

Strength without Mercy: Winston Churchill on Technology and the Fate of Civilization

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Abstract: Churchill's lifelong meditation on scientific progress led him to search for ways in which its transformative power could be moderated and guided for the preservation of civilization. The increasing role of scientific discovery and technological innovation in maximizing the destructive potential of warfare, Churchill believed, had brought a moment of decision for humanity: Whether to foster and maintain the moral and political principles that formed the foundation of civilized life or to trust wholly in an amoral science. He found guidance in the study of the humanities, Anglo-American constitutionalism, and Christian ethics.

Keywords: Churchill, technology, civilization, scientific progress, education

“We may well find ourselves in the presence of ‘the strength of civilization without its mercy.’”¹

Debates about the extent to which scientific investigation and the practical application of scientific knowledge should be guided, encouraged, or restricted by extra-scientific authorities are a constant in modern politics. One need only think of the stem cell or cloning debates to see that this is so. It may seem strange to look to Winston Churchill, who lived before many of the specific scientific issues we face had become possibilities, for guidance in such matters, but there are

several good reasons for doing so. First, while science continually produces new possibilities and technological novelties, the questions about which, if any, fundamental principles are to guide its operation retain their importance. Second, Churchill's status as a thinker is underappreciated. There is a great deal in the way of serious philosophical reflection in Churchill's writings and speeches that has not been generally recognized—reflection on human nature, technology, the proper ordering of society, the role of chance in human affairs, and education, among other topics. Third, Churchill stood, in his own time, at the apex of the intersection of science and politics. He was faced not only with the daunting task of thinking through the implications of scientific discovery but also with directing its application in the field of practical politics.

Scientific progress was an issue to which Churchill gave serious thought throughout his adult life—a life that saw world-altering technological changes. As a young man, he served in the forces of Queen Victoria and took part in the last great cavalry charge conducted by the British army. As an elder statesman, he witnessed the birth of the atomic age and lived to see the superpowers facing off under the doctrine of mutually assured destruction. Because of this lifelong association and concern with the questions of war and peace, the military applications of technology were always in the forefront of his mind.

Churchill often meditated on what technological developments the future might bring and he kept himself briefed on the destructive powers science might yet reveal through conversations with his friend, Oxford Professor Frederick Lindemann. As a result, he produced writings of remarkable prescience on the subject. Consider the following passage, which was written in 1924, long before the development of the V1, V2, and the atomic bomb:

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Then there are Explosives. Have we reached the end? Has science turned its last page on them? May there not be methods of using explosive energy incomparably more intense than anything heretofore discovered? Might not a bomb no bigger than an orange be found to possess a secret power to destroy a whole block of buildings - nay, to concentrate the force of a thousand tons of cordite and blast a township at a stroke? Could not explosives even of the existing type be guided automatically in flying machines by wireless or other rays, without a human pilot, in ceaseless procession upon a hostile city, arsenal, camp, or dockyard?²

The Second World War was to make these frightful possibilities into grim realities. The First World War had been a mechanized slaughter on an unprecedented scale, but the struggle through which Churchill was to lead his people was to hinge to an even greater degree on the ability of the combatants to master the scientific possibilities for both offensive and defensive operations. Churchill wrote that “No such warfare had ever been waged by mortal men.”³ He called this struggle the “Wizard War” and did much to encourage technological developments, such as Radar and Sonar, which would give Britain the strength to resist German aggression.⁴

Churchill’s meditations were not limited to purely technical and immediate concerns, however. He also gave consideration to the broader implications of science and technology for the destiny of man. He was not a scientist, but he understood the power of science to transform human life. Churchill was not a philosopher, but he understood the necessity of ethics to shape human behavior. He was a statesman who understood that the conjunction of these two forces was of profound importance to the survival of healthy political life. This conjunction was of crucial import in the Second World War, in which it seemed that the world was to reap the whirlwind of technological might divorced from ethical and moral restraint. Indeed, he often described the war as involving something greater than merely the survival of particular nations: upon its outcome hinged the fate of human civilization itself.⁵ Churchill’s reflections on science and technology have a somber cast. The staggering achievements of science are the chief characteristic of the modern age. They have tremendous power to shape human life, but to what end? Science is a force that despises limits, that grasps everything within its reach. It propels the motion of man at an ever-increasing rate, but not necessarily to his benefit. Therefore, Churchill counseled that scientific investigation should always be coupled with the foundations of restraint to be found in the study of history, ethics, and the principles of political freedom.

THE USES OF TECHNOLOGY

Churchill’s approach to history and his treatment of science and technology bear some resemblance to the work of Thucydides, author of *The Peloponnesian War*, which tells the story of the war between Sparta, Athens, and their allies in the fifth century BC. The beginning of the first book of *The Peloponnesian War* is known as “the Archaeology,” the *logos* about the beginnings, of the first things. The theme of the Archaeology is motion and rest. The earliest ages are characterized by motion and unrest—constant transplantations and movements that resulted in violence, fear, and poverty.

Gradually, places and times of rest developed that allowed for the accumulation of strength and wealth, but Thucydides does not hold a progressive view. Rest is never finally established. Unrest may be kept at bay for a time, but it can never be done away with. In fact, it is of movement and unrest that he will speak in his work. He writes that the Peloponnesian War “was the greatest movement yet known in history.”⁶ He narrates the war, then, because from the very beginning he had the expectation that it would be a great one or the greatest one; in fact, it is a universal, a world war.

These considerations bring to mind Churchill’s account of the Second World War. Like Thucydides, Churchill could be said to set his subject within the larger story of mankind. It is true that in Churchill’s understanding the stage for the Second World War was set in the mishandling of the final act of the First World War, but it is also true that he saw it as a culmination of the whole history of man. In various interwar writings, Churchill gives a kind of mythic account of the beginnings, an echo of “the Archaeology.” Like the Thucydidean account, Churchill’s is one in which man knew no rest: “Before history began, murderous strife was universal and unending.”⁷ Men lived in solitude and fear: “Man in the earliest stages lived alone and avoided his neighbours with as much anxiety and probably as much reason as he avoided the flesh-eating beasts that shared his forests.” Gradually, men learned to cooperate; as they created the legal conceptions necessary to settled security, they began to build the foundations of future civilization:

With the introduction of domestic animals the advantages of co-operation and the division of labour became manifest. In the neolithic times when cereals were produced and agriculture developed, the bleak hungry period whilst the seeds were germinating beneath the soil involved some form of capitalism and the recognition of those special rights of landed proprietors the traces of which are still visible in our legislation.⁸

The story Churchill has to tell is of the forward march of mankind. From these humble beginnings, from these islands of rest, were forged civilizations, empires, and all the works of men’s hands. This forward motion was not always constant or consistent, however: “Mankind has sometimes travelled forwards and sometimes backwards, or has stood still for hundreds of years.” But in the twentieth century the speed of change is increasing, he writes. Human society begins to change so quickly that the possibilities can scarcely be imagined; the power man may wrest from nature increases exponentially:

What is it that has produced this new prodigious speed of man? Science is the cause. Her once feeble vanguards, often trampled down, often perishing in isolation, have now become a vast organized united class-conscious army marching forward upon all fronts towards objectives none may measure or define. It is a proud ambitious army which cares nothing at all for the laws that men have made; nothing for their most time-honoured customs, or most dearly cherished beliefs, or deepest instincts.⁹

Science has mankind in a steely grip. It will not admit of rest; it will not be checked; it can barely be controlled. Science moves forward on its own momentum, bearing humanity inexorably toward unknown ends.

Modern sensibilities might very well rebel against this gloomy version of the march of modern science. After all, has it not made great strides toward improving human life? Has it not advanced very far along the path that Francis Bacon set for it—the relief of man’s estate? Has it not drawn man up from his squalid existence into a new world: a cleaner, healthier, faster moving, more efficient, and more entertaining world? Churchill was ready to concede that science had indeed provided many benefits:

Hitherto everyone has eagerly welcomed scientific discovery. We see the mass of the nation in the enjoyment of so many comforts and facilities of which the rich and powerful never dreamed a hundred years ago. We travel with incredible speed. Already we grumble if aeroplanes only go at 120 miles an hour. We speak to each other across dark distances by waves in the ether. Millions of people own and enjoy motor-cars and motor-bicycles. The poor man in his cottage can hear each night concerts or news from every capital in Europe. The cinema not only presents the millions with lively amusement, but also revives the pageant of the past and portrays the finest stories the world has ever told.

Behind these incidents, which could be multiplied indefinitely, lie grand, marvellous discoveries like chloroform and antiseptics, and all the other improved methods of preserving health and curing disease. Naturally, we have sat grateful to science for these inestimable gifts, which increase the pleasures and reduce the pains of human existence.¹⁰

But Churchill stressed that science has also played another part in human existence. In the essay “Shall We All Commit Suicide?” he tells the story of scientific progress and its influence on mankind. But it is not a story of wider hope and health, of greater pleasure and freedom; it is a story of progress in the means of inflicting pain and death, which may end in the complete destruction of mankind. At first, technology was limited in reach and could do little to make effective the natural ferocity of man:

Reciprocal extermination was impossible in the Stone Age. One cannot do much with a clumsy club. Besides men were so scarce and hid so well that they were hard to find. They fled so fast that they were hard to catch. Human legs could only cover a certain distance each day. With the best will in the world to destroy his species, each man was restricted to a very limited area of activity. It was impossible to make any effective progress along these lines. Meanwhile one had to eat and hunt and sleep. So, on the balance the life-forces kept a steady lead over the forces of death and gradually tribes, villages, and governments were evolved.¹¹

These limits began to be overcome through cooperation: “War became a collective enterprise.” Paradoxically, the same movement toward collective activity that laid secure the foundations for civilization increases man’s destructive power: it creates rest and the potential for greater motion at the same time. Islands of rest are established, but these very islands provide solid ground from which more effective attacks can be launched—roads are built, armies marshaled, and armaments forged. As in Thucydides, motion and rest are two sides of the same coin. Nonetheless, there were practical limits on man’s destructive potential—problems of communication, organization, and logistics that man did not yet have the technical capacity to overcome. But that was eventually to change. Man was at last to grasp a power to match his

ferocity: “It was not until the dawn of the twentieth century of the Christian era that War really began to enter into its kingdom as the potential destroyer of the human race.”¹² Advances in organization and the rise of the collective consciousness of nations allowed greater projects to be undertaken, and above all, “science unfolded her treasures and her secrets to the desperate demands of men, and placed in their hands agencies and apparatus almost decisive in their character.”¹³ By increasing the power of man, science extends the reach of the sword.

Part of Thucydides’ case for the Peloponnesian War being the greatest motion involves the assertion that the wars of the past were not so great. The weakness of ancient times did not allow for conflicts to take on the same scale that increased technology and cooperative activity would later allow.¹⁴ Churchill can be said to make a similar case for the Second World War. Earlier ages could not measure up to the twentieth century in terms of the powers within man’s grasp. But something more is at stake than the fates of individual cities, countries, or empires. Modern science has given war an appetite big enough to consume all mankind.

Before World War II was to afflict the nations, Churchill was sounding the warning that man was following a destructive road. The wheels of science were no longer propelling humanity at a manageable speed: “Clearly, if things go on as they are, the human race is about to be subjected to processes of change more rapid and more fundamental than anything that has occurred in all history. In the next fifty years mankind will make greater progress in mastering and applying natural forces than in the last million years or more.”¹⁵ The speed of change, he warned, was getting out of control. Humanity may careen off a corner on the high roads of progress and land back in a squalid ditch, perhaps one so deep that it will never be able to climb out again. One has only to look at history to see that whatever forces man may harness, he soon turns against his fellows. Science had indeed done much to improve man’s existence, but it had never been confined to benignant purposes. The same speed it applied to raising men up could be applied to casting them into the dust:

But science does not only concern itself with beneficent discoveries. The whole apparatus of scientific slaughter on a vast scale is being perfected and expanded day and night. The wars of the future will involve whole nations. Men and women, young and old, all will be under the flail. Not only shells and bombs will fall upon our heads, but poison gas will burn and stifle us. Even pestilence may be spread far and wide, and met by preventive inoculation. A hideous kind of warfare may be waged by scientists commanding armies of innumerable microbes which will fight for and against us in the battlefield of our unhappy bodies.¹⁶

These reflections ought to temper the arrogance of those who believe science has simply forged a new and better world. An advance in scientific terms is not necessarily an advance in human terms: “When we reflect upon these shocking possibilities we may not feel so proud and happy about all that science has done and is going to do in the lifetime of most of those who will read this page. The achievements of science

in the nineteenth and twentieth centuries were not necessarily due to the happiness, virtue or glory of mankind.”¹⁷

Modern science has unleashed greater forces than man has ever known. It has revealed wonders both beautiful and terrible to behold. It has given to man the ability to do much good and to inflict much harm. The forward momentum of science has propelled mankind to a kind of turning point; will humanity rejoice amid a shower of blessings or open an epoch of new and more terrifying miseries?

Are we the children of a glorious epoch advancing into the fullness of our inheritance, or are we a gang of squalid mischievous urchins who have got hold of firearms and raided the local laboratory for some tubes of typhus bacilli! Are we moving forward into a paradise of earthly delights where there will be enough for all, where the load of caring care about the means of existence—food, shelter, and clothing—will be lifted from the whole human race; or are we simply plunging into a senseless hell where all the treasures and joys of ordinary life will be calcined?¹⁸

Churchill described these possibilities as a choice man must face and a task he must undertake:

Broadly speaking, this is the supreme issue which now confronts us. We ought to think about it. Is it our power to decide? In my browner hours I sometimes doubt it. But then, one must always hope; for there is nothing so useless and so cowardly as despair. One must always try. It may not be in our power to decide the immediate future of the world, but it is our right and duty to choose—and to choose well.¹⁹

What is the nature of this choice? It cannot be to renounce all the discoveries of modern science—many of them have done much good—but only those that bring misery and death. Looking back on the history of mankind, Churchill found little reason to be optimistic about man’s ability to refrain from inflicting new technologies of destruction on his fellows; and he found no more in his own day, even though the consequences were more terrible than ever before. But, as anyone familiar with Churchill’s life and thought knows, neither can the choice be simply to forswear death-dealing science, to cast away all armaments. The nature of the world in which we live does not admit such solutions. Churchill ponders to what extent the choice lies within “our power.” But humanity does not share a collective consciousness, nor is it encompassed in any comprehensive social or political organization: it is divided into peoples and nations, often with conflicting interests. These divisions make the choice much more problematic. Different choices will be made by different nations, and the actions of one must influence the actions of all. The choice made would depend on the character of those choosing. Churchill presented Hitler as on the verge of such a choice, a choice that he would make not for himself alone but for Germany and for the world. Even on the very brink of the war, Churchill called on him to consider his course: “If Herr Hitler does not make war, there will be no war. No one else is going to make war. Britain and France are determined to shed no blood except in self-defence or in defence of their Allies.”²⁰ Increasing tensions in the years before the Second World War caused the possibilities for man’s future to loom more starkly than ever before. Hitler’s Germany favored one path; Britain and its allies hoped for the other:

Are these hopes, are these prospects, are all the secrets which the genius of man has wrested from Nature to be turned only by tyranny, aggression, and war to his own destruction? Or are they to become the agencies of a broadening freedom, and of an enduring peace? Never before has the choice of blessings or curses been so plainly, vividly, even brutally offered to mankind. The choice is open. The dreadful balance trembles. It may be that our Island and all the Commonwealths it has gathered around it may if we are worthy play an important, perhaps even a decisive part in turning the scales of human fortune from bad to good, from fear to confidence, from miseries and crimes immeasurable to blessings and gains abounding.²¹

Necessity eventually limited the options open to Britain—the war came. Hitler forced the choice facing Britain whether to resist the forces of tyranny. Churchill labored mightily to shape that choice and to make the necessary preparations for the burden Britain and its allies must shoulder. The powers given into the hands of man by modern science made that burden a heavy one and the price of failure very high. Their efforts were not guaranteed success. Should they stumble, Churchill warned, the lights of civilization would flicker and die: “But if we fail, then the whole world, including the United States, including all that we have known and cared for, will sink into the abyss of a new Dark Age made more sinister, and perhaps more protracted, by the lights of perverted science.”²²

THE SOURCES OF MODERATION

Churchill’s concern with science and technology did not pass away with the end of the Second World War, but his comments on these subjects were increasingly framed in terms of education. Simply put, he urged the pursuit of technical education in Britain accompanied by the study of nontechnical subjects, such as history and ethics, that could provide moderation and guidance to the restless and reckless energy of science. This dual concern sprang from Churchill’s lifetime of reflection, but especially from his experience of the Second World War.

Churchill was in the position to know just how narrow Britain’s margin of survival had been and thus to appreciate fully every lifeline cast to a threatened people by modern science: “Unless British science had proved superior to German, and unless its strange sinister resources had been effectively brought to bear on the struggle for survival, we might well have been defeated, and, being defeated, destroyed.”²³ Churchill knew very well that victory over Germany did not mean that Britain could now dispense with the pursuit of technological development; he knew the dangers of the world far too well for that. Addressing an audience at the Massachusetts Institute of Technology (MIT) in 1949, he noted that Britain had not paid sufficient attention to technical education:

We have suffered in Great Britain by the lack of colleges of University rank in which engineering and the allied subjects are taught. Industrial production depends on technology and it is because the Americans, like the pre-war Germans, have realized this and created institutions for the advanced training of large numbers of high-grade engineers to translate the advances of pure science into industrial technique, that their output per head and consequent standard of life are so high. It

is surprising that England, which was the first country to be industrialized, has nothing of comparable stature.²⁴

Churchill was all too aware, as the reference to prewar Germany reminds us, that industrial capacity can translate not only into domestic prosperity but also into military power. His continued concern with Britain's deficiencies in educating technical experts led to the establishment of Churchill College in Cambridge in 1959, a college that was to emphasize the study of science and technology.²⁵ Security as well as prosperity would be the fruits of such an education.

Churchill clearly did not put all of his faith in science to shape a better or even a necessarily safer world. The speech at MIT refers to science and technology within the framework of larger concerns and nonscientific guides: "If tonight I strike other notes than those of material progress, it implies no want of admiration for all the work you have done and are doing. My aim, like yours, is to be guided by balance and proportion."²⁶ That balance and proportion were maintained at MIT by including the consideration of the humanities:

How right you are in this great institution of technical study and achievement to keep a Dean of Humanities and give him so commanding a part to play in your discussions! No technical knowledge can outweigh knowledge of the humanities in the gaining of which philosophy and history walk hand in hand. Our inheritance of well-founded slowly conceived codes of honour, morals and manners, the passionate convictions which so many hundreds of millions share together of the principles of freedom and justice, are far more precious to us than anything which scientific discoveries could bestow.²⁷

The principles of freedom and justice are connected to the question of political regime. Churchill was a lifelong enemy of tyranny and an opponent of any regime that attempted to order human activity according to principles not in accord with human nature: "Those whose minds are attracted or compelled to rigid and symmetrical forms of government should remember that logic, like science, must be the servant and not the master of man. Human beings and human societies are not structures that are built or machines that are forged."²⁸ Human problems are not scientific problems nor do their solutions always directly correspond to the dictates of logic.

Churchill believed in the metaphysical freedom of mankind, and he insisted that it should be reflected in political arrangements, that political freedom was necessary to the flourishing of the human spirit. But he also pointed beyond politics, to sources of strength and guidance that can be nourished by the regime but not supplied by it:

However much conditions change, the supreme question is how we live and grow and bloom and die, and how far each life conforms to standards which are not wholly related to space and time.

Here I speak not only to those who enjoy the blessings and consolation of revealed religion but also to those who face the mysteries of human destiny alone. The flame of Christian ethics is still our highest guide. To guard and cherish it is our first interest, both spiritually and materially. The fulfillment of Spiritual duty in our daily life is vital to our survival. Only by bringing it to perfect application can we hope to solve for ourselves the problems of this world and not of this world alone.²⁹

These remarks at MIT echo a speech Churchill had delivered to the University of London some months before entitled "The Essential Verities."³⁰ The occasion of the speech was his receipt of an honorary degree. Churchill comments on the great privilege of a university education, which he himself did not enjoy, began humorously by remarking on his own educational past.³¹ But Churchill's case for the value of a university education does not center on increased technical capacity, material output, or earning power. Rather, he emphasizes that a university education can open up wide fields of thought and knowledge to be continually pursued throughout life. He emphasizes that it should provide a healthy perspective on past, present, and future, immunizing its recipient from the "clack and clatter of the modern age." But Churchill believed that the right kind of education had even more far-reaching effects. Churchill had recounted in his autobiography *My Early Life* his troubled relationship with the classics in his early education, but here he calls for their renewal.³² The importance of this educational tradition for Churchill is that it served as a unifying force, which bound the countries of Europe together in a common heritage:

I would like to say that I have changed my mind about the classics. I had very strong views about them when at Harrow. I have changed my mind about them since. Knowledge of the ancient world and of Greek and Roman literature was a great unifying force in Europe which is now I fear rapidly becoming extinct and I should like to say that university education ought not to be too practical.³³

Churchill spoke frequently of European unity in his postwar speeches, speculating that it might find its expression in a kind of "United States of Europe."³⁴ He stressed that common understanding and traditions were the only sure basis of the groupings that would help ensure peace in the world. While modern science and the pursuit of technology are certainly part of the common heritage of the West, these are not themselves sources of unity. Indeed, they had only served to make the disunity of Europe more horrendous in its consequences. In the weakening or absence of other sources of direction, science will, in its relentless way, begin to drive human affairs. As we have seen, Churchill stressed that such a situation must be prevented. Balance and proportion must be maintained: "The duty of a university is to teach wisdom, not a trade; character, not technicalities. We want a lot of engineers in the modern world, but we do not want a world of engineers. We want some scientists, but we must keep them in their proper place." The unity that Churchill sought must be pursued through an education that emphasizes the higher aspects of European civilization:

I would venture to say here, in the London University, that no amount of technical knowledge can replace the comprehension of the humanities or the study of history. . . . With all our theoretical values, it is a time when a firm grip on all the essential verities and values of humanity and civilization should be the central care of the universities of Great Britain.³⁵

The point was all the more pressing in light of experience: the nature of the enemy in the Second World War had represented a breakdown and denial of these essential verities, an abandonment of all the legal, political, ethical, and spiritual

sources of moderation to be found in the Western heritage. Germany was very far advanced scientifically but had cast away the guides of humanity and civilization.³⁶

Churchill ends the “Essential Verities” speech with an appeal to Christian ethics very similar to what he would say at MIT.³⁷ This appeal and its juxtaposition to the nature of the enemy was frequent in Churchill’s wartime rhetoric and its continuance after the war is not surprising, given that Churchill did not believe that victory over the Nazis had brought about a world free of conflict. In fact, his postwar rhetoric was aimed at bracing the West for yet another trial, the struggle with Communism. In Churchill’s view, Communism and Nazism are, in their essentials, very much the same. They are both forms of tyranny, sharing the methods of that type of regime. The founding of that similarity of methods is to be found in their rejection of “the highest guide,” the spiritual source of moderation in human life and politics.³⁸

That Churchill would strike such similar themes in speeches in Britain and the United States after the war is neither surprising nor isolated in its occurrence. During the war, of course, Churchill had striven mightily to strengthen the ties between Britain and the United States, dwelling on the theme of the English-speaking peoples and their common heritage. He was no less ardent in pursuit of this theme after the war. He was profoundly grateful for America’s aid in Britain’s darkest days and for its exertions in the cause of freedom. America, in Churchill’s view, was an example of a nation that combined strength with an awareness of its larger responsibilities:

I cannot speak to you here tonight without expressing to the United States—as I have perhaps some right to do—the thanks of Britain and of Europe for the splendid part America is playing in the world. Many nations have risen to the summit of human affairs, but here is a great example where new-won supremacy has not been used for self-aggrandisement but only for further sacrifice.³⁹

But the sacrifices that must be made by freedom-loving nations were not over. In “The Sinews of Peace,” commonly known as the “Iron Curtain” speech, which he delivered at Westminster College in Fulton, Missouri, in March 1946, Churchill called upon the West to put on its armor once again, to face a new foe no less pestilent than the last. It was only natural that Britain and the United States would continue to work together based on their shared moral and political understanding.⁴⁰ In Churchill’s view, it was the privilege and the duty of the Anglo–American partnership to share their political treasures with the world:

But we must never cease to proclaim in fearless tones the great principles of freedom and the rights of man which are the joint inheritance of the English-speaking world and which through Magna Carta, the Bill of Rights, the Habeas Corpus, trial by jury, and the English common law find their most famous expression in the American Declaration of Independence.⁴¹

Churchill was never hesitant to proclaim the benefits of the Anglo-American political tradition. At the core of Churchill’s identity as a statesman is found his unceasing call to the world to order itself according to the political principles of freedom, because healthy political principle is one of the strongest sources of moderation.

CONCLUSION

Churchill was a man of measured views. He saw a tremendous growth in the scientific knowledge and technical capacity of human beings in his lifetime and was profoundly reflective on the whole history of civilization’s struggle with nature and with human foes. He was certainly aware of the tremendous benefits modern science had brought, providing new weapons against hunger, poverty, and disease. But he also knew that modern science had provided and would continue to provide weapons of another sort—weapons to pierce, crush, stifle, and maim. Science had always measured out both the good and the bad in roughly equal doses, and Churchill saw no reason to believe that this would change, either through historical development or human agency. Human nature shows every indication of remaining fixed in its essentials, and many of those essentials are problematic in their practical expression; he did not believe that there was any ingrained principle of history to deliver men from the conflict that arose from that nature.

In Churchill’s view, science cannot solve this difficulty. Science is amoral. It knows nothing of moderation. It knows only the press for discovery. Science itself provides only the “can” or the “cannot”; it does not provide the “ought” or the “ought not.” Those must flow from other sources. Science provides tools, weapons in a war between the light and the dark sides of our nature, which can be wielded by either side. Thus Churchill stressed that civilization is not really a matter of technical power and achievement. It is a matter of strengthening and maintaining those sources of moderation that bind human beings to the loftier elements of human nature and tap into extra-human standards of right and wrong. Churchill’s writings indicate that he did not expect that this struggle of civilization would ever be finally won. If that is so, then Churchill’s reflections, though bound by place and time, will always remain relevant in our own attempts to understand and judge the seemingly inevitable advance of scientific discovery:

It is therefore above all things important that the moral philosophy and spiritual conceptions of men should hold their own amid these formidable scientific evolutions. It would be much better to call a halt in material progress and discovery rather than be mastered by our own apparatus and the forces which it directs. There are secrets too mysterious for man in his present state to know; secrets which once penetrated may be fatal to human happiness and glory. But the busy hands of the scientists are already fumbling with the keys of all the chambers hitherto forbidden to mankind. Without an equal growth of Mercy, Pity, Peace, and Love, Science herself may destroy all that makes human life majestic and tolerable. There never was a time when the inherent virtue of human beings required more strong and confident expression in daily life; there never was a time when the hope of immortality and the disdain of earthly power and achievement were more necessary for the safety of the children of men.⁴²

NOTES

1. Winston S. Churchill, “Fifty Years Hence,” in *Thoughts and Adventures: Churchill Reflects on Spies, Cartoons, Flying, and the Future*, ed. James W. Muller (Wilmington, DE: ISI Books, 2009), 294. Churchill is quoting an essay by Thomas Babington Macaulay published in 1841.

2. Winston S. Churchill, "Shall We All Commit Suicide?" in *Thoughts and Adventures*, 264.
3. Winston S. Churchill, *Their Finest Hour*, vol. II, *The Second World War* (Boston: Houghton Mifflin Company, 1949), 381.
4. For Churchill's friendship and collaboration with Frederick Lindemann as well as an account of the specific technologies pursued as part of the war effort, see R. V. Jones, "Churchill and Science," in *Churchill*, eds. Robert Blake and Wm. Roger Louis (New York: W.W. Norton & Company, 1993), 427–41. See also Churchill, *Their Finest Hour*, 381–97.
5. See, for example, "War," September 3, 1939, in *Winston Churchill: His Complete Speeches 1897–1966*, ed. Robert Rhodes James. 8 vols. (London: Chelsea House Publishers, 1974), VI 6153; "This is not a question of fighting for Danzig or fighting for Poland. We are fighting to save the whole world from the pestilence of Nazi tyranny and in defence of all that is most sacred to man. This is no war of domination or imperial aggrandisement or material gain: no war to shut any country out of its sunlight and means of progress. It is a war, viewed in its inherent quality, to establish on impregnable rocks, the rights of the individual, and it is a war to establish and revive the stature of man."
6. Robert Strassler, ed. *The Landmark Thucydides*, trans. R. Crawley (Chicago: Free Press, 1996), (1.1) 16.
7. "Shall We All Commit Suicide?" 259.
8. Winston S. Churchill, "Fifty Years Hence," 285.
9. *Ibid.*, 284.
10. Winston S. Churchill "Mankind Is Confronted by One Supreme Task," in *The Collected Essays of Sir Winston Churchill, Churchill at Large*, ed. Michael Wolff. 4 vols. (London: Library of Imperial History, 1976), IV 419.
11. "Shall We All Commit Suicide?" 259.
12. *Ibid.*, 260.
13. *Ibid.*, 260.
14. *Peloponnesian War*, (1.3–1.19) 4–15.
15. "Mankind Is Confronted by One Supreme Task," 418.
16. *Ibid.*, 418.
17. *Ibid.*, 418.
18. *Ibid.*, 419.
19. *Ibid.*, 419. He continues: "Mankind has never been in this position before. Without having improved appreciably in virtue or enjoying wiser guidance; it has got into its hands for the first time the tools by which it can unfailingly accomplish its own extermination. That is the point in human destinies to which all the glories and toils of men have at last led them. They would do well to pause and ponder upon their new responsibilities. Death stands at attention, obedient, expectant, ready to serve, ready to share away the people *en masse*; ready, if called on, to pulverize, without hope of repair what is left of civilization. He awaits only the word of command. He awaits it from a frail, bewildered being, long his victim, now—for one occasion only—his master." *Ibid.*, 419–20.
20. "A Hush over Europe" August 8, 1939, in *Complete Speeches*, VI 6151. See also "No Blood Will Flow. . . Unless. . ." in *The Collected Essays*, ed. Michael Wolff, vol. I, *Churchill and War* (Library of Imperial History, 1976), 457–59. These remarks are focused on Europe. Churchill is not thinking of the Japanese, who had already been making war for several years.
21. "Arm, and Stand by the Covenant," May 9, 1938, in *Complete Speeches*, VI 5956.
22. "Their Finest Hour," June 18, 1940, in *Complete Speeches*, VI 6238.
23. *Ibid.*, 381–82.
24. "The Twentieth Century—Its Promise and Its Realization," March 31, 1949, in *Complete Speeches*, VII 7801.
25. See Jones, "Churchill and Science," 440–41.
26. "The Twentieth Century—Its Promise and Its Realization," 7801.
27. *Ibid.*, 7807.
28. *Ibid.*,
29. *Ibid.*,
30. "The Essential Verities" in *Complete Speeches*, VII 7744–7746.
31. "For myself, as life unfolds, I have been astonished to find how many more degrees I have received than I have passed examinations—I have not been too good at that—and I always feel that even if one never had the advantage of a university education one can still become regarded as remarkably erudite." "The Essential Verities," 7744–45.
32. Winston S. Churchill, *My Early Life* (New York: Simon & Schuster, 1996), 15–24.
33. "The Essential Verities," 7745.
34. See "The Tragedy of Europe," September 19, 1946, in *Complete Speeches*, VII 7379–82, as well as "The United States of Europe," May 9, 1946, in *Complete Speeches*, VII 7318–23, for examples.
35. "The Essential Verities," 7745.
36. See "The Causes of War," 5433–34: "After all, only a few hours away by air there dwells a nation of nearly seventy millions of the most educated, industrious, scientific, disciplined people in the world, who are being taught from childhood to think of war and conquest as a glorious exercise, and death in battle as the noblest fate for man. There is a nation which has abandoned all its liberties in order to augment its collective might. There is a nation which with all its strength and virtues is in the grip of a group of ruthless men preaching a gospel of intolerance and racial pride, unrestrained by law, by Parliament or by public opinion. In that country all pacifist speeches, all morbid war books, are forbidden or suppressed and their authors vigorously imprisoned. From their new table of commandments they have omitted the words 'Thou shalt not kill.'"
37. "The light of Christian ethics remains the most precious guide. Their revival and application is a practical need, whether spiritual or secular in nature, whether to those who find comfort and solace in revealed religion or those who have to face the mystery of human destiny alone. And on this foundation alone will come the grace of life and that reconciliation of the right of the individual with the needs of society from which the happiness, the safety and the glory of mankind may spring." "The Essential Verities," 7745–46.
38. See "The Creeds of the Devil" in *Churchill and Politics*, 395: "There are two strange facts about these non-God religions. The first is their extraordinary resemblance to one another. Nazism and Communism imagine themselves as exact opposites. They are at each other's throats wherever they exist all over the world. They actually breed each other; for the reaction against Communism is Nazism, and beneath Nazism or Fascism Communism stirs convulsively.
- "Yet they are similar in all essentials. First of all, their simplicity is remarkable. You leave out God and put in the Devil; you leave out love and put in hate; and everything thereafter works out quite straightforwardly and logically.
- "They are, in fact, as alike as two peas. Tweedledum and Tweedledee are two quite distinctive personalities compared to these two rival religions."
39. "The Twentieth Century—Its Promise and Its Realization," 7807.
40. See "Liberty and the Law," July 31, 1957 in *Complete Speeches*, VIII 8682–683. See also "Anglo-American Unity," September 6, 1943 VII, 6824.
41. "The Sinews of Peace," March 5, 1946, in *Complete Speeches*, VII 7288.
42. "Fifty Years Hence," 294.

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