARDS

As part of my title notes ‘citizen sovereignty’ is an important consideration in this respect. Modern liberal democracies recognise the rights of individuals to certain inalienable rights, but also expects certain duties. The ability to exercise any kind of rights or freedoms depends on the position of the citizen in a society or country which is in turn heavily conditioned by the nature of the contemporary world around it. As we mark the 82nd anniversary of the D-Day landings in Normandy¹ and the 81st anniversary of the dropping of the Atomic Bombs on Nagasaki and Hiroshima, these events provide ample material on which to reflect in terms of the role of technology and science in the expansion and protection of certain privileges and freedoms that human beings have become accustomed to in the modern age.

¹ I would like to recognise the role of non-profit, civic organisations that seek to educate the public about these events and the enormous valour of the war veterans who served in Normandy and elsewhere whose actions ensured the preservation of the freedoms we enjoy today. Organizations such as the Best Defence Foundation (<https://bestdefensefoundation.org/>), Walking Among Heroes (<https://www.walkamongheroes.org/>), the Patton Foundation (<https://www.thepattonfoundation.org/>) and Operation Democracy (<https://operationdemocracy.org/>) deserve particular credit in this respect.

The phrase ‘bending the bulwarks of citizen sovereignty’ is an attempt on my part to illustrate the enormous strains that bear down on citizen’s ability to live their lives during times of upheaval and instability. Volatility in the world can be caused by paradigm shifts brought about by political tensions that may happen because of or in conjunction with armed conflicts whose affects ripple across territories not directly involved in such disagreements. In both cases, it is impossible to live unharmed by such events.

The key catalyst for the inception and continuance of the capacity of Western societies to live free of authoritarian menacing of its governance systems was the institution of the Manhattan project squarely focussed on the invention of a function nuclear bomb. Arguably, this could be said to be one of the key moments in human history in which technology took on such a central role in the securing a particular set of privileges: the ability to continue to live in a democracy by means of the application of overwhelming force against deranged and violent regimes intent on total destruction of an established way of life. Reaching a point at which the public could believe the creation of such a powerful instrument of deterrent would happen and actually function also required the deployment of great financial and scientific resources mustered by two democratic governments in the form of the Britain and the United States, with an obvious greater weight being carried by the latter.

However, scientific resources alone were insufficient to win the battle for the public mind and thus it was necessary to adopt rhetorical strategies with the cooperation of civil society to nurture a sense of ambition, ability and confidence in the belief that the race for the creation of the Atomic bomb would indeed be won by the West – which, indeed, as we know, came to pass.

The rhetorical strategy was a powerful instrument in penetrating the public psyche, as much as the strength and innovation of military technology is a pre-requisite for victory in the arena of war. It is at this point we encounter the irony of the freedoms secured by atomic warfare, the ‘atomic atrophy’ – where the radioactive substances used for the construction of nuclear technology (regardless of the ends to which they are put) break down and degrade over time. Given that *atrophy* denotes the wasting away of human tissue over time, we can equate this process with how nuclear material degrades over time (i.e. it’s half-life) and those in possession of such resources face a degradation in their moral standing in the eyes of others if they are found to abuse the power that this technology bestows upon them.

The hazards occasioned by the awesome power retained by those in possession of nuclear weapons may also have effect of augmenting the duty of care owed by such super powers. This is particularly noteworthy as such enormous power provides both the temptation and the means to circumvent the usual/normal system of international rules and regulations. Such a danger was alluded to in an address to the British House of Commons in 1946 on the need to maintain respect for morality and war which could be eclipsed by practices where ‘the larger nations undertook, to use Asquith’s words, not to be “hampered by juridical niceties,” i.e., law, in the conduct of war, they abandoned the rule of morality and of law and returned to primitive violence’ (AJIL, 1946:162).

Morality and law are two key spheres of reasoning which serve as a foundation for attempts to re-balance the positioning of priorities away from naked servility of the ends of technology toward a more humanist-driven approach. Conceived as part of an effort to save ‘civilization’, an undesired by-product of the invention of nuclear weapons has resulted in a situation whereby “those standards of humane conduct which have been developed as an essential part of modern civilization” (AJIL, 1946:165) have become even more precarious.

III. RISING MERCURY, RESTRAINED WILLS

Once the Allied forces attained victory and the Second World War came to an end, the acute hazards to public security posed by unregulated possession and use of nuclear weapons

became increasingly apparent. In 1957, Henry Kissinger was wont to opine in his book *Nuclear Weapons and Foreign Policy*, that:

The challenge of the nuclear age is not only enormous but also inescapable. Within a generation of the peaceful uses of atomic energy will have spread across the globe. Most nations will then possess the wherewithal to manufacture nuclear weapons. Foreign policy henceforth will have to be framed against the background of a world in which the “conventional” technology is nuclear technology. (Kissinger, 1957: xi)

From this point forward, all informed analysts were acutely aware of the grave dangers posed by nuclear weapons as much as they were cognisant of the fact that they could not simply be wished away since, Kissinger also observed: ‘So it is with the impact of nuclear weapons on foreign policy. Nostalgia for a more secure and less cataclysmic past is understandable. But *facts cannot be changed; they can only be used*’ (Kissinger, 1957: xi).

Unchangeable facts then are to be treated as stark realities, which in their own right are insurmountable yet can still inspire thinking minds – particularly those in the scientific community – to re-double their efforts to create new systems of thinking, new instruments for a variety of use in pursuance of a more perfect form being that ambitious members of the human race seek to implement. However, the perfection of man does not necessarily ‘consist in its perfect performance of a task’ as to adopt such a position according to John Passmore would be to ‘identify the perfectibility of man with his capacity to perfect himself technically in a task is to encounter insuperable difficulties – unless perfectibility is wholly divorced from moral perfection’ (Passmore, 2000: 11). This logic thus reveals another facet of the moral hazards involved in the conception and creation of powerful technologies that merit great care and attention from both an ethical and a cultural perspective.

In the presence of great danger there is strong temptation on the part of many to seek darkened avenues to live in denial, yet this approach is more common than we would like to acknowledge. Freedom of thought and freedom of association impose a cost of a certain level of responsibility since the ability to think freely also bestows the ability – if chosen – to digest large amounts of pertinent information. As Martin Heidegger affirms in a 2002 translation of his work *The Essence of Truth – On Plato’s Cave Allegory and Theaetetus*:

...the essence of truth as unhiddenness belongs in the context of freedom, light, and beings, more precisely in the being-free of man, the looking into the light, and comportment to beings. Freedom, light, beings, unhiddenness: these are not related to one another like isolated things...

(Heidegger, 2002: 29)

Thus, we can see that much can be gleaned from the substance of advanced technical knowledge and an appreciation of the power of knowledge as ignorance gives way to expertise. The processes that sustain natural phenomena are uncovered and so the so-called ‘unhiddenness’ stands as a stark fact that revealed truths – both in science and philosophy – remain valid despite the passing fads of different eras and varied cultural spaces. One could also claim that such an exercise is akin to forcing would-be deniers to acknowledge empirical truth in a manner akin to what Heidegger described as when such a person:

...were forcibly dragged up the steep and rugged ascent of the cave and not let go till he had been dragged out into the sunlight, would he not experience pain, and so struggle against this? And would he not, as soon as he emerged into the light, his eyes dazzled, be unable to see any of the things he was now told were unhidden? (Heidegger, 2002: 30-31).

Heidegger goes on to depict a conversation between two people who debate the essence of what it is to believe something based on evidence and its presentation through rational argument. More sophisticated levels of knowledge also require greater commitment to investigation the truth of phenomena so as to stand in the full-light of day as this exchange demonstrates:

‘He would need, I believe, to first become accustomed to the light before he could see things in the upper world. First he would find it easier to look at shadows, next at the reflections of men and other objects in water, and later on at the things themselves. After that he would find it easier to observe the sky at night and the heavenly dome, and to look at the light of the moon and stars rather than at the sun and its light by day.’

‘Of course.’

‘Finally, I believe, he would be able to look directly at the sun itself, and gaze at it is in itself, without using reflections in water or any other medium.’

‘Necessarily.’

‘Later on he would come to the conclusion that it is the sun which produces the changing seasons and years and controls everything in the visible world, and that it was also at bottom responsible for what he and his fellow prisoners used to see in the cave.’

‘That is the next conclusion he would obviously reach.’

‘And when he remembered his first home, and what passed for wisdom there, and his fellow prisoners, don’t you think he would feel himself fortunate on account of his change of circumstance, and be sorry for them?’

‘Very much so.’

‘And if the cave-dwellers had established, down there in the cave, certain prizes and distinctions for those who were most keen-sighted in seeing the passing shadows, and who were best able to remember what came before, and after, and simultaneously with what, thus best able to predict future appearances in the shadow-world, will our released prisoner hanker after these prizes or envy this power or honour? Won’t he be more likely to feel, as Homer says, that he would rather be ‘a serf in the house of some landless man’. Would he not rather put up with anything, than take truth as they do and live like them?’

‘Yes, I believe he would prefer anything to a life like theirs.’ (...)

(Heidegger, 2002: 30-31)

One could thus say, once we have received an advanced state of knowledge, we should ideally wish to remain that and not regress to an earlier state or time in which we are enveloped in ignorance or some other state akin to such a situation.

Knowledge and awareness then must be central elements of an active society and the life-blood of the culture it sustains. Keeping these factors in good order provide a strong counter-measure against atrophy in both the cultural and scientific sense. Access to truth in conjunction with the prompt and consistent application of the scientific method offers a strong instrument to guarantee the flow of trustworthy information that forms such an essential element in the marketplace of ideas that is encountered by the publics of different societies.

Freely available information and the ability to digest it in the absence of coercion is a precious liberty that must be carefully protected. Heidegger offers further insights in this respect where he observes:

(...) The essence of truth is deconcealment, therefore located in man himself: this means that truth is reduced to something merely human and so annihilated. Truth is usually regarded as something that man seeks in order to bind himself to it normatively, i.e. as

something over him. How then can the essence of truth be something human? Where is the man who has best secured the truth and through whom it is best demonstrated? Would he then become the norm? What is man, such that he could become the measure of everything?

(Heidegger, 2002: 54)

The measure of everything? Are we given to believe that man must be the centre of all there is? From the perspective of democratic societies, this is a proposition that has to be treated as a self-evident truth and in so doing we recognise and empower the role of the citizen. It is at this juncture that we can make use of the tools available to use to draw back the ‘curtains of culture’, a phrase I employ in my title to refer to the ‘screen’ which occults the workings of a culture, for example, a particular set of norms that govern a given community at national level. For this notion to operate successfully, we must adopt a strong degree of proportion so that the wider world and its attendant phenomena are capable of being comprehended by ordinary citizens. It could be argued that failure to do this merely weakens the necessity for human beings to explore and exert their roles as citizens within their own societies, without which, a civilised division of labour and the functioning of entire nations become instantly precarious.

IV. Which culture? What methods?

It is arguable that any enterprise which seeks to understand the essence of human beings in the world in which we live would derive immense benefit from an analysis of the intricate workings of the physical world that sustains the universe that accommodates our existence. Such an exercise involves an exploration of the ‘entanglement of matter and meaning’ to use the phrase coined by Karen Barad (2007) in her book *Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Barad notes Bohr’s epistemological framework had its roots in seventeenth-century Newtonian physics.

Bohr’s transformational theory of quantum physics paved the way for the creation of the atomic bomb, but not before he set off a process of disentanglement from classical physics and the movement toward a new set of principles. The key stages of this process are noted by Barad who observes that:

Bohr’s search for a coherent interpretation of quantum physics led him to more general epistemological considerations that challenged representationalist assumptions about the nature of scientific inquiry. Ultimately, Bohr proposed what is arguably understood as a proto-performative account of scientific practices. His early-twentieth century epistemological investigations focused on issues of contemporary significance: (1) the connections between descriptive concepts and material apparatuses, (2) the inseparability of the “objects of observation,” (3) the emergence and co-constitution of the objects of observation and the agencies of observation through particular material and conceptual epistemic practices, (4) the interdependence of material and conceptual constraints and exclusion., (5) the material conditions for objective knowledge, and (6) the reformulation of the notion of causality. (...)

(Barad,2007:195)

Moreover, the shedding of conceptual constraints brought human knowledge closer to a purer truth were very little could remain part of shadows of Plato’s cave and attain a state of Heidegger’s ‘unhiddenness’. From the perspective of Renaissance man’s logic, this uncovering of truth was wholly consistent since it acknowledged the reality that ‘*The chief antidote to the mind’s partiality for reducing complexities to oversimplifications lies in the recognition that the quest for truth must always be a quest for truths...*’ (O’ Kelly, 1966: 13), which finds

expression in Bohr's six steps for the attainment of better epistemological observations and the interpretations they facilitate.

Despite the improved means for creating more favourable conditions for better scientific conclusions, Bohr acknowledged the concepts that certain theories are governed by situations that give rise to the instrumentation necessary for its quantification. This is to say that, the conceptualisation of given scientific ideas are brought into being by virtue of the nature of the circumstances that rise for the need to explain them in the first and this also implies that they are a 'specific material arrangement.' Such a state of being creates a situation whereby it is possible to detect a definite inconsistency in measurement interactions and to date, no wholly-reliable method has been arrived at that would permit observations to be made that completely distinguish between the object and agencies of those observations. It is at this point that Bohr's insights demonstrate that 'observation-independent objects do not possess well-defined inherent properties' (Barad, 2007: 196). It is, therefore, a product of this scientific-culture that we have come to recognise the minutiae and immense complexities of the universities that sustains our existence where absolute certainty is largely a fantastic luxury beyond our possession.

V. STARK REALITIES

Returning to Kissinger's assertion: 'facts cannot be changed, they can only be used' – takes us to the next issue in respect of how such stark facts impinge on the human way of life and doing so involves the fact that, according to Bohr's discoveries, matter and meaning cannot be torn asunder. Even the most ingenious chemical processes, man-made centrifugal forces or nuclear blasts are unable to separate them and leads us to the powerful issue that forces us to confront inescapable conclusions that are largely ignored until they cannot longer be conveniently occluded given that:

Mattering is simultaneously a matter of substance and significance, most evidently perhaps when it is the nature of matter that is in question, when the smallest parts of matter are found to be capable of exploding deeply entrenched ideas and large cities... Perhaps this is why contemporary physics makes the inescapable entanglement of matters of being, knowing, and doing, of ontology, epistemology, and ethics, of fact and value, so tangible, so poignant. (...)

(Barad, 2007: 3)

The poignancy touched upon redoubles the tangibility of human abilities and the value systems that govern them echo the essence remarks attributed to Italian architect and humanist thinker Leon Battista Alberti who believed that humankind was given certain innate qualities which he noted as follows: '*To you is given a body more graceful than other animals, to you power of apt and various movements, to you most sharp and delicate senses, to you wit, reason, memory like an immortal god*' (Clark, 1969: 89).

While it would be outlandish to suggest that humankind has now reached levels of power and knowledge that are God-like, we can state with a large degree of confidence that immense progress has been made but that great danger remains a tangible hazard of these achievements. The principal hazard is that we cannot have full knowledge nor complete understanding of another person's motivations and this is true in how we can extrapolate Heisenberg's uncertainty principle which states that there is a discernible limit to the amount of knowledge can possess in respect the position and momentum of a particle. Playwright Michael Frayn subscribes to such a logic and has noted that: '*The moral issues always finally depend on the epistemological one, on the judgment of other people's motives, because if you*

can't have any knowledge of other people's motives, it's very difficult to come to any objective moral judgment of their behavior' (Barad, 2007: 7).

Ultimately, these issues are inevitable moral questions that present difficult questions with relatively few uncomplicated answers readily available for digestion nor likely to be easily deduced. Under such circumstances the powers of a single individual are insufficient to produce the necessary answers and it then becomes the prerogative of institutions and governments to grapple with such issues by means of injecting enormous resources at financial, intellectual and human level. A major difficulty arises when the state simultaneously wishes to encourage innovation while also trying to constrain excessive technological development which may likely prove harmful to wider society. A balance needs to be found, but the pendulum rarely stays in position for very long as competing interests clamour for attention.

VI. REFORMING PRACTICE, PERFECTING MAN

The complete satisfaction of competing demands is only possible in the imagination. The best ideal situation we can and indeed should seek to attain is a process which continually improves human beings in our thinking and practice. Seeking perfection, whether from a technological or perspective, is a worthy goal despite the obstacles inherently present in such a journey. Ultimately, the central goal should ideally be to converge our interests and abilities toward a rational state of being in our decision-making that seeks to, as John Passmore (2000) defends:

to identify the perfectibility of man with his capacity to perfect himself technically in a task is to encounter insuperable difficulties—unless perfectibility is wholly divorced from moral perfection. It is only if the task can be thought of as one set by a perfect Being or in a perfect society that there is any plausibility in supposing that a man can perfect himself as a human being merely by perfecting his ability in a task. Two consequences then follow. The first is that the perfection of such a Being or such a society does not itself consist in its perfect performance of a task. The second is that a man's perfecting himself in the performance of a task is not in itself sufficient to ensure his perfecting himself as a man: it is important only in so far as it bears witness to his perfection in some other, more fundamental respect, in obedience, in submission, in rational control.

(Passmore, 2000: 11)

Much can be gleaned from this set of remarks, but overall, we can assert that while the means of carrying out rational tasks for scientific purposes (with the ultimate goal of benefitting wider society) is a noble one, this should merely be a means to an end rather than an end in itself. A continuing process of improvement creates room for growth and, by inference, accommodates ambition and this is essential in vibrant democracies which seek to evolve and expand as its varying sectors seeks to advance their own agendas. Passmore's supposition that man's perfection must be subservient to 'some other, more fundamental respect, in obedience, in submission, in rational control' provide a complimentary affirmation to Battista's man's qualities of 'wit, reason, memory'. Collectively, these qualities form the central tenets of informed citizenship which itself sustains a sovereign culture that has the ability and interest to innovation, evolve and defend its value system². An ever-present sense of caution must remain part of the arsenal of an informed citizenry as well as the scientific classes that spearhead technological advancements. As such it falls to critically aware minds to inject this quality into ongoing debates about the function and utility of technology and indeed the moral code required to police such activities. In this respect, we can defer to the work of Neil J.

² A text of relevance in this area is my paper 'Literature, Rhetorical Devices, and Juridical Imagination: A Symbiotic Dynamic' accessible at: <https://openjournals.library.sydney.edu.au/LA/article/view/17606>

Sullivan (2016) who charts the long history of introspective reflection undertaken by certain figures on the morality involved in discovering the ability to bring technological advancements and the great temptations faced by those who have great power at their disposal because of their access to technology in how:

Hesiod's account of Prometheus demonstrates that, from the early times of Western civilization, people have thought about the proper relationship among the gifts of technology, the dazzling figures who bring those gifts, and the possible impacts on the rest of us. Did Zeus know best what humans were capable of handling? Was Prometheus a hero who suffered to provide us with a critical means of progress? Was he a reckless egotist who put us in peril with an offering for which we were unprepared? Through millennia of politics, through any number of arrangements of civic power, we find those questions as compelling and germane as ever. Perhaps Zeus thought that we weren't ready for the gift because its implications were yet beyond us. But in the context of World War II, the fire of the atom represented the assurance of victory, and that prospect proved irresistible.

(Sullivan, 2016: 222)

Humane conduct through restraint?

Sullivan's probing questions challenge us to reflect on, whether, in the midst of the enormous technological advancements that have occurred since the beginning of the Industrial Revolution, has the system we have built lived to the promise of promoting 'humane conduct which have been developed as an essential part of modern civilization'. What is it to be humane? We can perhaps say with steadily increasing levels of confidence with the passage of time and the with benefit of hindsight, to be humane is to do all that is possible to prevent and minimise the suffering of others. However, an obvious contradiction arises when the use of force is regarded necessary to reduce or arrest the suffering of one set of people at the hands of another. Those considering the use of powerful weapons such as nuclear devices to achieve such an end have achieved a very high-level of technical expertise, but this is no guarantee that their moral capacity is at least as well developed. As Carl Clausewitz has asserted:

the maximum use of force is in no way incompatible with the simultaneous use of the intellect. If one side uses force without compunction, undeterred by the bloodshed it involves, while the other side refrains, that first will gain the upper hand.

That side will force the other to follow suit; each will drive its opponent toward extremes, and the only limiting factors are the counterpoises inherent in war.

(Clausewitz, 1984: 75-76)

It would seem that the primary need in such tense situations where the use of violence is imminent or where it has already been used is evidently a return to a peaceful stance at which point more enlightened and well-reasoned position must be sought. Failure to seek a return to a more pacific situation only serves to alienate humankind's claim to civilised status³ particular since the live use of military devices such as nuclear weapons has the full potential to be absolutely devastating on multiple levels not least from a moral, civilisational and cultural standpoint.

³ A wider discussion of this issue in respect of the role of the English language in the knowledge economy can be found at: <https://cjlls.ca/index.php/cjlls/article/view/216>

VII. CONCLUSION

A final consideration presents itself in light of the issues considered, namely that of how to manage the relationship between expertise and democratic systems. An exercise of this kind demands serious interrogation of how the pursuit of knowledge effects the practice of scientific investigation and vice-versa that involves as Kitcher observes “how the system of public knowledge...should be shaped to promote democratic ideals” (Kitcher, 2011: 63). While modern societies generally provide the necessary freedom and funding for advanced scientific research and these decisions are approved by democratic governments in many cases, the irony is that the pursuit of higher ideals and advanced technical and scientific knowledge may actively corrode the structures on which democratic values depend as it precludes popular involvement in decision-making and rejects such involvement as being ‘vulgar’ even those issues materially affect the public interest. Moreover, since these hazards are a real and enduring presence, they must be faced and the act of doing exactly that is asserted by Nevo as being an example of the principle of scientific autonomy arrogating to itself the authorship of probative values. This practice reveals a nefarious tendency of some elements of the scientific community to engage in behaviour that “arrogates to the expert community a judgment about values it is unqualified to make” (Kitcher, 2011: 113). Let us have the courage of our freedoms and take responsibility for that path forward regardless of the difficulties that lie ahead.

REFERENCES

- [1] *American Journal of International Law* , Volume 40 , Issue 1 , January 1946 , pp. 161 – 165
- [2] Barad, Karen (2007) *Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham & London: Duke University Press.
- [3] Clausewitz, Carl (1983) *On War* (Princeton, NJ: Princeton University Press, 1984
- [4] Kissinger, Henry A. (1957) *Nuclear Weapons and Foreign Policy*. New York: Council for Foreign Relations & Harper and Brothers.
- [5] Kitcher, P. (2011). *Science in a democratic society*. Prometheus Books
- [6] O’Kelly, Bernard (Ed.) (1966) *The Renaissance Image of Man and the Word*. Ohio State University Press.
- [7] Passmore, John (2000) *The Perfectibility of Man*. Indianapolis: Liberty Fund.
- [8] Sullivan, Neil J. (2016) *The Prometheus Bomb: The Manhattan Project and Government in the Dark*. Potomac Books/ University of Nebraska.
- [9] *Martin Heidegger: The Essence of Truth – On Plato’s Cave Allegory and Theaetetus*. Trans. Ted Sadler. (2002) London and New York. Continuum.
- [10] Nevo, I. (2024). Science and the Public Sphere: Philip Kitcher on Science, Ethics and Democracy. *Sci Set J of Economics Res*, 3(4), 01-10.