

Technique and Control

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Technique and Control

Jacques Ellul's Sociology

FRANK W. ELWELL

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For Hazel

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Preface



The evidence that socio-cultural evolution pushes us toward enlarged and centralized organizations is overwhelming. These structural organizations are patterning the lives of the increasing number of people subjected to their rule. Although many macro-social theorists recognize this, most fail to appreciate its full significance. It is the master trend of social evolution. It has been picking up momentum since the dawn of civilization, and since about 1500 it has been rapidly changing what it means to be human.

The dominant formal organizations in modern societies are governmental and capitalist. These public and private organizations are well suited to achieving their goals, but their entanglement with one another makes them formidable indeed. Furthermore, the recent past has seen many other types of organizations' creation, proliferation, and enlargement. Examples include non-governmental organizations such as international charities like the Oxford Committee for Famine Relief and Save the Children; research institutes, churches, community-based organizations, lobby groups, and professional associations; and international agencies such as the World Bank, the World Health Organization, and the North Atlantic Treaty Organization. Finally, there are social movement organizations such as Greenpeace and the National Association of Colored People. Many of the latter organizations are concerned with similar issues, such as environmentalism or social justice, and they make common causes and work together to effect reform or to stop social change.

Study after study has remarked on the proliferation of formal organizations, a process that has accelerated since the 19th century (Caiden, 1985). Coyne (2008, p. 11) also comments on the increasing reliance on formal organizations because of “their efficiency in achieving complex activities.” In discussing the bureaucratization of the US judiciary, Fiss (1983, p. 1442) begins by briefly reviewing the history of bureaucracy in American life: “The history of the twentieth century is largely the history of increasing bureaucratization. Almost every phase of American life has come to be dominated by large-scale, complex organizations—the corporation, the labor union, the university, the public hospital, and even our national political agencies.” As Meyer and Bromley (2013, p. 366) remark, “a striking feature of societies around the world in recent decades has been the rapid growth of formal organizations in all social sectors. In state, market, and public good arenas alike, new forms arise, and older forms—traditional bureaucracies, family firms, professional and charitable associations—are transformed into managed and agentic [empowered to act] formal organizations.” They argue that this expansion is the result of “widespread rationalization.”

Riggs (1997) explores the impact of modernity on administrative states. He notes that industrialization has expanded governmental tasks and resources, necessitating efficient and humane public administration. “The need for complex and highly technical public services has been vastly increased by industrialization, as has the capacity of appointed officials to organize and arm themselves for collective action” (p. 348). This opinion agrees with Wilson’s (1975, p. 78) observation on the administrative state: “The number of administrative agencies and employees grew slowly but steadily during the 19th and early 20th centuries and then increased explosively on the occasion of World War I, the Depression, and World War II.” Since the end of the Second World War (1945), the growth of public and private bureaucracies has been even more explosive. Such organizations have multiplied, and digital technologies have allowed them to become enlarged, centralized, and allied with organizations with

similar goals. This growth has broadened and deepened their reach into the daily lives of individuals, severely affecting our natural and social environments.

Rarely, however, do social scientists venture to discuss the more serious consequences of what Max Weber called the rationalization process. In brief, Weber asserted that four motivating forces drive human behaviour. Action can be driven by tradition or habit, such as the customs and norms of society. Habits such as exercise, eating healthy food, and going to school every weekday morning are examples of traditional motivating factors. Behaviour can also be motivated by values, such as those internalized by individuals from parents, peer groups, religion, or philosophy. Examples include being kind to strangers, making charitable contributions, and voting. Emotional actions are triggered by feelings such as greed, anger, and pleasure—states of mind derived from one’s genetics and triggered by one’s circumstances, mood, or relationships with others. Finally, Weber asserted, there are actions specifically formulated to reach goals, such as establishing oneself in a career, seeking companionship, or amassing wealth.

Of course, Weber recognized that human behaviour is often motivated by a combination of these four factors or what he called “substantive rationality.” For example, in America today, surveys consistently find that the main motivating factors of individuals pursuing higher education are oriented toward career goals: to improve employment opportunities, to get better jobs, or to make more money. Nevertheless, many first-year students also indicate that they are undertaking higher education because they value learning more about their interests, gaining general knowledge about their societies, or satisfying their parents’ wishes. As with these students, most human actions have several motivating factors behind them involving some combination and relative strength of these four basic motivators.

However, Weber was not simply concerned with classifying human motivations. He also posited that goal-oriented action was becoming a more dominant motivating factor in modern life, brought about by

changes in the social structures of modernizing societies. He called such action “formal rationality.” Bureaucratic organization—that is, organization specifically designed to achieve organizational goals efficiently—was replacing more traditional organizations based on kinship, tradition, religious or philosophical values, or community. Although Weber recognized many of the benefits of bureaucracy, such as efficiency and predictability, he also noted its potential for unintended and irrational outcomes.

Structured along lines of formal rationality, these organizations promote hierarchical layers of authority and task specialization of offices; selection and promotion of careerists based on qualifications and performance; written rules of operations and procedures; and impersonality in treating employees and the public whom they serve. This impersonality is a feature, not a bug, and it is supposed to promote the standard that everyone should be treated in the same way. Personal relationships and feelings (emotional motivation) should not factor in organizational decision making. Naturally, being human means that these bureaucratic ideals are often violated. Nevertheless, they are guides for behaviour, and there are often sanctions for violating these standards.

The specific goals of bureaucratic organizations vary, such as manufacturing goods, providing social services, collecting taxes, educating the young, or healing the sick. Regardless of the specific goal, bureaucracies are organized to attain their goals in the most efficient manner possible—meaning that organizations should do so with minimum cost, thus maximizing profits for private corporations (the highest goal of all capitalist enterprise) and budgetary discipline for governmental and other not-for-profit organizations. (Whether this efficiency is aimed at the short term or long term can make a significant difference regarding an organization’s impact on social life, the environment, and its own sustainability.)

Formal rational organizations also promote the rational goal-oriented behaviour of their employees and those whom they serve through their rules, examples, messages (education, advertising,

public relations), and continued success. The social order, Weber (1958/1904, p. 181) reasoned, is now tied to the economic order—the development of ever more powerful technologies of production, specialized labour, expansion of markets, and ever more mass consumption. It is the economic order that regulates “the lives of all individuals” born into this system. Weber emphasized that it is not that the modern economic system affects all directly involved in producing goods and services but that it affects all.

In the past, according to Weber (1958/1904), most people only slightly emphasized external goods and placed far more emphasis and value on religion, family, and community. The value placed on external goods could be thrown aside “like a light cloak” at a moment’s notice. “But fate decreed that the cloak should become an iron cage” (pp. 181–182). By this, Weber meant that our economic-political system—with its need for profit, economies of scale, social order, and mass production—has led to mass consumption that cannot be lightly abandoned. Hundreds of highly centralized and enlarged bureaucratic entities dominate social life with their laws, rules, plans, and agreements.

Rationalization theory has received some attention from sociologists. C. Wright Mills, for example, employed it extensively in his analysis of white-collar workers (1973/1951), the rising power of elites in modern industrial societies (1970/1956), and as a force within the social sciences (1959). George Ritzer (1993) popularized a version that he called “McDonaldization” by describing the rationalization of the fast-food industry and many other areas of modern life. Rationalization, either explicitly or implicitly, is also an important part of many analyses of modern societies. Sociologists such as Gerhard Lenski and Norbert Elias have employed the concept. However, Jacques Ellul (pronounced a-lool) is the only modern-day sociologist who has analyzed rationalization’s three principal components (physical technology, organization, and mindset), their interrelations, and their evolutionary trajectory.

In his most famous work, *The Technological Society* (1964), Ellul first defines technique in its various forms, consistent with Weber’s

rationalization theory, and then explores its evolutionary development in the formal organizations that increasingly dominate modern societies. Perhaps most strikingly, he details the growing use and effectiveness of “human techniques” such as public relations, education, training, advertising, and propaganda aimed at controlling the beliefs and actions of individuals. Ellul sees propaganda and other human techniques as tools developed by formal organizations to motivate people to act consistently with the organizations’ goals—manipulating emotions, values, and beliefs to buy, vote, contribute, demonstrate, cheer, or hate. Propaganda is informed and refined through social science and experience. Propaganda is arguably the most serious threat to personal autonomy and democratic governance that we face today.

Google Scholar reviews the number of citations of articles and books by year in most of the major peer-reviewed journals. Such journals evaluate manuscripts by experts in the field before their publication, thus assuring quality and original work. Ellul’s citation history of two of his significant works, which Google Scholar reviewed, is fascinating. Beginning with one citation in 1964 when *The Technological Society* was published, it gradually increased to double-digit citations through 1989 (98). Then it increased to 116 in 1992, maintained an almost steady increase through 2020 (352), and plateaued through 2024 (321). *Propaganda: The Formation of Men’s Attitudes* (Ellul, 1965) shows a similar pattern, reaching a high point in 2018 (209) and plateauing around 200 since then. Neither *The Technological System* (1980) nor *The Technological Bluff* (1990) shows such a citation pattern, the first being moderately cited over the years, the second hardly cited at all. (Both books rehash much of the ground covered in Ellul’s classic studies, adding more details but few new insights into the technical phenomenon.) However, citation counts alone do not mean much; individual citations could be a passing reference to technological determinism (a standard charge of academics about Ellul’s work) or an in-depth analysis of his theory of technique. However, citation patterns indicate that Ellul’s

major works are still considered relevant by an increasing number of researchers, perhaps because of world events consistent with his macro-theoretical perspective.

In this connection, I should also note that there is an International Jacques Ellul Society (<https://ellul.org/>). Estimates are that there are a few hundred members worldwide, primarily academics and individuals interested in his work on technique and propaganda. The society publishes a journal, the *Ellul Forum*, twice a year online. “The aim of the Forum is to promote awareness and understanding of Ellul’s life and work and encourage a community of dialogue on these subjects. The Forum publishes work by and about Jacques Ellul and about themes relevant to his life and thought, from historical, contemporary, or creative perspectives. Content is published in English and French” (International Jacques Ellul Society, 2025, para. 7). The society also publishes books and sponsors conferences about Ellul’s life and works. I am not a member, nor is the journal listed on Google Scholar.

Rather than undertaking an extensive review of the secondary literature on Ellul, I focused on his significant books to arrive at a fresh perspective, relatively unencumbered by layers of interpretation. This work aims to detail his macro-sociological theory of technique and explore its predictive accuracy over the past 60 years. Like Weber, Ellul identified the direction of the evolutionary change and wrote about its probable effects on the indefinite future. Although many might see the drift today, fewer conceive of the specific changes as part of an evolutionary process, and fewer still have taken that awareness and projected it into the future.

Ellul has had much to say about the origins of technique (rationalization), its characteristics, typologies, and continuous and almost automatic development. His work on propaganda as a recent development in human technique is relevant given the past 50 years, and particularly the past 10 years, in industrial nations. He has explored the overwhelming evidence for rationalization theory and its consequences for the future of human civilization. The impacts of the rationalization process on individuals, socio-cultural systems, and the natural

environment are seriously underestimated even by most macro-social theorists. Rationalization leads to ever more efficient exploitation of the natural environment, workers, consumers, and citizens, often in pursuing organizational rather than human goals. The effects on individuals subject to the techniques of these rational organizations on the formation of character, values, and locus of control are profound.

Nobody has explored the causes and development of rationalization (technique) and its ramifications as thoroughly as Ellul. He is an exceptional social observer and theoretician, unflinching in his analyses. He writes extensively about human techniques such as advertising and other forms of propaganda by which organizations influence the thoughts and behaviours of individuals. As Ellul consistently points out, all of these human techniques are subject to further rationalization and greater improvements in their efficiency and effectiveness. Organizational power becomes overwhelming by combining these human techniques with technological advances in areas such as communications (television, internet, cell phones), monitoring behaviour (surveillance systems, facial recognition, internet tracking, big data), and computational power (supercomputers). These technical advances were developed by and tailored to bureaucratic organizations, and they are best positioned to exploit them fully. Further technical advances on the horizon—such as general artificial intelligence, quantum computing, and 5G—will enhance organizational power and control.

Given the evolutionary trends, are there countervailing forces to the growth of organizational power? To quote Weber, “what can we oppose to this machinery in order to keep a portion of mankind free from this parceling-out of the soul, from this supreme mastery of the bureaucratic way of life?” (Quoted in Mayer, 1944, p. 128). I will explore that question as well. Ellul’s iteration of the rationalization process has held up well, and his macro-social theory deserves further exploration by social scientists. Although this book is intended to be a stand-alone overview of his theory, all readers are encouraged to read the original works for a more in-depth view of this remarkable sociologist.

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Finally, I appreciate all who struggle with understanding the social world and share their thoughts on what is going on out there—it turns out that it is also happening in academia.

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What varieties of men and women now prevail in this society and in this period? And what varieties are coming to prevail? In what ways are they selected and formed, liberated and repressed, made sensitive and blunted? What kinds of “human nature” are revealed in the conduct and character we observe in this society in this period? And what is the meaning for “human nature” of each and every feature of the society we are examining?

—C. Wright Mills,
The Sociological Imagination

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Introduction

The Technological Society by Jacques Ellul was published in 1964 by Alfred A. Knopf. According to a statement by the publisher, it came to its attention from Aldous Huxley via the Center for the Study of Democratic Institutions. Although Huxley is best known for his novel *Brave New World*, he was a public intellectual with a lifelong concern about technological-human relationships. In response to the centre's interest in European works on technology, Huxley recommended Ellul's 1954 *La technique*. On the recommendation of the centre and Robert K. Merton, Knopf had a later edition of the book translated into English by John Wilkinson and published under the new title since the French word *technique* does not translate well into English.

The term "technique" was confusing to English-speaking people when reading the translation. What Ellul means by the term is the whole gamut of rational standardized procedures (means) for reaching goals (ends), including all forms of mechanical, electronic, and now biological technologies; formal organizational structures such as bureaucracies; and rational, goal-oriented procedures and mind-sets. In this work, "technique" refers to the overall phenomena, "technology" refers to machines and other physical technologies, and "organization" (alternatively "bureaucracy") refers to the social structural aspects of technique. In addition, I will use Max Weber's term "rationalization" (formal rationality, technical thinking, or goal-oriented rationality) when referring to goal-oriented procedures and thought processes. When discussing the overall phenomena, I will often reference the three types as a reminder that technique (material

technologies, organizational practices, and goal-oriented rationality) is a multi-dimensional concept. Finally, Ellul's use of "technological society" refers to societies in which technique is dominant and its breadth and depth expanding.

Merton wrote the foreword to the English version of the book, calling it a "comprehensive and forceful social philosophy of our technical civilization" (1964, p. v). For those who do not know of Merton, he was a pre-eminent sociologist of the 20th century. Although he perceived shortcomings in the work (as do I), he defended the book against charges of being a modern-day Luddite tract or a sociological apocalyptic work. According to Merton, Ellul's substantial contribution is an examination of the role of technique in society, the forces behind its development, and its impacts on individuals, organizations, and society as a whole. Merton agreed with Ellul that we live in a civilization in which technique extends into all areas of social life: "It is a civilization committed to the quest for continually improved means to carelessly examined ends" (p. vi). Merton also agreed with Ellul that the expansion of technique is inevitable and impersonal. It is the result not of the machinations of evil corporations or states but of a social evolutionary process that favours centralization, planning, productivity, and efficiency.

It should be clear that Ellul is firmly within the Weberian sociological tradition. Like his contemporaries, C. Wright Mills and Norbert Elias, Ellul extends Weber's rationalization theory. However, Ellul carries it much further than anyone, drawing out the full implications of technique in all of its ramifications, functions, and dysfunctions. Moreover, like Marx, who could appreciate the efficacy of capitalism in developing industry, Ellul is explicit in his remarks on the power, efficiency, and results of technical means. However, he recognizes the real downsides as well.

My second reason for focusing on Ellul's theory is that it has stood the test of time. In the 70-plus years since Ellul first wrote and published the original work (1955), technology has significantly advanced in mechanical, chemical, electronic, and biological systems.

Governmental, corporate, and non-governmental organizations have multiplied, their interrelationships have grown tremendously, and goal-oriented rational behaviour has invaded nearly every aspect of our lives. The ever more powerful coordination and control techniques (electronic and organizational) have developed and will continue to do so. Ellul is a brilliant sociologist and uses his theory to make accurate observations about the character and types of propaganda (psycho-social techniques) and predictions of its growth in democratic and authoritarian societies. For example, he accurately forecasts the polarization of political parties and the rise of political agitators in the United States and warns of the dangers of media concentration.

This book reviews four sociological works in which Ellul develops his macro-theory of technique. A detailed review of his theory is necessary because he is an insightful sociologist and deserves a much wider audience than he now has. He can sometimes be a problematic and recursive writer, though at other times he can be eloquent. Some of his phrases are unclear, and occasionally his examples are dated or obscure. I attempt in this book to clarify, focus, and update his insights by citing specific portions of texts to anchor my interpretations.

Mixed Reviews

Jacques Ellul is a guru-like cult figure to some and a neo-Luddite to others. A sample of several reviews of his major works will give the reader a range of opinions on him. Andrew Nikiforuk (2018), in a retrospective review of *The Technological Society*, calls Ellul the Karl Marx of the 20th century, asserting that he predicted the “chaotic tyranny” of technological society. Nikiforuk compares Ellul’s analysis of technique’s effects on politics, economics, and social life in the 20th century with Marx’s analysis of capitalism in the 19th century. Ellul’s dense 500-page book outlines technique’s power and domination

over social life and how technical innovation affects every aspect of human culture. Nikiforuk argues that “Ellul didn’t regard technology as inherently evil; he just recognized that it was a self-augmenting force that engineered the world on its terms. Machines, whether mechanical or digital, aren’t interested in truth, beauty, or justice. Their goal is to make the world a more efficient place for more machines” (paras. 28–29). Technology, Ellul writes, engineers all that it touches to material that it can manipulate and master, including human beings.

For example, the human technique of propaganda enables people to integrate into technological society and adapt to the constant disruption caused by technical change. “Technology disrupts and then disrupts again with unforeseen consequences, requiring more techniques to solve the problems caused by the latest innovations” (Nikiforuk, 2018, para. 30). Ellul’s book, Nikiforuk writes, should be read as a wake-up call that our freedom is on the line and that we must not abdicate our responsibilities by leading trivial lives. We must be conscious of which technologies we should bring into our lives and communities. “Read him,” Nikiforuk says. “He remains the most revolutionary, prophetic and dangerous voice of this or any century” (para. 83).

Howard Falk (1965) has very different views of the book and criticized it on two fronts. Like many readers, he objects to the view that technique has escaped human control, a key assertion of the book. Also like many others, Falk finds the book far too pessimistic (see also Norberg, 1971; Vance, 1968; Vecchio, 1967). He also wrongly asserts that Ellul’s whole argument relies on the assertion that social organization is centred on industrial production—countering (wrongly) that the United States was in the beginning of a post-industrial era, in which industrial production is no longer of central importance. However, his charge of pessimism regarding technique escaping human control resonates.

Rupert Hall’s (1965) review also hits on the common theme that Ellul is far too pessimistic regarding the workings and futures of

technological societies, pointing out that he does not counterbalance his critique of technique with all of the wonderful things that technological society provides. Hall claims that Ellul cannot see a single redeeming feature of technique, heaping up evidence against it but citing no evidence in its favour. However, as Ellul consistently points out, this is the hook of technology: the benefits always come with the costs. *The Technological Society* is about the costs of the technical system's convenience, wealth, and benefits. I should also point out that the benefits of technology were the rage when Ellul wrote his opus. Was it necessary to repeat the wonders?

Calling Ellul a “prophet of disaster” while offering no plausible means for avoiding it, Hall asserts that Ellul ascribes too much power to technique and not enough to faith in the human spirit: “All great scientists and virtually all creative artists and philosophers have possessed this faith in humanity; so have all great social reformers. Ellul appears to be without it. His analysis leaves him with no basis for rational optimism. His *diabolus ex machina*—Technique—is greater than man” (1965, p. 128). The label of pessimism is one that Ellul cannot quickly shake.

John Coleman, reviewing *The Technological Society* retrospectively in 2012, calls it “a dazzling phenomenology of the technical state of mind” (para. 2). “It is an almost harrowing inspection of the rise of modern technological society since the Industrial Revolution, which allows little leeway for effective agency to control its excesses. It is a book that is almost deterministic and, even, fatalistic” (para. 3). This lack of adequate human agency in Ellul's theory, Coleman believes, is the major flaw in the analysis. He asserts that, like many sociologists, Ellul carries the constraining powers of social structures too far and that humans can withdraw their consent, individually or collectively, as happens in revolutionary times. “So, I take Ellul's analysis quite seriously about the kind of dilemmas inherent in our technological society and within our minds. Although, I assume his work would read differently if his sociology were more informed by those who juxtapose structure and agency and know that there are elements of

human agency (e.g., acceptance, acquiescence, willful cooperation) in every social structure” (para. 13).

Charges of Pessimism

The charges of pessimism in Ellul’s work need to be explored further. Despite his denials, there is more than a grain of truth to them. Perhaps because of the criticism that Ellul received with the original French edition (1954), by the time he wrote the foreword to the revised American edition of *The Technological Society*, he was aware that many readers would take his writing as that of a pessimistic technophobe. He rejects the label, stating that he is not by nature a pessimist, nor has his sociology led him to such a conclusion. Turning the tables on those who would cast such aspersions, Ellul asks critics to consider their own values that would trigger such judgments. He writes that anyone bringing to the analysis beliefs such as “Progress is always positive,” “Man is good,” and “Man has always overcome challenges” (1964, pp. xxvii–xxviii) will label it as incorrect and pessimistic. However, the accuracy of the analysis can only be judged factually. Did Ellul analyze facts objectively? Are there substantial omissions in the data? Do the analyses warrant his conclusions? The charge of pessimism should not negate his work, for it is not the role of a critic’s metaphysical assumptions to challenge factual analyses.

Another reason for critics’ charge of pessimism is the claim that Ellul describes a rigorous determinism in the development and spread of technique, which denies individual actors’ free will. Free will is a much debated and open question in the social sciences, and Ellul’s analyses neither affirm nor deny its existence; the issue does not enter his argument. Ellul is a sociologist, and his analyses are of social structures and forces, focusing on the groups and organizations that make up a society. At this level of analysis, individual actions and beliefs “do not *here and now* exert any influence on social, political, or economic mechanisms” (p. xxviii). As a sociologist, he

asserts that a social aspect of reality is independent of the individuals who live their lives and make their decisions within a society. Social reality, though changing and influenced by individuals, pre-exists them and largely determines their beliefs, values, and actions. In *The Technological Society* and other books and articles, Ellul makes the case that technique is a significant and growing social force within technological societies and has a dramatic impact on social, political, and economic structures as well as the characters of the individuals who make up that society.

However, Ellul does not claim that individuals in technological societies are more determined by those societies than individuals who lived in premodern eras. Humanity has always been primarily determined by the prevailing social order: prohibitions, beliefs, lifestyles, traditions, and values. It is an illusion, he writes, to think that we are free because such traditional social forces—inculcated by institutions such as family, community, and religion—have lost much of their power. Instead, our conditioning is now much more deliberate and calculated, emanating from schools, workplaces, governments, and supranational agencies and promulgated by mass and social media. Conditioning based on technique is designed and continually honed to be ever more efficient and effective; it promotes conformity to the status quo, individual adaptation to technique in all areas of social life, and integration into the social classes and organizations that make up technological civilization.

Ellul bases the probable evolutionary trajectory of technological society on the contention that social, economic, and political phenomena are interrelated and interdependent. Recent history, say the beginning of the modern era around 1500 CE, reveals a pattern of the evolution of these institutions, a pattern that can be extrapolated into the future. This pattern is what Ellul reveals in his writings on technological societies. He describes the growth of technique in various areas of social life—production, politics, management, science, police work, education, propaganda, and the like—and, based on these observations, devises a theory of technique, the causes of its growth,

and its impacts on political, economic, and social institutions as well as individuals. It is a theory that parallels Weber's rationalization theory (see Chapter 1). The technological society that Ellul describes in his work is as it existed at the time of writing and "its *probable* evolution" (p. xxx). As a macro-social theory, his perspective helps us to understand how large-scale social structures and dynamics influence individual behaviour. It is a framework that allows researchers to analyze systemic factors affecting people's lives. Fortunately, we have over 70 years of history since Ellul made his forecasts and can readily judge his theory's accuracy and power to date.

A social theorist cannot foresee external factors that can disrupt the social evolutionary process, such as a general nuclear war, the collapse of civilization because of a massive asteroid strike, or the Second Coming of Christ. Aside from these cataclysmic events, Ellul insists that there is also room for human action; in fact, he contends that it is our only hope to maintain any semblance of human freedom. Suppose that we all live a trivial existence and continue to adapt without thinking about the changes wrought by technique. In that case, Ellul contends, the social evolutionary process that he has described will continue unabated, "and the determinants *will* be transformed into inevitabilities" (1964, p. xxix). However, such individual actions and external factors are beyond his analysis and cannot be foreseen.

For similar reasons, Ellul offers no solutions to the social, economic, or political problems caused by technique, and this lack has added to his reputation as a pessimist. He argues that no solutions are apparent in the existing social order that he analyzes. He does not claim that solutions will never be found, but he perceives "no breach in the system of technical necessity" (p. xxxi). Consequently, any social solution that he could offer, he believes, would be idealistic, dishonest, and guided by wishful thinking. Ellul is a social theorist in the tradition of Weber (also frequently charged with being pessimistic). His role is first to study technique and its progression within socio-cultural systems and then to generalize from specifics to a

macro-social theory of the phenomena. It is necessary to understand the phenomena thoroughly before proceeding to social action, and Ellul takes that important first step.

However, he does not advocate waiting for politicians, economists, philosophers, sociologists, and others to address the problems caused by the proliferation of techniques. Each of us, he says, “must seek ways of resisting and transcending technological determinants”(1964, p. xxxii) in our professions and social and family relationships. According to Ellul, we are surrounded by physical, biological, social, and psychological forces and constraints. Freedom consists of overcoming and transcending these constraints. It is not a matter of being determined or free but a dialectic in which we take action to overcome constraints, “and . . . this act is freedom.” Freedom is not a thing “but a prize continually to be won.” By acknowledging the nature of the technological phenomenon and the extent to which it constrains human thought and action, we take the first step in confronting “the blind mechanisms as a conscious being” (1964, p. xxxiii). Ellul is not advocating getting rid of technology but “resisting and transcending” it. He is unsure of how such resistance can be achieved, which I will explore more fully after examining the full extent of the problem.

Social Movements

Proposing that individuals act to control techniques (physical technologies, organizational practices, and goal-oriented rationalities) in their lives can be an effective personal strategy. People react and adapt to changes in their environments. As I demonstrate in Chapter 1, Ellul lived his life resisting techniques’ oversized and expanding role in his immediate environment. He participated in several social movements both before and after the Second World War. He claimed to recognize the social movements in the late 1960s as a hopeful sign that there might be a countervailing force to the spread of technique (1981, pp. 74–76).

Since the 1960s, we have seen the rise of social movements that seek to address issues such as the environmental costs of burning fossil fuels, the extinction of species, and the destruction of habitat on land and in water. Other social movements have arisen, reacting to the carnage caused by urban sprawl, deforestation, strip mining, fracking, and pollution of seas, lakes, and rivers. Still other movements address social justice issues, the rise of authoritarianism, and the upheaval of economic life. However, these social movement organizations invariably deal with these problems by advocating the development of further techniques: the employment of physical technologies, regulations, organization, surveillance, planning, education, and propaganda. Ellul demonstrates that such social movements have the positive function of taking some of the rough edges off technological society and furthering the integration and adaptation of more individuals into the social order, but they do not challenge technique; in fact, they, too, are carriers of it.

Marx made a compelling analysis of capitalism and its periodic crises. However, he let his hopes contrive the *deus ex machina* of a proletarian revolt to establish socialism, peace, and prosperity. Ellul's analysis of technological society does not allow Ellul to be so free with his hope for change. There might not be a revolution by the proletariat or any other class that will solve the problems of technique. The Iron Cage (another reference to Weber) has too many attractions. Rather than revolution, such social movements point to a dialectical process in dealing with technique. Elite resistance to fundamental change that threatens their power and control is formidable. Their power is greatly enhanced by their positions atop economic and government structures and their institutional mastery of technique. Breaking the elite grip on power and control will be achieved, if at all, one issue at a time and constantly repeated (see Chapter 4). Such social action will advance humanity's interests, whether wholly successful or incremental in achieving its goals. Moreover, that might be the most effective action that we can take regarding the future of technological society.

Social Evolution

Ellul posits that the social evolutionary process has been one of ever more technical advances for more than a millennium. We adapt to our ever-changing social and physical environments through technique. The fact that this evolutionary trend might lead us to a totalitarian future abhorrent to most people is not a cause to dismiss the theory. It should be considered and tested against all available evidence. It is a macro-social theory, in line with the theories of Weber and other sociologists influenced by rationalization theory. Perhaps Ellul overstated the case (a common fault of authors and sociologists), perhaps he is too pessimistic or does not allow for human agency (another common fault of the group), or perhaps subsequent events will prove the theory wrong. The test of a macro-social theory is not the optimism or pessimism that it projects but how accurately it reflects social reality.

Ellul's theory of technique's origin, transmission, and expansion into all areas of social life has been verified further since his writings by the enlargement and centralization of the industrial base and structural institutions of technological societies. These institutions are focused on efficiency, productivity, and power. Human techniques of psychosocial manipulation, as well as physical technologies for surveillance and tracking of individuals, have been developed and sharpened in the 21st century. These advances in technique greatly enhance the institutional coordination and control of those subject to their authority. Ellul explains much of what is going on in our technological society—automation, detailed division of labour, alienation, drug abuse, polarization, and fascism—all developments that seem to have intensified since his writings. Again, he is a remarkable sociologist.

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Biographical Overview

Jacques Ellul was born on January 6, 1912, in Bordeaux, France. His mother, Marthe (née Mendes), was also from Bordeaux. His father, Joseph, was considered a foreigner since he was of Serbian and Italian origin. Ellul believed that one of the most decisive parts of his early life was that he grew up in a poor family. He worked at an early age, balancing school with the need to contribute to the family's income.

Jacques was an only child. Although he describes his relationship with his parents as loving, it is also apparent in his autobiographical writings that they were distant and reserved (1981, p. 1). His father had strict rules and demanded obedience to his authority. Still, he did not seem to care what Jacques did when he was not around. His mother also let him roam the port of Bordeaux, so outside school he spent his free time and vacations around sailors and dock workers. In hindsight, he calls this milieu for a child to grow up in “astonishing,” “educational,” and “rather dangerous” (p. 2).

Jacques did not have much of a religious upbringing, which is surprising since he would eventually have a prominent role in the French Reformed Church as an adult. His father was critical of religion, believing that it was all myths and fairy tales. However, being a libertarian, he was not opposed to Jacques, who was somewhat familiar with Christianity. Although he characterizes his mother as

a religious Protestant, she seldom talked to him about her beliefs. She never went to church, and he learned about her faith only later when he asked her questions.

Growing up in a poor home, Jacques had only the Bible to read, with no library close to his house to borrow other books. He believes that this marked his early years and education, teaching him understanding of and empathy for poor students in his later career (1981, p. 3). Jacques was a good student, but his intellectual life was confined to school. However, another family characteristic that he considered fundamental to his development was that his mother was a painter who gave drawing and painting lessons. Her teaching contributed to the family's meagre income. It gave Jacques a "certain artistic atmosphere," though one confined to the visual arts. He never heard music in the house or attended a concert until his early 20s (p. 3).

After Jacques graduated from *lycée* (college) with his baccalaureate degree, his mother encouraged him to further his studies. He chose to study law because it seemed to lead to a profession, and the course of study was short compared with those for other degrees. His focus was on the history of law and institutions. His doctoral dissertation was on the *mancipium*, an ancient Roman institution that subjected one person to another. Jacques focused on the right of a father to sell his children to another man (1981, p. 4).

In 1930, while attending the Faculty of Law at the University of Paris, Ellul first encountered Marx's thinking in courses on political economy. With his interest aroused, he checked out a copy of *Capital* at the library. The book struck a chord in the young man, helping him to understand his father's employment struggles and his family's poverty in a broader context. His father experienced prolonged unemployment periods and had no government or family assistance. Ellul believed that Marx helped him to understand the plight of people who experienced poverty when sick with no medical care and no money to pay for medicine (1981, pp. 4–5). Beyond economics and the mechanics of capitalism, Ellul found in Marx a total system, a vision of history, society, and humanity itself.

Interacting with socialists and communists at the time, Ellul found that they were little versed in Marx's thought. They were interested in making it in the Communist Party, spouting the party line, rather than advocating the transformation of society. Consequently, Ellul recalls staying on the periphery of the movement until Joseph Stalin's show trials of the mid-1930s began and he broke with communists and the party. Although the writings of Marx remained a significant influence throughout his life, early on Ellul recognized and rejected Soviet communism as a totalitarian system that had little connection to Marx. Ellul came to appreciate the need for coherence in life, beliefs, and acts to support one another and "a continuity between Marx's thought and one's life in terms of that thought" (1981, p. 10).

Ellul integrated several elements of Marx's analyses of society into his theoretical system. The first element was a revolutionary tendency, a realization that the world could not continue along the present path. Marx convinced him that people have a "revolutionary function to their society" at "certain historical times" (1981, p. 11). The second element was the importance of the concrete material and social reality surrounding us. Ellul writes that our self-interests and economic positions often mask this reality in the guise of ideals and values. The third element was a concern for people who experience poverty. In this connection, Ellul asserts that many people misunderstand Marx's concern for the poor. Marx focused not just on the lack of money that the proletariat had but also on their lack of social resources and their alienation in modern life. They were forced into inhuman conditions at work, crowded into cities and ghettos, and kept in economic conditions that prevented them from having a full family life. Marx gave a complete account of humans' psychological, sociological, and economic unmet needs under the capitalist system, and the poor person is "deprived in all of these things," Ellul notes (1981, p. 12). However, it is not just the proletariat that concerns him. Others are deprived of full lives, too, such as many older adults, single mothers, teenage delinquents, and other social misfits in modern society, with whom Ellul sides.

In summarizing his position on Marx, Ellul is critical on two levels. First, he rejects the claim that Marx was scientific and that through scientific socialism he had found the meaning of life and history. Marx was passionate, and his passion is what appeals to Ellul. Second, Marx was very perceptive about the prejudices and assumptions of the people whom he attacked. Still, he failed to critique his biases and assumptions, and doing so is critical for any social theorist. Ellul contends that Marx biased his theory with the notion of progress, that each evolutionary stage represented an advance over the previous stage. Ellul also questions Marx's assumption that work is the defining characteristic of human beings. Ellul rejects that idea, pointing out that many people throughout history thought of work as a curse and that it was under the system of capitalism that the discipline required by work became a positive value.

Religion and God comprised the one area in which Marx had little or no influence on Ellul. When he originally read Marx, he was indifferent to that area of life. When faced with the existential questions of life and love, Ellul found that the Bible gave him a level of understanding different from Marx. He had a sudden and profound conversion to Christianity in 1932. From then on, he combined his faith with what he took from Marx, struggling with what he saw as contradictions between the two systems but refusing to give up on either system. This struggle led him to internalize a dialectical mode of thinking, which he maintains is the foundation for his theories (1981, pp. 14, 15).

Since dialectical thinking is foreign to many, Ellul offers explanations and examples. Marx was the first to popularize the concept, though he borrowed it from Hegel. Ellul writes that dialectical thinking includes contradiction, not the simple combination of thesis and antithesis to produce a synthesis, as many say, but something much more subtle and meaningful (1981, p. 7). For example, he points to the seemingly contradictory concepts of life and death. Every living organism has several forces working to preserve its life and a number working to end it. These forces include nutrition, pollution, disease,

aging, and genes. Thus, life can be considered synthesizing a succession of “equilibriums” between forces promoting life and forces promoting death (1981, p. 8). In terms of a social system, some forces are both favourable to the continuation of that system and harmful or contrary to its continuation. In historical development, the two forces do not simply cancel each other out—white becoming black or black becoming white. Neither is synthesis simple, a combination leading to grey. Rather, the synthesis integrates the thesis and the antithesis into an altogether different form, eliminating the contradictions and producing a new historical situation (1981, p. 8). It is not then that the process begins anew, as some describe it. Instead, it is a continuous historical process that occurs on a minute level in the short term but is capable of fundamental systemic changes over the long term. Quantitative change often leads to qualitative change. These changes can be “revolutionary,” sudden, and violent, as Marx predicted for the end of capitalism. However, often missed is that his prediction of revolution was posited on a long-term struggle between the thesis (capitalism) and the antithesis (proletariat exploitation) as well as significant and growing economic crises caused by the two systems.

Systemic change can be non-violent and peaceful. Each new synthesis—say that which led to the creation of the welfare state, first in anti-socialist Germany and then worldwide—is subject to these constructive and destructive forces. Some of these forces are brought into existence by the evolving synthesis, whereas others are a continuation of the earlier historical period as changed by the new synthesis. As with Marx, this dialectic is the overall vision by which Ellul interprets socio-cultural systems and change. According to Marx, it was how feudalism in Europe evolved into capitalism. It was how Ellul arrived at the theory that technique replaced Marx’s capitalism as the prime mover of the historical moment.

Shortly after his conversion to Christianity and looking at the Catholic Church and different Protestant sects, Ellul joined the Reformed Church in France “because one cannot be Christian all alone” (1981, p. 16). He began reading and studying the works of Karl

Barth, a theologian consistent with his dialectical thinking. Both Barth and Marx became significant influences on his life and work. Ellul writes that much of his work on theology explores the “significance of Barth’s theology” (1981, p. 18).

Throughout his studies of Marxism and Christianity, Ellul continued to pursue his studies at the Faculty of Law—though he seemed to get much more out of his studies outside the formal curriculum. As he neared graduation, he had to decide on a career. Considering the state of France at that time, he decided against becoming a judge; both as a Christian and as a follower of Marx (though not a Marxist), he could not see himself as the servant of a capitalist society. For the same reason, he decided against working in the civil or corporate service or working as a lawyer in the legal profession. After some internal struggles, he decided on teaching since it would allow him to teach about life to students and give him some distance and detachment from the world’s demands.

Beginning about 1933, when Hitler came to power in Germany, Ellul started to take a more active role in politics. In February 1934, he took part in a demonstration in Paris against the dangers of a Fascist *coup d’état*. After Italy invaded Ethiopia in 1935, Ellul joined the first anti-Fascist movement in France (Antifa) and demonstrated against the right-wing strikes to pressure the government to support Italy. Then, during the Spanish Civil War, he supported the Popular Front against Francisco Franco until late 1937.

During this time, Ellul and his friends launched the “personalist movement” under the leadership of Emmanuel Mounier. Upon a Christian foundation, it tried to steer an anti-Fascist movement based on a rejection of individualism and collectivism. It advocated the restructuring of society along the lines of the full development of personhood—spiritual and material—and the integration of the person into a community of close personal relationships. The movement rejected the alienating aspects of the distant, secondary relationships of collectivism and advocated the interhuman relationships of community instead. However, the movement had barely started when

France entered the Second World War in 1939 and “everything disappeared” (1981, p. 19). However, Ellul’s advocacy of the importance of primary groups and the local community would remain a central feature of his sociology and political life.

In 1937, Ellul married Yvette Lensvelt, who was of English nationality but was born Dutch. Ellul, a lecturer at the Faculty of Law, had his doctorate by this time. In 1938 and 1939, he applied for the Aggregation Competition, an examination to recruit associate professors who taught history or geography at the college or *lycée* level. The armistice with Germany in 1940 divided France into two parts. The southern part gave nominal independence under Marshal Philippe Pétain, commonly called Vichy France, after the resort town where the government was located. The German military occupied the rest of the country, about 60% of the total land area, consisting of northern France and the western coast. When Pétain came to power, Ellul was a lecturer at the University of Strasbourg, which withdrew from the occupied area to the city of Clermont-Ferrand in Vichy France.

Ellul reports that he was dismissed from his position a few days after the Vichy government took over. The Germans took control of the French province of Alsace, intending to incorporate it into Germany. Ellul was popular with a group of Alsatian students and, in a speech to about 50 or 60 of them, recommended that they not trust Pétain and not return to the province since they would be drafted into the German army. One of the students reported this to the authorities, whose investigation also revealed that Ellul’s father was foreign born. The Vichy government dismissed Ellul for being the son of a foreigner and for having made statements hostile to the government (1981, p. 21).

At about the same time as the dismissal, Ellul and his wife returned to Bordeaux in the German-occupied zone. Upon his return, he discovered that the Germans had arrested his father. Ellul believed that his wife, also a foreigner, would be arrested by the Germans as well. Out of a job and other options, he and his wife and newborn baby vanished into the countryside, living in a very isolated area about

50 kilometres from Bordeaux. Helped and advised by his neighbours, he took up sheep and potato farming to support his family. He joined the French Resistance, called the Maquis in rural areas. The Maquis were small groups who fought against the Nazi occupation of France and the collaborationists of the Vichy government during the Second World War. Ellul writes modestly that it was not a choice; there were no other options. In the Resistance, he helped to formulate tactics and served as a liaison among the various groups in the region. During this time, he discovered an abandoned church and, in 1943, began directing worship services for local farmers.

In 1944, Ellul was part of the Movement of National Liberation. He and fellow Resistance leaders dreamed of going from resistance to revolution, which meant restructuring economic life along the socialist lines advocated by Pierre-Joseph Proudhon, based on “going back to grassroots by means of a federative and cooperative approach” (1981, p. 22). However, General Charles de Gaulle had other ideas, such as a traditional republican government and the old political parties reconstituted. Ellul and his compatriots were blocked in their proposed reforms. Given these disappointments, he abandoned political involvement in 1947, concluding that “society cannot be changed through political action” (1981, p. 23).

After the war, Ellul returned to teaching at the university and was welcomed back without reservation because it was an honour to have been dismissed by the Vichy government. While pursuing his academic career, he remained active in the French Reformed Church, serving on its National Council, a group of 20 lay and clergy directing church affairs. He reports that he worked hard for 15 years trying to make the Reformed Church an active force in promoting social justice but had limited success. Ellul came to believe that the organization was too traditional and resistant to change. “Once a movement becomes an institution, it is lost,” he claims (1981, p. 24). This claim parallels Weber’s insights into routinization or how even revolutionary change must be adjusted to the forces of everyday life.

In other areas of action, Ellul became a community leader in preventing juvenile delinquency by working with youth beginning about 1958, work that he continued to perform until 1976. He focused on helping adolescents and getting the government and the police to recognize that many of the problems could be addressed better through prevention rather than the criminal justice system.

Ellul's last area of action began in 1968 with his involvement in the environmental movement. Ellul writes that this commitment was consistent with his research interests in technique and how industry transforms human and natural environments. It was also consistent with his commitments to Christianity and Marxism: "Intellectual interest means concrete commitment, practical and political involvement" (1981, p. 25). In advocating for things such as national planning for land use and against the proliferation of nuclear energy plants, Ellul writes that he was attacking the three things that he despised: "technology (let us say, technocrats), bureaucracy, and capitalism" (1981, p. 26). According to him, the problem is that we have no real control over the technology that determines our lives. Technocrats exercise dictatorial power, using the argument of the necessity of progress to force the acceptance of their projects. Although Ellul was a generalist, perceiving the world through a macro-sociological frame, his areas of action were on a much smaller scale. He did not believe in global or even national action but advocated action at the local level. Many credit him with the motto "think globally, act locally," by which he claimed to live. Ellul's wife, Yvette, died in April 1991; Ellul then fell into a deep depression following her death and died three years later, on May 19, 1994.

In addition to teaching, Ellul authored over 50 books, many on religion and theology. My focus is on his sociology of technique, a broad category that he defines as "the totality of methods rationally arrived at and having absolute efficiency (for a given stage of development) in every field of human activity" (1964, p. xxv).

Understanding Our Age

Ellul concluded early on that the world is much more complicated than Marx had thought. Although capitalism had periodic crises of overproduction and recession, the proletarian revolution never occurred. It also became clear to Ellul that Soviet and capitalist economies had remarkably similar goals: increasing industrialization at any cost and rapidly developing technical objects and procedures. He began to suspect that technology was more of a force in his time than in Marx's time. Ellul credited his friend Bernard Charbonneau, a geographer, for first bringing technology to his attention as a significant force in understanding our world. However, Charbonneau was not given the attention that his ideas deserved. Ellul took the basic concept and developed it more fully, concluding that technique in all of its forms was replacing capitalism as "the most decisive factor" of the social evolutionary process (1981, p. 32). It is technique—in material, social, and mental life—that channels the centralization and enlargement of power and authority in modern societies and increases the efficiency and productivity of industry (1981, p. 32).

Ellul points out that a problem in translating the French word *technique* into English has caused fundamental misunderstandings of his theories. The French word is translated into English as technology. However, the French word carries a more specific meaning. As Ellul uses it, it is a general term that includes mechanical, biological, and electronic technologies, organizational processes, and the totality of rationalized methods to achieve ends efficiently. Thus, when reading Ellul in English, it is often necessary to remember that he is referring to the breadth of technical phenomena: material (mechanical, electronic, and biological technologies), organizational (bureaucracy), and rational goal-oriented procedures and processes in various areas (advertising, education, propaganda, public relations, economic and social planning). These techniques have been developed and refined throughout the modern era to become ever more productive and efficient and expand into broader areas of human activity. This

expansion of technique is a relatively modern phenomenon: “The technique of the present has no common measure with that of the past” (Ellul, 1964, p. xxv).

The most readily apparent components of technique, of course, are the physical means and methods encompassing tools, machines, and processes employed to achieve specific goals—whether technology to exploit energy in the form of wood, coal, oil, nuclear, or solar; machinery to assist on assembly lines for consumer products such as automobiles and perfumes; or computer grammar programs to assist writers in composing commentary on Ellul’s theory. His emphasis is not only on the object itself but also on the method of using the physical technology. The method involves rationalizing and systematizing actions to achieve maximum efficiency regardless of wider social or ethical consequences—a process that changes with the physical technology.

Organizational techniques refer to the procedures, systems, and hierarchies developed to organize and manage the use of physical means. They involve the creation of structured organizations, a detailed division of labour, standardized procedures, and efficient workflows. There are two basic forms of social organization: primary groups and secondary groups. Primary groups rely on the personal relationships of family and community, loosely organized and based on social bonds of affection and familiarity. Secondary groups tend to be large and impersonally organized around status and role and coordinated through bureaucracy. (Actually, groups exist on a continuum, with primary and secondary being at each end, but it is useful to dichotomize.) Think of bureaucratic structures (corporate, government, and other formal organizations), assembly lines, supply chains, and sophisticated managerial systems that now encompass global markets. Organizational techniques encompass vast networks and systems of control designed to maximize efficiency and output, extending techniques beyond individual tools and machines. Ellul sees this organizational aspect as crucial to the pervasiveness of technique; it is not simply about isolated tools and machines but also

about entire production, distribution, and consumption systems. He posits not a simple argument of technological determinism but, like Weber, a nuanced system theory of social evolution.

Goal-oriented rationality is arguably the most far-reaching aspect of technique since it largely determines the mindsets of individuals in modern society. It is not just about the efficient use of tools and machines or the smooth functioning of formal organizations; it is also about a way of thinking that prioritizes efficiency, calculability, and control more than anything else. This type of rationality focuses the individual on achieving a goal through the most efficient means possible. Mandated by participation in formal organizations of work, this rationality often ignores or downplays ethical, social, and environmental considerations. It is a form of technocratic or instrumental thinking in which the means justify the ends regardless of the larger social or ethical context. (Weber called it formal rationality as opposed to substantive rationality.) Goal-oriented rationality represents a way of thinking that permeates modern society, influencing everything from individual decision making regarding personal lives to large-scale projects by industries, governments, and other organizations.

The three aspects of technique are deeply interconnected. Goal-oriented rationality drives the development and application of physical methods and organizational structures. They, in turn, reinforce the dominance of the goal-oriented mindset, creating a feedback loop that shapes human behaviour and society. This integrated and systemic nature of technique, extending beyond mere physical technology, makes Ellul's concept so compelling. It is not simply a matter of using technology; it is also about an encompassing system of technique (physical, organizational, and mindset) that shaped and defined social life in the past and continues to be the principal driver of social evolution.

For example, once introduced, the automobile became an independent force that transformed transportation systems and

a whole way of life. Its development led to the construction of extensive road networks and altered where people lived and how they interacted (including the sex lives of teenagers). Technological innovation continues in the automotive industry, creating new features such as airbags, electric vehicles, and autonomous-driving cars—technical innovations driven by the logic of efficiency and productivity in meeting market demands (both natural and created), capital maximization, as well as government incentives and mandates to promote economic development, safety, and efficiency (brought about by industry and consumer organizations).

Marx saw labour as the force that creates value. Today, Ellul asserts, technique is the prime mover in creating value through applying science, observation, and rationality in all of its fields. This prime mover is true not only of capitalist systems but also of communist and socialist systems. Ellul believes that, if Marx were alive and writing in the 20th century rather than the 19th century, he would have named technique the most significant force in structuring society's social and political organization. Therefore, Ellul considers his study of technique as continuing the development of Marx's theory into the present day (1981, p. 34).

Although Ellul arrived at technique as the prime mover in modern socio-cultural systems through Marx and dialectics, the concepts and theory surrounding technique have many similarities to Max Weber's rationalization theory. Recall that Weber theorized that the increase in population and intensifying production had caused the development of both government and private bureaucracy. He argued that, the larger the state, the more it depends on bureaucracy: "It is obvious that technically the great modern state is absolutely dependent upon a bureaucratic basis. The larger the state, and the more it is or the more it becomes a great power state, the more unconditionally is this the case" (quoted in Gerth & Mills, 1958/1946, p. 211).

Weber also argued that the growing complexity of the production process also provides significant stimulus to bureaucratic growth:

The growing demands on culture, in turn, are determined, though to a varying extent, by the growing wealth of the most influential strata in the state. Increasing bureaucratization is a function of the increasing possession of goods used for consumption and a sophisticated technique of fashioning external life. This technique corresponds to the opportunities provided by such wealth. This wealth reacts upon the standard of living and makes for increasing subjective indispensability of organized, collective, inter-local, and thus bureaucratic, provision for the most varied wants, which previously were either unknown, or were satisfied locally by a private economy. (quoted in Gerth & Mills, 1958/1946, p. 212).

Weber asserted that political, economic, and social institutions adopt bureaucratic organizational techniques to reach their goals more efficiently. They include educational institutions, political parties, faith-based entities, economic firms, and an expanding number of local, regional, and national government agencies. These bureaucracies rely on goal-oriented rational behaviour to achieve their aims and encourage the development of rational thought and behaviour among their officers and clients. Weber called this the “rationalization process” and posited that it will continue to expand its role in human affairs at the expense of values from religion or philosophy, social traditions and customs, and individual emotions such as love, loyalty, and hate. Weber’s rationalization theory is a socio-cultural systems theory. As technique is applied to ever more complex and expanding production processes employing ever more sophisticated machines and a detailed division of labour, the population grows; bureaucracies proliferate, enlarge, and centralize to provide the needed coordination and control; and rationalization of human thought and behaviour becomes more dominant in human affairs.

However, Ellul states that, when he began his studies of technique, he was unacquainted with Weber’s sociology, which he did not know till after the Second World War: “We certainly have a similar approach to the issues and a similar sociological method, but there is

a major difference between us” (1981, p. 34). Ellul writes that Weber, who died in 1920, could not have known the full extent of technical society. Ellul suggests that the first fully formed technical society did not appear until about 1945 when the United States emerged from the war as a global power. Weber had a general view of technical growth and its causes and predicted its continued expansion, but he never experienced the full-blown phenomenon. He made some brief comments about the growth of rationalization in the future but did not fully explore its effects. Regarding the study of technique, Ellul’s theory elaborates Weber’s theory, with a more detailed and comprehensive explanation and description of technical civilization and its effects on individuals, organizations, and total societies (1981, pp. 33–34). Also, like Weber’s theory, Ellul’s is a systems theory that explores the phenomenon of technique (or Weber’s rationalization process) as an “all-encompassing” social force that progressively affects every area of social life (1981, p. 35).

To those who argue that the only difference between the techniques that created primitive tools such as the stone axe and today’s nuclear weapon is one of degree, Ellul responds that, beyond a certain point, quantitative change often becomes qualitative or a difference in kind. He posits several qualitative distinctions between today’s techniques (material technologies, organizational practices, and goal-oriented rationality) and techniques before the 18th century. In the past, technique was based mainly on custom and practice. Only in the 18th century did people begin to analyze the techniques around them and try to improve their efficiency (1981, p. 36). For example, Thomas Newcomen’s steam engine was invented in 1698 and used to pump water from coal mines. Later engines, such as the one developed by James Watt in 1765, increased the efficiency and convenience of the steam engine. The new perspective was one of improving efficiency—European artisans began designing tools and machines to perform the specific task at hand.

The second qualitative difference is that, beginning in the 18th century, technique came to assume functions outside material devices

and in social relationships. Rational methodology to increase productivity and efficiency soon invaded all human activities. Psychology, economics, anthropology, and sociology give us increasingly precise knowledge of human social behaviour. Technicians use much of that research in management, human resources departments, public relations, advertising, corporate governance, propaganda, and the armed services (Ellul, 1981, p. 37). Mechanical and other material technologies are thus only a part of the wide-ranging technical phenomenon.

As an example of the expansion of technique, Ellul points to athletics. He states that training for athletics was a personal affair a century ago, left to the individual styles and intuitions of athletes and their coaches. However, in the 20th century, that changed dramatically. Biological science has given us more precise knowledge of anatomy, physiology, nutrition, sleep, and exercise. Athletic trainers (technicians) have taken this knowledge and devised training schedules and nutritional plans. Serious athletic training is “thoroughly programmed,” Ellul posits, in accordance with the latest findings (1981, p. 38). Track and field coaches discipline their athletes; they teach them optimal and precise body movements for running, swimming, or jumping to excel in competitions. Baseball managers often make game decisions based on statistics rather than intuition. Football coaches and players study films of opposing teams and their tactics in previous games to anticipate and master each football match. All of this, Ellul writes, is technique, and it continues to expand into every area of human life.

Another difference between modern technique and what existed before the 18th century is its multiple and complex relationships to science. Although the popular view is that science advances technique, it is also true that science relies on technique to advance. Ellul points to space exploration as an example of this interdependent relationship. Think of the scientific advances in geography, geology, and meteorology enabled by satellites and the advances in astronomy enabled by the Hubble and James Webb space telescopes. The relationships between science and technology are both mutual and

growing. Technique increases scientific productivity; scientific organizations are progressively more extensive, compartmentalized, and coordinated; and scientific understanding has thereby advanced substantially.

However, perhaps the most significant difference among modern techniques is their self-augmentation properties. Because a critical mass of techniques has been achieved, there is an almost autonomous process of cross-fertilization as technical innovation in one field interconnects with others and produces innovations and discoveries (Ellul, 1981, p. 39). One can see this in computer science, in which advances in computing power, miniaturization, and programming have led to numerous innovations and inventions. They include personal computers, complicated role-playing, action games, cell phone apps of infinite variety, statistical packages, accounting software, global positioning systems, self-driving cars, and various innovations in multiple fields.

His views on technique led Ellul to a much more nuanced view of the Industrial Revolution. Most scholars emphasize the initial development of industry, but for Ellul industry was only one aspect of a technical revolution that predated it. He notes that the modern state appeared simultaneously with the Industrial Revolution and depended on bureaucratic organizational structures oriented toward efficiency and rationality. The movements toward rationality in production and the state are rooted in the 16th and 17th centuries, along with the initial rationalization of finance, law, and science (1981, p. 39). So, Ellul concludes, the technical mindset emphasizing rationality, efficiency, and productivity was infiltrating various areas of social life, blossoming in the 18th and 19th centuries.

Ellul asserts five causes of the growth of technique in a variety of fields in the premodern era. First, population increase and denser population centres necessitated a more efficient bureaucratic organization to coordinate and control social life and a more detailed division of labour, all leading to a significant increase in the circulation of social experiences and ideas.

Second, there was an era of “social plasticity” caused by weakening long-standing social structures such as nobility, family, guild, and community. With the Enclosure Movement in the 18th century in England, land held in common by village members for raising livestock and growing crops was fenced off by the aristocracy for their private profit. Although enclosure had its roots as far back as the 12th century, it became far more common in the 18th and 19th centuries as the aristocracy claimed that larger fields were more efficient and productive for growing crops and raising sheep. Enclosures separated many peasants from their means of production, uprooting them from rural areas of England and forcing them into cities, where their only means of subsistence was to become the proletariat or a working-class population. Enclosures soon spread to France, Germany, and other areas of northern Europe.

Third, according to Ellul, the rise of technique was caused by individuals’ clear, rational motivation to apply technical reasoning to different areas of life. This intellectual innovation parallels Weber’s rationalization process, in which traditions, values, and emotions have diminished roles in human affairs and rational, goal-oriented behaviour becomes more dominant. Weber asserted that rationality becomes the predominant way of thinking as individuals spend more of their lives working in or subject to formal rational organizations.

Fourth, the rise of technical dominance was the result of centuries of maturation of technical development. Ellul posits that the slow accumulation of techniques went on for well over two centuries before blossoming in the 18th century in a seeming revolution. This slow maturation might also account for the gradual emergence of rational motivation among individuals (1981, p. 41).

Fifth, Ellul asserts that capital accumulation in Western society was behind the early evolution of technical dominance. This accumulation was the result of the growing success of commerce and the exploitation of the New World. This capital played a vital role in developing industry and utilizing all technical means by governments, militaries, education systems, and other social institutions.

According to Ellul, these five factors led to the transition of traditional society to modernity, and the Industrial Revolution was only one aspect of the transformation (1981, p. 41).

Ellul considers technique to affect not only human activities but also the values of a socio-cultural system. He states that technique relates to specific values such as efficiency, functionality, utility, and the positive attributes of work (what Weber called “formal rationality”). These values, in turn, promote further bureaucratization and intensification of production, all of which are essential in a technological society for its stability and development (1981, pp. 41–42). He notes that most premodern societies considered work a curse rather than a value. People worked to survive, not for the joy of accomplishment or satisfaction in a job well done. Ellul argues that the positive value of work is a 20th-century development, a concept that becomes indispensable in advancing technique and capitalism.

Ellul also points out that there is a dual aspect of technology’s promise regarding work, making it more than a means of survival. On the one hand, technological society promotes work as a positive value, with the potential to give meaning to life and lead to feelings of accomplishment and satisfaction. On the other hand, it promises progress, freeing us from work some day by building a technological utopia, a society free from want and sacrifice. Both values are necessary for the advancement of technical society. Another essential value, Ellul argues, is individual happiness and commitment to the social order. Beginning in the 19th century, many abandoned spiritual happiness through religion and faith. The rationalization process has advanced secularization and demystification among an increasing segment of the population, replacing happiness through spirituality with joy through consumption and material comfort. Mass production requires mass consumption; thus, the roots of consumer society lie in the overall needs of the system and of the individual (1981, p. 43).

According to Ellul, new technological developments often cause a crisis of values among many people. The values associated with both

hard work and consumerism are questioned by many because technology has undermined many traditional social structures, replacing them with those that promote the further development of technique: “Every time technology penetrates an environment that is not made for it, it will upset that environment” (1981, pp. 43–44).

This distress is apparent in the Global South, where technical means rapidly infiltrate traditional societies. Western Europe and much of North America rode the first wave of technology as it developed over decades. The Global South’s tradition-bound cultures are experiencing massive and rapid changes for which they are unprepared. The people who become workers in the industries and sweatshops of these societies crowd into the ghettos of cities. They are uprooted from their families and the social control, morals, and discipline of their communities (Ellul, 1981, p. 44). Whereas some groups in these countries can adapt to change, many others cannot. The shock of absorbing massive amounts of technology in a short time can destroy the specific character of a society. “There is no integration of technologies into a society with a different culture,” Ellul asserts. “It is an either/or situation”; technology destroys tradition (1981, p. 77). The Global South is experiencing unprecedented cultural shocks and has embarked on a process that will destroy, in large part, its traditional culture and create for its people a social system “totally alien to them” (1981, p. 77).

Ellul writes that a new ruling class replaced the capitalist in the latter half of the 20th century. He claims that society is evolving, becoming knowledge based, that power is not reliant on what you have but what you know—the class of technical experts is rapidly taking charge of the new economy. Individual capitalists still exist under the corporate capitalism of the 20th and 21st centuries. However, now they invest their capital in multinational corporations under the overall direction of a board of directors and managed by a chief executive officer. The chief financial officer allocates resources throughout the corporate bureaucracy, which consists of professionals and managers at various levels as well as clerks and staffers. However, one’s

capital comes to naught unless invested in people with technical expertise; even between capitalists and their investments in these corporations, there exists a layer of bankers and brokers (also called banksters) with the technical expertise and software to guide investments in the most profitable corporations. Capitalists do not claim that technocrats hold all of the political power in a society, but they do claim that societies—capitalist, socialist, and communist—are moving toward technocracies (Ellul, 1981, p. 47).

Ellul asserts that corporate and government technicians are rivals to capitalist dominance rather than simple technical tools that capital employs to enhance efficiency, coordination, and control. He might be wrong on this point, at least in the short term of the next 100 years. Although managers and boards of directors control the day-to-day operations of corporations and, like most technicians, even engage in long-term planning, major stockholders have ample board representation, and modern corporations tend to laser-focus on shareholder value.

Chief executive officers, chief financial officers, corporate technicians, and the bureaucracies that they rule can have much power under latter-day capitalism (indeed, many become major shareholders themselves). However, they still serve as the representatives of the capitalist class and are dismissed if they fail to perform adequately. Technicians who serve in capitalist and government bureaucracies (local, regional, and national) and other public and private organizations are specialists in technical information used to advance the interests of the organizations that they represent. When it comes to private corporations, the primary interests that they advance are those of the stockholders, the true holders of power. Government bureaucracy and the technicians who staff it are specialists for those who wield political power. Technique is a powerful force in the modern world, but capital remains a potent force, and its power is enhanced by technique. If indeed we are evolving into a true technocracy, then it is only in its beginning stage. Capital and technique are separate but often complementary social forces.

One of the problems with his exposition is that Ellul is not always clear with his time frame—whether he is writing of the present, the immediate future, or a more distant future. For example, he writes about living in a purely rational technological universe, labelling it “an extraordinary icy, extraordinary alien universe” (1981, p. 48). He compares such an environment with “countless science fiction stories” and astronauts who attempt to live and work in space. However, Ellul does not claim, nor can he, that this is the universe in which we live today; his thesis is that technique is continually expanding its reach and power in modern societies, not that it now dominates all areas of social life (see, e.g., 1981, pp. 69–70). Instead, his forecast of a distant future is dark, implying that, if present evolutionary trends continue without human intervention, it is where they will lead.

However, in the same paragraph, Ellul mixes this forecast with observations of the present, suggesting that people have extreme difficulty adjusting to the present technical environment. He argues that we are irrational creatures motivated by rationality, passions, values, habits, and desires. Nevertheless, we are increasingly embedded in rational organizations in which we cannot be spontaneous and express the full range of our emotions, values, or beliefs. This parallels Weber’s thesis of the increasing dominance of rational, goal-oriented behaviour in the modern world. Ellul posits that, because of the rationalization process, many people are unhappy and seek “compensations” (1981, pp. 48–49). He argues that many consumer goods, services, and entertainments are compensations for technique’s impacts on our lives by providing an escape from an increasingly rational world. Many people feel this emptiness, according to Ellul, but it is especially true for the young.

He details two consequences of technology that are especially important, which he labels as “suppression of the subject” and “suppression of meaning.” Suppression of the subject occurs because technology mediates most of our communications with others. For example, Ellul writes about how the telephone is interposed between subjects, a weak argument at the time that he was writing. However,

his point is now much more persuasive because of the ubiquity of cell phones “connecting” everybody with everyone else through text, social media, video conference, email, voice mail, or even a phone call. Couples and families at restaurants often look at their phones rather than communicate with others at their tables. In-person relationships must compete with entire social networks for attention and with a myriad of amusements such as games, shows, memes, propaganda, funny stories, and news. As social animals (still), many people desire personal contact, excitement, and interpersonal mystery. Hence, according to Ellul, we are mismatched with the technical milieu. However, he suggests that succeeding generations might adapt better to the increasingly technical environments in which they are born (1981, p. 48). We are currently experiencing this phenomenon since many young people are far more technologically savvy than most of their elders and spend more time on, and seem to be more satisfied with, mediating technologies.

By the suppression of meaning, Ellul refers to the idea that the proliferation of techniques has obscured all human ends. All techniques are merely mechanical, electronic, organizational, chemical, formulaic, or algorithmic means to unexamined ends. Technical development is self-augmenting, with developments in one area stimulating others. “It develops because the world of means has developed, and we are witnessing an extremely rapid causal growth” (1981, p. 50). This self-augmentation leads to a suppression of meaning. Asking and answering questions about the meaning of life or “why am I here?” become the exclusive concerns of philosophers and are ignored by technicians. Technique “destroys values and meaning” (1981, p. 50).

Many in our technical society turn to religion to compensate for the loss of meaning. Ellul, a devout Christian, does not believe that this movement comes from the ministrations of the Holy Spirit; instead, he offers a sociological explanation. It is a reaction to a technical, materialistic world. It is an intense form of fundamentalism, a spiritualism of extreme piety, an escape hatch to another world (1981,

p. 55). Being ever more subject to the material world, some people escape through spiritualism.

Ellul's theorizing is inductive. Ellul constructs his theory by observing the physical and social reality around him. He points out that further observations might cause him to modify his theory to encompass new realities. He gives the example of the youth revolutions in several countries in 1968. While writing *The Technological Society*, he was somewhat pessimistic about the human future, but the youth rebellion of 1968 gave him some hope "that we were not truly conditioned" (1981, p. 56). However, Ellul became concerned about the recent successes of propaganda and the phenomenal growth of computers. Although both were in the initial stages of development when he was writing, he posited that their increasing technical development might cause him to "rethink a good portion of my theory" (1981, p. 50). In the following chapters, I will point to more recent technical developments—such as cell phones, pervasive surveillance, and big data—and how they weigh on his theory.

Along this line, Ellul writes that his general theory allows him to interpret additional facts. The theory can be added to, amended, and changed as necessary by continually observing the world. He believes that his analysis of technique as a system contributes to a greater understanding of the world than other macro-social theories, including classical Marxism. As a means of interpretation (a technique, if you will), it is a social evolutionary theory capable of integrating ever more facts or changing if the facts so dictate. Ellul's theories on technique are robust and consistent not only with those of Weber but also those of Gerhard Lenski, Norbert Elias, C. Wright Mills, and George Ritzer.

The Present and the Future

Most people in the industrialized world live in cities. According to Ellul, urban settings are artificial technical worlds with almost no animal life and few meadows, parks, or trees. The modern city is made

possible by techniques such as sanitation, garbage removal, sewer and water systems, electricity and gas, police, zoning, and transportation systems (1981, p. 59). People have generally lost touch with the natural milieu in which our species evolved, trading it for life in an urban environment of glass, steel, asphalt, and concrete. Even when we escape to the mountains for a holiday, we often take artificial gadgets with us—television, radio, cooking stoves, ice chests, and now cell phones and other electronics—all of the technical means for our comfort and amusement. It is a practice so widespread that in today's world it is called "glamping."

Ellul has a particular meaning when he discusses the concept of a milieu. For him, it is not only the place where people live but also a place from which they draw their subsistence and experience threats to their livelihoods, persons, and even lives. For him, a milieu combines the natural and social environments, offering both the means of life and the problems and dangers of continuing that life (again the dialectic). Therefore, organisms must change and adapt as the milieu changes. Living creatures never fully adapt to their milieu because the social and natural environments continue to change. After successfully adapting to environmental changes for millennia, some animal species failed to adjust to further changes and became extinct. An example of mass extinction is that of the mega-fauna of Australia and the Americas because of climate change and the probable impact of the arrival of humans.

Humans, as a species, have been successful (so far) in adapting to changes and the various crises within the milieus in which we live. Ellul offers a theory to visualize our history of adaptation. Most theories have divided humanity into prehistorical and historical societies in which humans adapted to the different and often changing environments through culture. Instead, Ellul asks us to visualize three successive milieus: the natural milieu, the societal milieu, and (now) the technical milieu (1981, p. 60). This classification parallels a theory posited by Roderick Seidenberg in *Posthistoric Man: An Inquiry* (1950). A different version was made more popular later by Neil

Postman in *Technopoly: The Surrender of Culture to Technology* (1992), which posited a triad of eras parallel to those of Ellul: technocratic, technocracy, and technopoly.

Since life on Earth began, massive ecological changes have led to at least five mass extinctions. Since the last extinction, all surviving plants and animals could only make slow and random genetic adaptations to changing environmental conditions, sometimes leading to further speciation or extinction of individual species. This natural world was humankind's first milieu, the one in which our genetic heritage was formed. Only primitive tools and group bonds served as intermediaries between humans and nature. Nature provided food for scavenging, hunting small animals, and gathering edible plants. The principal dangers were predatory animals, shortages of food, and exposure to the elements and other human groups.

Historically, humans have adapted to natural and social environments through social organization. Society became the usual milieu for humans, with close and regular contact with nature by drawing their subsistence through agriculture, herding, and fishing. Techniques became more numerous over the historical period, but they were means to socio-cultural ends rather than ends in themselves. The problems presented by the social milieu were mainly those of organization: political forms, the division of labour and wealth, group cohesion, and conflict and war with other societies. This social milieu is an intermediate stage between the natural milieu and the one that we are entering today, the technical milieu (Ellul, 1981, p. 61).

In the technical milieu, technique manipulates our environment; it mediates and shapes our personal and organizational relationships and leisure activities. Ellul does not claim that each successive milieu replaces the preceding one; instead, social organization becomes the best means of exploiting the natural environment while minimizing the dangers and disadvantages of living in nature. Technique does not replace nature or the social order. It mediates between the individual and the social and natural environments (1981, p. 62).

In a technological society, nature and society still pose dangers. There are still disasters such as earthquakes, volcanic eruptions, typhoons, and tsunamis in the natural world and epidemics, wars, and dictatorships in the social world. However, Ellul calls these problems less fundamental and more localized compared with the problems caused by technique. Environmental problems and challenges caused by this technique include pollution, depletion, and widespread extinction of animal and plant species. Technique has also created tremendous social and political problems by increasing the power and authority of political and economic elites, threatening nuclear destruction, and creating growing inequality within and between nation-states.

The technical environment has become a system in that it is composed of many interconnected elements reacting to one another. One cannot understand the individual elements apart from their relations to other parts of the system and their connections to the complete system itself. Change one part of the system, and many other parts must adjust; a change in the whole will necessitate changes in the integrated components. Each technique within the system (material technologies, organizational practices, and goal-oriented rationality) is related to each other and to the system itself (Ellul, 1981, p. 63).

The concept of systems captures the integrated and holistic nature of all forms of technique, an essential tool for understanding the technical milieu. This concept has significant consequences for interpreting technique's impact on society. First, it leads to an understanding that the technical system is autonomous and self-augmenting. The elements within the system react to one another, and developments in one technical aspect often stimulate parallel innovations in other aspects. Human decisions and interventions in this process are minimal. They are the products of an organizational structure that determines the office-holders in government and corporate bureaucracies. These actors are scientists, technicians, and leaders in industry and government who have been accustomed to technique since childhood. They have internalized the technical

mindset and supported its further development without reservation. The sole decisions allowed or possible are those that favour the growth of technique (Ellul, 1981, p. 65).

This lack of negative feedback on technical innovation causes serious problems. For example, Ellul points to the overuse of fertilizers in agriculture, but many other examples could be presented. When society encounters problems with a technique, it rarely corrects them immediately. With the pretext that “not all of the data are in,” or “the science is not yet settled,” corporations wage intensive propaganda campaigns that seek to minimize the technique’s impact on the general population, and indecision, finance, and special-interest politics reign. Society does not act until the problem festers, grows, and becomes too dangerous to ignore. Only then, Ellul notes, will social action be taken, with the preferred “solution” being additional techniques employed to address the problem (1981, p. 65). He asserts that there is no actual self-regulation in the technical system; it has gone beyond human control and only receives positive feedback for continued growth.

Second, many people fail to understand the nature of systems, including the technical system. Ellul criticizes the scientists of his day who studied the impact of television as if it were a phenomenon separate from all other entertainment techniques, distractions, advertisements, news items, and radio programs. Studying it alone missed the fact that increasingly we live in a graphically visual world, where sociality with colleagues demands familiarity with our society and culture, as mediated by our media (1981, p. 67). The critique is somewhat dated since social and behavioural scientists increasingly take systems analyses seriously. See, for example, studies on media use among children (Johnson & Puplampu, 2008; Jordan, 2004; Michaelson & Steeves, 2020), addiction (Leape et al., 1995; White, 2002), and health care (Bielecki & Nieszporska, 2019; Clarkson et al., 2018).

Likewise, Ellul bemoans the study of propaganda in a laboratory, thus minimizing its effects by ignoring that its power relies on and

is increased by repetition, various media carrying the message, content of the message, social settings, and length of exposure to the intended audience. To understand any technique, one must locate it within the total technical system. One cannot study a single technique and its effects on the individual—the effects of television, commercials, or propaganda—in isolation from the totality of the technical system surrounding each human (1981, p. 67).

Each innovative technology has both positive and negative effects. Ellul posits that thinking we can have one without the other is simplistic. A product's adverse or secondary effects are rarely known in its initial development; they become apparent only later. Medicines, processed foods, fertilizers, insecticides, and other consumer products have been subsequently found to harm people and subject to recalls. Technique's positive and negative effects are interrelated, and each advance increases both, with little initially known, particularly regarding long-term adverse effects. This unpredictability puts books such as Aldous Huxley's *Brave New World Revisited*, or the Club of Rome's *Limits to Growth*, in the realm more of warnings of possibilities than of predictions of a dystopian future. The technical system has too many unknowns, and probability reigns (Ellul, 1981, p. 68). Ellul's work, and Marx's and Weber's, are of a similar nature.

Our technical society does not mean that all aspects are controlled or manipulated by technique; rather, Ellul posits, it is a major "determining factor within society" (1981, p. 69). Other factors include capitalism, politics, and the inherent irrationality of human beings. Being irrational, we are subject to ideologies, histories, emotions, values, customs, traditions, and nationalisms. We are "unfit for technology" (1981, p. 69). According to Ellul, the result is a severe mismatch, a growing conflict between the technical system, which is self-augmenting, and the residents of the technological society. So, as the rational technical system enlarges, it causes increasing disorder and chaos among a sizable portion of humanity. Rationality has not yet subordinated everything, as it continues to expand into areas not yet subject to its systems, but often "some kind of crisis occurs" (1981, p. 70).

Again, how this will resolve, if it does resolve, is still unknowable. One could predict that humans will continue to adapt and submit to the technical imperative, hence the scenario of *Brave New World* and similar social science fiction. Alternatively, the technical infrastructure could eventually cause environmental collapse, leaving humanity to revert to a more basic social existence. Trends are rarely without their countervailing forces. However, what those forces might be—environmental collapse or nuclear annihilation—are two terrible possibilities, but so is revolution or a more benign adaptation of reform.

Ellul posits that, during the previous 500,000 years of human existence, we adapted to the natural environment by creating primary group bonds, developing basic tools, and fashioning natural resources for survival. Some 12,000 years ago, we began to rely more on adaptation through socio-cultural systems and primitive technologies. Modernity represents a qualitative change in human history, upending traditional lifestyles (1981, p. 70). Ellul asserts that humankind cannot reverse half a million years of evolutionary success in a few hundred years. Nevertheless, one prediction is nearly certain: if the technical system continues to enlarge, then there will also be increased environmental disruption and social disorder. Not that technological society will necessarily collapse, but difficulties and problems caused by our technical system will continue to mount. Historically, the responses to the problems caused by our techniques were additional technical fixes.

Over time, humankind has been challenged by new natural and social circumstances to overcome. Ellul writes that the proliferation of our techniques now challenges us. Such challenges are what life is; they are what life does. No life on Earth is static or unchanging; instead, it is a perpetual struggle to address environmental changes that create imbalances, sometimes successfully restoring a state of equilibrium, sometimes leading to extinction (1964, p. 70). Thus, the technical milieu's challenge for humanity can lead to positive developments in civilization if people understand that the seriousness of the

issue requires unprecedented action. Given the nature and severity of the problems, Ellul does not believe that politics, as usual, can address them: “Our institutions were invented between the seventeenth and eighteenth centuries, and they are adapted to situations that have nothing to do with what we now know” (1964, p. 71). For example, he writes that fighting pollution was a local problem 100 years ago; we could pass laws and issue regulations to clean up water and air within a nation-state. However, this was not effective at the global level of pollution. Since Ellul’s writing, global organizations have been created or adapted, and international agreements have been reached to deal with many global issues.

Nevertheless, the problems continue to mount, and national institutions and interests often prohibit full cooperation in addressing these problems. If a nation-state sees an advantage in hunting whales, polluting the air, or clear-cutting rainforests, then there is little enforcement available other than international condemnation. One only needs to look at our present institutions’ impotence to date in preventing nuclear proliferation, habitat destruction, overfishing, whaling, climate change, and control of general artificial intelligence.

Ellul suggests that we can understand the social world as consisting of two levels: first, the level of events, appearances, and circumstances; that is, the level that politics plays on; second, the level of stable structures: that is, fundamental social, political, and economic institutions. Technique, of course, affects both levels. By calling the second level stable, Ellul is not saying that it does not change; it is affected only a little by events and circumstances but tends to be affected by technical change. He contends that technical change obeys its internal laws and evolves accordingly. People tend to focus on the latest news, circumstances, and events rather than on the fundamentals. Regarding the fundamentals, we always think that we have time. However, Ellul says that this is not true; if the technique continues to grow, then the disorder will continue to mount; the more this disorder mounts, the greater the danger to social life and the planet.

Ellul holds out some hope that society can accomplish some fundamental changes. He is heartened by several social movements active since the late 1960s, including the environmental, women's rights, and social justice movements, all of which address fundamental problems (1981, pp. 74–76). Unfortunately, he believes, the working-class movement, or Marx's proletariat, has been integrated into technical society through labour unions and traditional party structures, sapping its revolutionary potential.

According to Ellul, national power today lies not in natural resources or population size but in technical progress and growth—in the ability to innovate and refine specialized instruments in terms of efficiency and productivity. However, he makes a distinction between simple growth and development. Simple growth means continuing to produce more—oil, iron, coal, corn—than the previous year, or the economy falters. “Aiming at development means looking for the most balanced and least harmful economic structure, recognizing the value of ‘small is beautiful,’ and achieving higher quality in consumption” (1981, pp. 78–79). Until now, technology has emphasized growth over development. Many inequalities between the Global North and Global South are the results not simply of “the dynamics of capitalism, but rather the development of technologies” (1981, p. 79).

Society must organize in ways that promote work, specialization, economic growth, consumption, and other social imperatives to maximize the power of the technical milieu. Thus, there is a measure of commonality between economic systems ideologically opposed to one another. Ellul points to the United States, Europe, and China as evolving in the same direction regarding technical growth. Thus, economic and political structures are becoming more alike, with market economies forming in the socialist and formerly communist worlds and economic planning and social welfare systems developing in the Western world. The political-economic problems of production and distribution are universal; all countries must address which goods to create and how to produce and distribute them. The growth of production and distribution technologies (transportation

and communication), the development of national and international organizations, and the increased trade among countries have led to a marked convergence between the different ideological systems.

This convergence, however, does not guarantee peace. Although the ideological conflict between the superpowers has lessened, the potential conflict is now one of the excessive technical powers of the three or four superpowers. Ellul believes that conflict among them is inevitable, perhaps over raw materials, although one can foresee other reasons for Armageddon. "It is a question of life and death. This, ultimately, is what endangers world peace, and nothing else" (1981, p. 80).

Ellul's goal in writing about technique is not to advocate its elimination, for Ellul thinks that it is both impossible and potentially devastating to millions. Instead, he has been searching for a new direction. He directs his concerns to "the base," everyday people who can understand what is happening, who take human values seriously, and who are open to change. This concern leads him to focus on local initiatives, rely on small groups to study issues, and ask people to take a stand on technical development issues. He maintains that change can come only from the individual or small group level and that to be drawn into the national political arena is to become trapped in the "extraordinarily enveloping" and "seductive" technical milieu. We must develop a consciousness to become people who can use techniques "and at the same time not to be used by, assimilated by, or subordinated to them" (1981, p. 82). We must prepare future generations to live in a technical world while developing a critical awareness of its adverse effects on our natural and social environments.

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The Sociology of Technique

According to Jacques Ellul, technique refers to the rational methodology developed to attain organizational goals in the most efficient manner possible, given the present level of technology and the degree of social organization. In modern society, technique has expanded its reach into all areas of human life. The development of technique in the contemporary era dwarfs all previous societies in its reach and effectiveness. In his seminal work, *The Technological Society* (1964), Ellul analyzes technique as a sociological phenomenon: that is, how its development has affected political, economic, and social life.

Although most social scientists have associated technique with machine production, it is much more than that. As an efficient organization of parts to achieve a desired end, the machine is a model of pure technique. Mechanization was introduced to traditional societies on a massive scale in the 19th century and created inhuman conditions for many men, women, and children—hard labour, low wages, long hours, and ghettos—as well as environmental exploitation. The initial Industrial Revolution caused tremendous human misery, calling into question governments, economic systems, and the entire social order. Technique is an integrating mechanism of technological society, bringing traditional institutions, norms, and values in line with the needs of technical civilization. It rationalizes

economic, political, and social life to serve the needs of efficiency and productivity of the entire society (Ellul, 1964, p. 5). It places great power and authority in the hands of elites who dominate the institutional structure of modern societies.

For Ellul, rational social organization is another form of technique. Organizational technique consists of a hierarchically organized structure, a specialized and detailed division of labour, standardized rules of procedure, hiring and promotion based on achievement, and a focus on efficiently attaining organizational goals. It embodies the technical process applied to human organization and carries that process to other areas of social life.

As humans spend more time in these rational organizations—daycares, educational institutions, workplaces, unions, professional and social organizations—they are socialized to value observation, logic, and rationality and to control their emotions and personal values in social interactions. This rationalized form becomes integral to the social order and internalized by individuals. Technique precedes science; indeed, it existed from the beginning of human history. Much of the early development of machine technology was the work of tinkerers and experimental geniuses rather than scientists. However, since its modern beginning, science has formed a close association with technique and furthered its scope and power. The technical process is continuous with the Industrial Revolution. Its “true aspect” is mechanical and organizational, and it is enveloping the world (Ellul, 1964, p. 12).

Ellul focuses on the immediate future and the probable expansion of technique over the next century. Societies have not restricted technique to production. The principal front of its expansion today lies in controlling individual behaviour and the ever finer regulation of human societies. Modern civilization is always searching for the most efficient means to achieve desired ends, the spur for developing technical forms and procedures. These forms then replace “natural and spontaneous” actions, Ellul says; they become the right and best way to achieve desired ends (1964, p. 20).

The search for the most efficient means to achieve the goals of an organization—be it simple profit, government distribution of vaccines, provision of primary education for children, or career training for young adults—constantly calls into question actions based on traditions, values, and emotions. Rationality encourages more extensive experimentation and observation in its search for efficiency. The technical process is similar across organizations. The technician analyzes the problem (or the steps needed to achieve a goal) and considers the means available to address it, the probabilities of success by employing various means, and the costs that the organization will bear for employing these means. The technician then selects the most efficient and productive means available to achieve the desired end and then makes appropriate recommendations for action (along with the analysis) to the supervisor in the hierarchy. Thus, Ellul notes, rationality lies at the heart of technical phenomena as it expands into areas historically left to instinct, tradition, values, or chance (1964, p. 20).

The “one best means,” of course, depends on the knowledge base and existing techniques (physical technology and organization) available at the time. In effect, it is a continuous quest. The technological society comprises the “aggregate” of these technical means (Ellul, 1964, p. 21). In addition to physical techniques such as machines (which Ellul declines to discuss because they are so well known) and intellectual techniques such as books, libraries, journals, and the like, he identifies three significant areas where technique is expanding its search for more efficient means.

The first area that Ellul outlines is “economic technique.” He points out that it is concerned almost entirely with production and consumption and consists of the organization of labour around production and distribution technology. Since growth is integral to the health and vitality of capitalist economies, economic planning by governments and corporations is a dominant feature. Although the objects and goals differ from the other areas, the problems and potential solutions within this area are purely technical.

The second area that Ellul discusses is the “technique of organization” and applies to commercial, industrial, government (at all levels), justice, and military organizations. The military applies organizational techniques to warfare, ensuring that weapons, ammunition, water, food, and supplies reach the troops continuously and on time. Logistics “[e]nsures the power of an army at least as much as its weapons” (1964, p. 22). Analogously, organizational techniques are critical to the efficient functioning of the various institutions that comprise modern society’s formal organizational structure.

The third area that Ellul focuses on is “human technique,” such as genetic manipulation, medicine, drugs, propaganda, public relations, advertising, pedagogy, media, and counselling. Here the individual “becomes the object of technique” (1964, p. 22). Technique touches every area of social life, and technology and organization dominate every area. The individual is surrounded by technique and profoundly affected by the technological milieu.

Ellul contends that early hominids were motivated by animal instinct. He asserts that there is a vast gulf between early instinctual behaviour and technical acts performed by later sapiens. Our worship of technique, he writes, might well stem from our “ancestral worship” of the mystery of consciousness and our subsequent creations under its influence (1964, p. 23). Ellul traces the development of technique throughout history, commenting on its growth concurrent with the knowledge base of societies. These advances in knowledge were based on previous technical advances within the culture, though more often through cultural contact with others (1964, p. 27). In his review, Ellul comments on developments in material techniques such as metallurgy, plant and animal domestication, water wheels, mills, and forges as well as organizational developments in civil, judicial, and military techniques.

In addition, Ellul writes of the growth of a “technical state of mind” or the rationalization process (1964, p. 34). Rational behaviour was not prevalent in early human affairs, perhaps because of an intense focus on religious beliefs and a lack of interest in practical

activity. Medieval Christianity, for example, would judge technique by religious criteria rather than its success in attaining its goal. This situation only began to change with the Renaissance and the rise of humanism. This “technical state of mind”—or rationality based on experience, observation, and reason—became one of the primary causes of technical development (1964, p. 38).

The 15th century saw the development of the printing press, the compass, and gunpowder, all of which were essential precursors to the Industrial Revolution. The printing press was instrumental in the proliferation, preservation, and retrieval of accurate knowledge. In addition to books and religious tracts, early presses were busy publishing news, technical manuals, maps, and documents for governments and commercial firms. Moreover, with the material inventions of gunpowder and the compass, that century saw advances in navigation, banking, arms, furniture, and architecture. However, Ellul reports almost a complete lack of technical development in the 16th century. He finds little concern in that century for efficiency, systematization, or invention—almost a complete absence of rational goal-oriented behaviour (1964, p. 38). Although he reports significant material advances in agriculture and gun making, the period immediately following the Renaissance had few genuine technological or organizational innovations.

In examining books on law, medicine, and history published between the 16th and 18th centuries, Ellul reports that they are bereft of logical order. There is little connection among the materials, arguments, examples, and proofs. The authors’ stream of consciousness is the only organizing principle (1964, p. 39). As purely personal reflections, such works often contain bits of esoteric and unconnected knowledge in various fields. For example, Ellul recounts that treatises on law might contain bits on alchemy, history, or medicine. The books overflow with personal reflections, a lack of references to previous works by others, and no effort to “search for the best method, all of which are indispensable for technique” (1964, p. 39). He further reports almost a complete lack of specialization within the

intellectual classes; instead, the ideal was to seek broad knowledge in various disciplines.

Technical development exploded, of course, with the Industrial Revolution. The revolution was not restricted to machinery and included the development of organizations. Ellul points to the emergence of the modern state, conscious of itself and expanding its functions in coordinating society as a product of the French Revolution. Nation-states developed economic policies, codified laws, and created labour regulations, poor houses, and police and fire departments. The state applied techniques to everything, including fiscal policy, taxation, budgets, plans for roads and bridges, and weights and measures. Militaries were professionalized and more efficiently organized, with mass recruitment and training and an increasing emphasis on mechanization and logistics. All of this represented the expansion of technique into areas long dominated by traditional organizations, customs, and informal community relations. In this sense, Ellul writes, technique is an attempt to master material things as well as social relations utilizing rational plans to “make quantitative what is qualitative, make clear and precise the outlines of nature, take hold of chaos and put order to it” (1964, p. 43).

In his view, mechanical inventions were secondary in importance to organizational techniques in the overall socio-cultural system. Most of these organizational techniques were developed before widespread machine technology was adopted. Why, after centuries of slow technical progress, did technique suddenly erupt in the latter half of the 18th century and into the 19th century? Ellul asserts that a change of attitude began the revolution in organizational and mechanical techniques. He hypothesizes why this change occurred when it did (1964, pp. 43–44).

According to Ellul, the standard answer of relating early technical development to the rise of science does not stand up to close examination. Early technical development resulted from practical application, not from pure scientific research. Ellul writes that the close connection between science and technical invention did not

develop until late in the 19th century. The relationship blossomed in the 20th century only when science became captured by technique—its funding and focus becoming a handmaiden to technical development (1964, pp. 44–45). I will explore this relationship in more detail later.

Ellul admits that the utilitarian and pragmatic philosophy of the 18th century did play a limited role in stimulating the development of technique. Such philosophies favoured knowing and exploiting nature, making life easier, and simplifying labour. However, these ideas influenced only a small elite, scarcely enough to mobilize entire populations. There was also general optimism in the latter half of the 18th century, perhaps engendered by better living conditions. Nevertheless, though this might have created conditions favourable to technical development, Ellul argues, it was not enough to explain the incredible blossoming of technique in the 19th century.

Instead, he identifies four phenomena that best explain the transition from traditional civilization to modernity. They were a long and gradual accumulation of technical experience, agricultural development that led to population expansion, an economic environment favourable to innovation, and a weakening of traditional institutions. These factors led to the development of techniques, an increasing emphasis on rationalization, and the application of logic and experience to problem solving and goal seeking in all areas of life—material, organizational, and personal matters (1964, p. 47).

Technical experience refers to the fact that every technique has its roots in previous discoveries and inventions. Often what appears new is the process of combining previous techniques into a coherent whole. Much depends on experience, growth in society's knowledge base, and a social milieu favourable to the new synthesis. Technical advances in one field—for example, innovations in finance such as joint-stock companies (corporations)—often lead to advances in other fields such as banking, manufacturing, or transportation (Ellul, 1964, p. 48). A long incubation period preceding the 19th century laid the foundation for the seeming explosion of innovation, invention, and discovery.

Ellul identifies population growth as the second factor of the blossoming of technique in the 19th century. He asserts that the literature closely links this growth and technical development. A larger population needs more food, housing, clothing, other necessities, and luxuries that only technical development can supply. He also points out that population growth provides growing markets and labourers, as well as a stimulant to specialization and a more detailed division of labour, all of which are part of the technical process.

Ellul asserts that the third trait of the transformations in the 19th century is an economic structure both stable and flexible enough to encompass massive change. Stability is necessary to encourage innovation and technical research, yet too much rigidity can stifle innovation. The milieu must be able to absorb technical innovation, experiment with different techniques, and engage in further research and development. According to Ellul, Western civilization in the latter half of the 18th-century economy had these characteristics. Although he does not mention it, the rise of capitalism is undoubtedly an important development that provides this needed flexibility.

Ellul identifies the plasticity of the social milieu as the most critical condition for the flowering of technique in the 19th century. Here he refers to the loosening of religious and sociological norms. The Christian Church represented a serious impediment to the development of technique in Western Europe. Many precepts of Christianity were hostile to technical development, and the church was a very conservative institution. Anything new was frowned upon, subject to moral judgment. Traditional and religious values held sway not only among the clergy but also among the laity. These values held fast through the 17th century. In addition, Ellul notes, social norms and values, particularly belief in a social hierarchy, could not be modified (1964, p. 49). These conservative influences were under assault and waning by the 18th and 19th centuries because of the social turmoil caused by technical innovation.

A second impediment to technological development in the 17th and 18th centuries was the existence of strong kinship ties and guilds.

Individuals found their occupations, security, and life satisfaction within these small groups. Even though they might have been poor in material goods, these collectives answered the needs of individuals, giving them a sense of community and stability. They were living in balance with their environment; there was no push for constant innovation or creation of new secondary needs. The existence of these solid primary groups serves as an obstacle to the spread of technical innovation since they form a social barrier that can be difficult to cross. Guilds often take this to the extreme, protecting their manufacturing secrets and forbidding available innovations to their members. Guilds and other social divisions can block the diffusion of new techniques from other areas. Ellul adds that modern people have difficulty understanding such traditional environments since they do not know the satisfaction derived from living in such a balanced social world (1964, p. 50).

He points to several causes of the weakening of these ties in the middle of the 18th century, such as the spread of philosophical materialism and the appearance of new religious sects. Materially, in the 18th and 19th centuries, the Enclosure Movement took land held in common by village members for growing food or pasturing animals, separating peasants from their means of production and forcing them from the land. The nobility privatized the land, walled it off with fences or hedges, and used it for their own agricultural pursuits. Enclosures threw many rural peasants into crowded cities that were dangerous, crime-ridden, unsanitary environments.

The actions of these elite landowners forced entire families to work long hours for meagre wages in dangerous and unhealthy factories. The industrial machine created the urban proletariat, but it was possible only because of the increasing number of dispossessed people who had nowhere else to live and no other way of providing food and shelter for themselves and their families. Many were ripped from their social mooring—their families and communities destroyed in the process. This “atomization” isolated individuals from their rural surroundings and traditional family and community social

groups. Isolation from their traditional milieu made them vulnerable to the direct influence of the state and the economic market, a perfect condition, according to Ellul, for the expansion of technique (1964, p. 51).

In addition to this atomization, technical development created a general intentionality. Invention, innovation, discovery, and change became expected parts of life. Rather than look to a golden age, people began to look to the future and the idea that progress was possible and desirable. Ellul attributes these changes to the “special interests” of the bourgeoisie. The industrial self-interest of this class demanded efficiency to achieve the goals of mass production and profit maximization.

The bourgeoisie also developed financial and business techniques that expanded their capital. This rising middle class saw the potential for ever greater profits from the system by expanding techniques. Those in the capitalist class put their interests in profits, and thus techniques, ahead of the interests of workers’ comfort, safety, and health. The capitalists sacrificed all such considerations so that technique could be free to generate greater profit. Techniques embodied in mechanical devices to increase production made money. Economic organizations that rationally invested resources in labour, mechanical devices, distribution, and marketing increased capital. Moreover, rationalized techniques became favourite methods of capital development (Ellul, 1964, p. 53).

Nevertheless, the motive force behind technical development was not purely economic. The modern state was also interested in political, military, and judicial techniques and sponsored development in the sciences and arts to further its resources, power, and authority. Many of the techniques developed by capitalists were applicable to the development of the modern nation-state.

Techniques employed solely to benefit the bourgeoisie did not endear them to the proletariat or peasant class. The masses, many of whom had been removed from rural life, subjected to inhuman working conditions, 12-hour working days, and terrible living conditions,

were often against technique. However, Ellul notes, the capitalists were for it because it created wealth, and the state was for it because it increased its power (1964, p. 54). Marx (and other radicals) wrote that the problem with technique was with the masters of the economy and state, not with technique itself. Marx wrote that the proletariat would eventually liberate all people by taking control of the developed industrial structure and employing it for the benefit of all.

This socialist philosophy—combined with reform movements, protests, popular revolutions, and labour unions—led to the eventual diffusion of a more significant share of the benefits of technology among the working classes. The benefits included shorter working days, less manual labour, improved nutrition and sanitation, and ever-increasing consumer goods. With the growth of corporate and government bureaucracy and the development of professions, a managerial and professional class developed around expertise. This convinced many people that the development of technique could provide ever greater material benefits. Increasing faith in progress was particularly true for the familiar techniques of organizational and material technologies.

The Character of Technique

According to Ellul, the character of technique today is qualitatively different from historical norms. Modernity marked a transition in the number of techniques applied to different areas of social life and the nature of its relationships with society. Traditional societies restricted techniques to certain areas of social life, such as production, consumption (food, clothing, housing), and warfare. However, production and consumption techniques themselves were still limited. Work was considered a curse, not a virtue, as in the modern era, and most premodern people would rather have limited their consumption than worked harder. The goal for most individuals in traditional societies was simply put by the adage “work to live rather

than live to work.” Tools used to fashion material life were simple, and any technique was inherent in the worker’s skill rather than the tool or, later, the machine. In addition, traditional societies tended to be local and closed to the outside world, in which family, community, and religious groups were dominant. Transportation and communication were limited, so the diffusion of physical and organizational techniques was slow. Technique was embedded in the local milieu and slowly evolved through trial and error, experience, and happenstance (Ellul, 1964, p. 70).

Because technique evolved slowly before the 18th century, there was time for the social order to adapt. Many Western societies had time to absorb changing technologies and the growth of formal organizations and to control their influence. People adapted techniques to their needs, Ellul argues, accepting those that fit their society or modifying or rejecting them if needed (1964, p. 72). He emphasizes that it was not technical considerations alone that determined traditional operations and tools; many aesthetic considerations were also incorporated.

These other considerations are at the heart of Max Weber’s and Jacques Ellul’s views on premodern societies: “To obey a multiplicity of motives and not reason alone seems to be an important keynote of man. When, in the nineteenth century, society began to elaborate an exclusively rational technique which acknowledged only considerations of efficiency, it was felt that not only the traditions, but the deepest instincts of humankind had been violated” (Ellul, 1964, p. 73). One can easily suppose that by “instincts” in this context Ellul is referring to human values, traditions, and emotions. Weber maintained that there are four primary motivators of human behaviour—tradition, emotions, values, and formal rationality—with formal goal-oriented rationality becoming ever more dominant in modern societies. According to Weber, the increasing dominance of formal rationality has been the result of the growth of population, a complex industrial infrastructure, and the resulting bureaucratization of the social structure. Ellul’s theory of technique is an independently

arrived-at theory of rationalization, which Ellul follows with detailed analyses of its effects on both individuals and society.

To support his contention of aesthetic concerns affecting technical products, Ellul remarks that many early manufactured goods added decorative flourishes, such as sewing machines with cast-iron flowers or tractors with iron bulls' heads on their hoods. He also carries this observation to more abstract techniques and their relations to moral values, commenting on political and economic techniques in the initial stages of development concerned with moral theories and rights, liberty, freedom, equality, and justice. Many of our social institutions are steeped in these values and even have them expressed in their mission statements. However, these values are anachronisms, Ellul writes, and have no significant impact on further technique development. When these "moral flourishes" stand in the way of progress, they are abandoned and then forgotten. "This is the state we are in today" (1964, p. 73). The gradual elimination of the non-rational and the focus on immediate goals are characteristic of Weber's rationalization process.

The continued evolution of technique is based on two factors: efficient attainment of goals and adaptation to the social and natural environments. There is now an emphasis on differentiated technical instruments—mechanical and organizational—to achieve specialized ends. For example, Ellul points to French military aircraft (five broad categories from tactical bombers to transport planes and 13 different subtypes) and lubricating oils (15 distinct types for automobiles from one major refiner). One can also observe differences in organizational structures among manufacturing corporations, universities, financial institutions, hospitals, and service organizations. However, the fundamental bureaucratic hierarchy of specialized offices and a focus on efficiency remains intact.

A second general characteristic of modern techniques that Ellul describes parallels the "iron cage" that Weber outlines. Ellul argues that technique was not overwhelming in traditional societies, and individuals and their primary groups had opportunities to reject

material and organizational innovations and still live productive lives. The reach of centralized governments was limited, and individuals could often evade their reach by moving to the countryside to evade military service, Nazis (in Ellul's case), or taxes. In premodern societies, there was not yet a critical mass of techniques that would feed off one another. There was no general belief in progress, no push for discovery or invention. Innovation and its implementation in the social order were slower paced, and human decisions often blocked or delayed wholesale adaptation (1964, p. 77). Ellul argues that human choice regarding technological development is now almost absent in modern society. One can certainly see this with general artificial intelligence; the discussion among technicians repeatedly asserts that there is no stopping or even slowing down its development despite the apparent dangers of the technology.

Modern Technique

Technique has many positive attributes, material and organizational, making it almost irresistible. Nevertheless, modernity marked a change in the relationship between technique and society. Ellul offers nine characteristics of this changed relationship: (1) technique knows no limits; (2) it encompasses all areas of social life; (3) it has led to a multiplication of means; (4) it is constantly perfecting these means; (5) it is evolving at an ever-quicken pace; (6) its transmission is rapid through technical development of communication and transportation systems; (7) it extends throughout the globe; (8) it poses severe problems to the natural environment and human groups and organizations; and (9) it leads to a homogenization of civilizations (1964, p. 78). The relationship between technique and society continues to change and become more encompassing and profound each year.

According to Ellul, five essential characteristics of modern technique bear some elaboration. The first is application of a rational

process that brings logic and experience to bear on all that was informal and spontaneous in the past (1964, p. 78). This rationality again parallels Weber's analysis and consists of applying logic, experiment, observation, calculability, standardization, and rational thought processes in fashioning means to achieve goals. From there, Ellul goes further than Weber in elaborating additional characteristics of the process of rationalization.

The second characteristic of modern technique, according to Ellul, is artificiality. At best, the means used to attain goals are artificial, seeking to manipulate and redirect elements of the natural or social world. However, they are often worse. Rather than living in a symbiotic relationship with nature, technique seeks to conquer nature, bend natural forces to its will, and exploit the Earth and its creatures. The technological imperative, as well as capitalism pushing that imperative, seeks perpetual growth. However, endless growth is something that the world ecology cannot accommodate. The resulting problems—such as pollution, depletion, and mass extinction—must be addressed by further technical innovation. Such environmental impacts have worsened since Ellul wrote, including climate change, habitat destruction, widespread extinctions, and water and air pollution. However, if we weather all that (which is doubtful without massive social change), Ellul foresees a day when there will not be any natural environment; it will all be crafted for human use (1964, p. 79).

The third characteristic of modern technical means that Ellul identifies is technical automatism, meaning that once the “one best way” has been found the technique is adopted throughout the socio-cultural system (1964, p. 79). Measurement, observation, and rationality are all employed to find the most efficient technique to achieve a given goal. Once determined, there is no human choice in the matter; technique itself selects from among the available means. The individual simply becomes a recording device of the results of the various measurements and data determined by the various techniques; the “choice” can only be the one technique—organizational or physical technology—that produces the highest degree of efficiency.

Although technique might follow its automatic development, social structures can inhibit it. Most observers insist that capitalism is an excellent accelerator of technique. However, Ellul argues that capitalism can often check the advance of technical development if that development cannot produce a profit or preserve its monopoly on a less effective product. Patent protections and copyrights are legal devices to check technical development, but financial considerations also play a direct role in the suppression of innovation. Citing Thorstein Veblen, Ellul points out that, despite its reputation for being a powerhouse of innovation, corporate capitalism must often act to stifle it (1964, p. 81).

The goal of technical development is to fashion more efficient means to achieve higher rates of production. Capitalism cannot always adopt these innovations because of its investment in previous technologies; corporations need time to pay for the old machines before purchasing new ones (Ellul, 1964, p. 81). At one time, many people thought that competition would spur capitalists to adopt innovative technology or go out of business. However, this is a time of corporate capitalism, and many innovations can be ignored or even suppressed for profit.

Yet Ellul maintains that technical automatism continues to challenge the limits placed on it by capitalism. Capitalism has proven periodically to be incapable of distributing all of the goods that it has produced, leading to the crisis of overproduction, falling profit, recession, and high unemployment. Ellul points out that this is the “old schema of Marx,” which he believes has much validity. He agrees with Marx’s prediction that capitalism must ultimately be crushed by this automatism, “for everything can be called into question (God first of all), except technical progress” (1964, p. 82).

Ellul asserts that we are now in an era in which physical technologies and organizational techniques continue to advance and spread to areas of human society once closed to them. To be clear, there are still spontaneous and unorganized areas of life, and there might still be room for such human activities in the future. However,

technique is expanding into many of these spontaneous events. Moreover, when it expands in these areas, it tends to transform or destroy them. Again, this expansion is the result not of a conscious effort or a directive of the will but of technique's automatic process. When technique advances into non-technical activity, it transforms it into technical activity (1964, p. 83). It is goal-oriented behaviour, constantly questioning means and devising better ways to achieve ends. It is impossible to compete without developing ever more efficient technical means. One can see this today with the expansion of home health care, elderly daycare, assisted living, nursing homes, hospices, and other services for the elderly, progressively replacing non-technical family and community services in American society.

We live in an era when social evolution transforms much of social life into technical means. Previous technical developments have often caused present problems—environmental problems of climate change, pollution, and habitat destruction, to name the most severe. Socially, the growth of technique has led to changes in community and family life, workplace alienation, industrial warfare, and drug abuse, to name a few. Our posited solutions to these problems almost always involve further innovation or proliferation of material technology or organization. It is as if societies are addicted to technique; a technical fix is necessary to address the technical problems that previous technical solutions caused. Organizations rarely consider other solutions, such as abandoning or restricting harmful technologies. Technique is expanding. Like Midas, it transforms all that it touches and eventually touches all.

Technological self-augmentation is the fourth characteristic of modern technology that Ellul notes. He points out that technique has become so powerful and valuable in achieving goals that modern people all work to further it, almost without thought. In every field and organization, thousands of people work to improve procedural and mechanical means to attain the goals set by their organizations more efficiently. This collective effort—seeking minor improvements and advanced by informal and formal research—goes

on worldwide. It is motivated by the drive for greater efficiency and productivity, part of the mindset of modern humanity. This “accretion of manifold minute details” is how technique advances through the joint efforts of thousands (1964, p. 86). Ellul remarks that the fact that many inventions are developed simultaneously in various parts of the world testifies to the nature of technological advance through this process of slow accretion and self-augmentation. He further posits that this exact process is present in scientific discoveries, which points not only to this cumulative process of small steps leading to significant discoveries but also to the fact that technique governs science.

Another element of the self-augmentation process is its connection to national wealth. Wealthy countries can employ techniques to maximum effect. Once deep history puts the nation-state in an ideal geographic location and capital is accumulated, a feedback loop is sometimes set in motion (“sometimes” because many economic, social, and political factors are involved as well). Technical advancement leads to wealth accumulation, Ellul points out, which is then employed in furthering technical advancement to accumulate even more wealth (1964, p. 87). This feedback loop, of course, is the capitalist system. Although Ellul tends to downplay the role of capital as one of the factors that initiated the technical age, it continues to supply much of the motive force behind the growth of technique.

However, another example of the self-augmentation of technique is more self-generating. Innovative techniques provide the conditions for further technical advancement. Ellul points to the internal combustion engine and its technological advances in transportation, military and civilian logistics, military strategy, and many other developments. For example, the automobile has changed living patterns, causing problems such as urban sprawl, pollution, traffic congestion, and accidents. Freeway and highway construction and accidents destroy neighbourhoods and often lead to even more congestion. Switching to the automobile as the primary system of transportation in the United States has led not only to unprecedented

geographic mobility but also to many problems that further technical developments must address.

Technical developments in one field often spread to other fields. Another example is the introduction of garbage disposal units in kitchen sinks that allow people to flush food waste into our rivers and streams, causing pollution and fish die-off. Add to these problems the chemical and animal waste runoff from industrial farms, leading to developments in pollution regulation, water purification technologies, fish farming, and bottled water companies (Ellul, 1964, p. 87).

Ellul's observation is that self-augmentation of technical development is an accelerating phenomenon. The more factors there are, the more they combine, and the more evident is the urgent need for each technical advance. Today one must look at the myriad problems caused by developments in social media, medical drugs, carbon dioxide, methane pollution, genetics, widespread habitat destruction, and war—all of which are rooted in technique. Furthermore, technological societies will require further development of techniques (organizational and physical technologies) to address these problems or die trying.

Ellul formulates two laws regarding the self-augmentation of technique. First, within a given society, technical progress is irreversible. This is true because technical advances in one area engender further advances in other areas. Ellul posits a caveat, though: if a society collapses, then some technical procedures will be lost to successor societies. Second, technical progress tends to advance geometrically. Ellul points to “operational research” in the military that spreads to other organizations in business and government. In addition, different techniques often combine and lead to further advances. The greater the accumulation of techniques, the greater the possible innovations and combinations (1964, p. 91).

The most important point that Ellul makes about the self-augmentation of technique is that it necessarily leads to a shrinking role for the individual in guiding technical evolution (1964, p. 92). Although people remain necessary for technical advancement, they

are primarily anonymous technicians, taking the next small steps in an extensive number of small steps in development. Rather than individual genius, technical advancement increasingly depends on combining already-developed technologies. Furthermore, their development depends on the material, social, or individual problems that they are designed to address.

The fifth characteristic of technique that Ellul identifies is “monism.” He notes a unity or holism in technique, an essence common to all technical phenomena that sets it apart from all other aspects of nature. There are principles that radios and gasoline engines have in common, as do an office building, an airplane, a printing press, and a newspaper (1964, p. 95). Techniques might differ in many secondary respects, but they are all of a kind, making it relatively easy to discern technical from natural phenomena. This almost indefinable something that sets technique apart from nature might be the result of its inherent rationality and artificiality.

Whereas some people make distinctions among the uses to which technique is put—be they for good or ill—Ellul insists that such distinctions are futile. The use is inseparable from the technique itself. All techniques are of a standard form, and all are united. Employing techniques means that society must take all of the uses to which they can be applied. They cannot be abused; they are only used. To illustrate his point, Ellul imagines that a new machine is developed that increases the productive power of a factory, which throws hundreds of people out of work. The capitalist says that this is the nature of an economy. Technical innovation causes creative destruction, but the workers released will eventually find new jobs. Faced with a comparable situation, the socialist responds that the liberated workers can be used elsewhere and sends them to another part of the country to work at other jobs. Ellul points out that both “solutions” are inhumane. The worker for a capitalist firm must spend a significant period of time unemployed; the worker for a socialist firm must move to another part of the country, away from extended family members, friends, and roots. People are not things that can be moved at will or

refashioned to suit the economy's needs. Nonetheless, the economy treats them as things, an inevitable adaptation that individuals and societies make to the advancement of technique (1964, p. 104).

Technique evolves not to serve humankind or to achieve some moral end. It is a method to achieve an end as efficiently as possible given the contemporary level of knowledge. It is a blind evolutionary process; previous elements combine with new elements, Ellul argues, ever accelerating as the elements multiply "in a domain of integral causality" (1964, p. 97). As an example, he writes of the evolution of policing techniques. In his day, crime detection and action consisted of telephone taps, suspect files, and crowd control. Ellul asserts that these techniques will be applied everywhere possible to ensure that criminals are apprehended and that order is maintained. He posits that the police will have to cast an ever wider net and eventually monitor the activities of all citizens. In addition, physical technology and organization will develop to surveil, store, and access data more efficiently and correlate this information. Consistent with his predictions, today's policing consists of cell phone and online tracking, pervasive surveillance monitoring (e.g., traffic, commercial establishments, pedestrian walkways, airports, and sports events), facial recognition software (combined with surveillance), identification of suspects through tip lines, and cell phone and traffic sign alerts. The development and employment of these policing techniques have accelerated in the age of international and domestic terrorism.

Ellul is not writing here about old-style authoritarian control of the population through tactics of terror, arbitrary arrest, and continual stop and frisk. The most efficient technique of control is more subtle and pervasive but hardly felt by citizens. In the modern surveillance state, all individuals are known to law enforcement; all actions can be traced and correlated, and all live under surveillance. Technical perfection is totalitarian; it means total control. There is a subjective aspect of the need for power and control among some law enforcement officers, for the profession attracts individuals with such needs. However, Ellul asserts that it is technique itself that

demands order and control, creating the environment and parameters for police procedures (1964, p. 100).

Ellul foresees a time when constant and pervasive surveillance, combined and coordinated with administrative, organizational, and psychosocial (or human) techniques, will closely coordinate the thoughts and actions of a population. He writes that the most potent human technique, of course, is propaganda. This all-pervasive technique plays a leading role in conditioning a population on the necessity of police power to keep order, justifying its actions, and making it seem normal and reasonable. Ellul writes that this is true not only of dictatorial regimes but also of Western democracies, where movies and TV shows often depict the police as the protectors of society.

By necessity, Ellul predicts, security needs will grow over time. There will come a time when the police or some other social control agency will be responsible for the re-education of social misfits and deviants. This goal is inevitable in establishing social order (1964, p. 102). Ellul bases this projection not on some transitory authoritarian regime or an evil nation-state bent on authoritarian control but on the needs of technique. The increasing complexity and volume of our resource extraction and production processes and the environmental and human impacts of these activities have led to the tightening coordination of people and the need for order. Social order has become one of our highest priorities. The need for order results from the technical evolutionary process, the “accretion of a thousand technical details” (1964, p. 103).

Moreover, each step toward efficiency and order gives a mostly approving population a greater sense of security. Again, Ellul does not foresee a reign of terror, torture, and confinement for Western democracies. Instead, he asserts that technical necessity demands order, which surveillance and propaganda techniques can best achieve. Such techniques can soften and hide power so that the individual does not even recognize the manipulation. It is a new form of totalitarianism, made possible and necessary with the development of technique.

All techniques have intended consequences (manifest functions in sociology) and unintended consequences (latent functions and dysfunctions). The use of technique will inevitably involve manifest and latent functions and dysfunctions, many of which neither governments nor corporations can foresee. According to Ellul, history shows that every technical application has latent dysfunctions, many of which cause more harm to society or the planet than the positive manifest functions of employing the technique itself.

There are now techniques to analyze the latent functions of social programs and material technologies, planned environmental disruptions, and the like. For example, the United States has adopted a National Environmental Impact Assessment system that considers proposed environmental changes by systematically examining all relevant information about the proposed changes and possible alternatives and their impacts. These procedures advise decision makers on the most environmentally sound options for achieving proposed objectives. However, the assessment of technique's impacts is not restricted to the environment, and impact assessments have been used to gauge the effects of proposed changes on health care, communities, cultural heritage, and political participation. "Impact assessment, simply defined, is the process of identifying the future consequences of a current or proposed action. IAIA [International Association for Impact Assessment] is the leading global network on best practices in the use of impact assessment for informed decision making regarding policies, programs, plans and projects. Members of IAIA believe that impact assessment is a practical tool for helping meet today's needs without compromising the opportunities of future generations" (IAIA, 2024, para. 1). However, as we have learned through experience, protecting the environment, people, or our cultural heritage is not always the primary consideration of politicians and capitalists.

In addition, these impact techniques often fail to account for all of the consequences of a planned action, though as techniques their efficiency and effectiveness are constantly improving. For example,

the development of powerful computers and big data helps to analyze planned changes, but they, too, are techniques and have many dysfunctions for the socio-cultural system. Furthermore, social and environmental problems are mounting, so social pressure exists to employ new techniques as rapidly as possible, often before all of the ramifications can be studied. Reality is complicated and interrelated, and it is impossible to assess a given technique from the perspective of all relevant disciplines before it is employed (Ellul, 1964, p. 105).

The use of any technique mixes both good and harmful effects. Ellul gives another example, medical techniques employed to save lives and increase longevity. These techniques have led to a population explosion, widespread poverty, and hunger. It is not that a technique is employed for good or bad use; it is that it is employed at all (1964, p. 109). The good cannot be accepted, and the bad rejected, for they are part of a whole. The manifest functions of all techniques are efficient ordering, and the latent functions are sometimes good, sometimes bad, but always present. Ellul writes that one cannot choose from among the effects of technique. Such a “belief means that the essence of the technical phenomenon has not been grasped” (1964, p. 111).

Linking Techniques

All of the different techniques are linked. Ellul illustrates this by reviewing the textile industry’s beginnings, with the flying shuttle’s invention in 1773 creating an oversupply of yarn, thus calling forth the invention of the spinning jenny, which then called forth the invention of the loom. Increasing the production of one machine upsets “the equilibrium of production” and calls forth the development of more technology to restore equilibrium at a higher level of production (1964, p. 112). Modern processes of production develop various machines and organizational techniques to process raw materials and fashion them into commodities at an ever-quickenning pace.

Capitalists, communists, and socialists expanded factories to produce more products and create and market new products, and their organizations became more extensive and complex. Size and complexity demand organization and planning, not only of machines but also of workers and material resources. Tremendous amounts of capital must be secured to build the factories and purchase the machines. Furthermore, technicians must devise management systems to coordinate plants and supply chains, transportation systems to distribute goods, and commercial enterprises and advertising to sell the increasing volume and variety of the material and service goods produced.

Technological civilization built various systems over time in interaction with one another, with developments in one calling for innovations in others. However, there was still a need for a single entity to coordinate the multitude of techniques necessary for a fully functioning modern economic system. Coordination necessitated the development of the modern nation-state, much more powerful and effective in creating the conditions for economic development, establishing monetary policies and central banks, enforcing contracts and labour laws, and coordinating transportation and communication systems. The nation-state is a key component of capital development; without an active state, the capitalist economy would never have attained worldwide dominance (Ellul, 1964, p. 115).

Nevertheless, Ellul continues, technicians (managers, professionals, and government officials) recognized early on that compulsion and force were insufficient to coordinate the modern economy effectively. Reliance on coercion alone required significant effort in terms of labour and resources to keep individuals in line. In a society that depends on bureaucracy, professional services, and marketing, it is not enough to have people's physical commitment; the people must believe in the system. This need for commitment necessitated the development of systems of education, propaganda, and psychic manipulation to reinforce the economic, political, and social order. The modern nation-state coordinates a complete and

complicated socio-cultural system. Ellul claims that eliminating or changing any part will have ramifications for other parts and the entire system, though the entire system undergoes continuous rationalization and growth.

Ellul also identifies a technical universalism in which technique expands its influence geographically and qualitatively into new areas of social life. All countries increasingly apply technical procedures to economic, political, and social activities. Two primary forces drive this expansion: commerce and war. Colonial wars allowed European nations to export military technology—the machinery of war, military organization, strategies, and tactics—worldwide. Colonial people were initially awed by the power that such techniques gave to the conquerors and soon came to emulate them. Arms trafficking and rebellions against the colonial system were sporadic at first but eventually became better organized and armed. The Second World War also allowed many colonial peoples to participate in modern warfare, further training them in organized conflict. After that war, the colonies adapted modern warfare techniques to liberate themselves from their invaders.

The second factor of the spread of technique around the globe, also related to colonialism, was the need for commerce to expand its reach for raw materials, cheap labour, and growing markets. Beyond traditional colonialism, rapidly disappearing when Ellul wrote, there is “technical subordination.” Rather than exercising outright political control, powerful countries exert economic and political pressure to exploit the less powerful. The political competition between the two superpowers at the time, the Soviet Union and the United States, was fierce to subordinate and incorporate less developed nations into their spheres of influence (1964, p. 119). This Cold War competition served as a model for technical subordination for Ellul. However, economic neo-colonialism now goes beyond the superpowers. It consists of exploiting poor countries’ natural resources, labour, and markets to benefit prosperous economies throughout the global economic system (Wallerstein, 2000).

The speed of communication and transportation also aids this technical universalism. Technical information and products could be spread worldwide in a brief time during Ellul's writing and instantly in the 21st century. Furthermore, all countries must standardize their development of infrastructure. Military and civilian ships' enormous sizes and capacities necessitate "continually improved port installations" worldwide. Passenger and freight airlines require massive airports, air traffic control, and close coordination among nation-states (1964, pp. 119–120).

Another element of technical universalism is the movement of technicians among countries. After the Second World War, German scientists relocated to the United States and the Soviet Union. Thus, the war spread German technology internationally, including advanced military and civilian uses of rockets and jets. Cassidy quotes Douglass O'Reagan, a historian who studied the era (2019, para. 2), who said that it was "the largest-scale technology transfer program in history, aimed at almost every field of industrial technology and academic science." In the present day, the movement of technicians among countries—say, oil and gas technicians to the Middle East—is a form of the assimilation of citizens of less developed countries into the technical way of life.

The extension of European- and American-style education and the long tradition of recruiting international students to American universities are also mechanisms of the technical invasion of the globe (Ellul, 1964, p. 120). This invasion, Ellul adds, is not the simple addition of new values and elements to old cultural ways and traditions. It is not a matter of putting "new wine into old bottles; it does not introduce new content into old forms. The old bottles are all being broken. The old civilizations collapse on contact with the new" (1964, p. 121). This collapse involves cultural, social, economic, and often political forms, affecting the entire life of the socio-cultural system for generations. The mode of subsistence changes, ecology is disrupted, people form new institutions and groups as geographic and social distances separate them, and new values supplant old

ones. The collapse of traditional culture often critically affects the psychological health of individuals.

In Western societies, technical development occurred over many years, but even then it radically changed traditional structures such as the family and community, with which technological societies are still struggling. One only needs to think of how much more devastating its effects must be when traditional societies are suddenly hit with techniques in all of their forms. Ellul asserts that we are ill equipped to deal with the cultural breakdown that technique is causing throughout the world and to deal with the destruction of traditional rural life, urbanization, slums, soaring unemployment, widespread poverty, and malnutrition for many. He does not doubt that such techniques will destroy traditional cultures before they can develop new social, economic, or psychological adaptations. Technical societies continue to exploit the economies of these traditional societies, whose domestic production craters. In the political sphere, Ellul reports, the collapse of traditional societies has taken the form of either dictatorship or anarchy.

Traditional societies had a unity of economic, political, and social aspects in which the family and community had significant roles. In such societies, these primary groups held the allegiance of their members because they were essential in allocating goods, socialization, and education of the young as well as labour, power, and authority within society. They served as the mediators between larger economic and political institutions of society and individuals. However, in a technical society, many functions are separated from primary groups and allocated to specialized institutions. Primary groups no longer play significant roles in providing mutual aid, production, child care, education, distribution of goods and services, and welfare. Many of their essential functions, group meanings, and identities are lost, thus affecting the overall social system (Ellul, 1964, p. 126).

In addition to geographical expansion, technique is expanding into every area of social life, both inorganic and organic. Ellul writes that an inversion is taking place. In traditional societies, a technique

was merely one of many elements integrated with traditions, customs, values, and beliefs. In technical civilization, its influence is expanded first to the inorganic, in which machines assist and replace human labour, and then, most recently, to the organic, in which human beings become its objects as means to technical ends. The necessity of efficient production and consumption mandates that the individual “submit to technical efficiency and systematization, the end point of the industrial assembly line” (Ellul, 1964, p. 128). This is Ellul at his most pessimistic (most Weber-like), positing humans as cogs in a social system.

He argues that technique is the prime mover in social evolution, despite the hubris of humans, and that social change is determined by their will, philosophy, and economic or political regime (1964, p. 133). As previously argued, technique advances by combining prior discoveries with small steps almost independent of human volition. Ellul asserts that individuals are mere “catalysts” in technical development. At one point, he compares individuals to “a slug inserted into a slot machine”; they start the process but have no further role in it—a cog in a social system (1964, p. 164).

Like Émile Durkheim, Jacques Ellul recognizes that specialization of the labour force, a characteristic of technical work, often destroys community bonds. Detail workers often lose connections to their fellow human beings, failing to understand each other’s vocabularies, interests, and motivations. Their professions often become their whole lives, with their jargon and world view, living in a closed universe to others (1964, p. 132).

Ellul forecasts a day when technological advances will free the worker from guiding the machine, only watching it and repairing it when necessary. The goal of freeing humans from toil is a long-held ideal, but it is not the only impetus behind automation. There is also the fact that people are unpredictable, make mistakes, and cause errors. We make terrible machines. We are subject to fatigue, need sick days, engage in labour strife and backtalk, and sometimes “make unpredictable choices” out of loyalty, emotional upset, or stupidity.

Machines are precise, rational, and untiring, and their use demands the same from their human tenders. The tendency, Ellul notes, is thus to limit the human factor in production (1964, p. 136). He adds that computers (which he calls electronic brains) will soon be able to perform intellectual tasks that surpass human performance in many areas (1964, p. 137).

Because of the unpredictability of people, technique expands into work life, seeking to transform human beings into technical animals. Human techniques are psychosocial techniques designed to manipulate the behaviour of people to conform. These techniques include activities such as education, training, entertainment, psychological tests, bureaucratic rules, counselling, and propaganda. They have evolved to eliminate personal idiosyncrasies, thus limiting disruption to both production and social organization (Ellul, 1964, p. 138). For example, workers in many technical jobs—say, jet pilot or nuclear worker—must be calm and composed. Applicants for these careers are tested for these characteristics and selected accordingly. Although these examples might be extreme, Ellul writes, the more technique evolves, the more applicants will be selected based on meeting the job's technical requirements. The human sciences will be tasked with testing, sorting, and directing people based on their personality traits and physical and mental capacities.

Again, Ellul contends that capitalism often retards technical advancement. Businesses will decline to adopt techniques if the cost-benefit ratio is negative. Historically, capitalism and its drive for ever-increasing profits have intensified technical developments in resource extraction, manufacturing, service industries, and administration. Capitalism has pushed rationalization of the political economy wherever it can be made to turn a profit. Nevertheless, as both Marx and Ellul point out, the need for profit can be a fetter on the growth of technique.

The point of all techniques is to be both efficient and effective. To be most effective, technical society will be adaptable and transparent, giving individuals the illusion of freedom and control over

their lives. Power and authority will be exercised through the ever more sophisticated methods of surveillance and manipulation provided by science (including the social and psychological sciences) and technique. Through techniques of targeted propaganda, press management, big data, computer and phone tracking, and the rise of the therapeutic perspective, technological society will exert its power more efficiently than was possible in the past. Furthermore, with each passing year, social organizations will exercise that power more effectively. Individuals will not be able to escape it; it cannot tolerate the refusal of its bounty. Technique will integrate individuals into the social whole to the point that they will consider it wrong to aspire to any other form of life; it will be impossible to disengage from it. Because technique is autonomous, we cannot choose our means any more than our ends (Ellul, 1964, pp. 139–140).

Again, Ellul reminds us that we cannot choose which parts of a technique we will accept and which we will reject; it is an all-or-nothing proposition. Suppose we seek to use a technique to achieve a desired end. In that case, we must accept that, along with this end, there will be wider consequences for other parts of the socio-cultural system: that is, there will be latent functions and dysfunctions that cannot be avoided. Ellul concludes that because of the characteristics of modern techniques—rationalization, artificiality, automatism, self-augmentation, monism, and universalism—there is no comparison between the techniques of today and the primitive techniques of traditional societies. Technique now is an “utterly different phenomenon” (1964, p. 146).

Parallel to the concerns of Weber’s writings on the rationalization process, Ellul asserts that the rise of technique demystifies social life. Mystery and the sacred are necessary to human life, and he claims that technique destroys them. Technique maintains that there is no mystery and that everything can be explained through evidence, logic, and reason. “Science brings to the light of day everything man had believed sacred. Technique takes possession of it and enslaves it” (1964, p. 142). Technique turns mystery into the everyday, the sacred

into the profane. Human beings, products of nature and nurture, or heredity and chance, are imperfect. Technique can make them more intelligent, more beautiful, and more adaptable to their functions in life. We will soon be able to create ideal men and women, soldiers, and bureaucrats through technique. We no longer need to rely on chance (1964, p. 143). As always, Ellul is imprecise on the timing of future technical advances, but he is certain of the direction of technical development.

Ellul writes that, for many citizens of technological society, belief in the traditional gods and sacred mysteries is waning. This weakening of belief is particularly true for technicians immersed daily in technique as part of their professions. Since humans cannot live without the sacred, according to Ellul, there is a tendency to transfer their sense of the sacred to the powers of technique itself. (This recalls Durkheim's contention that the power of society is transfigured and imagined in physical form as God.) Many contemporary Wall Street bankers style themselves as "Masters of the Universe" or "Wizards of Wall Street" as they manipulate the economy for their own ends. Some government bureaucrats glory in their positions because they prove their power and social superiority. For these technicians, technique is sacred because, without it, Ellul argues, they would be "poor, alone, naked, and stripped of all pretensions" (1964, p. 145). Weber (1958/1904, pp. 181–182) presents similar themes in the closing paragraph of *The Protestant Ethic and the Spirit of Capitalism*: "For of the last stage of this cultural development, it might well be truly said: 'Specialists without spirit, sensualists without heart; this nullity imagines that it has obtained a level of civilization never before achieved.'"

3

Technique and the Economy

Jacques Ellul argues that Karl Marx was in error when he put the economy at the base of the social system. Ellul, of course, asserts technique as the foundation. Marx, he writes, focused almost exclusively on the means of production: factories, transportation systems, and commercial activities. Technique goes well beyond economics to play a role in all areas of the socio-cultural system. Nevertheless, in this chapter, I will focus on Ellul's posited relationships between technique and the economy. Citing John Maynard Keynes, Ellul writes that a stationary capitalist economy is impossible. Without constant population growth or new geographic areas to exploit, technical progress is the only way to maintain economic growth and capitalism's survival (1964, p. 151).

Ellul maintains that industrialization of the farm is destroying traditional peasant life everywhere. Peasant farmers are tradition-bound, but recent technical advances in agriculture are unblocking this way of life. Technique destroys traditions, just as it corrodes values. Agricultural technology—machines, pesticides, herbicides, fungicides, corporate seeds—conspires to create the enlargement and concentration of land holdings into a few hands. Peasants are removed from the land and separated from their means of subsistence; many end up in urban ghettos where sanitation, food,

water, and work are scarce, and crime and violence are rampant, or they emigrate to the Global North. Many must sacrifice local crops and traditional ways of life to participate in world markets. Given this disruption of rural life throughout the globe, Ellul predicted dire consequences that are currently happening. The industrialization of rural life will lead to migration to urban areas, deforestation, specialization, and increases in production and consumption (1964, p. 152).

The influence of technical innovation on economic life is far more disruptive than most people realize. Ellul cites Thorstein Veblen and others who question the very efficacy of machines, wondering whether they squander more effort, capital, and time than they save. Ellul also questions whether the enormous economic loss and personal devastation that technical change often causes individuals are worth the advantages to the socio-cultural system. Again, even the advantages to society are not without dysfunctional consequences. It is not an indisputable fact that technical development is economically superior; what has carried technical development forward is the raw power of production and the self-augmentation of technique (1964, p. 153).

Ellul credits technical developments as the driving force behind economic evolution from about 1830 to the present and claims that this was not true before the modern period. He focuses on the impacts that technical developments—encompassing machine technology, organization, and goal-oriented rational behaviour—have on the overall economies of nation-states and international economic relations. The simplistic view is that the technical economy will produce material abundance and more leisure time for all. Unfortunately, things are not that simple. For actual economies of scale, technical means are becoming more capital intensive; they need numerous machines for production. These machines are more costly to produce and are constantly improved, thus subject to frequent updating and replacement. In addition, the labour force must be large, with a detailed division of labour, different levels of compensation, and a concomitant managerial, financial, and marketing force. An economy

based on small businesses and individual enterprises that utilize such techniques is impossible since it calls for vast concentrations of capital and an economy organized by massive corporations and powerful nation-states.

Ellul cites historical data in the United States to show that there has been significant capital concentration in the American economy (1964, p. 154). He states that only .1% of all American enterprises in 1939 held 52% of all industrial capital. More recent data indicate that the concentration of American industries has continued apace. In an article in *Review of Finance*, Gustavo Grullon et al. (2019) found that American industries overall have experienced a significant increase in the level of concentration since the late 1990s. They found that industries in which market concentration is highest show higher profit margins. They concluded that this profitability is based not on efficiency but on the fact that market concentration gives firms power over markets regarding quality and price. It is an important source of value to the corporation and its stockholders. “Overall, our results suggest that the US product markets have undergone a shift that has potentially weakened competition across the majority of industries” (p. 697).

Another measure of concentration that Ellul reports on is the number of mergers and acquisitions in the United States. In 1955, it was about 350; in 2021, it increased almost 70 times or 24,412 (Statista, 2022b). Worldwide, mergers have steadily increased, from 46,352 in 2014 to 63,215 in 2021 (Statista, 2022a).

Again, Ellul asserts that the motive force behind concentration is technique itself. Only large corporations have the capital to take advantage of the latest technology. Only they can recover waste, manufacture by-products, and apply the latest expertise to industrial relations. Only they can engage in economies of scale—stockpiling needed raw materials at favourable prices, just-in-time inventory management, accelerated capital turnover, reduced finance charges, and other economic techniques. Technical progress thus fosters concentration, but its advantages seem mainly to benefit the corporation

and its stockholders (or what Ellul calls the “technical domain”), not the market, the worker, or the consumer.

So powerful is the technical need for concentration that the governments of the United States and France, which often oppose such concentration because of its effects on markets, workers, and consumers, frequently allow these mergers to take place, convinced that economies of scale and standardization trump other concerns. Such is the decisive power of technique over the modern economy and the nation-state. It is also testimony to the power of capital in politics.

As part of organizational technique, the state takes on a regulating role, with state intervention in the economy becoming “indispensable” (Ellul, 1964, p. 155). This indispensability is especially true not only for infrastructure—rail lines, roads, bridges, airports, and electrical grids—but also for economic planning, basic and applied research, monetary policy, social security, welfare, and health care. It is not a matter of ideology pushing the nation-state into economic life; it happens for technical reasons. Ellul does not claim that capitalist economies are becoming socialist, but he does assert that the corporate economy and the nation-state are increasingly intertwined (1964, p. 157). In the 20th century, the economy expanded to cover all facets of human activity and touched on all social problems. It is a significant factor in national policy, and the discipline of economics has become the central technique in coordinating the economy.

Ellul also cites economic concentration’s human and social effects. In a large corporation, he writes, workers are “enslaved” more than in any other organization; their technical roles are narrowly defined, and they have little freedom to act outside them. The corporation often imposes its products on the consumer, with quality, price, and product durability often set to benefit corporate goals rather than consumer needs. From an economic standpoint, concentration suppresses competition. It tends to raise prices and lower quality. (“Economic competition is for losers,” according to Peter Thiel (2014), a well-known entrepreneur and investor who advocates building monopolies rather than engaging in direct competition.) Ellul also

questions whether concentration even results in profit growth, claiming that profitability often declines as an enterprise grows (1964, p. 155), though the recent research cited above contradicts this assertion. Ellul does not foresee that market power, combined with economies of scale, would counteract any tendency of declining profits.

Economic Science

Ellul asserts that there is a relationship between technical progress in economic life and economics as a social science discipline. The economy has become extraordinarily complex, with economic facts becoming more numerous and interrelated. As a result, economic science, according to Ellul, has become far more reliant on data and far more comprehensive in its technique (1964, p. 158). In the 1850s, he notes, economics was considered the “science of wealth.” Today it concerns itself with human needs, coordinating production, marketing, management, planning, and many other activities.

Economists have taken the physical sciences as their model, just as many other social scientists have. Research in economics focuses on measuring economic data over time, relating these variables to one another, and explaining and predicting economic behaviour through these relationships. As a result, economics abandoned its “dogmatic positions and deductive methods” and has become an empirical technique to accumulate facts about all facets of the economy and correlate them. With these interrelations, it attempts to predict their future behaviour and advise policy makers and businesses on corrective actions. Ellul notes that it aims to modify policy decisions previously based on errors in judgment, ideology, or too little information to formulate policies to ensure a vibrant and growing economy (1964, pp. 160–161). Macroeconomics has become a technical application; its research is motivated not by pure scientific interest but by action (1964, p. 164). He writes that it was still in its infancy in 1964 but that it would develop more certainty of prediction and become the increasing focus of national and international policies.

Economists have one trait in common with other technicians: pride of membership in a group essentially closed to the uninitiated. This pride might be an unconscious product of group membership and training. However, Ellul believes that it is also a fundamental part of being a technician, which includes knowledge of a secret technique and jargon that others are not privy to and a degree of contempt for whoever is not part of the group. Over time, their writing becomes incomprehensible to the layperson, requiring years of study to master. Technique gives power to an “aristocracy of technicians,” specialists who make consequential decisions based on hidden knowledge that often appears arbitrary and capricious to outsiders. This hidden knowledge is dangerous for the future of democracies since the direction of economic life will no longer be in popular control (e.g., the US Federal Reserve system). Members of the public and their elected representatives often hold simplistic and contradictory economic views, Ellul claims: “It is a grave illusion to believe that democratic control or decision-making can be reconciled with economic technique” (1964, pp. 162–163).

Over the 20th century, economists have developed mathematical techniques to understand and influence economic activities. These techniques are statistical data analysis, accounting procedures, modelling, and public opinion polling. Ellul reviews these technical procedures and how they are used to uncover information about the economy, predict its path in detail, and provide information to influence corporate and government policy.

Statistics are the basis for measuring and relating economic variables to one another. Economists (and other social scientists) are immersed in statistical procedures essential for the operation of the discipline and society. Once the preserve of amateurs, statistics has become dominant in the social sciences. In addition, statisticians have developed precise instruments in their work. When Ellul was writing, he mentioned punch cards, calculating machines, and microfilm. To show how far statistics have advanced in the 60 years since these techniques were current, one can mention powerful computers, more sophisticated statistical software, and reams of government

and personal data to manipulate. Econometrics uses these statistical methods to develop theories and make forecasts about the future of economic activities and financial trends.

Ellul writes that accounting specialists have also modified the discipline in the modern era. Accounting is no longer concerned with simply keeping track of the funds of a business. Instead, it examines both the past and the future. With the greater complexity of manufacturing, banking, securities, insurance, and other economic activities, more specialized accounting procedures are necessary to keep track of capital, labour, taxes, and environmental and administrative regulations (1964, p. 166). Today, consistent with specialization and the detailed division of labour, there are at least five distinct types of accounting. Cost accounting focuses on the total production costs of a business. Financial accounting keeps track of a business's financial statements, cash flow, income, and balance sheets. Tax accounting focuses on specific tax laws for businesses and individuals. Managerial accounting uses financial information to focus on strategic planning and decision making. Finally, forensic accounting helps to review the past operations of a business or an individual in investigating fraud and presenting evidence of it in court. Since 1964, we can add to the specializations in accounting by citing government accounting, public accounting, and auditing.

The third economic technique that Ellul identifies is modelling, representing elements of economic reality in relation to one another through mathematical equations. Modelling is a simplified description of reality designed to test hypotheses about economic behaviour. Some of the relations among variables in the model are quantitatively based on past empirical observation, and the researcher posits others. Ellul notes that the researcher's addition is subjective and based on the modeller's economic theory. Economists put the posited relationships in the form of equations and then add the time factor. The equations, now solved by the computer, are a model of the economic system and its evolution over time (1964, p. 167). Economists and policy makers use these economic models to test theory and identify economic policy functions and dysfunctions.

The last economic technique that Ellul describes is public opinion analysis. As a general method used in the social sciences, polling is a recent technological development that allows public opinion to be put in quantitative terms and is now used by economic, political, and social organizations (1964, p. 168). It allows the economist to measure opinions on prices, products, wages, or any other economic fact. According to Weber, predictability, measurability, and calculability are parts of the rationalization process, and Ellul appears to agree. Public opinion polling “brings into the statistical realm measures of things hitherto unmeasurable” (1964, p. 168). He states that most economists will dismiss anything from consideration that cannot be measured. This elimination of the unmeasurable is a necessary limitation of statistical techniques, making all non-technical variables somewhat opaque in policy research and development.

Ellul argues that the traditional economist abandoned all hope of affecting public policy through objective theories and ideological arguments. This assertion might have been premature since ideology continues to play a key role in economic policy. Regardless, many economists who seek to affect practical reality developed expertise in technical applications that can monitor and forecast national and international economic activity, often with considerable accuracy. However, doing so requires access to massive amounts of data that only nation-states can collect and distribute. Through their sponsorship, these states supply economic technicians with careers and the necessary tools and resources to perform their tasks. The economists thus gain power, Ellul maintains, and the state gets expert advice and assistance in its governance of the economy (1964, p. 169).

Economic Planning

According to Ellul (1964), the central goal of all techniques is to promote efficiency. Unless economic techniques end in actions, they become inefficient. Economic planning is a significant aspect

of economic technique. Ellul points out that economic planning is not connected to any political doctrine. Communist and capitalist countries practise economic planning because it is integral to a technical economy (p. 174). Economic plans consist of an organization's objectives and the elaboration of means to achieve them. Planners elaborate goals and means rationally, using techniques to attain the selected goals. The means to achieve the goals include the efficient use of resources and the labour force. As with all rationalizing activities, there is a constant search for the "one best way," given the available resources to achieve the particular goal. The plan's function is to devise the optimal organization of the various resources to achieve the overall goal (p. 175). Ellul also notes that, during the execution of an economic plan, there are constant adjustments of means and ends to coordinate the various parts of the plan more effectively (p. 176).

Planning in the modern economy is widely recognized as indispensable. Like all techniques, it is judged based on its efficiency in achieving its objectives and has proven to be far more effective than arbitrary action. Ellul asserts that economic planning has become essential because of modern society's challenges; he mentions misery, distress, and hunger among a segment of the population. Today such challenges affect entire societies and include pandemic responses, climate change prevention and mitigation, and a host of other issues that make planning even more necessary. Given the complexity of national and international economic systems, how can a nation-state refuse to engage in economic planning that "orders incoherences, and rationalizes the excesses of production and consumption?" Ellul adds that all of the techniques of measurement and monitoring of the economy can only be effective if organizations use them in economic planning (1964, p. 177).

The collective needs of the men, women, and children who inhabit modern technical society determine social needs. These needs are collectivized by advertising, standardization of goods, mass communication, transportation systems, intellectual uniformity enforced by schools, and other instruments of conformity. Mass production

necessitates mass consumption and gives rise to a “standardization of taste,” responsible for the remarkable sameness of various regions of US society, with every city, town, and village having much the same look and feel (Ellul, 1964, p. 175).

Planning and Freedom

Planning has an impact on human freedom. Every part of the economic system is related to every other part; one cannot do just one thing without affecting other things. It is not feasible to limit the scope or power of planning. Economic planning entails labour, resources, and finances and touches upon the natural environment, housing, education, roads, and other infrastructure. Once a nation-state engages in economic planning, it must extend it to additional areas of social life. To limit it to economics is to put an arbitrary limit on the method, thus destroying its efficiency in attaining its goals. Ellul writes that it is like building the most efficient automobile possible but not upgrading the narrow, muddy roads travelled by horse and wagon. The car would still run, but it would not be efficient (1964, p. 180). As society becomes ever more complicated, planning becomes more exact, and putting artificial limits on the scope of economic planning becomes ever more impractical.

Effective national planning fixes objectives that would not be attainable for corporations or individuals acting in self-interest and with limited scope. National planning goals do not always coincide with the immediate interests of all of the organizations affected or the individuals involved. The plan must marshal energy, productive resources, and finances with maximum efficiency. If individuals and organizations are free to pursue their interests, then such planning will come to naught. Ellul notes that, for planning to be successful, it is necessary to impose sanctions on organizations and individuals to promote actions in compliance with the plan. These sanctions include tax breaks, subsidies, fines, or criminal charges. Thus,

economic planning is intricately bound with authority exercised through coercion and manipulation (1964, p. 181). National planning can only be a nation-state function because only the nation-state has the power required to marshal the resources needed, the ability to coordinate the various parts of the plan, and the authority to demand compliance with its dictates. Ellul argues that effective economic planning, a technique essential for coordinating a modern economy, restricts personal freedom and gives power and authority to a centralized state. Planning cannot be limited or abandoned (1964, p. 193).

Ellul points out that planning and the necessity of sanctions are compatible with several economic and political systems. However, he argues that only two systems are genuinely compatible with the full-scale economic planning needs of the modern economy: corporatism and the planned economy. He discounts the future of liberal capitalism because of its fundamental incompatibility with extensive economic planning. He writes that this is not because of his preferences but because of what he considers the “most probable,” and what is most probable is what is most efficient at this moment (1964, pp. 183–184). Ellul uses the phrase “at the present moment” because liberal capitalism was efficient in the initial industrializing process in the 19th century and early 20th century. However, there have been extraordinary social, political, and economic changes since then, and liberal capitalism continues to evolve to accommodate new needs and challenges.

The equilibrium among state, corporation, economic planning, and freedom is unstable. It is changing and “ceaselessly re-established,” Ellul argues (1964, p. 187). One can see this in US history since the beginning of the 20th century since state action in the economy has been growing, not in a linear fashion but seemingly with each economic and national crisis. Although the United States had a liberal economy for most of its history, the Progressive Era in the early 20th century marked a change in government involvement. However, the real sea change occurred with the Great Depression of

the 1930s, which led to the New Deal and the beginning of the US welfare state and increased government involvement in regulating the economy. During the Second World War, the United States engaged in the extensive economic planning of the “Arsenal of Democracy.” It successfully supplied its military and many of its allies’ needs during the war and converted the wartime economy to a peacetime economy. With the rise of a national security state, the US political economy engaged in extensive planning and preparing for war and defensive and economic alliances.

The stagflation in the 1970s, the ongoing crisis in access to health care, the Great Recession of 2008, and the economic havoc created by COVID-19 are all more recent examples of when national and state governments have had to engage in economic planning. Over time, there has been a clear upward trend of state involvement in more extensive planning. Therefore, Ellul asserts, “the facts direct us toward the planned economy, regardless of our theoretical judgments in the matter” (1964, p. 184). He further insists that a planned economy must lead to a planned society.

Planning is part of the rationalization process; the current framework is continuously evaluated for optimal efficiency and further technical development. Will it be able to address additional economic, political, social, or military crises? If not, then there will be pressure to establish a new equilibrium between state action and a free-market economy, giving the state greater power in economic affairs. Since the means of state economic intervention are available when the economy comes under stress, the average person, used to comfort and ease, will agitate for their use, Ellul adds, unless their private interests lead them to prefer the freedom of the jungle (1964, p. 188). It is challenging to limit technique. Its full use is often in the interests of both economic and political elites.

Ellul asserts that liberal state intervention in the economy is a transitional form to a planned economy. The liberal capitalist state increasingly engages in economic intervention, leaving some flexibility for entrepreneurs and market freedoms when dictated

by efficiency and productivity. Economic plans are adopted on an ever-widening scale—regardless of the political and economic doctrines of the decision makers involved—because planning allows an economy to achieve goals more thoroughly and quickly than otherwise. Successful economic plans formulate coherent action steps, marshal needed material and labour resources and generate an intense effort to achieve these goals. Ellul points out that planning allows the full use of economic knowledge and actionable techniques for coordinating the various parts of the political economy (1964, p. 184).

He posits that the nation-state's interests will also undergo some changes because of its incorporation of economic techniques. Ellul describes a nation-state centred on economic efficiency and productivity and minimizing other motivations. The state increasingly focuses on continuous economic growth and planning to avoid depression, recession, and inflation; it also concerns itself with economic power and national pride (1964, p. 197). Technique is neutral, fixed on finding means to achieve ends. The economy becomes the servant of the nation-state, intent on these national goals.

As Ellul notes, liberal capitalist states also have some humanistic concerns with “nonconformist elements” (1964, p. 187). He considers these concerns desirable; however, since the state must take a strategic role in regulating the economy, he does not believe that such an arrangement will be viable in the long term. Humanistic concerns do not satisfy the conditions of full state action on economic intelligence and planning. Humanitarian goals, the radical redistribution of wealth, and the ownership of the means of production for the sake of ideology are inconsistent with and often contrary to these national goals. Over time, socialism became an anachronism as an aristocracy of technicians arose, and the working classes continued to be needed to staff the growing economy. Ellul predicts that many aspects of the welfare state will continue, not out of humanitarian concerns but in the interests of efficiency and domestic tranquility (1964, pp. 197–198).

Centralization

Once accepted, technique imposes centralization on the economy. Enlarged and centralized organizations produce most of the goods and services of modern society. Moreover, as we have seen, and as Ellul mentions, the state becomes essential in regulating and coordinating this activity (1964, p. 194). He asserts that this does not mean that the state controls the whole economy or that it is an authoritarian state in the mould of Nazi Germany or the Soviet Union. Instead, the state becomes the controlling factor, the impersonal regulator of economic activity. The relationship between the state and the economy results from developing economic techniques. The enlargement of state powers is not just a quantitative change but also has led to a qualitative change. Ellul posits that we are witnessing the birth of the technical state, a super-organization that tightly regulates economic life by making it more predictable and efficient (1964, p. 197). Economic planning and regulation have become integral parts of the nation-state, managed in its interests.

The competition among dominant nation-states will force them to face the economic problems of extreme technical development. Which system will be the most capable of fostering technical progress? Which one can mobilize the resources for economic planning and development? In Ellul's time, the competition was between the United States and its allies and the Soviet Union. It now appears to be among China, the United States, and the European Union. Ellul maintains that states will increasingly regulate the economy to support further technical progress and integrate it into the socio-cultural system. This unceasing integration of technique is the evolutionary trajectory that we are on. The state, developing governance techniques and absorbing economic techniques, becomes the overseer of the economy. Liberal capitalism as a political-economic system is progressively weakened, with its remnants (consumer markets, small businesses) integrated into the system (1964, pp. 197–198).

Capitalist entities that assert principles of *laissez-faire* (when these principles align with their economic interests, jettisoned when

they do not) means that the liberal capitalist state is not able to utilize all modern economic techniques. Techniques often entail unprofitable decisions, Ellul posits (1964, p. 201). For example, government regulations and incentives were necessary to force automobile manufacturers to equip cars with safety equipment such as seat belts and airbags or, more recently, to push them to switch from fossil fuel vehicles to electric vehicles. Furthermore, the goals of technique are efficiency and rationality; the goal of liberal capitalism is profit. A state-planned economy does not ignore profit, but it is just one factor among a host of others—ecology, sustainability, safety, consumers, local communities, workers, and other stakeholders. Thus, there is an ongoing conflict between technique and liberal capitalist economy; Ellul predicts that technique will ultimately bend liberal capitalism “to its laws” (1964, p. 201). A technical economy is an antidemocratic economy, whether dominated by business, a government elite, or a combination of them.

The growth of technique (material technologies, organizational practices, and goal-oriented rationality) is weakening liberal capitalism and will continue to transform it. First, technique gives rise to monopolies that destroy competition. The various finance techniques allow the formation of trusts, stock exchanges, and banking institutions that promote large corporations. Second, technical progress allows some firms to gain an advantage over their competitors, eliminating or absorbing them through mergers, again destroying competition, the core market mechanism that ensures the highest quality of goods and services at the lowest possible prices. Ellul does not predict that competition in market economies will disappear. However, it will reach a point where it plays such a minor role in the economy that liberal capitalism will be a sham (1964, p. 204). The scale of the economy has been transformed by technology and associated techniques. The economic “laws” that held sway over capitalism in the early 20th century are no longer valid. At what point do we stop calling it capitalism and begin calling it a controlled or planned economy (1964, p. 204)?

Population growth necessitates expanding techniques to feed, house, clothe, and employ more people. Furthermore, technical development brings a more significant portion of the world's population into fuller participation in economic life as producers and consumers. Technique inevitably leads to globalization (Ellul's term is "intercontinental economy"), in which participation is reduced to a few essential functions of producer and consumer (1964, p. 206). This expansion of economic techniques also leads to mass society instead of community. Enormous economic and government institutions break down intermediate groups, absorbing the functions provided by family, community, and friendship networks. Individuals are enmeshed in impersonal relationships and anonymity and thus prone to government, corporate, and mass media influence. Such "malleable human ensembles" are ideal for developing the technical economy, with mobile masses of individuals available to advance techniques and meet production and consumption needs (1964, p. 207). Ellul concludes that mass society is the most compatible social form for a technical economy, giving the most unrestrained play to social manipulation and planning.

A world in which workers elect plant managers, construction workers elect engineers, privates elect generals, or citizens elect tax collectors would be anarchy, Ellul asserts (1964, p. 208). Technique sets the limits of popular sovereignty; many areas of technique are not subject at all to democratic control. Specialization and expertise, not popular will, guide a technical economy. The absence of democracy does not mean that labour regulation cannot include strong industrial relations with management, humane working conditions, good sanitation, and so forth. However, this is the result of vigorous internal and external regulations as parts of technique's maximization of efficiency; the fact that they are in accord with the safety and desires of workers is a happy coincidence. Although many give lip service to workers' safety and comfort, the goal is to improve efficiency and productivity, not to enhance worker well-being and freedom (1964, p. 210). For example, Ellul points to corporations

that close unprofitable plants, throwing hundreds if not thousands of employees out of work and uprooting them from their communities. Against such economic necessities, human needs count little. People participate in the economy as producers and consumers, not as whole human beings but as things (1964, p. 215).

Modern times have developed economic techniques that transform chance and nature into the decisions of accountants, marketers, planners, and state regulators. With each success, technicians focus more on understanding and determining human behaviour through techniques such as public opinion polls, economic data, and statistics. Which stimulus produces a given response? Why do people conform to the latest social trends? What determines conformity to the general types that exist in society? With this knowledge of human behaviour, technicians devise techniques that transform the spontaneous behaviour of the majority into predetermined outcomes (Ellul, 1964, p. 216). Every technique tends to constrain nature and limit human freedom, transforming the natural and free into the artificial and planned. This artificiality is especially apparent with economic techniques.

Ellul notes that people who make personal decisions to follow the sociological currents of the day act “freely.” Nevertheless, if the same action results from a system of economic and social manipulations, it becomes obligatory (1964, p. 217). Some people might object that humans thus lost their freedom when they banded together in groups; the individual was very much subject to the norms and folkways of the group. Ellul’s answer to such objections is twofold. First, once such levers of human thought and behaviour are codified and integrated into a technical system, actions and thoughts become far more obligatory. Ellul draws the analogy of the transition from moral laws to state laws. Disobeying state laws has the force of sanctions up to and including death. However, he ignores the role of informal sanctions for breaking moral laws, not conforming to the group, or disobeying natural economic law in premodern societies. These sanctions included shunning, ostracism, and death. Premodern societies also had strict sanctions against non-conformists.

Second, and more important in restricting human freedoms, is that the levers of control over the beliefs and actions of the many are in the hands of a few. In premodern societies, social control was the product of a broad swath of the community. In modern times, Ellul notes, far more efficient technical instruments of manipulation and control are in the hands of an economic-political elite (1964, p. 217). At stake is human liberty, the freedom of action and thought, the ability to act in concert with our self-interests or decide to act in the interests of others. “We see in this loss of liberty the downward path into which technique is leading us” (1964, pp. 217–218).

Homo Economicus

The concept of *homo economicus* started as an abstraction, a hypothetical person used by economists to isolate the economic characteristics of humans as producers and consumers. That is a person who acts according to rational self-interest by omitting all other human characteristics. The planned economy is an attempt to make *homo economicus* a reality. According to Ellul (1964), the economic milieu changes humans into uncomplicated producers and consumers. He highlights the role of money in this process. Cash payments connect us to one another; money is essential in getting anything done, even in private life. Almost all human values can be reduced to money (p. 219). For many people, life revolves around doing work and making money, often excluding all other activities and enthusiasms. The 19th-century world was divided into two classes: the capitalist, who created the economy and reaped its rewards, and the proletariat, who produced the goods and services (p. 220). Work and money were related to God, who rewarded those who worked hard with money and punished those who were lazy with poverty and disease. Work became capitalism’s highest virtue, and money was its highest value. The capitalist conception is that a human is “only a machine for production and consumption” (p. 221).

For the proletariat, there was alienation. Workers were alienated from capitalists, their work, their products, and their very humanity. This alienation produced discontent and often revolutionary fervour. Nevertheless, they directed this fervour toward making money and overthrowing the rule of capitalists rather than ousting the power of the economy over human life. Some of the proletariat turned to labour unions and others to Marxist ideology to achieve their fair share of the wealth that they created and to find satisfaction within the economic sphere. Unfortunately, both subordinate individuals even further to the dictates of the economy, narrowing their lives to producers and consumers. The economy compels humans to produce and consume whatever it offers to avoid the crisis of overproduction. “The counterpart of the necessary reduction of human life to working is its reduction to gorging” (Ellul, 1964, p. 221). The goal of capitalist production is not to produce goods and services for humankind’s benefit but to produce and sell products of any kind at the increasing volume and profitability that technique allows. If people do not need a product, then techniques will be used to create that need through advertising, constructing a bridge between consumption of the product and the good life.

All other dimensions of humanity—traditions, spiritual values, emotions—are reduced in importance. Money, power, and status are everything. Nothing else—morality, art, values, emotions, religion—is “to be taken seriously,” Ellul claims (1964, p. 221). He notes that this is true for capitalist and communist societies. (Immanuel Wallerstein (2000) argues that this is because the communist world exists within the capitalist world-system.) Nevertheless, humans are not naturally *homo economicus*, Ellul insists. Yet the pressure of economic events has made them so. He equates this economic pressure with a “rolling-mill,” used to make of individuals what is necessary for the progress of the economic order. The process has not always been easy, with reversals and rebellions by some people. Many remained dissatisfied with this mangling of human nature, especially since inequality remained widespread and periodic economic crises continued (1964, p. 222).

The lure of spirituality, art, scholarship, and literature provides an escape for some. However, Ellul warns that, as the economic world develops, such avenues of escape will become more constricted. Each of these areas has become an industry, subject to technique's ability to rationalize production and commodify products. Economic technique demands that people satisfy its requirements of calculability, order, and malleability. Individuals become human capital, resources to be exploited like any other resource. Technique mobilizes all individuals into the "production-consumption complex" (1964, p. 224). All must work to live and live to consume.

The production-consumption complex is part of our technical reality, and we cannot escape from the things that economic technique designs for us. Technique focuses on efficiency and productivity, so the complex is oriented toward the socialization of needs through education and media and then the meeting of those needs through production. Nor can we escape the needs of the economy regarding producers. Individuals must do their small parts in the production process. Education and training for many specialized jobs are arduous and often rigorous. The modern economy is specialized and interdependent; thus, workers must perform their (often mind-numbing) jobs with some devotion if not enthusiasm. The technical means for invoking this commitment include education, human relations techniques, and propaganda. Ellul asserts that, as these means develop, they become more unobtrusive, more reliant on data and science, and more efficient (1964, p. 226).

Using science, data, experience, and rationality, technique progressively makes individuals into production and consumption machines. Over time, we no longer feel the loss of the whole. We are not distressed or alienated because economic techniques (with assistance from human techniques such as education and propaganda) adjust individuals' character—their goals and desires—to the economic regime. As economic technique becomes dominant, Ellul argues, the individual who endures capitalism's booms and busts, its meaningless and alienating jobs, and its spiritual emptiness will be

“released from suffering” (1964, p. 226). Technique demands our full participation in economic life and requires us to seek basic education and career training to serve the organization better. Economic technique requires a moral life because “no technique is possible among amoral and asocial” individuals (1964, p. 226). Rather than destroy the spiritual, technique subordinates it to economic life.

Under the influence of technique, individuals become objects, conditioned and assimilated into the economic regime to become *homo economicus*. The traditional concept of personal autonomy is redefined in the process. We believe ourselves free because technique gives us the illusion that we are rulers of our fate rather than products of subtle manipulation and control. According to Ellul, the ideal citizen for the artificial paradise is fashioned and shaped, the “detailed and necessary product” of technical means (1964, p. 227). Thanks to the success of economic techniques, Western people have become accustomed to the comforts of modern life: decent housing, abundant food, and all sorts of material goods to satisfy every basic and manufactured need. Despite the two world wars and economic setbacks, Ellul maintains that mid-20th-century men and women still believed in progress. However, that idea is now stained with the notion that material paradise can only be attained through the destruction of enemies. The atrocities of 20th-century wars, Ellul maintains, were fuelled by hatred of supposed foes who stood in the way of the attainment of the promised technological paradise, “be it Jew, Fascist, capitalist, or Communist” (1964, p. 191).

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Technique and the State

Political techniques are required to administer and coordinate the economy. The modern state has a relationship with technique (physical technologies, organizational practices, and goal-oriented rationality) far different from that of traditional states. Jacques Ellul mentions several general causes of this change, such as demography, the diffusion of ideas, nationalism, and the influence of finance on government. However, he wants to focus on causes directly related to technique (1964, p. 234).

The relationship between the nation-state and technique changed primarily because of the necessary expansion of the state into areas where it had not penetrated in the past. This enlargement of state interests includes the need for infrastructure (e.g., roads, bridges, and railways), education and training (primary, secondary, and higher), and welfare services. Private individuals first developed these domains. However, when they proved to be effective, and it became necessary to expand them nationwide, the state began to intervene and provide such infrastructure and services. Increasingly, private enterprises have been restricted or regulated in these areas since the private provision of these necessities interferes with state power.

To Ellul, it is unthinkable to have essential functions such as nuclear energy, electrical grids, or communication networks in

private hands without state ownership or at least strong regulatory oversight. He writes that this need for oversight is especially true in the case of mass communication since private radio and television networks would allow private citizens to agitate against the state. At the least, the state must regulate if not own such networks (1964, p. 235). In the case of communication networks, including radio and television, Ellul was writing before the elimination of the Fairness Doctrine and the subsequent media conglomeration headed by Rupert Murdoch. Ellul was wrong about such private communication empires; they have become thinkable. However, he was correct that the lack of state oversight has allowed such entities to agitate against the state. In addition, he wrote well before the rise of the internet and social media, which complicate the communication environment considerably.

Financial consideration is the second cause of the expansion of technique under state control or regulatory coordination. As technology becomes more efficient, complex, and centralized, it often becomes so expensive that the costs of initiation, maintenance, and continual improvement become prohibitive for individuals or even corporations. Ideological support and opposition affect the speed of government expansion in these areas, but it is not simply a question of ideology. In effect, the state expands into areas of technique because of the costs of technical advancement. In addition to implementation and maintenance costs, fundamental research on fusion energy, biotechnology, chemistry, and nanotechnology requires the state's direct or indirect resources.

Finally, Ellul (1964) notes, applying technique often raises environmental, public health, and social problems that private enterprises cannot or will not address without state regulation (p. 237). He attributes state expansion in many areas to the decline of primary groups that traditionally performed these regulating functions at the community level. The resulting rise of individualism in the 20th century left some unable to manage their financial or physical affairs (p. 238). Ellul also attributes expansion to appeals to the state for law and order,

social justice, and some measure of equality for its citizens (p. 266). In response to the proliferation of private bureaucratic organizations and new and powerful technologies, modern governments have expanded their role, taking on new responsibilities and activities to coordinate and regulate national life.

Nevertheless, the evolution of the economy was the primary reason for the creation and growth of the modern nation-state. Society had to adapt to the growth of the technical economy, and the state was the only institution able to tackle these overarching technical problems (Ellul, 1964, pp. 238–239). A superior power can only address such a problem if the nation-state is conscious of its technical means to adapt the social order to a hyper-industrial economy. The relationship between the economy and all other social activities is becoming ever tighter. The modern nation-state, particularly after the Second World War, is a state in which the social order—infrastructure, structure, and superstructure—is organized around economic performance and growth.

Ellul describes the state as having attained the status of “an enormous technical organism” in the United States (1964, p. 252). He enumerates a range of techniques applied by the modern state, including insurance and banking (social security, loan guarantees), coordinating commissions, education, subsidies for the arts, basic scientific research, subsidies for technical research (alternative energies, carbon sequestration), planning, food and drug testing and monitoring, vaccination programs, and state propaganda. The state is becoming integrated into supra-organizations, international agencies such as the United Nations, the World Trade Organization, and others of increasing complexity that regulate and coordinate a variety of techniques of the modern world (1964, p. 254). Technicians base their decisions on the application of instruments and on the overall goals of the organization that employs them, to the exclusion of ideology, sentiment, or empathy.

For technicians, the nation-state is not something sacred, an expression of popular will, or the embodiment of God on Earth. It is

a supra-organization that they need to manage to yield optimum efficiency (Ellul, 1964, pp. 263–264). National administration becomes a machine in which the various agencies and their employees are monitored and evaluated for efficiency through cost-benefit analyses. Government bureaucrats have become objects, much like factory workers became objects under Taylorism or “scientific management.” The national goal set by politicians is economic and military power, and technicians dictate the means to exploit workers and resources to achieve and optimize this power.

Regardless of the type of government, all nation-states face similar problems that demand planning. Mass transit, housing, air and water quality, and climate change: none of these issues can be addressed rationally except by using regulative plans. Ellul writes that no country can allow free movement into or out of it; all must control immigration. Countries that are stable politically and pay high wages will attract far too many potential immigrants with open borders; dictatorships will see their populations dwindle, which would mean a diminution of power. Both dictatorships and democracies must engage in immigration planning—employ police, judicial, and administrative techniques to control their borders—and no form of government can escape these technical necessities (1964, pp. 270–271). The structures of the modern state are dependent on technique, whether they be democratic or authoritarian. Each function of the modern state—defence, education, welfare, or coordination of the economy—is “becoming more and more alike, regardless of the theories of government under which they operate” (1964, p. 271).

Technical instruments are in response to economic and social necessities. More technical solutions will be needed as social and environmental problems mount—population increase, water and air pollution, habitat destruction, economic dislocation, supply chain issues, inflation, immigration, housing, food shortages, and climate change. National problems today are much more severe and complicated than those in previous centuries. Many can only be addressed through international efforts. There is only one way, Ellul claims,

for the nation-state to address these problems: through technique (physical technologies, organizational practices, and goal-oriented rationality) (1964, p. 271).

Representative democracy of the nation-state in the modern age is purely formal. In such a democracy, people elect representatives whose supposed political authority is superior to that of all technical functionaries—foreign and domestic. It is through these representatives that the people exercise control over their lives. However, according to Ellul (1964) political intervention on behalf of constituents only disturbs the functioning of the bureaucracy and only subverts the functioning of technique (pp. 209–210). More seriously, over the long term, technique subverts democracy by creating a new elite. It creates political inequality between the technicians and the majority, between an elite of governors and “a majority of servants” (p. 274). This new elite is close to government power. The state depends on this class and responds to its needs and interests. Political equality and democracy have become mythical forms without substance (p. 275).

Propaganda is one of the most significant developments undermining democracy. Many people believe that in a democracy competing parties use propaganda, and the resulting flow cancels one another out, and the voter is encouraged to choose from among the rivals. Others claim that those most skillful in formulating and spreading propaganda are the ones who will get the most votes. However, according to Ellul, the absolute perversion of democracy is the result of the psychological assault on individuals caused by the accumulation of propaganda techniques pressuring them and dominating their thought processes. Democracies depend on free choice and individuals who follow their enlightened self-interests. A society that is the target of intensive propaganda eventually destroys the individuals’ “faculty of discernment” (1964, p. 276). It is also in democracies that rival propaganda machines flourish in the form of political parties.

There is only one propaganda source in authoritarian nations, which Ellul claims is usually weak because it has little competition.

“In the so-called democracies, propaganda must become more and more intense in order to dominate its rivals” (1964, p. 276). Like the role of competition in early capitalism, propaganda in democracies must become more effective, efficient, and insidious. However, Ellul ignores the effects of complete immersion into what modern commentators term “the bubble,” far more prevalent in authoritarian than democratic regimes. The message becomes gospel if the individual receives all news and views from a single source or multiple sources promoting the same message.

Ellul (1964) writes that, in the same way that military hardware, weapons, and machines dictate military strategy, techniques also condition the structure of the modern state. These techniques focus on efficiency over all other goals (p. 277). Because of ever more powerful technical means, people pressure the modern state to perform efficiently. In Ellul’s view, this dooms parliamentary democracy, which is slow, ponderous, subject to frequent turnover of representatives, and has no facility in applying techniques. Technical advances compel governments to adapt in favourable ways to these changes. The United States has developed a “fourth branch of government,” or lobbyists, that liaises between Congress (as well as state legislatures) and technical business, labour, military, educational, medical, and other special interest and advocacy groups. Ellul believes that such arrangements are weak modes of adaptation and that the modern state will be compelled to go further over time (pp. 278–279).

Adapting the state to advancing techniques might be through a revolution, as occurred in the Nazi state, or it might change by degrees. If by degrees, then quaint old forms and trappings of democracy—elections, supreme courts, Congress, and the Constitution—will remain in place. The traditional names and slogans will continue to be called on and broadcast; freedom and democracy will continue to be the themes of presidential speeches and editorials. Moreover, certain freedoms will reign, but it will be an illusion of freedom, yet another softening of power. Ellul (1964) writes that “the conclusion seems unavoidable that this is the road upon which our

democracies have already entered” (pp. 278–279). Such a regime might be considered democratic by its citizens; such beliefs and popular support can be secured through education and propaganda (p. 213).

Ellul (1964) contends that our modern democracies are far removed from the classical state that politicians ruled and will be more so in the future. The state becomes “an amalgam of organizations.” Like an automatic machine that replaces a worker, the politicians’ and bureau chiefs’ only remaining function is to see that the organizations continue to function. “Such an organization is not too rigid and knows of itself how to adapt to current problems. We are admittedly not yet in this situation, but we are rapidly approaching it” (p. 279). The classical state exists in the past and corresponds to a vanishing order of traditions, values, and emotions. The technological state appeals to people who place the highest premium on efficiency, power, order, and speed (p. 279).

The growth of technique also changes political doctrines. Technicians develop new doctrinal elements and slogans to buttress the development of state techniques, expressing the relationships between the state and the groups and individuals that make up its citizenry. Traditional democratic doctrine—ideas such as human rights, equality before the law, free and fair elections, and crimes against humanity—are ill adapted to the new realities of technical progress. Such ideas mean little to a nation whose rights are routinely abrogated by corporations and governments when doing so suits their interests. Ellul does not celebrate the disintegration of democracy; it is distressing but part of the social evolutionary process. Nothing lasts forever, he writes, and “no political doctrine is eternal”; as technique becomes more dominant, democracy retreats (1964, p. 281).

Political doctrines have changed not only in substance but also in function. In the past, they were statements of goals and ideals. Ellul asserts that they have become “rationalizing mechanisms” (in the colloquial sense), providing justifications for the state’s actions. He adds that it often takes considerable intellectual acrobatics to square state actions with democratic principles. One could see these

acrobatics with the US invasion of Iraq in 2003 with justifications of Saddam Hussein's possession of weapons of mass destruction and made-up links to the attacks of September 11, 2001. In February 2022, Vladimir Putin's Russia, which also claims to be democratic, invaded the sovereign country of Ukraine; the doctrine that justified the invasion was that the government of Ukraine, headed by a newly elected Jew, was dominated by Nazis intent on invading Russia. State power cannot be exercised without justification, and doctrine supplies that justification.

The Totalitarian State

The accumulation of techniques by the nation-state causes it to absorb the life of its citizens. Economic and political techniques are interconnected and influence one another, "forming a system that tightly encloses all our activities" (Ellul, 1964, p. 284). Under the influence of technique, all states, even those that profess to be democratic, evolve toward a totalitarian order.

Bureaucratic organizations and other technical procedures address themselves to the masses, at best to categories of people, not to individuals. As a mass instrument, it is not possible to limit the effects of technique. Not that technique denies that every individual has peculiarities and propensities. However, it does mean that individual characteristics are excluded from consideration by the rules of the organization and other forms of technique. This impersonality is how bureaucracies rule. Techniques are objective procedures, seeking the most efficient path to achieve a goal—controlling inflation, executing a war, educating students, and even considering that the subjective is counter to technique and interferes with efficiency. This is not to say that such subjective judgments are absent in modern life, but they are seen by many as an aberration and counterproductive to efficiency.

Large-scale social organizations (bureaucracies) would not be possible without abstracting these common traits. In a world now

dominated by these organizations, individuals spend much of their lives interacting with the bureaucracies of education, the military, work, and consumption. Ellul asserts that technique now dominates these structures and that human beings can only be treated as things, categories, rather than individuals within these organizations. This impersonality is not to say that human interactions do not occur within these organizations; instead, such interactions are by-products and not supposed to interfere with the efficient attainment of organizational goals.

Furthermore, human techniques (primarily education and propaganda), which technicians systematically developed in the 20th century, are intended to transform the individual into becoming part of the mass: “that is, to transform the qualitative into the quantitative” (Ellul, 1964, p. 286). This transformation is in keeping, of course, with techniques’ needs for order and efficiency since individuals are untrustworthy and often act counter to organizational goals. Through these human techniques, Ellul asserts, the state becomes totalitarian (1964, p. 287). It has no alternative because technique sets the agenda, not human beings.

Ellul is not writing about a return to the past and is not predicting a 1984 type of totalitarian regime of terror, brutal labour camps, and Gestapo policing. The new technical totalitarian state wastes nothing. Coercion and torture are expensive and inefficient methods of maintaining social order and give opponents a target against which to rebel. There is also a recognition that the workforce and the military must be kept in good working order, and torture has a way of inhibiting optimal performance. The technical totalitarian state of the future, according to Ellul, will not engage in torture since it is unreliable in producing results and wasteful in terms of resources. “There is nothing arbitrary, for the arbitrary represents the very opposite of technique, in which everything ‘has a reason’” (1964, p. 287).

Ellul contrasts the two forms of totalitarian states in the 1960s, communism and fascism. On a superficial level, he asserts, the two forms are identical. He notes that both have concentration camps

(now often called re-education centres), extensive police monitoring of behaviour, the torture of opponents, a single legitimate political party, and often a single person who exercises near-dictatorial powers at the top. There is much similarity between the two regimes. They are alike in their origins, attitudes, and commitments to further the development of techniques (1964, pp. 289–290). However, Ellul claims that communism still has some commitment to human welfare since it makes an appeal to workers and people experiencing poverty. In contrast, fascism is focused exclusively on national power.

Communism originated in the 19th century as an ideology that attempted to explain how technical development produced a capitalist society and, with further development (as well as periodic crises and a final push from workers), would break capitalism's constraints on the economy and create a new social order. Marxism promotes technique development as the key to a just and equitable society (Ellul, 1964, p. 290).

Fascism, according to Ellul (1964), relates to technique in an equivalent way: that is, to maximize the state's power through technique and efficiently adapt humans to the new social realities. Both forms of totalitarianism are committed to efficiency and the development and spread of mechanical, organizational, and human techniques (p. 291). As detailed earlier, technical advances occur as a process of self-augmentation, but totalitarian states push them as a matter of policy, an end to pursue without limitation. The goal is to improve the material lot of the people by exploiting all of the available technical means and enhancing the state's power in the process (p. 291).

Ellul considers dictatorships' ability superior to democracies' ability to exploit technology to the maximum without internal opposition (1964, p. 288). This ability might well be accurate; however, such absolute power brings massive disadvantages, such as the suppression of dissent that might adjust a dictator's actions, the hesitancy of underlings to tell the dictator disagreeable news, and the complete lack of checks and balances on dictatorial power. These are

problems that Ellul must have been aware of given his experiences with Hitler's Germany. The problems of dictatorships and additional problems of major corruption throughout society plagued Russia's invasion of Ukraine in 2022 and into 2025.

Democracies follow a similar path but differ from existing totalitarian states in a few respects. Primarily, democratic states have not attained consciousness regarding the possibilities of exploiting technique to the maximum extent possible. They still have scruples, Ellul writes, traditions, and democratic principles that prevent them from doing so (1964, p. 288), though he avers that these scruples might only amount to concerns about voters or the next election. However, he writes, these scruples are not much more than smokescreens to be disregarded when necessary.

Ellul writes that, when the democratic state wants to exploit a technique, it must debate its necessity and then provide justification for it to its citizens. When it then needs to go further, it must repeat the process. Everything is open to question; every step must be debated (1964, p. 288). In the end, Ellul asserts, the democratic state will have to give in, but its traditions and values act as a drag on applying such techniques.

For example, when the 9/11 attacks occurred, the United States passed the Patriot Act within 45 days (about one and a half months). Its official title is *Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001*. The state had to justify the Patriot Act, which provided extensive security, internment, enhanced law enforcement, strengthened money laundering prevention, and data collection measures on American citizens. Although it has continued to be justified, debated, and slightly modified over the years, many of its provisions remain in force. Given the dangers of foreign economic competition, warfare, natural and manufactured disasters, and domestic and foreign terrorism, Ellul writes, the democratic state will increasingly be forced to adopt such technical actions. It has no other choice; according to him, it will either fully utilize available techniques or perish (1964, pp. 288–289).

Repercussion on Technique

Although the technical movement has transformed the nation-state since the mid-20th century, the reverse is also true. As mentioned, though technique advances according to its internal logic, the state has quickened the pace through its power and support. State and private partnerships, in which the state provides funds and direction, and private organizations retain the initiative and organization at the ground level, have served in advancing the spread of technique in democracies. Such partnerships also cancel some of the deficiencies of each type of organization (Ellul, 1964, p. 300). The advantages of massive infrastructural projects and government contracting of goods and services from the corporate sector can be seen in many capitalist countries. Some disadvantages include costs (government waste and corporate greed), corruption, and intense corporate lobbying for more “investment” and tax breaks.

Nevertheless, the increased pace of technical development and the state’s cumulative power have taken a toll on human support for technique. People are losing their “bedazzlement” by and illusions about technology; there is increasing awareness that the growth of technique, mainly when sponsored by the state, is not freeing them so much as forging a new set of chains (Ellul, 1964, p. 300). However, as Ellul notes, people attribute these new chains to the state; they are unwilling or unable to attribute the loss of freedom to techniques themselves, for there is still widespread belief in progress; it is often perceived as our “last hope” (1964, p. 301).

Every substantive change in the socio-cultural system encounters resistance in other parts of the system. Consider the changes in American society in the 1960s and 1970s with the rise of the feminist movement. Women who worked outside the home and the resulting rise of feminist ideology met tremendous resistance within the home, workplace, educational institutions, and churches as well as ideological resistance from several quarters. There are always obstacles to such fundamental changes, obstacles that, over time,

reject and extinguish changes, modify them, or structurally adjust to them. The cause of this resistance to change is that each new factor—ideological, structural, or material—must be integrated into the socio-cultural system. The process often takes time since several parts of the system must adapt to the innovation. Fundamental changes, like those that occurred with women working outside the home, are so numerous that they add to revolutionary change. Whenever a change is introduced into a socio-cultural system, Ellul posits, several factors restrain its acceptance or rejection (1964, p. 301). He details four possible restraining factors: public opinion, morality, social structure (e.g., economic and social relations), and the state.

Public opinion is almost always in tune with the advancement of all forms of technique. Ellul points out that modern people are nearly obsessed with performance, be it in economics or sports, and technique is the way to achieve it in terms of numbers, records, and awards; the higher, the better, whatever the object (1964, p. 302). Technique has made daily life predictable, constraining our thoughts and actions and reducing or eliminating our personal power, particularly at work. Sports provide a mechanism of escape to offset the dull lives that technique requires many of us to live. We identify with and revel in our spectator sports, the achievements of the organizations that we work for, and our societies' economic and military achievements. With these achievements, we sublimate all that we have repressed into the performance of a group (Ellul says "mob"). In doing so, he asserts, we fuse our identities with these groups; it is how modern individuals express their will to power in achievements and records that they did not establish themselves (1964, p. 302).

Many people identify with and worship the collective power of the state. Ellul calls this adoration mystical, with remembrances, memorials, and deference paid to those who gave their lives to further its powers (1964, p. 303). There is also a strong faith in the power of physical technology (particularly military technology) and that further technical development will solve the problems caused by earlier techniques. One can see this with the debates over global climate change.

Many place their faith in technologies such as carbon sequestration, fusion energy, or other cheap alternative fuels, which technicians will someday develop to solve the problem. Or consider the hope of many that military technicians will be able to solve the problem of nuclear war by developing super-accurate antimissile systems. This faith in physical technology is widespread in modern society. However, it might not be as universal today, 60 years after Ellul's writing.

Ellul also points to the widespread conviction among many people that technical issues are the only serious ones. He acknowledges the "amused glances" of people at philosophers and the lack of interest in theological and metaphysical questions (1964, p. 303). He notes the outright rejection of the humanities by those convinced that we live in a technical age, and that education must conform to its demands. Ellul is aware of the widespread conviction that education must focus on the practical and the technical and that subjects such as history and philosophy are useless and serve no practical end. This emphasis has carried over to universities, where subjects such as philosophy, history, grammar, and humanities have lost students to the more applied disciplines. Today this is particularly true for those disciplines that are part of STEM (science, technology, engineering, and math) or degrees that prepare one for business, medicine, or other careers. Such educational trends result from the conviction among many that "only technique is not mere gab," as Ellul puts it (1964, p. 304). Only technique leads to practical achievements.

Ellul does concede that public opinion on technique is not always so simple. Although opinion tends to favour technical development, it tends to be retrospective: that is, past technical development. Members of the public tend to be supportive if an invention or discovery does not directly affect their interests. However, their enthusiasm diminishes if it threatens their fortunes, interests, or careers (1964, p. 310). In terms of the practical, public opinion is oriented toward advancing technique. Moreover, if this widespread approval of technique should lag, Ellul writes, another technique stands ready to recreate support—hence the propaganda machine.

It was not employed much in the 1950s and 1960s to support technical progress (when he first wrote his opus) because technique still enjoyed widespread popular support. However, he writes, should this situation change, if public support were to turn against the further development of technique, propaganda campaigns would be employed to promote public support, “for the whole social edifice would be at stake” (1964, p. 304).

The third traditional restraining force on the evolution of technique is the social structure of a society. Typically, a society promotes technical development unless it challenges existing economic or political interest groups. In that case, for example with alternative energies, development is resisted, slow-walked, and channelled into existing social structures—massive wind turbines rather than energy produced at home, natural gas marketed as a green energy alternative. Economic growth dominates the modern world, and technique dominates economics. “The whole of the material world in which we live rests on this technical base,” Ellul writes (1964, p. 304).

Nineteenth-century Western society was an individualized and atomized culture and, thus, a prime target for technical development. In such a society, Ellul remarks, primary social groups such as the family and community functioned to serve human needs. The rise of technique weakened these groups, especially as government and commercial organizations absorbed many of their functions. In the latter half of the 20th century, there was a rise in group association. However, it was not in opposition to technique but a function of technical organization—industrial associations, labour unions, professional associations, special interest groups, educators’ unions, and homeowners’ groups. In modern societies, Ellul argues, secondary social groups organized in relation to functions dominate their social structures, a marked change from premodern societies. These secondary groups are not autonomous, with values, interests, and orientations apart from the organizations of which they are parts; they are secondary collectivities that represent technical organizations and interests (1964, p. 305).

Therefore, Ellul (1964) concludes, neither public opinion nor social structure is effective in braking further technical development. What about the nation-state? But we have already seen that it abdicated this role in favour of sponsoring the intensification of technical development. Indeed, Ellul summarizes, every possible restraining force on further technical growth has been eliminated or even inverted. There are no limiting factors and no countervailing trends to further technical development. The only possible limit is techniques' "own powers (which seem unlimited and inexhaustible)" (p. 306). He also claims that technique is becoming independent of all human control. Society does not have the means "to limit it or even orient it" (p. 306).

Given the opposition's weakness to unbridled technical growth, the claims that we are in control of technique or can rein it in at any time are empty. Technique, Ellul asserts, is a sociological phenomenon that must be opposed or checked by equally strong social forces. However, technique has changed all of these social forces; they now support technical growth rather than oppose it. We have lost control of technique; our only option is to submit to it and take from it the riches and comforts that it produces. Oppose it, and we are alone (1964, p. 306). However, considering the numerous social movements that have enjoyed some success in opposing technique since his original book, the role of social movements deserves more exploration.

Ellul's opinion on countervailing forces to the growth of technique began to change in 1968 with the rise of the student revolutions in several industrial nations (1981, p. 56). The rise in the types of social movements since that time—such as the women's, environmental, antiwar, antinuclear, and social justice movements—as well as the sophistication of their organizations, ideologies, propaganda, and political strategies have created a potent countervailing force to unbridled technical development. Social movements are a growing phenomenon in modern societies that, through the political process or action counter to that process, often succeed in blocking or

modifying technical developments. I will examine this countervailing force in more detail in the concluding chapter.

The Role of the Nation-State

Before the rise of the modern state, private individuals developed techniques at the local level, with little coordination among them. The state has evolved to coordinate the complex techniques within its borders. The state integrates the complex of techniques into a coherent unity through planning. The state's role is less that of the brain of the overall organization than that of the rational-relational apparatus that enables the different techniques to coordinate their actions. In the modern era, examples include coordinating air, rail, and automobile traffic and regulating private and public medical insurance, hospitals, and health-care providers.

The state also coordinates the manufacturing and service sectors with commerce, finance, military needs, and the like. In a very inter-related society, Ellul notes, with many distinct parts dependent on the proper functioning of many other parts, the state's coordinating role is critical (1964, pp. 307–308). Private enterprises cannot perform this coordinating function because they are specialists and have private interests to serve. The nation-state has the resources to mobilize the bureaucracies and specialists to apply techniques to provide the ever-expanding coordinating role (1964, p. 308).

In addition to this coordinating role, the state provides resources for developing and utilizing techniques far beyond what individuals or private corporations can provide. One can see this in investments that the US government made in the electricity grid of the nation in the 1930s, the interstate highway system of the 1950s, and the development of rockets and space exploration in the 1960s through to today. Recent state initiatives include the development of vaccines, the internet, basic science, agricultural machinery, nuclear fission and fusion energy, high-speed rail transportation, and a host of other

developments. When the public is directly affected by a technique, there can be some hesitancy to adopt innovations. This hesitancy is especially true when scientists and technicians disagree. Ellul gives the example of polyvalent vaccine hesitancy in France in the 1950s. In this case, the state used its authority to settle the dispute among technicians. It ruled the vaccines mandatory in France, stating that, unless children were vaccinated, the state would not let them attend school, and their parents would not receive family subsidies.

The French case paralleled the situation in the United States in 2021 with the development and distribution of the state-supported RNA COVID-19 vaccine:

The most frequently documented factors associated with COVID-19 vaccine hesitancy included contextual factors, such as sex, age, and social inequalities; individual and group factors, such as trust in the healthcare system, public health authorities, and governments, and history of vaccination; vaccine-specific factors, such as concern for vaccine safety, perceived vaccine barriers, perceived effectiveness of vaccines, and concern about the rapid development of the vaccine; and disease-specific factors, such as fear of being infected with COVID-19, perceived severity of COVID-19, and knowledge of COVID-19. (Kafadar et al., 2023)

There was disagreement over the vaccine, and in this case hesitancy was promoted by political interests, though some sketchy technicians joined the resistance. The two political interests consisted of a largely unorganized group of anarchists and conspiracy theorists and an organized political right (a neo-fascist movement) intent on maintaining the status quo. This opposition to the state was enabled by the development of unregulated mass media, social media, and propaganda promoted by a state hostile to the United States (Kafadar et al., 2023; Yasmin et al., 2021).

Against this opposition, the state used its authority to push for widespread vaccinations through propaganda and by mandating the vaccine for all federal workers, contractors, service members, large employers, and health-care workers. However, it has not yet used its

authority to mandate this vaccination for schoolchildren or tie any government benefits or penalties to COVID-19 vaccination status. The technical authority of the democratic state is being challenged in this and other areas by the development of the internet, domestic and foreign propaganda, unregulated cable networks, and social media. The state's authority is a significant factor in technical development and utilization, but it is strongly challenged in democratic societies.

According to Ellul, science in the technological age is becoming subservient to technical applications. Research sponsored by the state must centre on applications to serve the public and aggrandize state power. The state emphasizes the practical rather than the esoteric or theoretical research (1964, pp. 313–314). The state assigns specific tasks to the scientific research that it funds through its agencies or grants to research universities, institutes, and large corporations. In 2022, there were some 22 “Grant Making Agencies” of the US government, allocating thousands of grants yearly (US Government, 2022).

For example, the US Department of Commerce offers financial and technical support for projects that enhance the global competitiveness of US products. The National Telecommunications & Information Administration, also under the Department of Commerce, administers grant programs to further the use of broadband and other technologies. These grants promote economic growth, education, public safety, health care, and other national priorities.

It is standard practice for states to disseminate this information to public and private entities. The United States has a decentralized system for the dissemination of statistical data consisting of 13 statistical agencies such as the Bureau of Labor Statistics, Bureau of Justice Statistics, Census Bureau, Economic Research Services, National Center for Science and Engineering Statistics, and many more. Other tools of dissemination include the Government Printing Office, which evaluates all government publications for inclusion in its dissemination programs. All federal agencies must submit their publications, regardless of medium, for evaluation to distribute print and electronic versions to the Federal Depository Libraries Program

nationwide. The National Archives and Records Administration (much in the news of late) serves as the official archive for the electronic content of the Government Printing Office.

The technical operations of gathering and disseminating information have become necessary as the nation-state finances and directs technical investigations. The resources of the national government are much more significant than universities or even major corporations can afford. Thus, the state is directly interested in supporting these institutions by granting research and development funds. "All this means a much freer movement among government, industry, and technical research centers than would otherwise be the case" (Ellul, 1964, p. 316).

Ellul remarks that, in principle, it is still possible for science and scientists to be independent of the state. Nevertheless, the best and the brightest will be called on to submit requests for funding. Many scientists will succumb given the low pay of many university professors (a common complaint) and the need for expensive labs and equipment (a huge university expense often paid for through these grants). American businesses spent \$441 billion on research and development in 2018 (Wolfe, 2019). Of this total, only about \$29 million, or about 6.5%, was devoted to basic research; the rest went to applied research (15%) and developmental research (79%). "In current dollars, federal funding for R&D . . . grew from \$3.5 billion in 1955 to \$138.9 billion in 2019, a compound annual growth rate (CAGR) of 5.9%" (Congressional Research Services, 2022).

At the same time, the federal government's share of funding research fell between 1964 and 2000, whereas the share funded by businesses rose. This declining share was the result not of a decline in federal dollars devoted to research (as evident above) but of a steep rise in corporate funding of research and development. In 2019, business-related research reached 70.7% of all research expenditures in the United States. However, this is an example of how to mislead (lie) with statistics. The steep rise in business research is the result of federal and state tax policies. Research and development tax credit

eligibility is extremely broad, and tax credits can apply to product development, new manufacturing processes, software development, and quality enhancements. So much of what passes for research in the private sector is indirect state-funded business development or the advancement of business techniques—another example of successful lobbying efforts on behalf of corporate America.

Ellul (1964) posits that “practical or purposive science,” instead of basic research, will dominate technical states over time (p. 317). This practical bent is valid for the United States, both directly by spending tax dollars and indirectly by sponsoring corporate research and development. The R&D system in the United States mobilizes technicians and scientists and orients them toward precise economic, military, and government objectives. Much state-sponsored research is devoted to practical and utilitarian ends to make government administrative and military functions more efficient (p. 317). Indirect funding of corporate research is aimed at making economic production more efficient. Ellul was confident in his prediction that techniques will multiply and become stronger over time. “The state and technique—increasingly interrelated—are becoming the most important forces in the modern world; they buttress and reinforce each other in their aim to produce an apparently indestructible, total civilization” (p. 318).

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Human Techniques

Before launching into a description of the development and deployment of human techniques aimed at adjusting the thoughts and behaviours of people to thrive in a technical environment, Jacques Ellul depicts the stressors that make these techniques necessary. He writes that much is required of modern humans, far more than was needed from all but a few of our ancestors. Now virtually all people are subjected to exploitation through intensive labour in the “monstrous technical mechanism” that we have created for manual and white-collar workers (1964, p. 319). The pace of work and the product itself are not set by the worker and not a source of contemplation and pride. Ellul claims that work is not more fatiguing or of longer hours but an “aimless, useless, and callous business, tied to a clock” (1964, p. 320), and it has little relation to anything called work in the pre-industrial era.

Modern work, he asserts, calls for different qualities in workers. They have lost control over the pace and length of time that they work. Furthermore, rather than expressing creativity in the actual work and the final product, modern workers must subordinate themselves to external rules and procedures of the organization. In traditional societies, work required a presence; the whole person—mind and body—needed to determine the pace, procedures, and goals of the

work. Today's work, Ellul writes, requires an absence of mind, for the whole person (including personalities) is subordinated to the procedures and ends determined by the organization (1964, p. 320).

Ellul's characterization of work in the mid-20th century might or might not have been accurate, but much has changed since then. Recent research on working conditions and worker satisfaction is not quite as bleak as Ellul maintained. To begin with, the job market has changed drastically since he wrote *The Technological Society* in 1964.

Changes in the American economy in the 21st century are affecting the U.S. workforce in significant ways, and in some cases reshaping the nature of work. For instance, advancements in artificial intelligence, robotics, and other new technologies are leading to increased automation and changes in work tasks. Online platforms have also grown for obtaining gig work, and employers are increasingly using temporary, part-time, or contracted workers. These nonstandard work arrangements may have implications for workers' safety, wages, and access to benefits. (US Government Accountability Office, 2022, para. 1)

Dudovski (2021) and others attribute the changes to several factors. First, the popularity of alternative work patterns is the result of workers' demands for more free time to spend with their families or to pursue their leisure activities and hobbies. Second, a better work-life balance is thought by many employers to lead to greater job satisfaction and thus better work performance and improved productivity and quality. Third, innovations such as telecommuting save the organization from providing office space and equipment to accommodate employees.

However, many employers are now contesting whether a better work-life balance is good for business. Some 90% of US employers, fearing a loss of control and productivity, were planning to have employees return to the workplace by the end of 2024 (Hyken, 2023). More to the corporation's liking, downsizing (often called "right-sizing" by senior executives) and part-time employment are also on the rise. They save the organization the costs of benefits, often over

25% of wages. Hiring two part-time employees to perform the job of a full-time employee is thus a significant saving for the organization. In sum, the primary rationale behind the changes in the job market in recent years is a corporate adaptation to changes in markets—recruiting and retaining employees, increasing the creativity and commitment of employees in their work, and improving their productivity and profitability.

The American Working Conditions Survey was conducted by the RAND Corporation, Harvard Medical School, and University of California—Los Angeles (RAND, 2015). With a nationally representative sample of over 6,000 workers, the survey was conducted in waves, beginning in December 2015 and ending with a fifth wave in September 2018. According to the 2015 survey, “61% of American workers perform repetitive or intense physical work. This work can include moving heavy loads or maintaining painful positions. More than half are exposed to hazards such as loud environments, extreme temperatures, hazardous materials, or unhealthy air” (para. 4). A total of 50% of the respondents reported that they had to work in their free time to keep up with workplace demands, with 66% claiming that they had to work at high speeds or on tight deadlines (para. 6). Whereas 75% reported that they can prioritize many tasks over others on the job, 36% said that they cannot determine their working days. Contrary to Ellul’s assertion of the meaninglessness of modern work, 63% thought that they are doing useful work. All of this, of course, varies by a worker’s age, gender, race, and education.

Nevertheless, it is not just work that subjects humans to unreasonable conditions. War and the threat of total war in the modern era affect all of humanity and life. Of technical necessity, modern weapons such as intercontinental ballistic missiles or even the smaller rockets, bombers, and artillery used in conventional war will involve civilian fatalities. Such casualties will be either intentional acts of state terrorism (Russia’s invasion of Ukraine, Georgia, and Chechnya) or extensive “collateral damage” (the United States’ invasion of Vietnam, Afghanistan, and Iraq). In sum, modern war

is inhumane, with all of us becoming potential targets, and there is little that we can do to protect ourselves and our families from its ravages. The modern age subjects many of us to conventional warfare and all of us to the threat of nuclear war. Ellul writes that this tension is beyond human power to endure, yet—as committed to technique as we are—we manage to withstand the stress and go about our daily lives (1964, p. 320). Human manipulation and techniques of control are essential in engendering continued support for war, both total and “limited.”

Ellul becomes almost poetic, rhapsodizing about the lost life and the dystopia that we have created. We humans evolved to use our muscles to gain our daily bread, and now we are chained to desks, sitting motionless for eight hours. We were “made to breathe the good air of nature,” not the noxious fumes and compounds of coal smoke and obscure chemicals. We were created to dwell in a “living environment.” However, modernity forces us to live in a cityscape of concrete, asphalt, and steel where “trees wilt” and “cats and dogs disappear little by little from the city, going the way of the horse,” with only rats and people remaining (1964, p. 321). In his vision, we now live narrow lives in cities rather than in the open country, alone rather than in the close-knit family groups of traditional societies. All people, Ellul writes, not just the proletariat, are subject to this anonymous and bleak world of the city. Overall, he paints a dark picture of modern life that smacks of romanticism about the past and does not do justice to the allure that technical civilization has for many people.

However, Ellul then returns to reality and, moderating his dislike of modern life, asserts more realistically that many of us are ill at ease in this newly built environment, despite its comforts and material abundance, and that the stressors of modern living take their toll on many if not all of us (1964, p. 321). He claims that technique transforms our essence as human beings and, in the process, creates a whole new human environment. The machine allows us to move faster, changes our concept of time and space, and multiplies

the powers of our senses. In our workplaces and homes, we are confronted everywhere by machines, hyper-organization, and technique. Our families and other associations have lost many of their functions and have no *raison d'être*. Daycares and educational institutions, as well as mass and social media, educate our children. Counselling services and family shelters advise us on our relationships. Banks and credit unions loan us money. The government and the marketplace have largely superseded all services that used to be the exclusive province of family and community.

Ellul argues that we have been liberated from physical constraints by technology but enslaved to abstract ones (1964, p. 325). He admits that we still do not know how all of these transformations wrought by technology and organization will ultimately affect social life. However, he suspects that recent literature on neuroses and other aberrant behaviours might well be related, asserting that the scientific literature of the day has demonstrated that we have limited capacity to adapt—psychologically, physically, or morally—“to the milieu technique has created” (1964, p. 331).

In the 21st-century United States, almost a quarter of all adults report having been diagnosed with anxiety, depression, or emotional distress in the previous year. This is the highest rate among high-income countries. Stress associated with social and economic needs often causes emotional distress—nearly half of those experiencing emotional distress report worries about social relationships or money. The United States has some of the worst mental health-related outcomes in the world, including the highest suicide rate and the second-highest drug-related death rate, though other high-income countries are not too far behind (Tikkanen et al., 2020). It is a matter of debate whether this mental health record can be directly attributed to the rise of technique, better record keeping, or other causes, such as the expansion of psychological diagnoses with no underlying increase in symptoms. (Better records and broader parameters for psychological diagnoses can be attributed to the expansion of technique itself.) At the least, the mental health evidence is consistent

with Ellul's hypothesis that technological societies increase stress for a significant portion of their populations. Moreover, these supposed stressors and available social supports deserve further study. There is a rich history of social science studies on this subject (Ensel & Lin, 1991; Lin & Ensel, 1999).

Ellul (1964) contends that assimilating humans into this new life has become the primary objective of the human sciences (p. 332). Accordingly, technological society has developed techniques to keep the population committed to the tasks of living, not by modifying anything in the environment but by acting on humans themselves. In this development, morale is all important since humans are remarkably resilient if their morale remains high (p. 321). Most humans are not equipped with such high morale or a will that is both steady and primed to rise to any demand. Therefore, the state and various organizations create the psychological conditions necessary to boost morale and the will to resist discouragement by modern life's conditions and tribulations.

Ellul gives several examples of the effects of positive morale-building propaganda in times of war, including the First World War, in which Allied and Axis propaganda allowed troops on both sides to endure the horrors of trench warfare for years. In the Second World War, German civilians withstood intensive American and British bombing. However, the American Strategic Bombing Service concluded that German industrial production and worker morale remained high till the end of the war. German propaganda carried the day in the struggle between it and Allied bombing.

Ellul also maintains that there is a close relationship between psychological motivation and industrial production. Modern society places people in stressful situations, and many are near the breaking point with the demands placed on them. An interdependent technical society must not allow the individual to lag or break down—it must minimize such conditions. Thus, society—through state and private sectors—furnishes individuals with “psychic forces” that come from outside them (1964, p. 322).

Ellul gives the example of an assembly line in which one worker lags because of fatigue and causes other workers to pause the line. The resulting guilt will goad the worker into performing the task despite fatigue or discontent. These types of psychological stimulants are both innumerable and spontaneous, according to Ellul, including homespun ideologies on work such as keeping your nose to the grindstone, taking pride in your work, and keeping up with the demands of the job—the types of ideologies found in *Reader's Digest* (1964, p. 323). There are also positive sanctions for diligent performance, including raises (though infrequent), benefits (picnics and corner offices or, more importantly, medical insurance, pensions, and sick days), and promotions (perhaps the most significant reward of all).

The only thing that matters in the technical world is production, which can only be attained through efficiently exploiting the workforce, “body and soul” (Ellul, 1964, p. 324). The “soul,” in this context, means a commitment to your job within the organization. This commitment is particularly essential in white-collar and professional work since it is often difficult to monitor quality in such occupations. The heart must be in it, or the individual must at least try to fake it. (As George Burns put it, “the key to success is sincerity. If you can fake that, you’ve got it made” (Burns, n.d.)) Ellul posits no limit to increasing production in the modern world—at least when it comes to exploiting workers, for artificial means can increase their level of effort. Physical technology and rational social organization allow the individual to cope with the material demands of living, and “psychological manipulation” allows the individual to cope spiritually and mentally (1964, p. 324). Many techniques surround and immerse the individual to form the human psyche and its interrelations. Specific traits and values are encouraged, and others are repressed.

As a result, the characters of the men and women who inhabit modern American (or French, Canadian, German, or British) society are different from those of just 100 years ago. The norms and values of Western civilization have changed, not because of the conscious

will of human beings, but because of the indirect influences of technique. Citing Karen Horney, Ellul asserts that “secularized Christian ideology” influenced traditional Western civilization with the highest values centred on kindness, charity, and benevolence toward others. However, the modern world’s social structures oppose such values. Competition is endemic to modern society. It rules economic, political, and social life, extending even to “human relations of friendship and sex” (1964, p. 333). This competition causes stress between the individual’s traditional human values and the new social realities, thus producing the neuroses, anxieties, depressions, and insecurities of the modern age. Ellul suggests that most neuroses are rooted in the failure of humans to adapt to this new social reality: that is, technical relations of the marketplace or the government replace familial and community relations.

Ellul is not the first and will not be the last to comment on this decline in family and community relations and its consequences for individuals and society. Robert Nisbet (1990/1953, p. 55) writes that “the family is a major problem in our culture simply because we are attempting to make it perform psychological and symbolic functions with a structure that has become fragile and an institutional importance that is almost totally unrelated to economic and political realities of our society.” According to Nisbet, the family has lost all functions in modernity save two: it is an institution in which we can express romantic feelings and sexuality, and it has become a haven in a cold and impersonal world. The extended kinship systems are often separated from the nuclear family by physical or social distance. They are unlikely to shoulder household burdens, provide daycare for children, offer care for aged parents, and give help to family members coping with stress. The functions of the extended family are increasingly taken over by formal service organizations staffed by specialists in psychology, physical health, counselling, social work, and related fields. The growth of these organizations is another example of the proliferation of secondary organizations and the rise of technique.

Mass Society

According to Ellul, the massification of society is an ongoing process, and many individuals struggle to maintain their traditional values. At the same time, they increasingly clash with the norms and values of society at large. The parallels between Jacques Ellul's process of massification and Max Weber's process of rationalization are remarkable. According to Weber, there are four primary motivators of human behaviour: (1) goal-oriented rational behaviour (formal rationality); (2) value-oriented behaviour; (3) traditional action; and (4) affective or emotional action. Weber posited that changes in the social structure (caused by population growth, economic development, secularization, and resulting bureaucratization) promoted goal-oriented rationality at the expense of other human motivations (Weber, 1964/1978).

Ellul's concepts of technique and rational social organizations mirror Weber's concepts of bureaucracy, which promote formal rationality and emphasize empiricism, calculability, and predictability. The significant difference is that Ellul locates the stress between traditional secularized Christian ideology and modern technique. Weber considered this stress to be rooted in human nature itself. In his conception, humanity was historically motivated by a mix of traditions, values, emotions, and rationality. The modern world, or technique, has emphasized formal rational behaviour at the expense of other values, emotions, and traditions, thus alienating individuals from their full humanity.

The rise of secondary organizations and their co-optation of functions performed by the extended family, community, and friendship networks are undeniable. From the cradle to the grave, secondary organizations are now the settings in which we are born, receive day-care in our first four or five years, and are educated for at least 13 years through primary and secondary schooling. After this foundational education, we might follow several different tracks: trade school (or technical education), military service, full-time employment, college,

or professional school. Secondary organizations, rather than family or community ties, provide loans, emergency aid, welfare, assistance to the elderly, health care, and eventually the service for and disposal of our remains. These massive structures (secondary organizations) were developed over the past century for technical and economic reasons. Technically, these secondary organizations can muster the resources and expertise to provide these services efficiently. Traditional primary groups often did not have the monetary resources, technical equipment, or expertise to perform these tasks efficiently. Economically, these services are profitable to corporations (often under government contract or monetary support) and provide jobs to millions in industry and government. They are not the result of a political doctrine or social movement; they are the world into which we are born and must act (Ellul, 1964, p. 334; see also Weber, 1958/1904, pp. 186–187).

The purpose of the new human techniques is to help individuals adapt or, in Ellul's words, assist in their mutation to reshape both heart and brain. Suppose integration into the social environment through normal means proves to be impossible. In such cases, Ellul adds, social engineers (technicians) will uproot individuals and place them in another milieu to facilitate their achieving equilibrium with the collectivity—the state of perfect adaptation in which their values, outlooks, and difficulties reflect those of the group itself. The individual becomes not just part of a group but also an element of the group (1964, p. 334). According to Ellul, these other milieus are re-education centres, parts of the new technical reality in authoritarian countries, and he predicts that such centres, perhaps under other names, will become the future reality of democracies as well (1964, pp. 102–103, 271–272).

The merging of the individual into the group is essential for the further development of human techniques. An important part of this massification is conditioning the individual to respond to mass media psychological manipulations and calls to action. This conditioning is vital to the success of methods of education and propaganda, both

of which serve to “massify” individuals and move them in directions desired by the socio-cultural system. Again, this change in the conditioning of humans in democratic societies is not the result of political theory or some would-be dictator’s machinations. Ellul writes that the cause is “much more profound, at once human and inhuman.” It is human because we have been conditioned to desire it, welcome it, and further its development. It is inhuman because it is caused by the self-augmentation of technique—physical technology, organization, and rationalization (1964, p. 335).

Ellul’s thesis regarding the indispensability of human technique in modern society is threefold: (1) modernity has modified the physical and human environments as evidenced by the declining importance of primary groups; (2) secondary bureaucratic organizations have been enlarged and centralized; and (3) there have been “superhuman demands” on individuals, causing “fundamental discord” with their social environment. As a result of these trends, social structures have evolved to condition individuals and encourage their adjustment to these new social realities (1964, p. 335).

Human Techniques

Ellul doubts that technical humanism is a viable concept. Current techniques might benefit humans in terms of efficiency and productivity, but there is no guarantee that they will serve them in the future. There are no fundamental reasons for technique to subordinate itself—its power and reach—to the interests of humans as individuals or the whole society. Because of this, technique has the power to do great harm (1964, p. 340). Indeed, he adds, technique has been at the forefront of brutally exploiting humans and the environment as well as contributing to humanity’s most significant achievements; it mixes the bad with the good.

Traditional leadership was often based on art, inspired by traditions, religious or philosophical values, love of country, or hatred

of oppression by others. Often intuitively, sometimes as a result of reason or knowledge gained from others, some individuals develop leadership skills to influence the hearts, minds, and acts of others. However, intuition and art are no longer enough. The ability to influence individuals to act has to be determined systematically to deal with modern problems more effectively, many of which are caused by techniques themselves (Ellul, 1964, p. 340). According to Ellul, a successful technique for influencing the actions of people must meet three criteria: (1) it must be general to everybody in every area of life; (2) it must be objective, a function of society itself, not dependent on the personality or values of the individual employing the technique; and (3) it must be permanent; psychic action must be brought to bear on individuals from the beginning of their existence to the end of their days. Human techniques aim to understand the mechanisms of human behaviour with the goal of managing or manipulating them with precision (1964, p. 341).

The transition of leadership from art to technique is demonstrated first by the technician's mindset. Technicians who use human techniques are not interested in the broader social sciences; they are interested only in data deemed helpful in their work—whether in public relations, as career counsellors, or as propagandists. For most human technicians, calculability is highly valued, hence the reliance on mathematics and statistics in creating and refining their techniques (Ellul, 1964, p. 341). Again, this is consistent with Weberian theory. The third sign that art has given way to technique in influencing human behaviour is reliance on experimentation and, because of the limitations of experimenting on humans, quasi-experiments such as surveys, focus groups, and interviews. These empirical checks on the efficacy and precision of techniques are also valuable for refining techniques over time.

There is a multiplicity of human techniques in the modern world, so many in fact that Ellul declines to enumerate them, claiming that to do so would fill a whole library (1964, p. 343). Human techniques focus on the adult and the child, the employed and the unemployed,

line managers, and executives. Some techniques concern both mind and body, and others focus on motivations and commitments. Technicians base their techniques on the social and behavioural sciences, observation, logic, and reason. They apply these findings in diverse fields such as education, advertising, management, public relations, and psychological counselling. Ellul summarizes several of these fields to illustrate the basic themes and principles of applying techniques in human affairs.

Education

Ellul begins his discussion of educational techniques by describing the traditional educational experience of students in France before the 1950s, much of which would pass for American education in the same era (and beyond). He describes dark and institutional schools where students saw their teachers as enemies and dispensers of corporal punishment, excessive homework, and incomprehensible and boring lectures. The textbooks were dense with writing and devoid of illustrations, and bullies stole lunch money or tormented students sitting in front of them. The competition for grades and class positions was relentless. Many students saw schoolwork as a burden and the school itself as a hostile place. Life was simpler then (1964, p. 344). According to Ellul, all of this was overthrown by a series of techniques called “progressive education.”

Progressive education is student centred, with the happiness and comfort of the child as its end. The emphasis is on learning as fun, developing all of the child’s faculties, stressing physical, manual, and intellectual abilities rather than cramming children’s heads with rote memorization of dates and other facts. The educational process is supposed to be devoid of force, and the teacher must meet the child’s needs to individualize instruction wherever possible. Such instruction is not focused on the intellect alone but encourages children to discover facts and make generalizations about what they observe.

Ellul asserts that progressive education is a rigorous technique that demands much from the technicians (teachers) who employ it. Like all human techniques, it is not a mechanical procedure and much depends on the personal characteristics of the technicians to pull it off. Ellul adds that this reliance on the individual is especially true since the progressive educational technique is in its infancy. He notes the difficulties in transitioning to the new system from the old system: an antiquated examination system in France, large class sizes, and the training and recruitment of qualified teachers. However, he believes that these obstacles will disappear over time.

There is little doubt that children educated in this way will enjoy a much-improved educational environment and be better positioned to develop their full potential. However, progressive education is not just for the child's benefit. It is also structured to benefit the technical society. Ellul recognizes the critical importance of education of the young in socializing them to the modern social order. He believes that once this is understood no expense or sacrifice will be too great for a society to fund and fully implement this type of education. In this connection, he emphasizes the importance that totalitarian regimes place on educating children in their systems. He predicts that the new education in which technique is given free rein in the socialization of children will become a key principle in democratic societies (1964, p. 346).

Ellul (1964) cites Dr. Maria Montessori in her speech to the United Nations Educational, Scientific and Cultural Organization, which he believes is emblematic of liberal education. Montessori spoke of the necessity for children to understand life and its needs and to know that the "fundamental reason for all existence" is "the search for happiness" (p. 345). To reach these goals, the child should know what must be done for the good of humanity, and understand the necessity of peace among nations, which she asserted is dependent more on education than on politics. "Education must become a truly humane science to guide all men to judge the present situation correctly" (p. 346). The Montessori method of education, still popular in many

circles today, involves children in self-directed activity, hands-on learning, and collaborative play. Children make choices in their learning, and teachers offer activities to guide the learning process. Montessori education frees the child from school, community, and family bonds. However, according to Ellul, it consists of pervasive surveillance of children, precise regulation of their activities, spiritual indoctrination, and teaching them the joy of collaboration with others. It is a technique designed to integrate the child into the existing social order (p. 347).

State-supported primary education becomes a technical and social force, developed, continually sharpened through logic, experiment, and observation, and directed at the child to achieve a specific social end. That end encourages the child to adapt and conform to society's needs and to integrate into the social body with as little friction as possible. Primary education is a technical tool used to mould children to take their places in society, and its main purpose is social adaptation. Although advocates talk a good deal about the higher aims of this education, its main goal is not the child as an individual "but the child in and for society." Ellul adds that it is not the ideal society of truth, beauty, and justice that the child is being prepared for "but society as it is" (1964, p. 348).

As a society becomes more totalitarian, Ellul argues, it becomes more difficult for the individual to adapt to its dictates; education systems have therefore evolved to secure greater conformity by students. In the earlier industrial era, this conformity required extreme self-discipline, regimentation, rote memorization, and obedience to authority. In our technological society, there is a need to broaden children's outlook and develop their social personality and satisfaction with the status quo. Ellul has no doubt that this approach makes the child more balanced and "happier," but there is a social cost. Much like the drugs that serve to accommodate people to intolerable conditions of work and life, the new educational techniques are designed to help children adapt to the current social reality. It is a technique of submission; children are socialized to meet societal expectations

and to become part of the social order. They are encouraged to strive for the rewards that society offers them: careers, marriage, success, and consumption. They are taught that they live in a world of change and that they must adapt to it (1964, pp. 348–349).

The argument that preparing the young for their roles in society is what education has always done is beside Ellul's point. Educational techniques now prepare the young throughout their development based on applied social science, logic, observation, and reason. Also, the goal of education has changed since the early industrial era. Then the goals, aside from basic reading and writing skills, were regimentation, rote memorization, self-discipline, clock-oriented deadlines, and obedience to authority—goals congruent with early industrialism. The keyword for Ellul in his discussions of human techniques is *adaptation*; all human techniques are designed to enable individuals to adapt to whatever social changes society throws their way. In a technocratic society, material technology, private and government bureaucracy, and rationalization are proliferating at an unprecedented rate—social change is the only constant. Current educational practices strive to prepare the child for this world of hyper-change. Ellul compares them with the Napoleonic system of education, which the state formed to produce the administrators and managers needed by it and the economy; now this model of producing conformity among children to meet the needs of the socio-cultural system has become global. These are not humanistic goals. They are technical goals.

Higher Education

As far back as 1950s France, Ellul notes, there were complaints that higher education was not producing enough technicians to meet industrial needs. He quotes *Le Monde* in 1952 as saying that “there are too many half-baked intellectuals and not enough technicians” (1964, p. 348). Increasingly, higher education instruction is oriented

toward the practical and the applied, and this career orientation is especially true in hyper-industrial American society.

Traditionally, higher education in the United States was seldom as bureaucratically organized as corporate or government institutions. American university organization was based on European traditions in which universities were organized around academic disciplines. Moreover, these traditional universities depended on educated professionals who used their numbers and expertise to demand a voice in university governance, which often superseded bureaucratic order in an administration; many of these administrators were former professors coming up through the ranks themselves. This professor orientation began to wane in the latter half of the 20th century as universities gradually transformed into corporate-like institutions producing technicians, managers, and executives to meet the needs of a technological society.

Before getting to the educational functions of American universities, I will explore how social forces external to the institutions caused them to adopt more technical procedures to increase their productivity and efficiency. The baby boom in the United States added approximately 4.25 million new babies every year between 1946 and 1964 (Patterson, 1996). First primary schools and then secondary schools had to scramble to muster the resources to educate the growing horde. The boomer generation began enrolling in universities and colleges in the mid-1960s through the late 1970s, causing massive pressures to expand physical plants and staff. With the decline in the birth rate after the boom, these institutions became desperate for students. Also, beginning in the early 1980s, many state-supported universities could no longer expect significant increases in funding and had to rely increasingly on enrolment to fund their activities (The Urban Institute, 2021). In response, they rationalized their business organization by controlling instructional costs, tightening the coordination of faculty members, and increasing the use of part-time workers (low-paid adjuncts and graduate students). Universities responded further

by cutting programs with few majors (mainly in the humanities and arts), raising tuition and fees (a process made easier with federal student loan programs subsidizing parents and students), and investing in educational programs, services, and social amenities designed to attract students.

Modern universities in the United States monitor faculty performance through student performance (assessment), student opinion surveys, and observation of professors in the classroom and online. Administrators use these assessments to award merit, tenure, and promotion (instructor, assistant professor, associate professor, and full professor). The intensification in monitoring faculty members is partly the result of the reliance of educational institutions on attracting and retaining students—it pays to have professors who are popular with students, helping to retain students through the years and to graduate a high percentage of them (all measures of quality used by administrators, accrediting agencies, as well as state and federal governments). The change in monitoring professors is also a result of the increase in educational administrators and the general tightening of the coordination, monitoring, and control of workers to ensure continued efficiency and productivity throughout American society.

It seems that, unless administrators monitor professors, the former cannot assume that the latter will perform at their best. Most recently, the tenure process has come under increasing attack among state legislators and others pushing for a “post-tenure” review process to weed out those who no longer perform; others favour the scrapping of tenure altogether. There has also been an increase in resources devoted to responding to federal and state “requests” for data to ensure “accountability.” David Riesman (1980), a sociologist and an advocate of educational reform through his work with the Carnegie Foundation, suggests that governments do this in the name of consumer protection. The apparent belief is that, if left to their own devices, colleges and universities would become degree mills, selling credentials to those who can afford them.

A second characteristic of the rationalization of higher education is the standardization of course content. This standardization began with the widespread use of textbooks but has extended to the demands of program accrediting boards, state licensing agencies, and state-appointed boards of regents. Universities often undertake standardization to promote quality and comparability within them—so that sequenced classes can be based on the certainty that prerequisite course material is covered. Some universities require a standard textbook for multiple-section courses to control costs and relieve some burdens on university bookstores. In some programs, the university's control extends to what is covered in each class session. This is consistent with coordination from the top and ensures that minimum classroom standards are met. There is also a move in many states to mandate the standardization of classes across universities to ease student transfers between them or to control costs by centralizing course creation (goals, texts, and coverage) and approval while avoiding redundant efforts by different campuses around the state.

A third marker of the increasing rationalization in American universities is the growth of the power and influence of central administration. As the numbers of students, programs, and physical plants grow, the division of labour increases, the administration enlarges, and its authority is enhanced. Riesman (1980) indicates that in the past most university presidents came from the ranks of professors, with doctorates from various disciplines. However, the proportion of presidents who served as faculty members has declined since then. That proportion dropped from 31% in 2006 to about 19% in 2016 (American Council on Education, 2017). More than 20% of college presidents are hired from outside higher education itself (often politicians or successful businesspeople), and some 41% of all American university presidents hold a doctorate in education and started their university employment as administrators. A specialized technical degree in educational administration (or some related higher education field) is becoming the credential needed for higher academic administration.

Moreover, perhaps because of these changes, there is a tendency for centralized administration to manipulate or ignore traditional “shared governance” by the faculty regarding university policy and even the academic curriculum to meet the goals of the institution more efficiently. A corporate model based on an administrative hierarchy and bureaucratic procedures is taking hold. A university can be far more efficient without debate, discussion, or compromise. The increasing rationalization of American universities is also evident from the increasing emphasis that their presidents place on financial matters. Of current university presidents, 65% state that financial matters—budgeting and fundraising—occupy most of their time (American Council on Education, 2017).

Another indicator of the rationalization of American higher education is the rise of contingency workers or adjunct instructors. According to the American Association of University Professors, 73% of higher education faculty in the United States are not tenured or on a tenure track. The highest percentage of contingent faculty are at two-year community colleges, where tenured positions are often less than 20% of the faculty. “While a little less than 50 percent of faculty positions at master’s and baccalaureate institutions are part-time, more than 65 percent of positions at two-year institutions are” (AAUP, 2018).

Another technique used to extend teaching efficiency is to increase class sizes. It is common practice to hold class sessions in large auditoriums where faculty, often with the aid of graduate students, teach hundreds of students per course. In the process, they produce hundreds of credit hours and thus revenue for the institution. To accommodate such numbers, professors (technicians) rely on machine-graded multiple-choice tests, audiovisual equipment, the internet, prepared educational supplements (often extensive materials that come with textbook adoption), and deliberately inexpensive graduate student labour.

Technique integration into higher education is further evident from the rise of “alternative delivery systems,” in other words

web-based classes that can extend the reach of professors through the internet, computer classrooms, and labs. Professors who create online courses can continue to teach them even after death since the courses can be administered through adjunct instructors or graduate students (Tamara, 2021). There are now thousands of online degrees offered by American institutions, both private and public, undergraduate, graduate, and professional; there are even several universities that only offer online degrees with very few full-time faculty. Other course delivery systems include televised courses, DVD courses, and closed-circuit TV courses that wire them from one campus to others in the region. One of the newer innovations is teaching a course using computer conference software. These cost-cutting trends—adjuncts, temporary faculty, web technology, and larger classes—increase the efficiency of education and the university’s productivity as defined by the accrediting process.

Like that of a corporation, a university’s health is measured by growth in market share or, in today’s climate, at least in maintaining its existing share. The rationalization of higher education is also evident from its attempts to maintain or increase student numbers through marketing a proliferation of professional and semi-professional degrees. This proliferation is accompanied by the precipitous decline of the liberal arts as viable majors, particularly in the arts and humanities—the bulk of the traditional disciplines that used to define university education itself.

Another way to increase the university’s clientele is by marketing to “non-traditional” students (age 25+). Many older students must “retool” to stay employed in the ever-changing economy or seek advancement. This marketing strategy is part of the university’s more significant career focus. In 2025, over 24 percent of all college students were 25 years of age or older (Welding & Bryant, 2025). A recent innovation is the development of micro-credential programs, which can be recognized by digital badges, awarded to students who complete courses in specified skills (say, forensic accounting) as credentials for employment.

Universities also attempt to increase the number of international students through programs that bring them from their home countries to American campuses or satellite campuses overseas. Again, this is an attempt to expand the number of students in the institution. Many observers have written of universities overselling foreign markets to the detriment of students (Riesman, 1980, pp. 218–224). “During the 2019–2020 school year, approximately 1,075,496 foreign-born students were enrolled at U.S. colleges and universities, representing 4.6% of the total U.S. student population. Students come to the U.S. from roughly 200 countries, though more than half are from China and India” (*International Students and Graduates in the United States*, 2022).

A significant increase in resources is devoted to marketing the university to students to maintain or grow their numbers. Moreover, the costs of student marketing are rising. Riesman (1980) points out that the escalation of marketing strategy was based on the irrational belief that other institutions would not follow the same strategies to increase their enrolment. Those that did would cancel any temporary gains in the number of students and render the recruitment process far more expensive. Riesman then gives a classic example of how an extreme focus on a goal can often undermine the institution itself: “Each director of admissions thinks his or her stratagem is unique, failing to realize that a hundred others, no less hungry and intelligent, will think of the identical devices” (p. 113). Students must bear the high-stakes costs of recruiting them—increased tuition, larger class sizes, inadequate library or computer support, and poor maintenance of university facilities. Although spending on university marketing is hard to track since it is spread over several departments, one estimate by Kantor was that in 2018 it was about \$2 billion (Marcus, 2021).

Another symptom of widening the pool of potential students is the spread of remedial education. “Every year, millions of new college students arrive on campus lacking the necessary academic skills to perform at the college level. Postsecondary institutions address this problem with extensive remedial programs designed to strengthen

students' basic skills. In 2011–12, about one-third of all first- and second-year bachelor's degree students—29 percent of those at public 4-year institutions and 41 percent of those at public 2-year institutions—reported having taken remedial courses” (National Center for Educational Statistics, 2016). “As many as 60 percent of entering college freshmen are placed into remedial education courses to develop skills that they should have learned in high school, at a cost of more than \$1 billion annually” (Jimenez et al., 2016). Manno (1995, p. 48) asks “can it be true that large numbers of students unable to do serious college-level work in reading, writing, and mathematics are able to do serious college-level work in history or business?” Open admissions, he claims, send the wrong message to high schools and their students. No admission standards in college, he says, lead to no exit standards in high schools.

Riesman (1980) relates the decline in standards to university-student market relationships. With institutions competing frantically with each other for students, “faculty members and administrators will hesitate to make demands on students in the form of rigorous academic requirements for fear of losing ‘FTE’s—full-time equivalent students” (p. xiv). The erosion of the core curriculum—the number and quality of courses often designated as “general education” or “distribution requirements” aimed at educating the whole person (the remains of a traditional liberal arts focus)—is evidence of this decline in standards and rigour. Riesman again relates the decline of the core to the student market, to the student as consumer, “since any requirement is likely to turn away prospects” (p. 108).

Evidence of educational decline comes out in report after report. James Williams (2019), in *The Decline in Educational Standards: From a Public Good to a Quasi-Monopoly*, writes about the commodification and decline of academic standards in American higher education over the past 50 years. He, too, attributes much of the problem to the need to attract students and the consequent watering down of course content and grade inflation to boost retention and graduation rates. Much of higher education has become a business, with regional

universities and community colleges competing with flagship institutions and each other for students. Including the well-financed privates, the not-so-well-financed privates, the massive online universities, and the diploma mills, it might well be the most competitive market in the United States.

College majors do not just teach a list of skills and general factual knowledge. More importantly, they socialize students into the discipline's values, ideologies, and interests (this is true of any discipline, though I would argue that the liberal arts tend to instill broader values and ideologies than professional fields). For far too many students, the liberal arts and humanities in their general education courses are viewed as non-essential, tolerated (to varying degrees), and subordinate to their occupationally focused majors. Many universities have abandoned their general education programs or have cafeteria-style distribution requirements that allow students to select courses that directly support their professional degrees, such as micro- and macroeconomics for business majors to meet their social science requirements or psychology for nursing and other health-related professions. On the off chance that humanities and social studies professors get to instruct such students, many already have a personal stake in the status quo; they are junior doctors, businesspeople, and social workers. This early commitment to the status quo makes students much less flexible and less willing to experiment with new ideas; it also goes a long way toward explaining why undergraduates no longer have a unique subculture.

Another factor behind the decline of general standards and the core curriculum is the “dis-integration” (in Durkheim’s sense) of broadly subscribed cultural norms, values, and ideologies in American society. This weakening of the collective conscience, combined with the increase in specialization at universities, has led to multiple disciplines and “special” interests in campus debates about university standards. In addition, several academic movements—postmodernism in particular—have been hostile to the Western humanistic and scientific tradition. Some postmodernists emphasize themes

such as subjectivism and relativism, rejecting notions of objectivity, truth, and validity of the scientific enterprise. Such postmodernists claim that everything is rooted in observers, their class, race, and resulting ideology (see Harris, 1995, for an extended discussion). Consequently, getting professors to agree on what should constitute a common core is challenging. Getting them to agree on what every student should know is difficult.

Riesman (1980) attempted to look at the consequences of this competition for headcounts, finding that it affects far-ranging areas of the university and society. One indicator of this vigorous recruitment of students is the growth in the percentage of high school graduates (aged 18 to 24 years) who attend college. This number has gone from approximately 34% in 1986 to 62% in 2021. Among recent high school graduates aged 16 to 24, college enrolment rates for men and women were 55% and 69% respectively. Although the pool of 18 to 24 year olds is declining, and the competition among colleges for students is fierce, universities must continually widen their nets. They have adapted to serve this broader demographic to meet the needs of students and an advanced technical society more effectively.

In response to the market (and often parents), institutions of higher learning have increasingly focused on occupational training for students. According to My Degree Guide (2023), American universities' five most popular majors are business related (Business Administration #1, Accounting #2, Marketing #6, Computer Science #10, and Finance #11). Most remaining majors are also career oriented (Nursing #3, Psychology #4, Education #7, Elementary Education #8, and Criminal Justice #12). Just two are from the traditional liberal arts, Communications (#5, now often seen as a "business light" degree or as preparation for entry into media) and English #9. Interestingly, Biology was the only science to make the top 25 list (#13).

In marketing career-oriented majors, colleges are responding to actual economic conditions. According to the National Center for Educational Statistics, the employment rate in 2021 was higher for 25 to 34 year olds at higher levels of educational attainment. Those

with bachelor's degrees or higher had the highest rates of employment (86%), regardless of gender, compared with those with some college education (75%), those who completed high school (68%), or those who had not completed high school (53%) (National Center for Educational Statistics, 2022). People go to college because the labour market favours college education, and they have higher employment rates and earn more than those with a high school education or less.

According to some estimates, 65% of all jobs in the American economy require some postsecondary education or training; 35% require at least a baccalaureate degree (Carnevale Vale et al., 2014). Major occupations that require college-level applicants are growing faster than the overall jobs in the economy. Part of this is the result of the changing nature of the economy. However, part of it is also the result of the educational upgrading for many existing jobs (called "credentialization") and does not represent a meaningful change in responsibility or compensation.

Many of the fastest-growing jobs available for college graduates are in the "professional-specialty occupations" classification of the US Census Bureau, such as engineer, registered nurse, teacher, counsellor, and social worker. The second largest category is "executive, administrative and managerial occupations." These two broad groups account for over two-thirds of college-level employment in the United States (Mittelhauser, 1998). People go to college for the credentials to qualify for employment in these areas, as evident in yearly surveys of first-year American students "Just over half (51 percent) of students say they enrolled in higher education for higher earning potential, 45 percent are looking to access better job benefits and 40 percent say their field of study requires a degree. Around two in five students (39 percent) say they're looking to explore potential career opportunities" (Inside Higher Education, 2024).

This personal vocational focus is supplemented and encouraged (some would say created) by a political system that promotes higher education as a means of workforce development and little else. In addition, the corporate system demands that higher education (and thus

governments, parents, and students) subsidize many of its training costs. University systems and technical schools follow these corporate and government priorities, rapidly becoming worker training centres for corporations and the nation-state—selecting, sorting, and training future workers for the technological society. A recent development in many states across the United States is the 90-credit hour bachelor's degree touted because it reduces the time to graduate from four to three years. Typically cut are foundational courses considered non-essential for the major and elective courses, and there is a more rigorous focus on core competencies required for the major. The development of such degrees is promoted for their efficiency (saving time and money for students and parents), exclusive focus on workforce needs, and reduction of the costs of higher education for states.

There has also been growth in the number and power of professional and occupational accrediting boards, which often dictate specific courses and contents to faculty. Significant personnel and money resources must be expended to gain and maintain these accreditations. This trend is a mix of standardization to ensure minimum quality and “relevance” of the educational program for student consumers. It is also the result of self-interest by occupational groups to raise standards and restrict access to various professions.

All of these changes (and more) can be related to increasing rationalization, a consequent increase in the division of labour, and the growing function of colleges and universities in training technicians. However, we must still detail the effects of these changes on the educational “product” and society itself. Professors complain about students in campus offices and hallways during professional meetings (where most of the actual discussion takes place). We complain about students who are not conversant with their culture and often hostile toward the arts, humanities, and social studies. We complain of students who are indifferent toward politics and the governance of their society, students whose only interest (and value) seems to be pursuing a comfortable career. Some of this talk, no doubt, is a look back (with heavy doses of nostalgia) to the days when we were

undergraduates going through the “most exciting time of our lives.” Nevertheless, by catering to student desires through watered-down core requirements and an emphasis on vocational education, the university does not always give students what they need.

However, there is another side to the issue of declining standards and excessive career focus. A complete answer to the question “why?” should discuss the types of workers needed by technocratic societies. That those on top of the dominant bureaucratic hierarchies need a broad traditional liberal arts curriculum could be argued. Tim Askew, writing in *Inc. Newsletter*, estimates that over a third of the chief executive officers of the top Fortune 500 companies have liberal arts degrees. He asserts that they and other corporate leaders with such degrees have the intellectual flexibility and critical thinking skills to further their organizations’ goals. “They know how to tap into the non-quantitative intuitions that constitute the foundation of creative business and creative life for that matter. They know how to bring love, meaning, and passion, as well as immediate profit, to entrepreneurship and long-term corporate health” (2018, para. 7). In an advanced technological society, that need might be as high as 15% to 20% of all corporate and government positions, a figure that our best private and public colleges can supply.

However, it is difficult to make the same argument for the millions of technical specialists, semi-professionals, and middle managers produced annually by private and public universities. Suppose we assume that most of these students are destined to serve in the middle levels of bureaucracy or, at best, as professionals dependent on public or private bureaucracies to practise their skills. In that case, it might be that the old liberal arts disciplines run counter to these bureaucratic needs. Critical thinking (which could be defined in terms of Weber’s concept of substantive rationality—the ability to exercise goal-oriented rationality within a holistic context of traditions, emotions, and values) is not in high demand in such positions. To have middle-level managers or government accountants competent in critical thinking (as opposed to problem solving in their specialties), constantly asking “why?” or “should we?” instead of executing

decisions from on high, would impede the efficient operation of the organizations. Apart from leadership at the top of the hierarchy, bureaucracies value technical expertise since it leads to efficient operations in attaining organizational goals. Nevertheless, such a narrowing is counter to traditional views of education. More importantly, it is counter to the needs of a liberal-democratic social order.

The Technique of Work

Ellul's dissertation on work begins with techniques to adapt the worker to the job's requirements. This complex includes vocational guidance, the organization of labour, and the physical and psychological tools that can aid the individual to perform with optimum efficiency and thus benefit the overall organization. Ellul reports that work techniques at the beginning of the industrial era gave little attention to humans tending to machines. Then, under the "scientific management" system of Frederick Winslow Taylor, workers' productivity was increased through disciplined movements, production lines, and detailed divisions of labour. Under this regime, the exploitation of workers was markedly increased, and their happiness and well-being were generally ignored.

Then, over time, managers began recognizing the human factor in production and became concerned with optimizing results rather than focusing on maximum exploitation. Human technicians realized that psychology and happiness affect productivity and that they had to adapt work to the emotional and psychological needs of workers (Ellul, 1964, p. 350). Workers will not give their commitment and skill to a job unless they believe that they are integral parts of the process and that the economic system is in line with their interests. Compensation alone does not motivate workers to give their best efforts; improvements in work conditions are also insufficient. Although such attributes are essential as a foundation, such as hygiene and safety, the key to motivation is psychological. Much work in the modern

world is routine and boring. Both blue- and white-collar jobs follow rational procedures set from above, with little or no room for initiative or thought. The worker is often bored, disassociating the mind from the body. The solution is integrating workers into the workplace, promoting friendship and community within their division, and instilling pride and social meaning in their work.

The specific techniques of integrating the workforce vary by country and enterprise. They can include reorganizing a manufacturing plant, sponsoring company social events (family picnics, beer busts for the younger tech industries), and company sports teams. Other techniques include removing cubicles and opening office spaces, inviting workers' participation in advisory boards, providing a gym at the corporate location, and even granting a seat on the board of directors (these human techniques are widespread on college campuses as well). The human relations office oversees all of this activity directed at workers.

In the early part of the Industrial Revolution, tool and die makers designed machines for efficiency, with workers who had to tend to them being an afterthought. It was not until the early 20th century that machines were designed with workers in mind. Concern with efficiency and productivity was the drive behind the reduction in physical fatigue and the increased attention to safety (Ellul, 1964, p. 351). As a result, industrial machinery became further adapted to workers' physical needs by progressively eliminating causes of fatigue such as physical exertion, constant standing, and sensory overload. However, reducing physical exertion also decreases mental concentration, leading to boredom and decreased productivity. According to Ellul, all of the efforts at adapting workers to an industrial world have merits, but they also have limits.

Nevertheless, one must admit, the adaptations were made not for workers' benefit but to maximize productivity as efficiently as machine technology and techniques of worker manipulation will allow. Each technique is part of a system. Expanding productivity increases consumer goods and services, parts of the culture that keeps workers committed to their employers.

A second technique in coordinating and controlling the workforce is to use psychological counsellors as “safety valves” to address employee discontent. Again, Ellul points out that these counsellors are not there for workers’ benefit, for they do not counsel personal problems, encourage life changes, or solve serious problems. Their function is to listen to complaints. It is well known, he says, that expressing suffering brings some relief and that keeping things inside can lead to rebellion or unrest as well as loss of productivity. If workers communicate their feelings to those around them, then doing so can lead to unrest or revolt. The counsellor on duty is there to relieve steam and little more. Any relief of the suffering caused by technique, Ellul says, “is secondary” (1964, p. 353). Management’s concern is technical development, which calls for humans’ continuing adaptability to it.

The problem for human technique is to integrate the individual into the group. According to Ellul, it aims to rationalize “employee-employer relations” and ensure maximum productivity with efficiency in using human and material resources (1964, pp. 353–354). Based on an industrial model, the human relations system is developing along industrial lines, with strong ties among corporations, governments, foundations, and educational institutions.

Citing W. E. Moore, Ellul claims that there are four significant characteristics of human relations. The first is that human relations concerns are centred on the job; human relationships are central to being human, and human relations as a technique are only concerned with those relationships related to technical activities. The second characteristic is that human relations are considered universal. There is no room for arbitrary groupings such as race, ethnicity, religion, or sexual preference unless they concern production. The third is rationality, and the fourth is impersonality. Combined, they refer to the fact that relations should be conducted rationally; emotions, personal prejudices, likes, and dislikes should not play any role in the organization. These are all characteristics of Weber’s typology of bureaucracy associated with the rationalization process.

Ellul explains that two human relations theorists, Jerome F. Scott and R. P. Lynton (1953), lend support to Moore's characterization. Going further, they state that our complex technical society is destroying all foundations of traditional community. People must be encouraged to enter and sustain human relations in a technocracy. They add that this is necessary for both the individual's and the corporation's progress (Ellul, 1964, p. 355). They further urge human relations to encourage these relationships and organize employees into small groups mutually responsible to one another but directed toward overall institutional productivity.

Ellul concludes that technicians developed human relations techniques to help the individual adapt to technical civilization, to force the worker to accept the status quo, and to accept "slavery" to the organization. The purpose of human relations is to support community and happiness among colleagues and work groups (which Durkheim recommended to replace some of the bonds lost with the passing of traditional societies). These techniques, Ellul states, are "fakeries and shams" provided to avoid conflicts in a technical environment (1964, p. 356). (C. Wright Mills reached a similar conclusion in the 1951 book *White Collar*.) Furthermore, the relationships that we form are not simple counterweights to technique (physical technology, organization, and rationalization) but extensions of work techniques into our personal lives and relations with others. Ellul likens them to "lubricating oil" for organizational machinery but not a means by which humans can recover spontaneity, social bonds, or a sense of worth. Instead, they are simulations of primary connections, "a delusion which desiccates the individual's desire for anything better" (1964, p. 356). Although they undoubtedly add to the comfort and happiness of individuals, they are oriented toward manipulation and compulsion. Technical production is the goal. Moreover, this is true of socialist and capitalist societies, democracies and dictatorships. The specific techniques might differ, but the ends remain the same.

Such manipulation and compulsion are not done by evil men and women, Ellul asserts; rather, they result from the necessity of

addressing the social problems caused by technical development. The technical complex consists of mechanical, organizational, and psychological techniques. The technicians in this complex are prone to view human beings as just another object to be manipulated and controlled in accordance with the organization's needs. The complex determines the character of the men and women, boys and girls, who inhabit modern society. These techniques permit people to thrive and achieve happiness, and they are subject to additional and more effective techniques as development continues. The more substantial this development, Ellul claims, the greater the need for additional technical countermeasures and the more sizable the role of technique in modern life (1964, pp. 356–357).

Ellul reluctantly dismisses labour unions as a countervailing force opposed to technique, noting that they have long been another form of technical administration. Unions are part of the universal need to organize to have any real impact on our technological society. They have served to eliminate some of the worst abuses of capitalism—at least they did in American society until their power was curtailed in the 1980s. Nevertheless, they are not a “revolutionary force,” according to Ellul, because they have become part of the basic structure of technical societies (1964, p. 358). Although they have great educational value and not inconsiderable political power, and they have gone a long way toward improving the lot of workers, they are technical organizations that encourage the integration of workers into technological society.

Vocational Guidance

Before going into the most pervasive of all human techniques, propaganda, Ellul briefly looks at vocational guidance, a technique designed to identify an individual's aptitudes, interests, intelligence, and other characteristics and match them with occupations in the labour force. At the time of his writing (1964), Ellul called this a new technique that claimed to match people with their most suitable vocations,

which they could perform well and in which they could find meaning and happiness. Although this technique was in its infancy, Ellul was aware that its claims fell short of its reality, but in *The Technological Society* he does not want to focus on that shortfall. Whether there are natural aptitudes is debatable, but that is for another day, and other writers, as is the debate over whether such aptitudes, if they exist, can be measured. Ellul wishes to focus on the inseparability of vocational guidance from other economic and political techniques. He writes that it is no accident that the technique “discovers” aptitudes that fit careers needed by a technical society (1964, p. 359). He then gives several examples from 1930s France, in which vocational guidance diverted young people away from overcrowded trades, such as mechanical or textile work, and into trades needed by the economy, such as in metallurgy and agriculture.

Servicing a technical society’s needs does not mean that vocational guidance is a sham. It does mean that such guidance is a part of the overall human technique of preparing the young for their roles in the technical economic structure, in which their aptitudes and, more importantly, social needs are determinant factors. Ellul notes that it can be no other way, for an economy tailored strictly to individual aptitudes would be impossible (1964, p. 359). Today any young person who decides on a career would be foolish not to consider the economy’s future needs, about which the American government has published for years and now provides free online in *The Occupational Outlook Handbook* (2022).

Ellul asserts that the rational roots of occupational guidance can be observed by looking at the field’s early pioneers. One such book by Frank Parsons, *Choosing a Vocation* (1909), regarded as the founder of the vocational guidance movement in America, details the importance of a good fit between aptitudes and careers for both the individual and industry:

No step in life, unless it be the choice of a husband or wife, is more important than the choice of a vocation. The wise selection of the business, profession, trade, or occupation to which one’s life is to be

devoted and the development of full efficiency in the chosen field are matters of the deepest moment to young men and the public. These vital problems should be solved in a careful, scientific way, with due regard to each person's aptitudes, abilities, ambitions, resources, and limitations, and the relations of these elements to the conditions of success in different industries. If a boy takes up a line of work to which he is adapted, he will achieve far greater success than if he drifts into an industry for which he is not fitted. An occupation out of harmony with the worker's aptitudes and capacities means inefficiency, unenthusiastic and perhaps distasteful labor, and low pay; while an occupation in harmony with the nature of the man means enthusiasm, love of work, and high economic values, superior product, efficient service, and good pay. (p. 3)

It is fantasy, Ellul says, to believe that vocational guidance is strictly a service to individuals. In the context of other human techniques, it is simply a means of sorting people into careers that suit the individual and the technical economy. It is "a mechanism of adaptation" that encourages people to take up careers in which they will be most efficient and useful to the social order (1964, p. 362). Although not mandatory in France at the time of his writing, Ellul cites recent growth figures, nearly making it universal there. In the United States, vocational counselling has been integrated into secondary education through school counsellors. Unfortunately, many high school counsellors are also responsible for employing other behavioural techniques to address a vast array of student problems—personal, academic, and social. In its pure technical form, the occupational guidance technique is perhaps most evident on technical school, college, and university campuses.

Sports

The American form of sports is an industry that has spread to other technological societies. Ellul points out that the best athletes come from the proletariat since machine work develops speed and precision. It is more likely that, like entertainment, sports are one of the

few open avenues of upward mobility left to someone born to the poor and working classes. More importantly, sports are a technique. Sport is based on efforts to attain the perfection of bodily or mechanical action efficiently. The goal is speed, jumping ability, having the hand-eye coordination to hit a baseball coming across the plate at about 150 kph, or kicking a ball through several defenders and past a goalie. It is physical precision, Ellul notes, a “mechanization of actions” accompanied by whole industries producing sporting goods, high school and college sports, sports stadiums, statisticians, parking lots, concession stands, bars, betting, local and network broadcasting rights, and a population seeking escape and eager to watch every move (1964, p. 383).

Constant training and discipline replace spontaneity; techniques designed to produce an efficient athlete with a will to win become the overriding goal. This training goes beyond the few specialists in professional sports. It spreads to the broader population beginning in elementary school, with the goals of promoting the child’s physical health (productivity) and training the next generation of high school, college, and professional athletes (Ellul, 1964, p. 383). With the rise of spectator sports—an industry strongly associated with technological society—this sports mentality became a significant part of the entertainment/distraction industry.

Ellul (1964, p. 384) asserts that sports pave the way for a “totalitarian frame of mind.” Team spirit, discipline, and winning become paramount. Sports encourage athletes to focus all of their efforts on efficient performance to technical specifications. Ellul notes that technical sports originated in the United States, that “most conformist of all countries,” and that they have been taken up wholeheartedly by dictatorships of all stripes. Today sport is an essential component of all technological societies—democratic or totalitarian—and part of the worship of technique. As most coaches point out, sports build character and encourage discipline and competitive spirit. Ellul finds that sports promote the norms and values of technical societies, the same spirit necessary for success in school, the military, work, and life.

Medical Science

Ellul is outdated regarding the medical contributions to human manipulation and population pacification. After a quick review of various medical techniques of his day aimed at modifying behaviour—truth serums, nutritional supplements, lobotomies, hormone treatments—he concludes that such interventions are unproven or, at best, only of secondary importance. However, he posits that medical techniques could prove to be effective in the future, though he is far from certain.

There are widespread fears that the state might use such techniques, but Ellul considers these fears to be overblown. The state might use them in exceptional circumstances—to obtain confessions at show trials or modify the thought and behaviour of a deviant—but the state can have no interest in the wholesale degrading of human beings. The state, he says, needs whole, strong, fully functioning people and prefers those with enough intellect to master technical life. Therefore, Ellul writes, the state requires a means to integrate “whole beings” into the socio-cultural system without doing considerable damage to them regarding their potential for efficiency and productivity (1964, p. 386). The technical solution to that problem is the development of ever more effective propaganda and the means to distribute it.

Ellul fails to mention the potential of widespread use of psychoactive and performance-enhancing drugs among the citizens of technological societies or the extent of mental health counselling that enables people to tolerate the intolerable or to perform better in their work or play. In 2019, according to the Centers for Disease Control and Prevention (CDC, 2020), 19% of American adults received mental health treatments, almost 16% received prescription drugs for their symptoms, and almost 10% received mental health counselling from a professional.

Finally, there is the wide use of illegal drugs outside official channels that many use for recreation or in attempts to cope with life,

distracting many from their feelings of depression, meaninglessness, fear, and anxiety. According to the CDC (2021), in 2019 in the United States, 13% of those 12 years of age or older admitted to illegal drug use at least once in the past month. An additional 1.9% took a psychotherapeutic drug for non-medical reasons. The number of drug overdose deaths in 2019 was 91,799 or 27.9 overdose deaths per 100,000 population (many of the overdose deaths result from opioid use). The widespread use of psychoactive drugs by a sizable portion of the population illustrates that modern society is still not meeting many human needs. Medical science and the market (legal and illegal) have provided many coping mechanisms for people to relieve the stress of modern living as well as technology to enhance our performance at work and play. Further development of techniques to coordinate, control, amuse, and distract human populations will no doubt continue.

The use of legal drugs to ease the trials and tribulations of living is also prevalent in modern life. The average American adult consumes about 135 mg (about the weight of five grains of rice) of caffeine daily or one and a half cups of coffee—many cannot face the day without their coffee. However, of course, there are many other sources of the drug, including soda, tea, and increasingly popular energy drinks (which contain about 170 mg for a 473 ml serving) (Harvard, 2020). Alcohol use and abuse are also common among the adult population. According to the National Survey on Drug Use and Health, almost 55% of respondents reported that they drank alcohol in the past month. Of those 18 years of age and older, almost 30% of men and 22% of women reported that they engaged in binge drinking in the past month, and 6% (8.3% of men, 4.5% of women) reported that they were heavy alcohol users in the past month (National Institute of Health, 2022).

Performance-enhancing drugs in sports at all levels are becoming increasingly common, and the various regulatory bodies report rates ranging from 5% to 31% of all athletes, depending on the sport itself. The most common drugs include anabolic androgenic steroids, which

strengthen muscle and reduce body fat, and human growth hormone. Other types of performance-enhancing drugs include stimulants such as amphetamines to reduce fatigue and increase alertness (also used by many non-athletes to get through their work). “In the current cutthroat era of sports, where the second winner is viewed as the first loser, the spirit of ‘fighting well’ is lost completely. Winning no longer involves winning the medal and the pride but the multimillion-dollar deals that come with it in the form of endorsements, appearances, and contracts. Considering this reality, the athletes are ready to sacrifice their integrity and take a risk to gain the competitive edge and enhance their performance” (Malve, 2018, para. 1). The problem has become severe enough that the World Anti-Doping Agency was established in 1999 to monitor the situation and to promote testing and regulations against the practice. The agency comprises sports medicine experts, pharmacists, geneticists, physiologists, physicians, and laboratory scientists (Malve, 2018). It represents, of course, yet another step in advancing technique.

Amusements

According to Ellul, amusements and diversions are similar in function to the material components of propaganda—films, radio, newspapers, and the like. The difference is that, where propaganda attempts to influence and lead, amusements aim to distract and entertain. Propaganda meets the organizer’s or propagandist’s needs; amusements meet the needs of the masses. Ellul believes that amusement is a need because life in a technological society is relatively empty of meaning. At work, some eight hours a day, there is constant pressure to perform fruitless and meaningless tasks at the behest of others. Bureaucratic hierarchies of education, the military, work, the government, and leisure essentially organize personal life. War, natural disasters, accidents, and other threats to life and limb fill television and internet news (pictures make the news, and the news

is meant to sell commercials). Nothing makes sense; the individual has no control, and everything ends in death (1964, p. 376). Jacques Ellul, like Max Weber, can sometimes become quite pessimistic. The images that he draws of life in a technocracy are extreme. Most would argue that a technological society offers many benefits, but his point is that there are definite real costs of technique. Those costs are also disproportionately borne by some, and the benefits disproportionately go to those who control the major organizations of society.

Amusements have the power to distract the masses from grim realities by creating an artificial world of laughter, drama, thrills, sex, and mystery. Individuals can lose themselves in fantasy for hours, imagine themselves the hero, laugh and cry, kill the bad guy, and briefly believe that it all means something (Ellul, 1964, p. 377). The whole setting of the movie theatre—dim lights, attention focused on a colourful screen, attractive actors, and scripted dialogue—creates a reality that has great psychological force in integrating the individuals in the audience into the world depicted on the screen. Recent developments in flatscreen TVs, their increasing size, sound bars, and subwoofers, recreate the theatrical setting in the home. It is now common, Ellul notes, for people to escape their realities and forget their problems by watching images on a screen and imagining “a life of freedom that they will never live in fact” (1964, p. 377).

Many observers argue that such escapist fare has always been present and allows people to flee boring lives, famine, war, and persecution. However, Ellul asserts that now it is attractively packaged and technically sophisticated. It is a mass phenomenon serving millions who seek freedom, spontaneity, and life. Just as the modern state needs a force promoting social cohesion among occupationally diverse populations and thus exploits propaganda, so too does it need diversional techniques that provide escapes. Ellul is struck by a technical society that “provides the antidote while it distills the poison” (1964, p. 377).

Well before television became ubiquitous in France, Ellul wrote of its destructive effects on family and community life. Some critics argue

that television can bring families together by asserting that parents and children are more likely to stay together within the home while enjoying a favourite program. Ellul counters that this would centre family life on the television, obviating the need for conversation. With hypnotic attention to the program, they become unaware of each other, and thus it becomes easier to bear stale relationships and avoid conflicts. Television becomes yet another means of escape from the self and others. With television, family members no longer must interact with each other. Ellul writes that they do not have “to be conscious of the fact that family relations are impossible” (1964, p. 378).

Estimates are that some 82% of American homes have two or more TV sets, so families do not even have to be in the same room or watch the same show. Ellul asserts that radio and television are mechanical devices that isolate individuals. Through these means, they can escape the anguish of empty, meaningless lives. Such devices comfort and reassure us through their fascinating “hoaxes.” Ellul writes that television, because it casts visual and audio signals, is the technology “which is most destructive of personality and of human relations” (1964, p. 380). However, of course, he was writing before the development of the internet, personal computers, and cell phones. The sheer volume and variety of entertainment available today boggle the mind.

The goal of amusements is to cloud the individual’s consciousness. Both art and science have contributed to these amusements, particularly in films and television, but not chiefly in the service of education or culture. Their far more extensive contribution is to the technical enterprise of distraction, of pulling individuals into fantasy worlds. Ellul adds that, as techniques of propaganda become more developed and widespread, amusements will also become ever more efficient mediums of propaganda.

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6

Defining Propaganda

Jacques Ellul calls propaganda a new system of human techniques more sophisticated than others since it involves developing and synthesizing physical technology and psychosocial techniques. State or private actors use propaganda to influence public opinion to stimulate mass action or integration into the social order. The mechanical techniques important to the propaganda system in Ellul's time consisted of radio, press, television, billboards, and motion pictures. These technologies permit communication from a sole source to large numbers of people who perceive the message as addressed to them individually (1964, p. 363). The psychosocial techniques central to propaganda are the complex social and behavioural sciences that give access to an increasingly exact knowledge of human behaviour.

Today the list of mechanical techniques has expanded to reach into the mind and pockets of the average American, including the internet (news and opinion sites, social media, streaming, and gaming). However, other mechanical technologies that have developed since Ellul's writing have extended the power of propaganda even further, including advances in the surveillance of populations (phone records, internet tracking, big data mining, voice and face recognition, and ubiquitous video recorders). Technicians can combine the

data with advances in social science methodologies (focus groups, polls, and surveys, to name a few). Like mechanical technologies, more sophisticated theories of human behaviours, attitudes, and beliefs form the basis of psychosocial propaganda techniques. The result is that people are increasingly manipulated and coordinated by organizations with the resources to utilize these systems.

Rather than rooting the beginnings of propaganda in totalitarian states, Ellul asserts that proto-propaganda was first utilized under capitalism in its drive to sell products and maximize profits. From the beginning of the 20th century, advertising set about to convince many people to buy products using subtle manipulation. Newspaper ads were expensive, so they were designed with few words to have the maximum impact on the average consumer. Large commercial enterprises were thus the first to supplement these mechanical techniques with emotional and psychological appeals to status, health, and eventually sex, and by 1910 mechanical and human techniques were combined (1964, p. 364).

Once these techniques were proven to be effective, they were applied to other spheres, not only to sell products but also to educate and convince people. Before the 20th century, according to Ellul, political persuasion was mainly intellectual and aimed at elites through debates, speeches, and personal discussions. Several governments made clumsy attempts at producing propaganda during the First World War, but it was ineffective since they failed to incorporate psychology into their messaging. It was only with the rise of the Soviet Union and Nazi Germany that the two techniques were combined to serve political goals. Today all nation-states and many organizations exploit propaganda techniques to influence the attitudes and behaviours of individuals and groups (1964, p. 365).

Since its beginnings as a technique, Ellul says, propaganda has advanced in theory and practice; practitioners have studied conditioned reflexes, how to produce them, and how to measure their success. Political parties have reduced their ideologies to programs, platforms, slogans, symbols, and pictures. Totalitarian regimes have

instilled conditioned reflexes through their educational systems, or they have tapped into pre-existing spontaneous reflexes.

Scholars have studied propaganda extensively when produced by totalitarian states; there is much less literature about propaganda produced by democracies, at least when Ellul was writing. However, he asserts that the United States engaged in a concerted propaganda campaign during the Second World War by using erotic imagery (among other reflexes) to sell the population first on going to war and then on maintaining their support for it over time. Protected by two oceans and far from either front, Americans had to be subjected to an intensive propaganda campaign to maintain their commitment. Ellul characterizes the American propaganda technique during the Second World War as “obsessional,” constantly exposing citizens to propaganda through radio programs, posters, rallies, victory gardens, and drives to collect needed materials. The individual was confronted with rallies at work, posters and handbills, movies and newsreels, newspapers, and radio shows. All propaganda messages encouraged individuals to support the war effort and commit to war production through their opinions and actions. The messages appearing everywhere became part of the social environment, beneath the individual’s conscious awareness (1964, p. 366).

Slipping messages past conscious awareness is of immense importance for the success of propaganda. Like the proverbial fish unaware of water, effective propaganda must become as natural as the air around us, unnoticed and thus easy to forget. It is ordinary because it is what the individual knows and experiences daily. To those outside the system, the propaganda surrounding others might seem foolish and fantasy-like, but to the individuals within the bubble it is what they know. The prolonged exposure to “hypnotic repetition” of the same ideas, images, opinions, and conspiracy theories “conditions” the target population to internalize the propaganda so that it becomes an indelible part of their identity (Ellul, 1964, p. 366).

All forms of government engage in propagandistic manipulation and subject people from all levels of society to it. Ellul goes

as far as to say that we live in a “psychologically subversive” universe. As individuals, we can readily see the effects of propaganda on others—many Americans, for example, can see propaganda at work in Putin’s Russia or Xi’s China but do not recognize its effects on their compatriots or, most significantly, on themselves. Being immersed in a propagandist’s universe does not reveal itself to the individual; one must be outside the bubble and looking in (1964, p. 368). Ellul adds that, as a technique, propaganda is open to refinement and constant improvement, always searching for the most productive and efficient ways to influence the thoughts and actions of the masses.

Propaganda in his time was in its preliminary stages, not operating for long enough to reveal its full consequences on the human psyche. Ellul writes that when it is more fully developed, and its full consequences appear, we will be so immersed in the system, “so absorbed and manipulated,” that the effects might be impossible to recognize. Just as we struggle to understand the consciousness of our distant ancestors, so too our descendants will have no idea what we once might “have been” (1964, pp. 368–369). Nevertheless, even in the 1960s, Ellul states, some effects were already apparent. He discusses three such consequences in detail.

First, propaganda creates collective passions that suppress the critical faculties of the individual. Because they are collective passions, Ellul (1964) argues, they are amplified and reinforced by the group. People under this collective influence cannot distinguish “truth from falsehood” and reality from wishful thinking (p. 369). With this suppression of critical faculties, propaganda gives its subjects the collective conviction of their moral superiority over the “other,” stronger because their fellow citizens collectively hold it and since the various media repeat it. In the case of nationalist propaganda during wartime that promotes a strong collective social consciousness, Ellul points out, it led to a reduction in neurosis and crime, as evident in Nazi Germany and the United States during the Second World War (p. 369).

Also related to the suppression of critical faculties is the creation of a new sphere of the “sacred,” Émile Durkheim’s term denoting something set apart from the everyday that inspires feelings of awe or reverence among believers. The realm of the sacred contrasts with the realm of the profane, which refers to elements of the everyday, mundane world. Once society defines a person, event, or idea as sacred, it is beyond the realm of questions or discussions, and people treat it as truth. Modern propaganda combines this creation of the sacred with the suppression of critical faculties and the formation of moral superiority, making it an “application of psychoanalytic mass techniques” (p. 370).

Second, propaganda increases the susceptibility of the target population to manipulation. The goal is to integrate individuals into the group so that they lose their individuality and internalize the group’s norms, values, and opinions. Thorough integration into the group predisposes them to follow the propagandist’s lead and perform any advantageous act at a moment’s notice. The party line can change; alliances formed today might have to be abandoned or modified over time. Heroes of the revolution can become villains in the minds of the elite. The goal of the propagandist is to create a population that the organization can manipulate to undertake action following the winds of change (Ellul, 1964, pp. 370–371).

Third, propaganda creates its own reality, an alternative universe, in the minds of individuals under its influence. They fashion images of people, places, or things based on news items and opinion pieces that might or might not accurately reflect reality. These images are repeated in rallies, newspapers, television, radio, and now the internet. The news might well be “faked” to put forward a vision of the world consistent with the propagandist’s organization. Alternatively, news based on reality might be labelled as “fake” if it portrays unpleasant facts. Faking the news was a widespread practice in Soviet society. However, Ellul asserts, all countries and political parties practise it to various degrees. In the creation of an alternative universe with created heroes and villains, truths and falsehoods

become so internalized that victims are willing to sacrifice their lives for their manufactured world view (1964, p. 371). This creation of an alternative reality was apparent in workers in the Soviet Union, in which propaganda produced the same levels of satisfaction as positive changes in their working conditions. The same thing occurred among workers in the United States during the Second World War, at least temporarily. Ellul adds that the rapid spread of public relations in the United States will facilitate the application of propaganda techniques to all economic, political, and social activities (1964, p. 373).

Ellul points out that his readers will often see the effects of propaganda on others but will protest that it does not affect them. Nevertheless, he says, if they read the newspaper, go to movies, watch television, and (today) cruise the internet, then the description very much applies to them. To the objection that some countries do not exploit the technique, Ellul counters that some might not be able to afford it or that others exploit it only to a limited extent—and here he uses the example of the United States in the early 1960s. However, he adds that democracies will employ these techniques when they are in their national interests, especially given the global struggle between dictatorships and democracies. He writes that propaganda will be used because it efficiently mobilizes support for policies and prompts populations to action. It will be used because it is easily disguised as information and public relations, consistent with modern sentiments of freedom of thought and expression. Ellul writes that, once it becomes a part of our daily lives, it will be “impossible to turn back” (1964, p. 372).

One other consequence of the widespread use of propaganda is of political importance. Ellul considers it so apparent that he only briefly summarizes the effects of propaganda on democracy in his book on general technique. The idea among many people is that, because several parties employ propaganda, citizens are free to choose from among it. However, Ellul insists, this is not a defence of its influence. Propaganda is not the calm arguments of positions or political theories that citizens can ponder and choose intelligently

and in accordance with their interests. Political parties with sufficient resources can exert force on a population to believe and act. This force is powerful enough to inspire intense hatred of others and even prompt some to act against their self-interests. Politicians, even those who believe in their party's ideologies and proposals, will seek the most significant amount of support from their constituents through the most efficient means possible. This political need will lead to ever more efficient and effective use of propaganda.

Ellul also points to the tremendous costs associated with modern propaganda as one of the significant reasons that minor political parties fail to thrive in a democracy. Although human technicians are relatively inexpensive, the material techniques are costly. The more intense the competition among parties, the greater the costs of propaganda; the result is that only a few parties within a democracy remain competitive. This leads to intense competition between the two blocs fought through propaganda.

The influence of propaganda carries over to citizens as well. When competition between parties is intense, as in the United States in the first quarter of the 21st century, the individual often submits to one of the two streams and becomes thoroughly integrated into the chosen group (liberal or conservative). From there, political positions are easily arrived at; the individual parrots the requisite beliefs of the party "and votes as the group votes" (Ellul, 1964, p. 374).

Propaganda is thus a means to an end, a technique to stimulate individual action. The means are weapons that manipulate and exploit the individual, whether by dictatorships or by political parties within a democracy. Ellul asserts that there can be significant differences between dictatorships and democracies regarding objective conditions such as public health, technical innovation, and employment. Nevertheless, in a moral sense, if a democracy uses propaganda to achieve its ends, it is fundamentally the same. Both systems are dependent on "well-kneaded citizens" who, in the end, are made "progressively indistinguishable" from one another by the operations of human technique (1964, p. 374). "The human effects of

technique are independent of the ideological end to which they are applied” (1964, p. 375).

When writing *Propaganda*, Ellul (1965) maintained that there were three major propaganda blocs in the world: the Soviet Union, China, and the United States. Today, at the end of the first quarter of the 21st century, the three remain with one modification. The Soviet Union collapsed, went back to its Russia label, and abandoned its pretend communism for pretend capitalism. Although a dictator still rules (with assistance from oligarchs), it is a much-diminished economy and military power. However, in Ellul’s time, the three blocs represented three diverse types of propaganda, and those differences appear to remain today.

When analyzing propaganda techniques, one should remember that the sole criterion is their effectiveness in moving people to action and empowering desired policies. Propaganda, Ellul maintains, is an “indispensable” technique for maintaining technological civilization and continuing technical progress (1965, p. ix). There are several widespread suppositions about propaganda that make its study exceedingly difficult. It is not simply a pack of lies and tall stories. It is not necessarily evil, although, like all other techniques, it has been employed for evil purposes. It is challenging to study because it is hard to define and often carried out secretly. Rather than formally defining propaganda at the beginning of his study, Ellul analyzes its characteristics as a “sociological phenomenon” (1965, p. xi). His study focuses on the propagandist rather than on the social scientists behind the technique.

In its broadest sense, propaganda seeks to modify opinions and induce actions among citizens. It includes psychological warfare in which the propagandist seeks the destruction of an adversary’s morale, re-education camps to turn prisoner enemies into allies, and campaigns to promote revolution or social integration. It also includes public relations and human relations. Ellul acknowledges that their inclusion might shock some people. However, they meet the definition of propaganda because their goal is to help people

conform to organizational and societal expectations, the goal of all propaganda. He adds that there is also an organizational aspect to propaganda. Technicians combine psychological manipulation with organizational techniques that immerse individuals in meaning and inducement to action.

Organizations use propaganda techniques to condition and coordinate the actions of people. The phenomenon is the same throughout the world. However, the media of dissemination vary according to the technical level of the society employing the propaganda, and specialized techniques can vary among nation-states. Since propaganda is a technique, it is constantly refined to become more efficient and effective (1965, p. xiv). Finally, Ellul adds that, no matter who employs the technique—Nazis, Communists, or Western democracies—it has deleterious effects on individuals and groups.

He believes that propaganda has become a necessary technique in a technological society. Modern individuals, he writes, are much taken with facts, believing them to be the “ultimate reality,” and therefore they are willing to subordinate their values to them. Ellul is not willing to do that. To call it a necessity is proof of its power, not whether it is good for the individual or society. Confronted by the necessity of propaganda, people must become aware of and master it (1965, p. xv).

The social force of propaganda threatens the individual’s freedom of thought and action. Ellul addresses two significant issues in this work: the nature and strength of this threat. If it is as strong as he believes, then it is a dangerous flaw in a democratic society. True democracy and propaganda cannot coexist; to think otherwise is “to live in a dream world” (1965, p. xvi). As a lover of democracy, Ellul believes that he must warn individuals of their weakness so that they can strengthen themselves against propaganda. Still, no one is invulnerable to the reach of propaganda, and no one is entirely free from its manipulation, not even Ellul.

To focus exclusively on propaganda as a political weapon of a regime is a mistake. Its primary role is integration, a technique

designed to fit individuals into their roles in a technical society. Furthermore, propaganda cannot be studied apart from its organizational and social contexts. Researchers cannot study its effects in a laboratory; they can only study them in a nation or group subjected to effective propaganda (Ellul, 1965, p. xii). Propaganda is a social force emanating from the enlarged and centralized organizational structures of socio-cultural systems—governments, corporations, and many other administrative structures.

The Characteristics of Propaganda

Technicians formulate modern propaganda based on the findings of several disciplines, specifically in-depth psychology, social psychology, communications, and sociology. Propagandists use this knowledge of human and group attitudes and behaviours—tendencies, desires, needs, conditioning, values, and socialization—to fashion their techniques. According to Ellul, without this empirical foundation, propaganda would still be in a more primitive form and therefore much less effective (1965, p. 4).

As the social sciences advance their understanding of human behaviour and social life, propaganda will become more effective. In this body of knowledge, Ellul notes, propagandists establish rules and test procedures to further their ends. Rather than leave it up to intuition or blind luck, they apply rules and formulas that anybody with the proper training can apply, a technique rooted in the scientific method (1965, p. 4). A second point regarding propaganda's reliance on science is that its employment demands solid empirical knowledge of the target group to be subjected to propaganda, the social environment, and the campaign goals. Propaganda is not a one-size-fits-all technique; the type employed depends on analyzing these factors (which is why big data are such a critical development). A third and decisive point that highlights the scientific character of modern propaganda is practitioners' attempts to measure its effectiveness in

reaching its goals. Ellul asserts that this is prompted by a “spirit of experimentation” and a desire to improve the technique, making it more efficient over time (1965, p. 5).

Many observers will dispute the scientific character of modern propaganda by claiming that the science behind it is not scientific psychology or sociology. However, Ellul asserts that many disagree with Pavlov’s theory of conditioned reflex behind Stalinist propaganda; Dewey’s theory of teaching, the basis of American propaganda; or Freud’s theory of repression, which lies behind Nazi propaganda. Nevertheless, this merely means that there are different schools of thought among social scientists and propagandists. The latter borrow what seems valuable from the social sciences and, through their questionnaires, interviews, and focus groups, continuously measure the effects of their propaganda and refine its effectiveness.

Ellul divides propaganda into pre-propaganda (also called sub-propaganda) and active propaganda. Sub-propaganda is continuous, subtle, and slow. It prepares individuals for action by making them sensitive to selected issues, stereotypes, and symbols. Its goal is to mobilize the target group for future action. The conditioned reflex is one route to achieving this preparation for action. Conditioning involves training the individual to react to certain words, persons, images, or facts. Recent examples come to mind: “Build the Wall,” “fake news,” “but her emails,” “lock her up,” “planting evidence,” “no collusion,” “witch hunt,” “an enemy of the people,” and the list goes on. On the other side (I am not an advocate of “both-sides-ism”; there is a qualitative difference to be discussed later), there is “The Big Lie,” which, though truthful (which propaganda can be), is repeated at every opportunity, a characteristic of propaganda. Conditioning calls for constant repetition of the formula. The propagandist spends months working the crowds to provoke the hoped-for reaction to each call. And then, once the automatic response is achieved, more repetition reinforces the conditioned reflex.

A second route that sub-propaganda takes to prepare the individual for action is through the creation of myths. Myths appeal to the

individual's sense of the sacred, associated with desirable objectives and all that is good, right, and true. Ellul mentions several myths associated with propaganda campaigns in the past, such as those associated with race (always popular among fascists), the proletariat (among communists), *der Führer* (again with the fascists), productivity, and hard work (among capitalists), and the American Dream (among American capitalists and consumers). More current examples include “the deep state” and “stop the steal” (among American fascists). Again, these myths can only be created (or reinforced) through extended, patient, sub-propaganda operations. Through conditioned reflexes and living in a collective mythical reality, through sub-propaganda, the propagandist prepares the individual for action, triggered by active propaganda.

According to Ellul, the two techniques of sub-propaganda—conditioned reflex and myth—can be used in combination or alternated by an organization. However, there is a tendency for organizations in the United States to prefer using myth to prepare the population for mobilization, whereas the former Soviet Union preferred conditioned reflexes. Regardless, sub-propaganda prepares the individual for action. However, there is not necessarily a connection between the reflex and the called-on action or between the myth and the action—the sub-propaganda only readies the individual for action, not a specific action. The propagandist (technician) must continuously renew myth and the conditioned reflex, which is why sub-propaganda is a continuous operation. Once conditioned, the individual can be pushed into action in various directions depending on the organization's objectives and the active propaganda campaign. According to Ellul, propaganda's spectacular and seemingly inexplicable results are only possible because of the explicit preparation of sub-propaganda (1965, p. 31).

Propagandists cannot create reflexes or myths out of thin air; they must have some knowledge of the attitudes, prejudices, beliefs, myths, and stereotypes held by the target population. The organization will analyze this population through surveys, focus groups,

and, in the 21st century, web activities and other big data analyses to determine the levers available. The sub-propaganda builds upon this knowledge to tailor its myths and reflexes to the existing terrain. Techniques must be fitted to the target population (Ellul, 1965, pp. 33–34). As with all techniques, the propagandist attempts to achieve the goal as efficiently as the state of the art allows.

Although it is futile for propagandists to make a frontal assault on a well-established opinion or fixed behavioural pattern, that does not mean that they cannot take steps to undermine the status quo. Ellul writes that there is no logical consistency between opinions and actions. One can get a business owner to vote for communists or a factory worker in Kansas to vote Republican. Everyone holds innumerable opinions, stereotypes, and beliefs. The skillful propagandist will seek to appeal to the target population without confronting existing counter-prejudices or stereotypes and play on those characteristics and opinions that can lead to the desired actions (Ellul, 1965, p. 35). Through years of sub-propaganda work and then a short active propaganda campaign, the propagandist can lead true believers in the sanctity of law and order to attack police without noticing the inconsistencies between their beliefs and actions.

To be effective, propaganda of any sort must attach itself to an emotion, idea, belief, or fear present in the target individuals. It is far easier to establish a conditioned reflex when an innate reflex is already present—such as a political party that conditions hatred of immigrants by connecting them to fear of the stranger and crime or the advertising campaign that focuses on “new and improved” to appeal to Americans’ belief in progress. The propagandist must build myths upon existing attitudes and beliefs, many of which are available from the dominant religion, the mass media, or schools. Propaganda, according to Ellul, is restricted to using existing myths and beliefs; it does not create them (1965, p. 36).

He writes that a final criterion for effective propaganda is that it must respond to the needs of the target population. Those needs can be physical (food, water, shelter, work), psychological (peace,

security, happiness, meaning), or a combination of them. Through social research, the propagandist's organization (e.g., a nation-state, political party, corporation, government bureau, or social movement organization) will be aware of these needs and the population's innate fears, ideas, and emerging myths when designing the propaganda. Again, one can see this in American product advertising, creating new product "needs" based on Americans' fear of offending others (now with deodorant marketed explicitly for the *derrière*), keeping up with the neighbours, or not having the latest gadget.

Again, that propaganda must stick to exploiting existing tendencies and myths in the target population is not limiting; by using them indirectly, the skillful propagandist (or marketer) can create something new. Ellul gives the example of communist propagandists who base their appeal on unhappy factory workers who might be angry with their managers and, through propaganda, manipulate the workers to develop class consciousness and revolutionary zeal. In another example, he sketches a population oppressed by conquerors of a different ethnicity. Most of the population resents the occupying power and might even engage in a few random acts of violence. A burgeoning resistance group might take this resentment and build a revolution through its increasing organization and targeted propaganda. A country's nationalism is a natural and innate feeling among many in the population. However, only propaganda can knit patriotism into an integrated force to defeat a foe (1965, p. 38).

Properly cast propaganda often initially attacks from the rear. It then wears down counter-opinions, redirects attention, provides new distractions and issues, and instills in the captured individual a passion for the cause, prejudice, and hatred toward the other upon command. Propaganda that engenders passion and action gives it an ever-strengthening hold on its subject population. It can make individuals do things that they would never do of their own volition, even eliciting actions counter to their opinions (say, attacking the police) (Ellul, 1965, p. 38).

Ellul's last point about the fundamental characteristics of propaganda is rather chilling. The goal of propaganda is not to change opinions, elevate us to a higher form of consciousness, or serve our noblest instincts. The goal is not to serve us but to make us "serve" the propagandists and their organizations (1965, p. 38). Governments, corporations, and non-governmental agencies attempt to achieve this goal by tapping into individuals' base instincts and drives as well as their crudest prejudices, fears, beliefs, and desires. These are the most effective levers of propaganda.

The Individual and the Masses

Propaganda addresses itself to the individual and the masses simultaneously; it does not separate the two. According to Ellul, modern propaganda aims at individuals immersed in groups and the groups themselves (1965, p. 6). Individuals are encouraged to identify with labour unions, interest groups, and political parties. Contribute once to a political campaign, and the individual will likely be bombarded with questionnaires, petitions, and appeals for additional contributions. The goal is to get the individual to commit further to the cause. Integrating the individual into mass groups whenever possible is thought to weaken individual defences. Individuals are treated as group members in terms of what they share with other members. It is easier for propagandists to provoke reactions when the individual is integrated into a group.

Groups tend to amplify emotions, both when the individual is physically present within the group and when the individual is participating in it through media; the individual can be caught up in the emotionalism and impulsiveness and is thus prone to excess; all of this is well known to propagandists. The propagandist (technician) treats the individual as an average member of the target group—with shared likes, dislikes, motivations, and myths—and the propaganda is then aimed at this average. At the same time, the propagandist exploits "the individual's need for self-affirmation" (Ellul, 1965, p. 7).

It is not just the social and behavioural sciences that have made modern propaganda more efficient; advances in media have also contributed to its increased reach and power. The modern mass media of radio and television (and we can now add social media and the internet) can reach the whole group simultaneously, Ellul argues, while addressing themselves to everyone separately (1965, p. 8). He calls the mass audience the “lonely crowd,” the most opportune type in which to influence the individual. Recent developments in media technology now make this routine and pervasive.

Total Propaganda

To be effective, propaganda must be total, using all available technical means of communication. Sporadic messages do not constitute propaganda. Each modern type of media has a specific effect; television does not have the same impact as newspaper articles, does not play on the same motives, and does not provoke the same reactions. Each medium has a particular role to play in a propaganda campaign; each has strengths and weaknesses, and all must be combined to break down individuals’ resistance, begin to shape views, provoke decisions, and act accordingly. Ellul lists the media of his day and his analyses of their strengths and usefulness; however, his list is somewhat dated given the advances in communication technologies and propaganda techniques (1965, p. 10). The essential point is that the propagandist focuses on the entire intellectual and emotional life of the target population, using the available media tools in concert with one another.

Totalitarian propaganda surrounds the individual with feelings and ideas that explain the world, encouraging the individual to internalize this world view and act when called on. This organized world view, or myth, includes various beliefs and interpretations of events that are uniform, one-sided, and not open to any other interpretation. In such totalitarian societies, news outlets present information,

news, and opinion pieces in a one-sided manner, all in support of the myth. Once internalized, the myth becomes a force controlling the individual's thought and behaviour, immune to the influence of alternative world views. Individuals adopt a totalitarian attitude, explaining everything in terms of the myth and "truths" that they have been fed. They reflect the propaganda that has captured them (Ellul, 1965, p. 11).

Total propaganda is organized, skillfully combining media and stimuli into an overall campaign. Each campaign uses various instruments in relation to one another; Ellul goes as far as to call it composing a symphony. In addition to using all available media, the successful campaign employs censorship of its own media, charges of censorship and fake news against those that it does not control, legislative proposals, talking points endlessly repeated, national and international conferences, rallies, and personal contacts. Ellul writes that it is characteristic of propaganda to incorporate "everything that can serve it" (1965, p. 14). This "intrinsic necessity" of propaganda includes education, history, religion, legislative hearings, and criminal trials.

Pre- or sub-propaganda generally seeks to create a climate favourable to specific ideas, feelings, and biases. Ellul states that pre-propaganda is sociological, not inducing change but preparing the individual for future calls to action. He compares it to plowing the ground, conditioning the individual for action. Pre-propaganda is doing the groundwork for the active propaganda campaign to take root.

A solid propaganda campaign uses different media and different forms of propaganda. Ellul identifies two primary forms: direct (or overt) and indirect (or covert). Overt propaganda, in which people are aware of the source, is helpful for attacking enemies, rallying one's forces, displaying the movement's strength, or proclaiming victory (1965, p. 15). As a direct incitement to act, propagandists become involved in the movement, demonstrating their conviction and support, thus hoping to inspire their followers further to act. The

march on the US Capitol on January 6, 2021, serves as an example of several speeches and President Trump himself urging action, even saying that he would march to the Capitol to stop the certification of the electoral votes.

Covert, or “black propaganda,” occurs when people are unaware that an outside force is manipulating them and influencing their actions. Covert propaganda also uses mysteries, long silences, and then grand reveals. Although the distinction between direct and indirect propaganda is useful, Ellul points out that modern propagandists combine the two types in effective campaigns. Each type has a specific use. Direct incitement leads to immediate action; indirect incitement is often characteristic of propaganda through the mass media. When in direct contact with crowds (radio, television, in person), propaganda is most effective when the performer believes in the cause. On the level of propaganda strategy, Ellul asserts that there must be some separation from the public (1965, p. 16). Effectively combined, indirect and direct propaganda form an entire campaign.

Ellul writes that an effective propaganda campaign needs to be continuous and long lasting. It must confront individuals consistently, not leaving any gaps in their day, constructing a world view for them without any outside points that contradict it. The propagandee must not have an outside reference point that questions this world view. The propagandist must not leave individuals with their thoughts or alternative viewpoints. Propaganda bases its influence on constant repetition, censorship of alternative views, and construction of a complete media environment from which the individual never emerges.

The grip of propaganda is so strong that it can change an individual’s perceptions instantly, approving today what it condemned the day before, and the individual follows along. Breaking with the world view is simply too painful, for too much of the individual’s identity has been invested in it. The propagandist explains the new truth and “proves” that it is right and good. Resistance to the new routine is futile, fragmented, and sporadic. The target individual is caught up in

daily living and is soon overwhelmed by the steadiness and repetition of the propagandist's message (Ellul, 1965, p. 19).

The long-term, continuous nature of propaganda is why its effectiveness cannot be measured in the laboratory or election campaigns lasting only a few weeks. However, the current US campaign system, lasting years in presidential elections, is ample time for active propaganda campaigns. This is especially true for political parties and other actors that manufacture pre-propaganda campaigns continuously, laying the ideological groundwork for the fierce active propaganda campaigns to follow.

The Organization of Propaganda

Administration and professional technicians in various fields are necessary to organize and coordinate effective propaganda campaigns. Technicians are needed to coordinate the media, calculate the effectiveness of slogans and advertisements, and decide on the timing of new campaigns to replace old ones. Often from social science backgrounds, these administrators are "technicians of influence" who utilize data from opinion surveys and focus groups to decide on strategies (Ellul, 1965, p. 20). They serve as consultants to politicians or entire governments, advising them on courses of action that will satisfy their followers and on exploiting that satisfaction.

In addition to technicians, there is a need for an organization, or a bureaucracy, that closely ties the psychological manipulation of symbols to physical action. To understand the phenomenon fully, one cannot separate physical organization from psychological manipulation. They are of a piece; effective propaganda is only possible when psychological manipulation is combined with group organization (Ellul, 1965, p. 20). Organizational influence on the individual is critical; without it, there is no real propaganda. The organization might be a political party, a social movement, or a nation-state bureaucracy attempting to organize an entire population.

Because of the absolute need for physical organization and the inducement to action, propaganda can only work inside a group. For this reason, propaganda from outside the group, say one nation trying to destabilize another, is weak because of the absence of physical organization. One can reach the population by manipulating symbols through the press. However, unless there is an internal organization to encircle the individual and push for action, such efforts, at best, can only raise doubts among individuals about their country. The simple dissemination of words can hardly affect morale unless an organization sustains it and calls people to action (Ellul, 1965, p. 21). This internal organization can be accomplished by infiltrating a domestic political party, interest groups, or the media. In the mid-1960s, according to Ellul, the Soviet Union used domestic Communist Parties to spread its propaganda. In the 21st century, Russia has found domestic authoritarian political parties in several countries to amplify their propaganda and use it in opposition to liberal parties in Western democracies. So far, this tactic has been successful. Again, domestic organizations are essential for effective propaganda to take root.

Psychological action is an indispensable piece of the propaganda mechanism. By manipulating symbols, it convinces people to join an organization. It also provides them with reasons and justifications for their actions; if effective, then it gains their total allegiance. The propagandees must become true believers in their manufactured beliefs, finding meaning and satisfaction in their world views and requisite actions—their commitment results from psychological manipulation in combination with an organization (Ellul, 1965, p. 23).

According to Ellul, the propagandist is a creature of the organization, a manipulator employed by the machine. A technician's words are calculated for effect; they are not spontaneous, though often seeming so, but part of a meticulous script prepared well in advance. Belief in the cause is essential for them, but not necessarily belief in the message of the moment, for it might have to change without warning. The propagandist can simulate human contact, for human

relations are necessary for propaganda to have full effect, but they are simply the voice and actions of the organization itself. Like an insincere salesperson selling a false promise, when they speak, they are at the height of their “mendacity and falsifications,” whether conscious of them or not (1965, p. 24).

Orthopraxy

Propaganda might have started in the 1850s as information manipulation to change individuals’ opinions or ideas—making people believe in falsehoods or ideas and ideologies with little proof but great conviction. If this was ever true, Ellul asserts, then it is no longer so. Technicians create modern propaganda to provoke individuals to action and, once engaged, get them to “cling irrationally” to that course (1965, p. 25). They intend to loosen the target’s reflexes, inspire a mythical belief in a cause or a hero, and precipitate action on behalf of this cause. This capture of the individual is not through intellectual debate or persuasion, for the intellect is a poor motivator of action. Besides, the debate process is long, and it is uncertain whether it will bring positive results. Instead, Ellul argues, technicians often design effective propaganda campaigns to operate unknown consciously to the individual, appealing to central tenants and thus stimulating them to appropriate actions. Individuals do not act by choice or value judgment; instead, their action is the intentional objective of propagandists, who manipulate the instruments at their disposal—technical, organizational, and psychological—to “secure precisely this action” (1965, p. 27).

Like the division between thought and action created throughout technical society in factories and offices, propaganda recreates the great divide. It leaves individuals feeling free of thoughts but channels their actions consistent with the goals of the propaganda organization. Often these actions counter the private beliefs or material interests of the individual. Ellul asserts that it is well known that

there is no necessary continuity or rationality among convictions, opinions, and actions. Technicians design propaganda to exploit this gap by inserting its levers to induce action. In sum, propaganda seeks not to educate or create reasonable men and women but to foster foot soldiers, committed actors, “proselytes and militants,” primed for collective action (1965, p. 27).

The action thus engendered must be channelled on behalf of the propaganda organization. The foot soldiers receive orders (often indirect) through the organization, leading them to the appropriate actions. They act as a group for the organization (or the hero), giving their actions a patina of justice and strengthening the individual’s integration into the group. Once the group acts, it reinforces the individual’s beliefs in the propagandist’s messages. To question those messages is to question the justification for the actions, making them appear unjust, stupid, or absurd. The action commits the foot soldier, militant, or proselytizer to continue down the path indicated by the propaganda, “for action demands more action” (Ellul, 1965, p. 28). The individual has been co-opted and forced into a specific role in society. Often there is a break from family members and previous friends and colleagues. Individuals now have prescribed enemies and friends. If they have committed an illegal or violent act condemned by many, Ellul notes, then they cling even tighter to the propaganda and the myths behind it that provide that justification. They become more involved in the movement until it dominates their consciousness (1965, pp. 29–30).

Social Conditions

Certain social conditions of technological societies create the ideal conditions for the continuing development of the power and reach of propaganda. It is a powerful tool for structural elements of our societies, governments, political parties, corporations, interest groups, and other organizations. This point deserves emphasis. Propaganda

is the symbolic part of an organization's resources in its efforts to become more productive and efficient in achieving its goals. As a reflection of the organizational structure of society, it is part of the entire socio-cultural system and cannot be separated from it.

Ellul describes several myths and presuppositions shared among all technical societies today. All collectively share them without question. They are the foundations of capitalism, but they are now shared by non-capitalist countries as well. First, the goal in life is individual happiness. Second, progress is inevitable and positive. Third, humanity is essentially good and will eventually do the right thing. Fourth, the material universe is all there is (1965, p. 39). According to Ellul, the two fundamental myths of modernity, the foundations of all others, are science and history. From these general myths, we get the collective myths of the positive nature of work, happiness in social relations and material comforts, continuous progress, youth, and the hero (1965, p. 40).

The role of social organizations is to build upon these presuppositions and myths to achieve their objectives (profit, votes, conditioning, or rally attendance). One of the most productive and efficient ways to achieve these goals is through propaganda. Another characteristic of these organizations is that they are all bureaucratic, which means, among other characteristics, that they have hierarchies, and whatever propaganda the organization makes will be in accord with the interests of its hierarchy.

It is interesting how liberal Americans perceive the propaganda on the right as blatant manipulation but consider their sources of information factual and straightforward. The same phenomenon exists among those on the right, who are blind to the biases of their preferred media (Fox News, Newsmax) but perceive a leftward bias among media outlets on the left (MSNBC, Daily Kos). Moreover, both groups are suspicious of the mainstream media—attacked from the right as “lamestream” media or, at minimum, left-leaning sources and from the left as carriers of “both-sides-ism” (a charge of false balance, a media bias in which journalists present an issue as being more balanced between opposing viewpoints than the evidence supports).

There are many similarities between the sub-propaganda of Americans influenced by the left and the right. The differences are in the ultimate goals. Media arms of the right and the left in the United States emphasize news stories and opinion pieces that suit each narrative and ignore those that go against the overall message. The exceptions to this rule are opinions on the other side that can easily be pilloried and events that are so newsworthy (i.e., marketable, for the news is a business, and rating and readership are paramount) that they cannot be ignored. There are also significant differences among various media in the two camps regarding how closely they subscribe to journalistic ethics—multiple sources, accurate quotations within contexts, correct reporting—but both camps reflect sub-propaganda in service to their parties' interests. Both interests have their roots in American myths and presuppositions.

Ellul claims that propaganda that stresses virtue over happiness or austerity over consumption has little chance of broad resonance in technological societies. All propaganda in such societies must be compatible with the myth of continuous progress. As the old General Electric slogan had it, “progress is our most important product.” The propaganda in all technological nations will parrot one version or another of this adage—the nation will continue to industrialize and modernize; science and technology will create a material paradise.

Ellul asserts that, though advertising for products might evoke nostalgia, it is not a viable strategy for political propaganda. Although it might appear that “Make America Great Again,” a slogan used by both Ronald Reagan and Donald Trump, counters that assertion, it is consistent since the slogan also evokes a better tomorrow. Successful propaganda in modern society must also be consistent with the currents of that society. For example, a campaign to restrict women to 19th-century roles cannot win wide acceptance in a technological society—economic realities, working families, struggles to maintain a middle-class lifestyle, and corporate and government entities dependent on women in the outside labour force will resist it.

Ellul offers a not-so-compelling example of the impossibility of successful propaganda that contradicts the nationalist zeitgeist. True federalist propaganda (advocating for state and regional authority), he writes, “can never succeed” in modern technological societies (1965, p. 41). His reasoning about its incompatibility is that it challenges the national myth and the widespread faith in the strength and efficiency of centralization, part of the general faith in progress. However, federalist propaganda has found a willing audience and is valuable for some interest groups; others use it when it suits their purposes. A better example is one of the impossibilities of the success of propaganda advocating true anarchy, for such a philosophy runs directly counter to technological society.

Propaganda can turn patriotism into the conquest of other nation-states. It can turn a culture based on thrift and hard work into a consumer society. It can turn patriotic American citizens against their government. It can justify gross inequalities and integrate people more firmly into existing social structures. Ellul asserts that propaganda not only reflects a society’s myths and presuppositions but also strengthens and “hardens them, sharpens them, invests them with the power of shock and action” (1965, p. 40).

Timing

Active propaganda’s calls to action must be timely and responsive to the social and economic conditions of the moment. According to Ellul, the public of the modern nation-state is sensitive to contemporary news events, particularly economic and political news events, that challenge the fundamental currents of their society. The propagandist can utilize news events related to these fundamental currents and the public’s deep beliefs and attitudes. The news event reflects reality and has power over the individual because of this resonance and because it engenders “seductive excitement” by its call to immediate action in support of the manufactured reality (1965, p. 43).

The modern individual, Ellul notes, is at the mercy of news events. They come at the individual in rapid succession, faster, more numerous, and more intrusive each successive year. Individuals are further saddled with a limited attention span, little time to understand the world outside their jobs (usually jobs of limited scope), and short memories. Moreover, the same can be said of the various media that carry these fast-moving events. Current news gets massive attention, some events so much as to exclude all other contemporaneous events (think of the Department of Justice raid on Mar-a-Lago or Queen Elizabeth's death in the summer of 2022). Once the obsession with today ends, Ellul points out, it is forgotten, or interest is lost (1965, p. 45). So, despite their obsession with the news, modern people do not think much about or understand current social, political, or economic problems; instead, they react emotionally to them. One of the benefits of the job of propagandists is that they can depend on the fact that the public will forget the theme, event, or opinion within a few weeks (1965, p. 46).

Propaganda uses words and phrases that can break through the media noise and into the consciousness of the target population. Words and slogans are tested in focus groups, presented through surveys, and discussed in board rooms. They are pointed, active, and often associated with the times or images that inspire strong emotions in the target audience. Watergate! Benghazi! No Collusion! Witch Hunt! There is the possibility of information overload among the public (Ellul calls it "an excess of information"). To eliminate inconsistencies, an individual can repress or forget previous events. Such a person, he writes, is denying their continuity as a person and living on the surface: that is, a "discontinuous and fragmented" life (1965, p. 47). Such "current events" persons are ripe for propaganda since they lack well-defined anchors or values and are carried along by the prevailing current.

Ellul considers this obsession with news responsible for many people ignoring the most critical information about our world. Here he mentions the splitting of the atom and nuclear weapons. One

could add information about climate change, habitat destruction, deforestation, and desertification, some of our current environmental problems. Moreover, there are our social, political, and economic problems—few of which are adequately covered in the news flashes. There are long-term issues such as rising inequalities based on race, class, and gender, struggles between authoritarianism and democracy, and the ever-present threats of plague, economic recession, and war.

Nevertheless, the news itself, Ellul writes, could be a simple fact or the dissemination of an item of information. It could be true or false, depending on the source. It might be heavily edited to support a point of view, taken out of context, an opinion disguised as news, or an objective piece that looks at all sides. The important thing in studying propaganda is its dissemination, not its reality (1965, p. 47). Ellul emphasizes that people have been conditioned in the modern era to be sensitive to economic, political, and social news. It does not have to be objective or even rooted in reality; it only needs to be presented as such. Propaganda on behalf of a government, party, corporation, or other organization can then suggest specific facts from the news content that become real to the individual who has been conditioned to be concerned. Through propaganda, the organization exploits the individual's concern for its own ends (1965, p. 48).

The Undecided

Ellul estimates that anywhere from 7% to 10% of a population are indifferent to the social life of the group—they are not the undecided and not viable targets for organizational propaganda. The undecided are full participants in the life of society but have not yet committed to policies or actions on seemingly urgent social, political, or economic problems. Members of this group are susceptible to the control of their opinions and attitudes. They are often targeted with propaganda to bring them under organizational coordination and

control. Nevertheless, according to Ellul, this is only possible if the undecided share the concerns of the social group. Propaganda has its strongest appeal to individuals involved with the prevailing social currents of society who share the group's collective interests.

In modern technological societies, writes Ellul, collective interests seem to converge on issues of politics and governance, economics, occupations, and technologies. More recently, the environment and health care have joined this list of collective interests. It is within the collective foci of interests—that is, societal interests—that propaganda can be most effective. The more integrated the individual is into active groups tied to a collective focus of interest, the greater the effect of its propaganda on its members. Ellul emphasizes that this intensity centres on the collective focus of interest, and it is not simply the individual's reaction but also the result of group participation. Participating in collective life makes one susceptible to an organization's influence and propaganda (1965, p. 50).

Ellul then summarizes three major principles of effective propaganda. First, the organization must place its propaganda within the socio-cultural system's focus of interest. Second, the propaganda should aim at individuals intensely involved in group life. Third, a combination of the first two, the propagandist should note that the intensity of involvement is greatest around the collective focus of interest (1965, p. 51).

Handling the Truth

Propaganda's relation to the truth is mixed (like most of us and our organizations). Most people believe that propaganda is easy to recognize because it consists of tall stories and repeated and obvious lies. That attitude leads many to fail to recognize their susceptibility to propaganda. In fact, according to Ellul (as well as actual propagandists such as Goebbels, Hitler, and Lenin), truth is highly valued by propagandists, particularly truths that embody facts. It

is in the interpretation of facts that lying becomes a fundamental skill (1965, p. 52).

Propaganda must be accurate when reporting “local facts” that the target group can experience directly. As a caveat, Ellul states that propagandists cannot go against such local facts unless they have their target population so well in hand that they will believe anything. However, he says that this condition is rare (though perhaps not rare enough). Regarding factual material that is more remote, such as labour statistics or productivity claims, Ellul asserts that such propaganda from government entities tends to be accurate. Although propagandists have built campaigns on factual lies with some success, only true believers tend to go along with them. However, those outside the group, the undecided or those in thrall to opposing propaganda, see the improbability of such assertions and find them ludicrous and unbelievable. As a result, Ellul writes, campaigns based on real lies are becoming rare (1965, p. 54).

However, he might have been premature in this assertion since lies seem to be coming back in fashion as a propaganda technique. The “firehose of lies” is a technique in which many false messages are broadcast rapidly, repetitively, and continuously over multiple channels (e.g., news and social media) without regard for truth or consistency. The object is to overwhelm the target population with such assertions to get them either to believe the falsehoods or to give up on ever discerning the truth of the matter. Recent examples include the many assertions about COVID-19 vaccines and alternative treatments and the “stolen” election of 2020.

There are some exceptions to the use of lying propaganda noted by Ellul. Propaganda claiming that a fact is a lie is still popular, as is making vague “factual” claims to deceive people, such as claiming a 15% increase in productivity without specifying the time period. Alternatively, facts can be presented in such a way that, by innuendo, suggests an opponent is guilty of something. Also, facts withheld often suit the organization’s purpose (Ellul, 1965, pp. 54–56). For example, the Texas government, after effectively banning all

abortions, withheld maternal death rate statistics until well after the elections in November 2022. According to many, this withholding was meant not to give ammunition to those who favour choice in abortion (Klibanoff, 2022).

Nevertheless, interpreting facts is the “real realm of the lie” (Ellul, 1965, p. 57). Counter-facts can detect factual lies, but it is hard to disprove an interpretation of an event or a fact. A fact, Ellul points out, has different significance depending on who is interpreting it. Consider the different interpretations of the FBI search of Mar-a-Lago in August 2022 (much in the news at the time of this writing). The trick, Ellul writes, is to go immediately from the facts to moral and ethical judgments and assertions.

By its very nature, propaganda is a technique used by organizations for interpreting events. Ellul becomes negative here, calling it “an enterprise for perverting” interpretations and false insinuations (Ellul, 1965, p.58), but that might be too cynical. Indeed, some propaganda comprises lies and self-justifying assertions. However, many people interpret events and facts in a light as favourable as efficiency and effectiveness allow. Furthermore, much might be honestly believed by the propagandist or be factually accurate, such as propaganda pushing the effectiveness of a vaccine.

The second part of the relationship between propaganda and truth telling is that propagandists often (Ellul implies always) must obscure or outright hide the motivations of the organizations for which they act—such as the government, a political party, a corporation, or an activist group. Again, this might be a case in which Ellul is overbroad and too focused on active propaganda of a political nature. As he points out elsewhere, many organizations engage in propaganda openly with their stated goals. Examples include organizations such as the Sierra Club or Doctors without Borders, though one can also imagine such organizations engaging in active political propaganda that obscures their organizational interests.

So, lies about interpretations and intentions are common in propaganda campaigns. The government of the United States lies,

Ellul asserts, when it claims to defend liberty everywhere—it does not do so when it is against its national interests. The government of Russia lies when it claims that Nazis rule modern-day Ukraine with the intention to invade Mother Russia. Ellul points to a form of projection well known about propagandist-political leaders; they often accuse their enemies of intentions, misdeeds, or crimes that “clearly reveal the intention of the accuser” (1965, p. 58).

However, Ellul also points out that the propagandist sometimes believes lies. Some leaders in the US government might have believed that they were preventing the development of weapons of mass destruction in Iraq or defending the freedom of the homeland (the latter word always had a German ring to it). All three political blocs—the United States, China, and Russia—make positive claims about themselves and their interpretations of events and cast aspersions on the interpretations of others. Ellul credits these governments with some good faith in their beliefs about themselves. However, as soon as their propaganda becomes organized around false claims about themselves or others, it is done in bad faith. In his words, “propaganda reveals our hoaxes even as it encloses and hardens us into this system of hoaxes from which we can no longer escape” (1965, p. 61). The lie becomes part of social reality, and the propagandist and the target audience are ensnared. Like Sir Walter Scott’s (1808/1888, Canto 6, Stanza 17) adage, “oh, what a tangled web we weave, when first we practice to deceive.”

To summarize, Ellul’s definition of propaganda is a set of psychological methods of manipulation that an organization uses to arrange and trigger a mass of individuals to adopt beliefs and actions consistent with that organization’s ends (1965, p. 61). With modernity, propaganda has become ever more efficient and pervasive and actively threatens human freedom and democracy.

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Types and Functions of Propaganda

Propaganda is not a simple phenomenon, and Jacques Ellul classifies two fundamental types: “political propaganda” (the term predates him) and “sociological propaganda.” The former has political ends and is carried out by political institutions (governments, political parties, or interest groups). The latter penetrates our consciousness through our participation in social life. Within these two types, propaganda can be agitative, consisting of techniques that attempt to change the behaviour of individuals, or integrative, in which the goal is to integrate the individual into the existing social order. We think of political agitative propaganda whenever the topic of propaganda comes up. It is an organization’s deliberately chosen and calculated technique to achieve its desired goal. It is usually of short duration and mainly used to achieve political goals. As in any campaign (battlefield or gridiron), the political propagandist can be a tactician or a strategic planner. Also as in any campaign, the tactical focuses on limited and immediate results, whereas the strategic is the broader framework of the entire organization (Ellul, 1965, p. 62). Sociological propaganda is usually aimed at integration of individuals into secondary social organizations and, through them, the whole society. However, parties within a society might use it to integrate individuals into an oppositional world view.

Sociological Propaganda

Sociological propaganda (which Ellul also calls “sub-propaganda”) is a far more widespread and challenging phenomenon to recognize and define than political propaganda. It consists of the techniques that social organizations use to integrate the maximum number of individuals into them. The organization (government bureau, corporation, workplace, educational institution, political party, or other) expects the propaganda to unify its members’ behaviour in line with its goals and according to the individual’s status and role. Ellul labels such propaganda “sociological” to emphasize that it attempts to conform entire attitudes and lifestyles rather than particular courses of behaviour. I examined this type of propaganda produced by American education systems earlier, consistent with the sub-propaganda produced by governments, corporations, the military, sports, and other organizations within American society (1965, p. 68). Moreover, as a general statement of the phenomenon, Ellul remarks that a nation-state intensely organized through sociological propaganda will have many organizations spinning the same integrative messages through their media, public relations, marketing, and human relations departments (1965, p. 63).

Sub-propaganda is qualitatively different from political propaganda, with different origins, methods, and impacts. In sum, it is a uniform message that seeks to integrate individuals into the dominant social order through their participation in the structural organizations of society (Ellul, 1965, p. 62). Political propaganda seeks to spread its messages through mass communication systems to convince the public to favour some political or economic activity and to engage in some action to support that policy. However, sociological propaganda reverses the movement. Structural organizations exude a world view that usually supports the status quo and promotes the smooth integration of the individual into existing social structures. This is the type of propaganda emanating from the mainstream media in the United States now championed by the old liberal consensus there.

Sub-propaganda is diffuse, coming at the individual from the media, educational institutions, workplaces, governments, and most social organizations in which the individual is involved. It establishes a general climate, covertly influencing the individual through socialization, peer pressure, and sports and leisure activities. Albert Einstein (1931, p. 5) paraphrasing the German philosopher Arthur Schopenhauer writes that “a man can do what he wills, but he cannot will what he wills.” This aphorism means that a person’s hopes and desires do not come from within; they come from without, from the social structure. What an individual wants and seemingly adopts spontaneously conforms to society’s institutional structures. Sociological propaganda is ubiquitous, a conditioning process found in music, movies, television, fairy tales, novels, advertising, education, corporations, other businesses, chambers of commerce, and many other organizations.

Sub-propaganda is effective because it acts gently and subtly over time, particularly in stable societies. It explains the overwhelming conformity that most modern societies exhibit. Sub-propaganda forms are diffuse and aim to spread ideas, prejudices, values, and lifestyles. All of these message strands about the goodness of the American way of life complement each other, all in the same direction: the comforts of consumption, hard work, opportunity, the American Dream of home ownership, and plenty of money and leisure.

Ellul admits that such sociological propaganda seems quite different from the agitative political propaganda campaigns of Hitler or Stalin. Although sociological propaganda is usually non-intentional, at least in the initial stages, it strongly influences human thought and behaviour. Ellul argues that sub-propaganda must be considered part of the overall phenomenon of propaganda. Organizations express sub-propaganda through the same media as agitative political propaganda and often have their spokespersons put their spin on public relations.

Nevertheless, Ellul adds, sub-propaganda is ineffective in a crisis, in which case the sub-propaganda becomes the pre-propaganda that a political propaganda campaign requires. It is easy to graft agitative “propaganda onto a setting prepared by sociological propaganda” (1965,

p. 66). Besides, he notes, sub-propaganda can easily be transformed into agitative political propaganda with a few well-chosen words.

Ellul (1965) emphasizes that sub-propaganda is initially spontaneous and not the result of deliberative action; it follows the general climate of society (p. 64). He suggests that, though sociological propaganda is often involuntary at first, it “becomes ever more deliberate” and direct over time (p. 67). It also becomes more pervasive when the status quo is threatened. It leads people to believe that their civilization is the best of all worlds and that their way of life is superior.

Ellul posits that American sub-propaganda serves several functions. Its primary function is uniformity and standardization among an ethnically diverse population. Standardization has economic benefits in terms of mass production and consumption. To have both, there is a need for uniformity in terms of life’s necessities and agreement on acceptable lifestyles. Conforming behaviour has political benefits when trying to appeal to public opinion. However, the whole conforming enterprise can go to extremes, Ellul writes, citing the mass hysteria of McCarthyism in the early 1950s (1965, p. 68).

Sociological propaganda is often aimed at integrating the individual into technological society. In premodern societies, individuals were integrated into their norms, values, and lifestyles through traditional groups and organizations, such as family, community, religion, and social class. As modernity broke the hold of these institutions on the socialization process and the increasing division of labour introduced a variety of interests and lifestyles, there was an increasing need to integrate the individual into standard norms and values. Thus, the structural institutions of society weave a standard message of conformity to society’s way of life and goals: consumption, productivity, efficiency, and work. Sub-propaganda serves as the integrative mechanism of technological societies. Ellul writes that each person should be “a functional fragment” of society, perfectly adapted and integrated. The individual reflects society and its organizations and groups, sharing its stereotypes, ethics, politics, and beliefs (1965, p. 75). The propaganda of integration is usually

the product of sociological propaganda, focused on the long term; it surrounds individuals, leaving them no space to think outside their world views. However, political propaganda campaigns can also promote individual behaviour congruent with the interests of the social order (say, masking or getting vaccinated).

According to Ellul, sub-propaganda usually supports the status quo and focuses on justifying existing social, economic, and political arrangements. It is aimed at stability, unity, and social order. It promotes norms, values, desires, and common lifestyles to mould the entire person. Ellul is most interested in integrative propaganda, believing that it is a technological society's most potent social force.

He considers intellectuals to be much more sensitive to the appeal of such propaganda, even when they profess to be opponents of their society (1965, p. 75). He claims that comfortable and cultivated people share the stereotypes and values of the sub-propaganda and often demand that their society live up to the hype. In addition to buying in to society's stereotypes, Ellul points out, the superiority complex of intellectuals has led many to believe that propaganda does not affect them, thus making them more susceptible to its influence. In addition, they need to have an opinion on everything, and propaganda can instantly supply that opinion without further study and thought (1965, p. 111).

Ellul suggests that sub-propaganda sometimes attempts to spread its message to other countries, "to impose itself" on other socio-cultural systems (1965, p. 62). However, it is apparent from the context that he mistakes American sub-propaganda for the whole class. Ellul cites this colossus when he calls sub-propaganda inherently and aggressively expansionist. However, his evidence for it is weak, focused on a singular, inherently unique case. The United States was the first society to attain true technological status shortly after the Second World War, and American sub-propaganda was the first to incorporate ideological justifications for rationalization, bureaucratization, mass production and consumption, and continuous technological development. As other socio-cultural systems attained genuine technological status, they adopted similar technologies,

sub-propaganda techniques and messages, and organizational structures. They thus produced the same type of individuals who conformed to technological society.

As technically oriented sub-propaganda spreads worldwide, it becomes more conscious and precise, aiming at the long-term integration of the masses “and progressive adaptation” to technological society (Ellul, 1965, p. 67). In this way, much of America’s sub-propaganda became associated with the general category of sub-propaganda, specifically promoting integration into technological society. It is taken up by developing technological nation-states and spread throughout the world.

The more conscious sociological propaganda becomes in promoting integration into a technological society, the more it tends to supplement its appeal with agitative propaganda. Ellul cites the Marshall Plan, which he admits was a source of aid to the devastation of the Second World War in Europe, but it also had its propaganda elements—spreading American products and films as well as publicity about American largesse. He writes that in 1948 the American government subsidized American publications (he mentions the *New York Herald Tribune* and *Reader’s Digest*) in European markets to spread American propaganda. The propaganda efforts also included the sponsorship of film centres and libraries. The success of American propaganda was very uneven, Ellul explains, because Americans have a noticeable “superiority complex” that rankles the sensibilities of many Europeans (I add especially the French). At the same time, he admits, French opinion has favoured the “obvious superiority” of what Ellul calls “American technical methods,” which might be more accurately labelled simply “technique” (1965, p. 70).

Political Propaganda

Ellul asserts that political propaganda attracts the most attention. It is undoubtedly the flashiest, the type that most people think of when the topic of propaganda comes up in discussion. It is often subversive

of the status quo and sets itself off as opposition. Party organizations make such propaganda in order to destroy or upend the established order. It has always existed, at least in primitive form, in world history; all revolutionary movements engage in such propaganda. Ellul specifically mentions the rebellions of Spartacus, the Crusades, the French Revolution, and the like. However, Lenin refined the technique to mobilize his nation for psychological and actual war against factions within and without.

Ellul points out a “very curious and recent phenomenon” on the American scene in the mid-1960s. He writes of the appearance of “agitators” among politicians and propagandists (1965, p. 69). They stir up public opinion in a seemingly disinterested fashion. They function as nationalists and do not focus on any doctrine, principle, or reform but style their opinion as being truly American. They advocate for free trade and an unregulated economy and against “plutocrats, internationalists, and socialists” as well as anything related to the New Deal or the Great Society (1965, p. 69). They are active in the lower middle class and among the proletariat and others who have not fully integrated into American society through its organizational structures or sub-propaganda. Ellul continues that these agitators also appeal through anti-Semitic, anti-communist, racist, and xenophobic tropes as well as other current stereotypes and scapegoats among their target populations.

Like other propagandists, Ellul asserts, these agitators try to provoke action. However, at the time of his writing, he could not identify the political party that they were working for or whose interests they served. The term “agitator” seems apt since their interest is anti-establishment. Despite this, he writes, they strongly influence American public opinion, an influence that might well “crystalize suddenly in unexpected forms” (1965, p. 69). The only ideological threads that Ellul overlooks but are present in the agitators of today are white supremacy (undoubtedly present in the mid-1960s) and owning the libs (a more recent development). These early agitators gradually evolved into the right wing of American politics, led first by

right-wing radio, then by Fox News, and soon followed in mass and social media by a host of imitators and ever more radical propagandists. These propaganda outlets have attached themselves, of course, to the Republican Party and, at this writing, are in a six-year process of taking it over.

Consistent with the writings of Ellul, Fox News and the like specialize in sub-propaganda of the right wing of the Republican Party. It is often deliberate (ignoring some news events entirely) and practises some specific propaganda techniques to bolster its messaging. The mainstream media, in contrast, have continued to espouse the liberal consensus, mainly restricting themselves to the integrating sub-propaganda of the American way. Recently, some media outlets and politicians have begun to counter the right-wing media through leftist sub-propaganda. However, they have not yet used all of the propaganda tools available or are not yet competent in the techniques. Suppose Ellul is correct in his analyses, as the Republican Party continues to lean toward neo-fascism, opposition organizations, of necessity, will become more deliberative with their sub-propaganda and intensify their agitative propaganda.

Political propaganda aims to stretch the efforts and energies of its target population toward the goals of productivity, sacrifice for the future, or hatred of the other. It takes individuals out of their routines, Ellul notes (1965), plunges them into “enthusiasm and adventure,” and inspires them to strive for seemingly impossible goals (p. 72). It can be explosive, responding to a crisis or provoking one, but individuals can sustain such intensity only briefly. Unless the objective is achieved quickly, “enthusiasm will give way to discouragement and despair” (p. 72). Because of this, technicians of agitative propaganda tend to work in stages: intense agitation for a short-term goal, relaxation and reliance on sub-propaganda, and then agitation for the next stage.

Political agitative propaganda is easy to make, Ellul argues; it is often based on hatred, jealousy, or fear of the other and is, consistent with the essential needs of all human beings: “the need to eat, to

be one's own master, to hate" (1965, p. 73). He points out that it is easy to designate someone or some group as the source of all evil or misery, mainly if the person or group is relatively powerless to reject the label. The party can successfully pass on the big lie and the most absurd delusions through such appeals. Along with this appeal to violent sentiments, political propaganda often combines appeals to nationalism, liberty, and equality to broaden its attraction. These appeals often aim at the less informed and the oppressed.

The propagandist (technician) instills and exploits fear and resentment among the population toward a "collective fixation" on an enemy. If propagandists desire to blame social ills on an enemy, then they choose a scapegoat. Capitalists play this role for communists; Jews, communists, and Romani for Nazis; and immigrants for others. The propagandist condemns and slanders the scapegoats repeatedly, putting forth a collective goat that the population can blame for all of its ills, transferring all evil and sin to the goat, and justifying its own purity and goodness in the process.

Once the propagandist fixes the enemy as the cause of all social ills in the imagination of the target population, resentment builds, and, "like a flock of sheep, they stampede much further than they had actually been commanded to go," Ellul says, anger and self-justification causing them to attack their designated enemies verbally and physically (1964, pp. 366–367). In extreme cases, the propagandist can cast adversaries as the incarnation of evil and the cause of all society's ills: they are pedophiles; they kill babies; they perform bizarre rituals of cannibalism and orgies. When such accusations proliferate, it is a sign, Ellul writes, "that there is no rational basis for hate; it results solely from subconscious mechanisms" (1964, p. 367).

Ellul connects the effective use of propaganda on individuals with their loss of a sense of reality—motives become confused, accusations of every form of evil against the other mount, and all that is wrong transfers to the official enemy. Individuals define the world as good and evil, with all "absolutely good" people in their political, ethnic, or social camp and all "absolutely evil" people in the other

camp. Those defined as good are given political, social, and historical virtue, and those labelled as evil are considered subhuman, mentally deficient, or in league with the devil. In the modern world, Ellul adds, good and evil are defined more readily in terms of social and political opponents within rather than foreign enemies without.

Vertical and Horizontal Propaganda

Political or sociological propaganda, agitative or integrative, is almost always vertical; it is made at the behest of an organizational hierarchy seeking to influence the masses. Propagandees are isolated even when they are part of a crowd. Their shouting in agreement is in response to the leader rather than communicating with the people around them. They are passive. When they act, it is with a “vigor and passion” not their own. The action, Ellul asserts, is conceived from the top. Propagandists act through individuals, directing them as an instrument. This control is even more firm when the individual is part of a crowd. Propagandees lose their individuality and engage in acts that would be “inconceivable” if they acted alone (1965, p. 80). Vertical propaganda is the most common type, and it needs the mass media to spread its messages.

Conversely, horizontal propaganda is made from inside the group and depends on the tight organization of people. The two examples that Ellul explores are early Chinese propaganda and human relations departments in American corporate and government organizations. Chinese propaganda is political, sociological, agitative, and integrative; human relations are simply integrative propaganda. The characteristics of the two are remarkably similar, according to Ellul, even though they have hugely different origins, contexts, and methods. In both, the propaganda comes from inside the group, using social and psychological pressures to get the individual to agree with the group’s consensus. The individual might not even recognize the propagandist within the group as the leader. Such propagandists are

leaders or teachers who guide the discussions of individuals of equal status in desirable directions. The information presented in the group is selective, and the data and reasoning on which the group base their discussions are deliberately chosen to lead to the desired conclusions.

In China, Ellul writes, the state expects individuals to participate. Individuals in the group are encouraged to voice their opinions and, through extended discussions over time, discover their own convictions, which invariably are the group's convictions. Through expressing these opinions in a group setting, the individual becomes even more committed to the party line and goes on to help others in forming these opinions. Group members help one another to discover the correct line consistent with the party line (1965, pp. 80–82). It is a drawn-out process. The group settings are intimate, and the discussions tend to be informal. It is primarily an intellectual enterprise (technique) rather than an appeal to emotions. It is even more successful if the individual belongs to several groups with the same orientation. However, groups that might give counter-messages, such as family or informal friendship networks, are discouraged. The groups consist of people of equal status (homogeneous in terms of sex, age, and class), specialized, and small; Ellul estimates from 15 to 20 people.

Horizontal propaganda aims to create voluntary adherence to the party line. Indeed, Ellul suggests, it is a very advanced technique that leads individuals to “find” the party line through their own reasoning processes, which he believes can be more effective than vertical propaganda. The illusion that individuals arrive at their thinking through freedom of thought is subtle manipulation and, Ellul adds, “risky” (1965, p. 82).

Although there are advantages to such total horizontal propaganda, there are also disadvantages. It is time consuming and expensive (group leaders must be trained, paid, and bureaucratically coordinated and monitored). Group leadership takes a unique individual thoroughly integrated into the party and of “unswerving” devotion to its causes. The person must have the characteristics of

successful group leaders. Despite these issues, it has been successful in China because, though it is political, it is closely identified with education (Ellul, 1965, p. 83). The small groups are China's education system, teaching adherence to the rules of society, its ideologies, principles, values, and myths. In 1965, according to Ellul, the Communist Party of China delivered sub-propaganda through the technique of horizontal propaganda, and it was remarkably effective in attaining obedience to the authorities.

However, the expense of the effort and its inefficient and risky results are responsible for the decline of such horizontal propaganda in China, at least outside the re-education camps and prisons. Also, there is the need to consider the requirements of a growing technical society for a more specialized economic and professional education system—which Ellul points out would be incompatible with China's small group system. These factors are responsible for most of the propaganda of the modern Chinese state, which relies on traditional, vertical propaganda of the sociological, political, integrative, and agitative varieties.

Ellul's American example of horizontal propaganda practised through human relations departments is a short reference to William H. Whyte's classic study, *The Organization Man* (1956), in which Whyte demonstrates that American schools are becoming the training ground for adapting youth to prosper in American society (1965, p. 84). Nevertheless, unlike the early Chinese example, higher education and other institutional structures in the United States can better be described as using vertical sociological propaganda to integrate their clients into technological society.

Rationality and Irrationality

The characterization that propaganda is an irrational appeal to emotions has some truth, but it is not always so. There is rational propaganda based on facts, stats, and data; it is propaganda if it uses

selective facts to demonstrate or bolster a position of superiority or appeal for support. Remember, people can quickly check facts, but the “realm of the lie” is interpreting facts (Ellul, 1965, p. 57). According to Ellul, US propaganda tends to be factually based (1965, p. 84). This factual basis holds today, at least for the traditional mainstream media, which still subscribe to the liberal consensus. Ellul asserts that modern people must believe that they act consistently with information and experience. It is part of the rationalization process or the increasing hold of rational techniques guiding human behaviour. Propaganda has responded to this need by becoming more rational and factual in its relation to information.

Emotional appeals tend to lessen the individual’s critical thinking skills. There is even some blowback to excessive or blatant appeals to fear and shock, according to Ellul (1965, p. 85). However, given the recent MAGA (Make America Great Again) phenomenon and its relation to factual material, more research is needed to examine differences in individuals’ reactions to such appeals based on their social class, gender, pecuniary interests, party affiliation, and education level. At the least, the recent history of Trumpism calls into question Ellul’s assertion that “The Big Lie” is now ineffective.

Regardless, Ellul posits that propagandists (technicians) can present factual propaganda to evoke an emotional reaction. For example, an individual who views a factual documentary on US relations with the Iraqi people might come away with the overall impression of what a great relationship it was and take pride in American foreign policy. The individual who reacts to the mythical (manufactured) images is left with an emotional response that overrides factual analysis (1965, p. 85). The appeal is factual (though selective in the facts presented, a frequent practice in documentaries), but its effect on the individual is emotional.

Ellul argues that this is true for propaganda and all information. He asserts that the flood of information is such that individuals are drowning (and this in the mid-1960s!)—statistics, factoids, and professional opinions—their capacity to form judgments and opinions

overwhelmed. Thus, all rely on a general impression of the world, an impression often simplistic and one-sided. Much of propaganda's success stems from controlling the flow of information to the target audience and engendering emotional reactions in response to this information. These emotional levers are implanted within individuals and used to guide their attitudes and behaviours, depriving them of their locus of control (1965, p. 87). This has severe consequences for the future of democracy and social justice.

Social Conditions for Propaganda to Thrive

Several conditions are necessary for modern propaganda to exist and thrive within a socio-cultural system (1965, p. 88). Much of it could not exist without mass media. When Ellul wrote, US media comprised hundreds of daily and weekly newspapers, magazines aimed at various interests, radio stations, and three major television networks. With the proliferation of cable and satellite television, streaming services, internet news sources, and social media, the vehicles for disseminating propaganda have multiplied exponentially despite the decline of newspapers and magazines. Whereas past media had filters—editors, publishers, sponsors, and critics who would vet material before publication or broadcast, much of today's internet media is click-and-play. Thus, all manner of opinions, rumours, and conspiracy theories are amplified and propagated on the web. There have also been significant advances beyond Ellul's time in psychology, sociology, social psychology, public opinion polling, big data, and other fields aimed at understanding and influencing human thought and behaviour.

Ellul asserts that centralized media are necessary for propaganda to be effective. This concentration is necessary not because the individual has a choice of media but because no media (TV, newspapers, radio) can monopolize the individual's attention. It is only through the concentration of the media, preferably in a few hands, that propaganda

can become truly effective in applying the psychosocial “orchestration” necessary for manipulating the thoughts and actions of individuals (1965, p. 102). Nevertheless, even media concentration is not enough. Fortunately for the few media conglomerates that made it through the great narrowing, there is a concomitant increase in the number of recipients who can read and purchase radios, televisions, cell phones, and computers. Both mass production and mass consumption are necessary to sustain each other; no modern propaganda can exist without the simultaneous existence of producers and consumers.

Ellul also remarks on political developments that are more immediate causes of the evolution of massive propaganda campaigns. He refers to the two World Wars, the Russian Revolution, Hitler’s rise to power, and since 1945 wars in China, Vietnam (French Indochina for Ellul), and the Cold War between the United States and the former Soviet Union. Each event spurred technical developments—as wars often do—including the sharpening and spread of propaganda techniques (1965, p. 88).

Ellul maintains that propaganda can best succeed in an individualistic society: that is, in a society in which traditional integrative institutions such as family, community, and friendship networks lose their essential life-support functions of occupational, financial, and emotional aid, socialization, education, and social support. Where traditional groups hold individuals to their norms and values, propaganda has only a negligible effect on them. Such groups are tightly structured, with a distinct way of life that propaganda cannot easily penetrate. Modernity tends to limit severely the functions of these traditional groups, replacing them with formal institutions. This functional replacement is not to say that traditional groups have disappeared. However, because they have lost many of their primary functions (except emotional gratification), they have become much less stable and vital in the individual’s life. Although modernization has freed the individual from family and community norms and values, it has made them directly vulnerable to the influence of secondary groups and thus “the entire society” (1965, p. 90).

The rise of mass society, Ellul continues, is the counterpart of the rise of individualism. Secondary organizations sponsored by government and capital—such as educational institutions, social services, psychological services, credit unions, Social Security, insurance, banks, nursing homes, daycares, Medicaid, Medicare, and abuse shelters—have all taken over these functions. Family and community ties used to provide all of these services, though haphazardly and inefficiently at best, the primary reason for the rise of secondary service organizations. These new secondary organizations were promoted in their founding by propaganda and are themselves the hubs of propaganda; “they are instruments of propaganda” (1965, p. 97). These organizations, always based on bureaucratic rules and procedures, are thus based on technique. Such groups interact impersonally and are goal directed, with written rules of conduct and strict hierarchies. These are the groups in which people are now integrated and socialized (propagandized) into their societies.

Ellul admits that there are societies in which propaganda thrives that are neither individualistic societies nor mass societies, such as Russia in 1917 or China in the initial stages of communism (1965, p. 97). Nevertheless, early on, government authorities in these countries moved to break down these traditional groups and develop new mass structures to replace them functionally. These new organizations are open to and carriers of propaganda. Where the modernization process of breaking down traditional groups does not happen naturally as part of the social evolutionary process, authoritarian states often force the issue (1965, p. 98). Modern propaganda can take firm root only with this breakdown of traditional social structures.

In premodern societies, public opinion was a function of the individual’s interpersonal relations within small, primary groups. These dominant opinions have a tight hold on the individual because of the everyday experiences of the group, the tight integration of members, and their well-defined and stable roles within the group. Secondary organizations have quite a contrasting character. In societies dominated by these organizations, individuals have little

common experience with which to base decisions, engage in mindless yet scripted interactions (do you want fries with that?), or their status and role within the organization restrict communications. Ellul asserts that societies dominated by large bureaucratic organizations (all individualistic, mass, technological societies) are ideal environments for the development and success of propaganda. It is the mechanism by which public opinion is formed.

A significant point that Ellul (1965) makes is that the propagandee is complicit with the propagandist. It is the individual who buys the newspaper, purchases a TV set, goes to a movie, or wanders the internet. Individuals do not buy these things because they want propaganda. Rather, the attractions of amusements, sports, news, or infotainment are more significant than the fear of propaganda. Ellul also suggests that we choose to read the newspapers that we like, tune in to the television stations whose news and fictional depictions of life coincide with our views, and visit websites that reflect our opinions and help to shape them (p. 103). In all such cases, the individual chooses the propaganda. As stated earlier, not all propaganda is about changing opinions; sometimes it reinforces existing opinions and calls the individual to action. Readers, or more likely viewers in this graphics-oriented age, offer their “throat[s] to the knife of the propaganda” that they choose (p. 103). Even more “remarkable,” according to Ellul, is that the propagandist, through the media, attracts the propagandeas, integrating them into the collective, into the mass (p. 104).

Ellul (1965) also remarks on some ideal demographic conditions for propaganda to thrive. A large population of high density and urbanization is necessary to increase interaction, impersonality, geographical mobility, and isolation. (The internet is thus an ideal environment for propaganda.) All such characteristics weaken the hold of family and community groups and provide the conditions for secondary organizations to proliferate and enlarge. An average or decent standard of living is also ideal for spreading propaganda since people who struggle for subsistence focus on survival and thus are poor candidates for

propaganda (p. 105). Besides, he writes, propaganda aims at the most significant portion of the masses, which lies in the middle of modern technological societies, between rich and poor. Sub-propaganda aims for normalcy, an average standard of living, clear national goals of productivity and efficiency, and a shared lifestyle regarding work and consumption (p. 106). It is about adjusting individuals to the status quo and integrating them into the socio-cultural system; the individual is formed into a “pattern most useful to society” (p. 108).

According to Ellul, propagandists come from the middle class across all societies (1965, p. 106). The poorer classes do not have access to education, and the wealthy do not understand the masses well enough to devise or exploit the symbols necessary for propaganda. However, more recent experience indicates that this is a tendency rather than an absolute. Also, it is possible that some people, regardless of class, have personality traits (sociopathic or narcissistic?) that naturally lend themselves to being good propagandists.

In addition to an average lifestyle, propaganda thrives where people have some level of cultural learning. Basic literacy is essential, but Ellul asserts that “perhaps 90 percent” know how to read but do not exercise their critical faculties much beyond that (1965, p. 108). They attribute truth, or lies, to whatever they read or view. They select the reading material that is the easiest to digest and parallels or reinforces their basic assumptions and beliefs. As a result, basic literacy campaigns make significant numbers of individuals susceptible to propaganda. In fact, Ellul claims that propaganda becomes the culture, what the masses learn and act on regarding politics, economics, and culture.

To summarize, Ellul maintains that basic education is necessary for organizational propaganda. Most of the populations of technological societies have attained this level but not yet a level of critical thinking and discernment to recognize their manipulation. Widespread critical thinking skills would make propaganda too difficult (1965, p. 109).

Ellul’s estimate of non-critical readers is too high; surveys of Americans indicate that large numbers do not read books beyond high school or even college. However, much depends on the exact

question, though it must be admitted that books are seemingly going out of fashion. (Does reading require too much time? Too much thought? Yet another commitment that modern people are unwilling to make?) (Pew Research Center, 2012).

Since Ellul's time, other reading materials are available on the internet, brief, to the point, and cast in the technique of propaganda. Widespread internet use is not one of his conditions for propaganda (given, of course, that Ellul was writing in the mid-1960s). However, it is undoubtedly a media accelerant for all types of propaganda—sociological and political, agitative and integrative, aimed at a national audience and an adversary's population. Information is a vital part of propaganda. For it to be successful, it must have some "reference to political or economic reality" (1965, p. 112). It requires a literate mass—the broader the information base of the mass, the greater the effectiveness of the propaganda.

Ellul (1965) argues that propaganda thrives in societies in which more information is available to the public (p. 112). Propagandists can then confront the public with a problem. In doing so, they can magnify the problem or report on it accurately, but the point is that they must have some factual basis for their assertion. "The problem need not actually exist, but there must be a reason why it might exist" (p. 113). The propagandist follows up by promising a solution to the problem. John F. Kennedy's "Missile Gap" in his 1960 campaign was a good example. A more recent example is the 2020 "Stolen Election" in America, though now the propagandist need only declare an endless series of lies as facts and get a considerable number of people to believe them and an even more significant number to parrot them.

The Necessity of Propaganda

In Ellul's (1965) view, propaganda is necessary for the social organization of a technological society; in addition, it is necessary for the individual. In the 1960s, Ellul asserts, it pervaded nearly every aspect

of political, economic, and social life. It has been even more ubiquitous and effective in the first quarter of the 21st century. Propaganda is an integral part of formal social organization; it is the great motivator of action, the symbols that our institutions manipulate to win our hearts and minds, and the push for us to participate in politics with “deep satisfaction” (p. 118). Propaganda meets the needs not only of social organizations but also of individuals. According to Ellul, it is needed by almost every citizen of our “technological age” (p. 121).

In the modern state, the masses are expected to participate in politics and know their political leaders through the media. People in Western democracies have become used to making political judgments and being consulted on issues through polling and voting. Some are superficial in their interests, some are more serious, but a sizable proportion of modern citizens vote, and the vote, aside from money, is the lifeblood of politics. Besides, Ellul opines, “political decisions affect everybody,” and many people want to be involved in the game to make their influence felt (1965, pp. 122–123).

Unfortunately, there are some problems with public opinion, even regarding the vote. Ellul (1965) disparages public opinion as often mixed, uninformed, and prone to stampedes in unexpected directions. It is emphatically not made up of “rational decisions” (p. 124). There is simply no way that the modern state, even if benevolent and seriously democratic, can govern according to public opinion. “But it cannot escape it either” (p. 125). According to Ellul, the only solution possible is to “channel and shape” public opinion to follow the necessities or whims of the government and convince citizens that they are involved (pp. 126–127).

There is an almost “mystical belief in the people’s sovereignty,” according to Ellul (1965, p. 129). A democracy is not the only system to hold this belief; even dictators attempt to demonstrate their legitimacy by appealing to democratic procedures and manufacturing consent. Propaganda not only manipulates information to achieve consent but also provokes public demand that the government act—for example, that the United States invade Iraq or that Russia

invade Ukraine—thus giving the impression that the government is only responding to the will of the people (1965, p. 131). This game of constant propaganda shaping and provoking public opinion and governments pretending to respond to this opinion with policies and actions now characterizes much of the relationship between the government and the people (1965, p. 132).

Although democratic states might hesitate given their values and revulsion to using political agitative propaganda, Ellul (1965) posits that, when under threat or serious competition, they will be driven to use it more frequently (p. 133). The sheer intensification of production in modern states demands strict coordination within and between structural organizations as well as significant coordination and control of large populations. This coordination necessitates permanent propaganda campaigns by governments and industries. Ellul asserts that nation-states have no choice but to use propaganda (p. 134).

Another reason that a nation-state cannot escape using propaganda is the existence of psychological warfare or indirect aggression using propaganda on another nation-state. Nation-states must counter such aggression. The Nazi propaganda campaign targeted Austria and the former Czechoslovakia before the Reich absorbed the two nations. The campaign sapped the strength of the two regimes and deprived them of the support of their people (Ellul, 1965, p. 134). A country cannot defend itself against such aggression, Ellul believes, unless it uses the same means to counteract the assault.

Not only that, but also the state must constantly encourage loyalty in its citizens and commitment to the values of the socio-cultural system. According to Ellul (1965), this encouragement is especially critical when these norms and values are attacked (p. 135). This crisis is another reason for the nation-state to intensify its dissemination of integrative propaganda, often through sub-propaganda filtered through educational institutions and the media and mirrored in advertising, social services, and economic activity. Nevertheless, Ellul insists, the effects of a nation-state's propaganda on its citizens are identical to those of enemy propaganda on another nation-state's

citizens. Regardless of where it originates, propaganda destroys one's "personality and freedom" (p. 137).

Any politically oriented education, according to Ellul, is selective in terms of the values that it encourages its citizens to internalize. We tend to believe that our national values and opinions are genuine, justified through practice and time, and thus the only values that matter. We therefore think that it is simply a matter of education. Nevertheless, Ellul writes, we are mistaken. The inculcation of some values, such as the benefits of competition or patriotism, is a rejection of other values, such as cooperation or internationalism. Thus, when education is undertaken to inculcate civic virtue, it "is precisely a propaganda operation" (1965, p. 138). So, Ellul concludes, by various means we keep arriving at the same conclusion: the modern nation-state must use propaganda to govern.

Propaganda serves many individual needs as well. Ellul posits that it fulfills individuals' need for help understanding the world and their position in it. As the state increasingly relies on public opinion to rule, individuals face myriad decisions that demand knowledge, judgment, and information that they do not have. Many desire to be involved in political decisions beyond elections, but other areas of life (family, work, consumption) demand their attention. Time is a scarce commodity for most, and in-depth knowledge of economic and foreign policy issues is not widespread.

According to Ellul, average people work eight hours daily and must devote up to two hours to commuting. If they are old-fashioned, they read the newspaper (or at least scan the headlines, perhaps reading a paragraph or two of a few stories). Alternatively, they watch the TV news or browse internet news and opinion sites. Moreover, this is the case for most people. They are then shown snippets of information, much of it factual, from the wide variety of happenings in the world that day or week. They would retain hundreds of factoids, at least briefly, but with no real coherence (1965, p. 143).

Furthermore, the variety of information is incredible—foreign and immigration policy, economic news, and Ukraine (updated from

Ellul's reference to Indochina). Broad­sides from all directions hit the individual, creating a bewildering mix of news and opinion pieces; advertisements; weather reports about tornadoes, earthquakes, and floods; statistics on crime in the streets; and stories of political and white-collar crimes that drag on forever in the courts. The attention of the citizen/voter, Ellul (1965) notes, is continually pulled in one direction after another, a "kaleidoscope in which thousands of unconnected images follow each other rapidly" (p. 144). Furthermore, it keeps coming, for news comes daily. It is "incoherent, absurd, and irrational" to the average person (p. 145). The individual is overwhelmed with news and developments. However, the government, teachers, peer groups, fear, and patriotism continually press for the involvement of the individual. The various forms of propaganda bring order to social, political, and economic life. Propaganda provides the scaffolding in which the masses can fit the different pieces of information to one another (or ignore them entirely). Propaganda provides a coherent world view and an "affirmation" that we are actively involved in our governance and in control of our destinies (p. 146).

Polls indicate that our fellow citizens have opinions about everything, even the most arcane political issues. Many people prefer to express manufactured opinions from pundits, television personalities, or websites than not expressing any opinions at all. Regarding this general problem of incompetence, Ellul adds that the highly technical and complex nature of many political and economic problems is beyond the average person's grasp and scope. For all of these problems, propaganda is the solution. Individuals desire to participate but do not have the time or energy to master the issues. Propaganda supplies them with a simplified version of a world view that allows them to participate in the democratic process "without eliminating their incompetence" (1965, p. 140).

To maximize production, Ellul observes, modern propaganda must push individuals to give their all to jobs that are never ending, often devoid of meaning, but play key roles in their identities and stations in life (1965, p. 140). According to him, propaganda spurs

modern people's dedication to work and productivity. Advertising stimulates the desire for money, benefits, status, and other extrinsic rewards of work—the education system, human relations departments, management, and supervision rouse commitment and job satisfaction.

Not only must modern people sacrifice themselves to their work, but also they must pay heavy taxes for the privilege of living in a technological society. Using force to collect taxes for the elite was acceptable in the past. Today there is at least some need for citizens to commit to the system so that they will not cheat too much. Thus, positive propaganda engenders commitment, such as a sign indicating “Your Tax Dollars at Work” on a highway construction project or a parade of military hardware. Then there is the need to call its citizens periodically to war or to subject them to the constant threat of war. Again, only the nation-state can engineer propaganda to get young people to sign up for service; only propaganda can whip up the general population's support for war (Ellul, 1965, p. 143).

Aside from taxes and war, technological society also subjects many of its citizens to inhumane working and living conditions, noise, constant stress from money or health problems, crowded streets, and periodic or chronic unemployment in a culture that puts a premium value on work. Ellul adds that the stress of adjusting to a technical environment can be unbearable (1965, p. 143). Medical treatments to address widespread anxiety and depression are one solution. Social services at various levels provide psychological and social support to help reduce tensions (and keep people productive). Finally, the market sells many psychological comforts such as alcohol, tobacco, marijuana, electronic games, and other amusements. Again, Ellul stresses that propaganda is a necessary tool that all structural organizations within bureaucratic mass societies use as well as the overall government of the nation-state. Propaganda works because it gives modern people simple explanations for what is happening in the world. In addition, it provides the fundamental causes of the problems that beset us, as well as promises of solutions for these

and future problems, often involving the promotion of further techniques (technology and organization) (1965, pp. 146–147).

Ellul posits that several psychological characteristics common to modern people can also help to explain the need for propaganda. Modernity brings about overcrowded cities, and one can become lonely in such diversity. Many live in a spiritual void and experience a need for community. This loneliness, Ellul writes, is perhaps “the most terrible ordeal” for modern people to bear. It leads to mental health issues, addictive behaviours, and physical ailments. Human relations departments in many corporations and government agencies, as well as social services and counselling organizations for the public, are all remedies (1965, p. 148). Moreover, propaganda can create feelings of commitment and community, integrating individuals into social movements and providing a sense of purpose and meaning, which can be “a powerful boost” to coping with the individual’s loneliness and self-esteem (1965, p. 150).

Ellul (1965) also claims that society pushes modern people to become more passive. This passivity goes into the job, where most workers perform limited functions within large organizations and participate in various roles within mass society (limited though these roles might be). Training in school, military service, jobs, games, and new techniques is constant. We are under constant supervision and trained to act in certain ways (p. 148). But some of us rebel against this anonymity, these feelings of inadequacy and unimportance. Propaganda allows such individuals to feel like heroes, to be considered as somebodies, and to express their “drive for power and domination” (p. 149). The football team at our school wins, and we feel pride; America’s military displayed in parades and the field keeps many youths enthralled. If we are in a profession, then the association “invest[s] it with idealistic or moral justification. It becomes our calling, and we will not tolerate its being questioned” (p. 157).

According to Ellul (1965), a final psychological need that propaganda fulfills is some relief from our increasingly organized, rule-bound, rationalized institutions. Modernity represses many human drives

(which he admits would be chaos if completely released) far more than traditional societies (p. 151). Propaganda can permit what is generally prohibited, such as hatred, since it can legitimate hatred by pointing to crimes committed by enemies. Propaganda “opens the door and allows [one] . . . to kill the Jews, the bourgeois, the Communists, and so on, and such murder even becomes an achievement” (p. 152). People have an overpowering need to be proper and correct in their opinions and behaviours, and propaganda gives them the “proof” that they are by offering ready-made justifications for actions, giving “assurances equivalent to those formerly given” by religion (p. 159).

In conclusion, propaganda plays a fundamental role in modern societies. It provides many essential social functions. Propagandees are not innocent victims but co-conspirators, for propaganda fulfills many of their needs for meaning, belief, and action. Ellul posits that the poor and lower working classes are the most susceptible to political agitation and subversive propaganda. People of the middle class are less susceptible to agitative propaganda but much more likely to be the target of sociological integrative propaganda (1965, p. 112). In addition, and to even the score, Ellul also writes that intellectuals are particularly susceptible to sub-propaganda. Propaganda is a technique that plays a vital role in a technological society. It is rational messaging that furthers the interests of the formal organizations of our economic, social, and political institutions. “The need for psychological influence to spur allegiance and action is everywhere the decisive factor, which progress demands and which the individual seeks in order to be delivered from his own self” (1965, p. 160).

8

Effects on the Individual and Democracy

Propaganda is a technique that manipulates the thoughts and behaviours of individuals and produces severe repercussions beyond the effects of the mass media on personality. Psychological manipulation has consequences, Jacques Ellul (1965) argues; it can produce significant changes in the individual (p. 161). Propaganda crystallizes issues; it organizes information, stimulates hatred and other emotions, and makes opinions hardened and resistant to new facts. Propaganda justifies people in their prejudices and opinions. In societies dominated by it, ideas and stereotypes are standardized, a codification of standards that locks the individual into certain opinions, perceptions, and judgments (p. 162). Crystallization also provides self-justification, certainty, and commitment to the individual. "It eliminates inner conflicts, tensions, self-criticism, self-doubt" (p. 165). Propaganda gives individuals justification for all of their past and future actions; they can express their opinions, perform certain acts, heap scorn on enemies, and be secure in the superficial knowledge that they are right.

Crystallization provides ready-made and socially acceptable opinions, thereby reducing some of the tensions of life in a technological

civilization. However, simultaneously, it prevents the individual from considering innovative ideas and new ways of looking at issues. Propaganda manufactures many true believers, and their personalities are centred on the opinions and justifications that they consider to be their own. They must vehemently defend against every new idea or opinion that challenges their constructed belief system. They are intolerant of anything opposed to their beliefs; they feel personally attacked when confronted with criticisms or different opinions (Ellul, 1965, p. 166). Propaganda leaves no room for ambiguity or uncertainty; it seems integral to one's very personality. Ellul calls this reaction against challenges akin to that of a religious personality when one defiles something sacred in traditional society (1965, pp. 166–167).

For many in contemporary US society, in which two propagandas are competing for political allegiance, individuals deeply committed to one or the other have their choice of media outlets. They tend to tune in to those that reinforce their acquired views. If not true believers, many liberals and conservatives at least feel uncomfortable, frustrated, or angry when they hear propaganda in the form of talking points or opinions that counter their own beliefs.

Alienation through Propaganda

Because propaganda manipulates people to believe and act on behalf of someone else, it alienates them from themselves. Propaganda manipulates individuals to act for another, to obey impulses outside the self, and thus to lose their locus of control (Ellul, 1965, p. 169). Propaganda pushes individuals to identify with a higher cause, something bigger than themselves, to free their minds of doubts and tensions, and to devote themselves to a leader or cause. It limits critical faculties and reinforces social stereotypes, opinions, and beliefs. It channels the individual's thoughts within the party line, with only slight variations tolerated. The individual loses the ability

to exercise independent judgment. Ellul adds that “this leads to the atrophy of a faculty not comfortably exercised under any conditions” (1965, p. 170).

Once individuals lose themselves in propaganda, Ellul (1965) notes, their opinions and often their actions are not their own but those of the group. Moreover, propaganda requires that they be expressed “with firmness and conviction” (p. 171). Absorbing the collective vision, individuals make it their own, thus asserting themselves while denying their selves “without realizing it” (p. 171). Claiming that we are expressing our own judgment (or have done our own research), we parrot the propaganda lessons that have been stencilled onto our brains, a clear indication that we are no longer our own persons (p. 171).

Propaganda often pushes individuals to project themselves into a leader, a mass of followers, or both simultaneously. “When a Hitler Youth projected himself into his Führer, he entered by that very act into the mass integrated by propaganda” (Ellul, 1965, p. 171). When individuals participate in collective movements at the behest of propaganda, they participate in the psychology of crowds, and their personalities integrate with those of the masses; in this alienation, the individual often loses control of the self and participates in the actions of the mob.

Ellul (1965) states that such alienation is common, even in an acute state. Some people claim high truths that they read only an hour before, and their deeply held beliefs result from propaganda. Everywhere some people make heroes of strong leaders, a political party, a reality TV star, “or a cause, and [they] . . . will not tolerate the slightest challenge to that god” (pp. 173–174). He writes of the many people who will serve a cause at great personal sacrifice, even death, of those who violate their moral codes and ignore all reason regarding their manufactured visions. Ellul writes that alienated people are all around us, and we “are possibly already one ourselves” (p. 174).

Part of the alienating effects of propaganda and life in technological mass society is the disassociation between our minds and our

actions. Whether blue or white collar, modern work often separates mind and body. We often do not have to think on the job; we execute the decisions that come down from the hierarchy, following the rules and procedures of the organizations that we serve. This general disassociation, Ellul asserts, is the fault of our education system, the press, and myriad other institutions. However, it is primarily the result of the “mechanization of work and propaganda” (1965, p. 180).

The mechanization of work, Ellul claims, is based entirely on disassociation, on removing the human element in the production process. One can maximize production by reducing human error to an absolute minimum. This reduction is made by simplifying tasks, promoting standardization, and creating norms of behaviour on the job. Ellul states that the disassociation that occurs eight hours a day at work affects the worker’s overall behaviour by separating mind and body. This separation might seem hyperbolic. However, the mechanization of production is an ongoing process, speeding up from the accumulation and interaction of techniques. Propaganda aids in this task, Ellul asserts, by promoting active commitment to and participation in work as well as adherence to the organization’s rules.

Propaganda also creates artificial problems and public opinions that demand solutions. It can stimulate prejudices, hatreds, beliefs, and actions wholly manufactured outside the individual. Internalized by the individual, these prefabricated feelings and beliefs become part of the individual’s very being, as fundamental and decisive as the imperatives from family, religion, and community in pre-industrial societies, which they have functionally replaced. Nevertheless, unlike such early imperatives, meanings, and prejudices, modern propaganda comes from organizations that rarely have the interests of the individual among their objectives.

According to Ellul, propaganda that promotes class consciousness among the proletariat adds resentment and tension to workers’ problems. It then proposes solutions to this increased tension: strikes, revolts, and socialism. He mentions propaganda of an “equality complex” as adding another tension to the “natural” demands for social

justice of those in the lower and working classes (1965, p. 177). As Ellul states repeatedly, propaganda can lend itself to governments, organizations, and social movements that benefit people and those who would plunge us all into destruction. Regardless, propaganda functions to induce individuals to believe in and act on behalf of the collective (or what Harari, 2015, calls “fictions” or “large-scale flexible cooperation networks”), with as little thought by the individual as possible. Action must become a reflex; individual thought is not required or desired to engage in political and economic decisions (Ellul, 1965, p. 180). Thus, regardless of the causes that it serves, good or evil, propaganda has a corrosive effect on individuals’ ability to control their destinies and necessarily leads to the gradual diminution of freedom.

Ellul also briefly examines the situation in which oppositional parties in a democracy subject the individual to two different propagandas. Whereas some believe that the two would cancel each other out, Ellul writes that this might be so if propaganda were merely a debate of ideas, but it is not. It is psychological manipulation, and far from cancelling each other out they have a cumulative effect. Like a prize fighter stunned with a left hook, he does not return to normal if a right cross follows it up. He becomes even groggier. Individuals in a democracy with two opposed parties that constantly propagandize the population have only two options. They can either take refuge in rejecting politics altogether, thus among the many non-voters with little interest in political affairs, or they can commit to one party or the other, becoming hyper-partisan in the aggressive competition between parties. Thus, Ellul says, they can escape the clash and sign up for one side that is always right and true (1965, pp. 180–181). Once committed, they read, tune in to, and browse the propaganda media of their choice.

As Ellul (1965) details, the final effect of propaganda on the individual is the creation of a conditioned response to it. Individuals become so inured to the propaganda around them that they cease to recognize it consciously. He calls this process “mithridatization,” in

which individuals have thoroughly integrated propaganda's effects into their personalities and no longer need the reinforcement that propaganda supplies. Such conditioned individuals continue to obey the slogans and catchwords; the "reflexes still function," and they continue to obey (p. 183). The other process by which propaganda becomes integral to the individual is what Ellul calls "sensibilization" (p. 183). This process makes the captured individual hyper-sensitive to propaganda. The slightest stimulus "awakens the myth" and produces the desired action (p. 184). Again, this leads to the disassociation of thought and action. Individuals become tools of the organization, their thoughts "crystallized" and closed to other propaganda.

When a group loses its propaganda, say through defeat or fashion, social disintegration occurs (the word in this context should be written *dis-integration* to capture that it is the opposite of *integration*, not a synonym for collapse). Once individuals are caught up in a propaganda bubble, they need constant repetition of it, reinforcement of their world views, and integration into the group. "Propaganda must therefore be unceasing," Ellul claims (1965, p. 186). According to him, individuals within the group who have lost the propaganda will often withdraw from social or political life, becoming apathetic through uncertainty and fear (1965, p. 185). They become further alienated from society. Without the propaganda, individuals have the burden of making life choices and decisions independently. They no longer have the "director of conscience" (1965, p. 186) that propaganda supplies.

The Ambiguity of Psychological Effects

Ellul is aware that propaganda can produce contradictory results depending on the type of propaganda (agitative or integrative) and, of course, the psychology of the individual. Agitative propaganda seeks to move people to action, arousing anger, resentment, and aggression among them (1965, p. 188). Technicians employ integrative propaganda to assimilate individuals into a group. When used

against an enemy population, propaganda can stimulate guilt and fear among them, the object being to destroy their confidence and will to resist. Propaganda can destroy a group by identifying and hammering wedge issues (those of fundamental disagreements) among its members. Alternatively, it can destroy the enemy's confidence in its sources of information—repeatedly claiming fake news or lame-stream media (or faux news coming from the left). Another indication that propaganda has taken hold in US politics is that we habitually see the other party as the enemy, and any compromise with it is seen as an act of treason to our own party.

One significant prize for a propagandist, Ellul writes, is to sow doubt and suspicion in the mind of a follower in another group. Finding the previous certainties lacking, the person might go to the enemy group to escape the ambiguity, becoming tied to the new truth. “There is no greater enemy of Christianity or Communism than he who was once an absolute believer” (1965, p. 190).

There is a contradiction between politicization and privatization. Active political propaganda aims to move the masses to action, to convince them that their destiny lies in political participation. This need for politicization also requires them to sacrifice much of their private lives for the cause. Propaganda must constantly struggle against the tendency for one to drop out of the media circus and devote oneself to private pursuits, Ellul says (1965, p. 190). The modern state must rely on its citizens' support to function, even if it must manufacture that support. Propaganda therefore must limit the tendency toward privatization, politicize everything, constantly arouse passions for political and social problems (and pretend problems), and convince the public “that activity in politics is their duty” (1965, p. 191).

Nevertheless, it is not always in the nation-state's interest to suppress the urge for a quiet private life, and the nation-state might decide that the general passivity of the population is to its advantage. This can be especially true among authoritarian nation-states. Ellul posits that such nation-states can neutralize their citizens through privatization propaganda, giving a free hand to the already powerful.

The authoritarian nation-state thus has a powerful tool to harvest citizens' support needed for its legitimacy. "This method offers very great advantages for the State" (1965, p. 192). This is the case in Putin's Russia, which encourages political passivity to give the dictator a free hand. When dealing with an enemy nation, propaganda also uses the privatization argument to provoke paralysis in a military crisis.

Social, Political, and Economic Effects

According to Ellul, the significant innovation of Lenin and Hitler was their understanding that the modern world involved the proliferation of means and that the important thing is to use every means available to achieve personal and organizational goals. Ideology becomes secondary or even non-existent; what matters is action for the sake of action. Propaganda only needs to parrot the essential content of ideology and call forth the terms and images, but the content is pliable and can be readily modified as circumstances dictate. It is less and less about ideology; propaganda is autonomous and serves only efficiency, productivity, and power (1965, p. 196).

The goal of propaganda is power, both a means and an end. It seeks to unite as many individuals under its banner as possible, mobilize them to action when called for, and transform them into militants in the service of the movement. The content of ideology is no longer a determinant of action; it merely supplies slogans, images, and symbols that can mobilize a sizable proportion of the masses. In a group in which modern propaganda is active, individuals act in accordance not with the ideology of that group but through the "impulses" coming from the propaganda. Ellul disparages those who believe that ideologies and beliefs alone can make people act; to move people, the activist must use "psycho-sociological methods" (1965, p. 201). Their action creates ideologies and material conditions that produce the truths upon which propaganda further builds. This ideological weakness is explicit in 20th-century movements, as Ellul demonstrates

with Nazi and Communist Party propaganda, and it is even more apparent with the neo-fascist movements of recent times.

In a technological society rife with propaganda, certainties and truths are pronounced from on high and are not up for discussion or debate: “They are believed or not believed, and that is all. . . . There is action, but no interaction” (Ellul, 1965, pp. 202–203). Actual interpersonal communication ceases or becomes a parroting of propaganda’s talking points. The propagandee cannot honestly communicate with someone outside the milieu. The interaction between people who subscribe to different propaganda systems is polemic, stilted, restricted to non-political matters (business or family relationships), or avoided altogether. These interpretations of reality become rapidly crystallized and hardened through constant repetition, making them impervious to reason, facts, or contrary interpretations. It soon becomes apparent to all (except the rabid proselytizer) that communication outside the milieu becomes pointless. When acquaintances from different sides inadvertently stray into American society’s politics, most beat a hasty retreat.

Ellul asserts that, rather than public opinion forming spontaneously, it now forms around centralized media that disseminate propaganda in the form of news and opinion pieces (and today reinforced through social media). Individuals in vast numbers internalize this manufactured public opinion. This represents a significant structural change, especially in democratic societies. Public opinion no longer derives from individual debate, discussion, decision making, or crystallization of the group’s opinions (1965, p. 204). Instead, social organizations—such as governments and their agencies and bureaus, corporations, political parties, non-governmental organizations, media outlets, social movements, public health services, and service organizations—form opinions congruent with their interests. Moreover, their propagandists or spokespersons (from offices such as public relations, human relations, and marketing) communicate through media outlets to the public, members of which internalize the message and express the opinions as their own.

Once the manufactured opinion has crystallized among the public, it is often used to justify and promote the actions of those in power. Thus, organizations use propaganda to sell a product, policy, or candidate, whip up the public for war, or ban or legalize abortion. Organizations can convince someone to give money to a political candidate or take a vaccine. Some can recruit individuals, encourage them to put their money into social movements, believe in stolen elections, and even engage in armed insurrections.

Ellul (1965) writes that, because propaganda forms public opinion, the organization manufactures a simplified version of it; ambiguities, nuances, and shades of grey are all eliminated. Individuals have only two options, yes or no, black or white; anyone with a nuanced opinion is placed into one of the two categories (p. 205). This lack of nuance is especially true for the abortion debates since the *Dobbs* decision in the United States; it is all or nothing for the two sides. It is also true for prejudice, Ellul states. Prejudice arises spontaneously among the population (part of being born into a family and peer group). However, propaganda can take a prejudice and manufacture a simplified version of the other that is “unreal, rigid, and infantile” (p. 206).

Ellul says that over time private opinions will not be able to gain an audience since the centralization of mass media leaves few outlets for such opinions (1965, p. 206). However, technology has addressed that with the development of the internet and social media. Still, it must be admitted that most private opinions on social media mirror the manufactured public opinions expressed in the mass media, though often stated far more stridently.

From Opinion to Action

The most striking characteristic of propaganda is its ability to move people to action. The goal of all propaganda is to capture, at a minimum, the support of the individual. That support can be a vote, a donation of money, or a cheer for the Dear Leader. At its maximum,

propaganda aims for the active participation of the individual. Ellul describes this process as artificially inducing “the progression from thought to action” (1965, p. 207). The urgency of a situation and the necessity of specific actions can be manufactured by propaganda and internalized by the individual. Propaganda can show images of people taking similar actions around the nation to reinforce the message.

All of this is true, Ellul writes, but there is one other crucial factor for the overall success of propaganda in pushing people into action: the group’s influence. Propaganda can strengthen the integration of the individual into the group, producing uniformity of opinion and solid identification with the group. In many cases, it forms not only a community among the group members but also “a communal truth” about their beliefs and actions (1965, p. 210). A reliable way of moving such groups to action is for propaganda to manufacture a threat to the group itself. The most significant threat attacks the group’s beliefs and questions its continued existence, and the group must respond through action. Under such conditions, the group cannot remain passive but is pushed into action. The supposed persecution of Christians in 21st-century America is a good illustration of the syndrome, exemplified by the annual “war on Christmas.”

Another way that propaganda can induce action stems from the great power that it has given to public opinion (which it manufactures). This public opinion is not tentative, nor does it rely on word of mouth for its spread. It is in the media, therefore, invested with the authority of the written word, newspapers, and television news. This reinforcement by powerful media gives manufactured public opinion the cloak of absolute truth. As revealed by propaganda, Ellul asserts, such public opinion can even substitute for a leader; the sociological and psychological effects are the same (1965, p. 211).

Ellul observes that people tend to gravitate toward the media that express their group views, thus constantly reinforcing their opinions and allegiance to the group. This bias toward outlets that mirror individual opinions is truer 60 years later in US society since the media have primarily enlarged and centralized. Many news outlets have a definite

liberal or conservative cast in their selection of news, an emphasis on specific stories, and opinions on the stories that they report. Today this tendency of individuals to gravitate to such sources is called “confirmation bias”: that is, they search for articles and stories consistent with already held beliefs and values. Confirmation bias is greatly aided by social media algorithms, which feed us ever more extreme images, stories, and memes that have captured our attention in the past. Confirmation bias also operates on our interpretation of events and recall of information. It makes us constantly convinced of the rightness of our views (many of which are manufactured by the dominant organizations in the social structure) and feeds into the decline of communication between people in different propaganda bubbles.

Ellul remarks that propaganda exalts its home group, constantly building up its excellence and truth, and denigrates other groups as wrong or evil. This double whammy produces what he calls a “stringent partitioning” of society, today widely known as polarization. This polarization, Ellul asserts, occurs on distinct levels, for example union versus non-union, Catholic versus Protestant, and liberals versus conservatives. The other party becomes the enemy, and “a world of closed minds establishes itself,” people constantly reaffirming their own righteousness and the wrong-headedness of others (1965, pp. 213–214).

Nevertheless, Ellul writes, even with this partitioning of groups, propaganda can transcend the groups in which it operates to manufacture public opinion. National propaganda effectively manufactures public opinion inside a nation, whereas propaganda from other arenas (unions, religious institutions, political parties) is influential within them. For example, national propaganda might encourage a population to glory in the weapons display of the military; at the same time, a political party’s propaganda might damn the administration for profligate spending. Ellul writes that only a group on a superior level (e.g., the nation-state) can affect a group on a lower level (e.g., a political party) (1965, p. 214). He probably overstates the case, or his point is muddled by imprecise language, for revolutionary groups and opposition parties can seriously affect the public opinion of a nation-state.

Ellul also points to the channelling of different propaganda messages to different media. He notes that the mass media of the Soviet Union only contained positive messages about and praise for the regime designed for the masses. Such propaganda paints a picture of the stability and productivity of the nation-state. It makes the individual's first-hand experiences seem like minor aberrations with no fundamental importance, without meaning or connection to the overall reality of Soviet society. "Such propaganda (directed to the masses), therefore, can only be positive" (1965, p. 215).

At the same time, criticism was allowed in specialized journals, which the public did not read. Allowing such criticism told the apparatchiks (Communist Party members), *nomenklatura* (leaders in government and industry), and other professionals that the party was ever vigilant, demanded perfection, was open to constructive criticism, and provided a safety valve for frustrations. Ellul states that these two brands of propaganda from the same Communist Party were possible because the journals were specialized and not read outside their professions. Thus, the party could make propaganda tailored to the intended audience.

The computer, combined with "big data," has dramatically enhanced the tailoring of propaganda, which can sort populations by any number of factors. Social media sites have learning algorithms tailored to individuals, prioritized by the likelihood that they will want to see certain feeds, with provocative wording to encourage action (clickbait). Many observers posit that these algorithms are responsible for a good deal of polarization in many technological societies today.

Effects on Political Parties

Traditional political parties in the West have acted haphazardly when recruiting partisans, focusing their efforts and resources on elections. Ellul asks what happens to the parties when they engage in proper

propaganda, trying to “mobilize public opinion in a more permanent fashion” (1965, p. 216). He posits that this transformation has been taking place in the United States since the early 1950s, though he asserts that the effects of propaganda on the political parties themselves were still unclear when he was writing in the mid-1960s. Yet Ellul has a few hypotheses on propaganda’s long-term effects on the structure of political parties.

Such a party must have the resources to express its propaganda strongly. To do so, it must have extensive resources for advertising budgets (and I would add sympathetic media outlets to stretch its reach). Mass media are a business. With the rise of cable TV and the internet, it makes good business sense for some media outlets to specialize in broadcasting news and opinions, catering to and expanding the audience for the propaganda of certain parties.

In addition to resources, Ellul writes, the party hierarchy must organize in a formal, ever more bureaucratic manner, with every officer having a well-defined function and the expressed goal of affecting public opinion and electing politicians to further the party’s interests. Party discipline must be strict, with propaganda (talking points) from party leaders and lesser politicians and followers taking up the messages verbatim. This unity is essential since the speed of action and reaction are vital to the success of propaganda.

Ellul predicts that, with extensive use of propaganda, there will be a tendency for the party hierarchy to view voters as objects to be manipulated and controlled. Gerrymandering in the United States, now with the help of computing power and big data, allows parties to select their voters to some extent. Negative campaigning to dissuade an opponent’s voters from going to the polls or outright voter intimidation becomes part of the political campaign. There is also a tendency, Ellul asserts, among followers to personalize the party’s power in one person. “The inclination of the masses to admire personal power cannot be shunned by good propaganda: it can only be followed and exploited” (1965, p. 216). For this reason, party propaganda tends to intensify this inclination, investing the

leader with the attributes of a hero, including strength, likeability, and omniscience. (Trump depicted as a superhero and Dark Biden as a political mastermind come to mind.) Ellul claims, as a final attribute of the effects of propaganda on political parties, that the propagandists and their instruments take on a central position within the party. They become the heart of the party itself (1965, pp. 215–217).

Once a party adopts big propaganda, it influences other parties. If the opposition does not adapt and regroup because of a lack of funds or organization, then the party of big propaganda will crush it. Ellul cites this result with the fascists in Germany in 1932 and the Communist Parties in France and Italy in 1945. Another option that Ellul explores is for the opposition party to adopt the same techniques before it is obliterated or becomes a permanent minority. This defensive move, he says, was happening in the United States and France in the mid-1960s. However, because of the prohibitive cost of big propaganda and its dominance on the airwaves, Ellul believes that third parties and new parties are unlikely to gain many followers in a democracy. “One can say that propaganda almost inevitably leads to a two-party system” because of these costs (1965, p. 219). One can also say that it leads to a “stringent partitioning” of society, today known as extreme polarization (1965, p. 214).

A party that gains a ruling mandate does so through propaganda. However, the ruling party’s propaganda—aimed at integration, conformity, and the state—is limited in its goals. The minority party’s propaganda tends to be demagogic and “excessive in its ends and expression,” aimed at upsetting the status quo and the state as well as the norms and values of the social order (Ellul, 1965, p. 220).

Ellul mistakenly presumes that a majority party must then control the national legislature, which is invalid for the American Congress, where the 50-state electoral system, gerrymandered districts, and often abused filibuster give inordinate power to a minority. Ellul is also mistaken regarding contemporary American parties when he states that the minority party’s propaganda tends to be underfunded.

However, he states that the excessive costs of propaganda might force the parties to look for aid from capitalists “and thus indenture themselves to a financial oligarchy” (1965, p. 220). The flood of money from these sources is precisely what happened to American political parties, now funded by individual and corporate contributions made possible by campaign finance laws that welcome money from almost all sources. There has also been a rise in small donations made possible by constant internet appeals (propaganda) for them. As a result, America’s two major political parties continue to inundate society with sophisticated and well-financed propaganda.

For the individual exposed to two contradictory propagandas, it is not simply a matter of rationally choosing between them. The individual is not a rational spectator in a position to make an informed decision between them. For most individuals, it is not a weighing of self-interest, campaign proposals, or the most capable candidates. Instead, they are attacked from each side, the two parties’ propaganda systems flooding the airwaves, email accounts, and social media; attacking each other; and trying to capture citizens’ attention, commitment, money, and votes. Adding to the party propaganda are news and opinion outlets amplifying the messages. “As a result, the individual suffers the most profound psychological influences and distortions” (Ellul, 1965, pp. 254–255).

Furthermore, Ellul writes, those exposed to this cacophony will seek simple solutions, certainty regarding right and wrong, good and evil. In response, they will join one party or the other and damn the opposing party as the enemy, claiming that their party is always right and good and the other wrong and evil (1965, p. 255). He finds it striking that there are signs in the United States that the population is taking on characteristics hitherto seen only in authoritarian regimes, and again this was in 1965. The citizens become either true believers in one party or the other or completely apathetic about their society. Both responses are antidemocratic, and both are predictable reactions to the democratic propaganda of the two parties (1965, p. 255).

Democracy and Propaganda

In a democracy, there is a need for both government and private organizations to make propaganda. According to Ellul, it is necessary because democracy is centred on the competition between ideas and political parties, and public opinion and periodic voting are the fruit of that competition. Whereas many believe that modern propaganda—or the use of psychological manipulation combined with advertising methods and mass media to influence public opinion—began with authoritarian regimes, Ellul asserts that it was an innovation of democracies during the First World War. The German propaganda effort was mediocre, but the Allied democracies successfully mobilized their citizens for war with “big propaganda” (1965, p. 232). Although the democracies might have been the initial developers, authoritarian regimes in the 1920s and 1930s refined propaganda and extended its reach considerably.

Moreover, Ellul writes, this previous statement should give us pause because there is a conflict between the processes of making propaganda and democratic ideals. The ideal is for people to live in freedom, guided in their public lives by enlightened self-interest and reason, independent of government or corporate control. The use of propaganda—psychological manipulations, appeals to emotions and myths, and biased presentations of facts—seems contradictory to these ideals (1965, p. 233).

Ellul also posits that democratic ideology has an irrational conviction, perhaps tied to the notion of progress, that truth will always win in the end. Alternatively, as Martin Luther King Jr. (1968) reminded us along similar lines, “the arc of the moral universe is long, but it bends toward justice.” When democracies conflict with authoritarian regimes, this conviction leads democratic leaders to think that they only need to state the facts. The truth will inevitably be revealed (Ellul, 1965, p. 234). He clarifies that this belief, unfortunately, is irrational. History also reveals that many democratic regimes hid, suppressed, or eliminated truths. Even when the truth is triumphant,

Ellul continues, it is not always the case that it wins because it is the truth; instead, it triumphs because of the support that it garners among the powerful or the masses.

The irrational faith in the power of facts initially constrained democracies in their use of propaganda. It is not meant just to inform but also to establish selective facts and interpretations of public opinion. Ellul goes further, maintaining that propaganda is needed to establish facts in public discourse and to create truth. The “truth is powerless without propaganda” in technological societies (1965, p. 235). Considering the challenges that democracies face with authoritarian regimes, he writes, they will necessarily abandon their faith in the truth consistently winning on its own and embrace propaganda methods in conducting their affairs. “Unless they do so, considering the present tendencies of civilization, the democratic nations will lose the war conducted in this area” (1965, p. 235).

Because of these democratic handicaps—growing polarization between political parties and an irrational belief in truth—democratic propaganda in Ellul’s time was relatively weak compared with that of authoritarian regimes. At the same time, totalitarian governments were expert at controlling their populations, enforcing conformity, and manipulating public opinion consistent with the government’s wishes—all of this, Ellul muses, while conducting highly effective Cold War propaganda at “enemy” nation-states (1965, p. 235). So, he asks, is it even possible for democratic nation-states to make effective propaganda?

Ellul maintains that the most important condition for propaganda to thrive is the centralization and control of media outlets. Totalitarian states have a monopoly on their media, but in a democracy the state does not control them. However, Ellul points out, there is a strengthening concentration of ownership of media outlets, particularly in the United States, where newspaper chains, television networks, and radio stations are increasingly becoming part of large conglomerates.

However, the state must make propaganda, guide public opinion, foster its legitimacy, win elections, and disseminate the news.

As already discussed, information is necessary for a democracy, and the state must be credible in the news that it dispenses. However, suppose that there is a powerful and private news organization that “denies facts and falsifies information? Who can tell where the truth lies?” (Ellul, 1965, p. 237). The issue, then, Ellul says, is whether the state can tolerate such a private competitor for the hearts and minds of its citizens, especially if that competitor has the media tools and techniques to equal or exceed those of the state. Some might immediately answer that freedom of expression is paramount; it is the lifeblood of democracy. However, Ellul maintains that freedom of expression, as idealized in the 19th century, refers to individuals and small groups; it is different from freedom of speech for the individual who speaks to millions, especially when that individual has the science of propaganda to guide the messages.

Although democracies often permit a variety of opinions and types of propaganda on their airwaves, there must be some censorship of aberrant or immoral opinions and propaganda counter to democracy itself. As is often stated, “the Constitution is not a suicide pact,” meaning that the survival of democracy and its people should be upheld over constitutional restrictions on government powers. Everyone recognizes that the government must control news during a war, and propaganda against the state’s “interest must be prohibited.” However, Ellul adds, many people fail to realize that the Cold War tensions between authoritarian regimes and democracies are a “permanent and endemic” feature of technical civilization (1965, p. 238). One reason that Cold War–type tensions have become endemic, writes Ellul, is the development of propaganda itself. Propaganda directed at other countries is an effective weapon of war. He writes that the need to respond with unifying propaganda at home and propaganda against enemies will force democracies to employ the tool more aggressively (1965, pp. 238–239).

The problem, according to Ellul, is that democratic ideals fetter democratic propaganda and limit its effectiveness. Looking at American propaganda (of the 1950s and 1960s), he judges it truthful,

probably, though, because of the American belief that truth is more effective than lies rather than because of democratic ideology. In his view, American propaganda has a certain respect for the individual. This respect is becoming “steadily weaker” over time, but it is still there and puts some limits on the propaganda of the democratic state (1965, p. 239). There is also a question of nuance in American propaganda, a willingness to attribute good faith to opponents; there are no absolutes, and there is a reluctance to define good and evil clearly, with no room for doubt. In addition, democratic regimes in the 1960s hesitated to use propaganda to further their ends, either domestically or internationally, since doing so seemed so antidemocratic (1965, pp. 239–240).

For all of these reasons, Ellul (1965) judges the democratic propaganda of nation-states in the mid-20th century as “ineffectual” (p. 240). He asks how a democracy can engage in effective propaganda if it is unwilling to provoke the individual to action without thought. How can it engage in effective propaganda if it constantly injects nuance into every assertion? How can propagandists be effective if they have a bad conscience about their actions? Effective propaganda techniques demand the cold manipulation of individuals. Like all techniques, propaganda “creates a schism” between the powerful who wield the techniques and the masses who are their objects. Ultimately, even if the propagandist takes steps to maintain a bond with the people, “all propaganda ends up as a means by which the prevailing powers manipulate the masses” (p. 241). Nevertheless, as antidemocratic as propaganda is, ultimately democratic regimes must thoroughly and efficiently employ it as a matter of survival. Moreover, doing so will affect democracy, for the means of power affect the ends; propaganda is totalitarian and will destroy all possibilities for “true democracy” (pp. 242–245).

The growth of information and the development of technology to dispense it inevitably lead to a need for propaganda. This need is as real for democratic systems as it is for authoritarian systems. Thus, the need must draw a democratic state into producing propaganda

whether it wants to or not. Once it commits itself to this task, it must become the fount of truth, and it can no longer tolerate differences of opinion or competition from other sources of propaganda, “for the information it dispenses is believed only to the extent that its propaganda is believed” (Ellul, 1965, p. 251).

The development of communication technology fundamentally affects social and political structures. Ellul speculates about the effect of television propaganda on American democracy. For one thing, he predicts, it will bring people closer to direct democracy. Members of Congress and the cabinet will appear on TV, and many will become household names, informing the public daily on political issues rather than just at election time. Members of the public can track their representatives and know more about their stands on issues.

However, Ellul expects that, rather than being a mechanism of control over political elites, television will soon become a tool that those elites will learn to use to spread propaganda more efficiently. They will develop their technical skills once they have the money to do so. But television will cause a “profound modification of democracy’s ‘style’” (1965, p. 253). By “style,” Ellul is referring not just to the television-friendly style projected by candidates and political leaders. Former actors and television personalities know how to use the medium, although many career politicians are also mastering the technical skills. The criteria for voting for a person are increasingly based on likeability and televised presence rather than policies and track records.

More importantly, Ellul focuses on the governance processes rather than the trappings of elections. He asserts that democracy does not translate well into graphical representations—it “is not a visual form of government” (1965, p. 253). He insists that democracy is best adapted to the word and that speech is the highest form of communication and the most effective instrument for carrying democratic ideas. However, because TV reaches right into the home, has an almost hypnotic power over the public, requires little effort by the governed (especially with the advent of remote control), and

commands the full attention of the viewer, it is an ideal instrument of mobilization for democratic propaganda. Therefore, political parties within a democracy and the state must adapt to employ television propaganda or be left behind.

Nevertheless, though modern media are ideal for the spread of propaganda, over time they destroy democratic ideas and behaviours—the very foundations of democracy. Propaganda, even democratic propaganda, destroys empathy for others, particularly minorities. It reinforces prejudices, prevents the re-examination of long-held opinions, and encourages dogmatic beliefs and the rejection of facts when they do not fit the narrative. Although propagandees have democratic “convictions,” they are merely empty words, incantations that have nothing to do with behaviour. For such individuals, “democracy has become a myth and a set of democratic imperatives, merely stimuli that activate conditioned reflexes. The word democracy, having become a simple incantation, no longer has anything to do with democratic behavior. The citizen can repeat indefinitely ‘the sacred formulas of democracy’ while acting like a storm trooper” (Ellul, 1965, p. 256).

Means without Ends

Ellul mentions two types of solutions proposed for the dilemma of technological society. The first solution, favoured by technicians, is that technical problems demand technical solutions. He asserts that more technology, such as computers (he refers to them as “so-called ‘thinking machines’”), certainly comprises an innovative category. However, the techniques are new means “designed to permit human mastery of what were means” but are now slipping beyond our control. They “are techniques of the second degree, and nothing more” (1964, pp. 429–430).

The second solution is an attempt to discover (or rediscover) a new end or purpose for technological society (Ellul, 1964, p. 430).

Some people assert that a rediscovered humanism, perhaps through socialism, could provide such a goal to technical society. However, the further technology develops, the further removed any purpose to it all seems to be. Even the stalwarts of rising living standards and comforts seem to fade away; Ellul posits that this might be because constant adaptation to innovation can be tiresome.

However, the technician continues to struggle, believing that such ends must be “technically established and calculated” to match technical means. Technique needs precision, calculability, and certainty. “Everything in human life that does not lend itself to mathematical treatment must be excluded—because it is not a possible end for technique—and left to the sphere of dreams” (Ellul, 1964, p. 431). Thus, humanity becomes the object of technique, absolutely fitted for life within a technological society, “completely despoiled” of traditions, values, and natural emotions—the very attributes that make us human (Ellul, 1964, p. 432).

In 1960, *L'Express* of Paris published forecasts by reputable American and Soviet scientists for the year 2000. Ellul reports that, according to these worthies, there will be all sorts of technological marvels and wondrous social changes by that year. There will be regular voyages to the moon, the world population will stabilize, and we will have tapped into unlimited energy stores. They forecast that education will be transformed as electronic banks store information (one spot on) and download it directly to the human brain (not so prescient). New extraction techniques will provide all of the metal necessary to maintain production. Society will eliminate disease and famine. Genetics will gradually replace sexual reproduction of the species. The best genes will be selected to produce only the most exemplary human types. These genetic methods will become universal since any country that uses such technology will quickly dominate the world.

Ellul makes two points about these predictions. First, how will we ever get there morally, socially, or politically? Considering that we are still dealing with the problems of the initial wave of the Industrial

Revolution, how will a technological society deal with the massive problems caused by hyper-technical change? The scientists who made the predictions never said how they will solve the future problems of automation, throwing millions out of work. They did not detail the more distant problem of people insisting on having children naturally or relocating people who make their living by farming when we produce synthetic foods in factories. Who will determine the judges for preserving the seed of outstanding men? Alas, Ellul writes, they meant that role for themselves. Considering that such scientists are mere mediocrities outside their specializations, “we can only shudder at the thought of what they will esteem most ‘favorable’” (1964, pp. 435–436). There is only one way that such techniques can be given their full scope and uniformly applied: that is, through a totalitarian dictatorship. It is easy to see why these technophiles ignored that necessity “and land squarely in the golden age” (1964, p. 434).

Second, Ellul says that these predictions are incredibly naive, sterile, and sometimes contradictory. They assume that science will be able to reshape human thoughts, emotions, and behaviours. Some of the scientists advocated the genetic manipulation of humans to produce homogeneous “social units” (soldiers, workers, or scientists) and would forbid natural human reproduction. Nevertheless, they also wrote about ensuring freedom and democracy. They were incapable of seeing the contradictions. They proposed the “harshest of dictatorships. In comparison, Hitler’s was a trifling affair. That it is to be a dictatorship of test tubes rather than of hobnailed boots will not make it any less a dictatorship” (1964, p. 434).

Ellul admits that it is unnerving to realize the gap between scientists’ critical abilities and their enormous power and authority in technological societies. To exercise power effectively, one must have some judgment, self-criticism, and empathy for others. Ellul has no confidence in scientists who lack such faculties. “Yet it is apparently our fate to be facing a ‘golden age’ in the power of sorcerers who are totally blind to the meaning of the human adventure” (1964, p. 435).

None of these worthies questioned the goals of their techniques or, if they had, thought beyond the meagre motive of promoting happiness. However, according to these specialists, pills will soon be able to produce happiness as well. So, Ellul asks, why all of the other technical goods and services when individuals can have happiness without them? Alas, he concludes, even happiness, this paltry motivation for our runaway technical adventure, is destroyed by technique. However, it was never a question of a practical motive. The attitude of scientists and technologists is apparent: "Technique exists because it is technique. The golden age will be because it will be. Any other answer is superfluous" (1964, p. 436).

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The Technological System

Jacques Ellul's central concept of technique encompasses physical technologies, organizational practices, and underlying mindsets that prioritize efficient goal-oriented behaviour guided by experience, empiricism, calculability, predictability, control, and logic. Ellul broadly defines technique as the totality of methods, systems, and procedures applied to achieve maximum efficiency in various fields of human endeavour. Whereas production processes and bureaucratic organizations embody the most prominent examples, Ellul identifies and explores "human techniques" that bring rationalization to bear in fields such as education, counselling, entertainment, sports, leisure, arts, politics, parenting, and consumption.

Ellul argues that technique has become autonomous and self-augmenting, often functioning independently of human will or ethical consideration and exerting a significant influence on human decisions and societal structures. He also asserts that techniques are increasingly interrelated in a systemic fashion, emphasizing how different techniques (physical, organizational, and mindset) influence and rely on one another within a complex network. Ellul claims that one cannot modify a technology without causing repercussions to and modifications in many other objects and methods. Such combinations are self-perpetuating and often dehumanizing, driven by

their internal logic. As such, they have effects on one another and the whole society.

Technique (rationalization) prioritizes efficiency and productivity over traditions, emotions, and values. Individuals often conform to these dictates of how to work, live, and interact. The technical system limits human freedom, community, and creativity. Like Max Weber, Jacques Ellul sees increasing rationalization as undermining traditional structures and values and reshaping them to be more congruent with technical processes. Ellul posits that, independent of human control, the continuous development of technique in all areas of social life drives socio-cultural change—social structures and human relationships are increasingly influenced by the rationalization process, consequently reducing personal freedom.

Technique is about not merely the tools and processes but also the interrelationships that shape their development, deployment, and impact on societies. They form an autonomous technological system crucial in understanding the evolution of modernity. In *The Technological System*, Ellul (1980) argues that technique has become a self-perpetuating system that dictates its development independent of human interventions or moral considerations. His core argument is that technique possesses an inherent drive toward self-perpetuation and expansion—often with unforeseen consequences. “This means that technology ultimately depends only on itself, it maps its own route, it is a prime and not a secondary factor, it must be regarded as an ‘organism’ tending toward closure and self-determination: it is an end in itself. Autonomy is the very condition of technological development” (p. 125). He stresses the role of innovation as the driving force of the self-propelling technical system, with each technical advance being dependent on previous developments and simultaneously creating conditions for further innovation. The system’s expansion is driven by its internal imperatives; each successful application of technique creates new problems and challenges that demand further technological, organizational, and rational solutions, thus furthering the system. Human intentions and values, including

those of the elite, are shaped by this system and become secondary to the system itself.

Innovations in techniques, Ellul asserts, often redefine human relationships and cultural norms to align with the technical needs of efficiency and productivity over traditions, values, and human emotions. An example of the autonomy and interconnectedness of technique can be seen in the development of algorithms in social media and advertising. Once these algorithms are created, they optimize themselves based on users' interactions—individuals' past interactions with content such as the accounts that the individuals follow, their search histories, online shopping, time spent on the platform, and content that they have previously engaged with across other social media sites. Combining the data with the individual's age, gender, and location determines which content to display. The algorithm adapts and evolves based on performance metrics, often prioritizing sensational or extreme content to maximize user retention (addiction) and advertising revenue. The programmed goal of the algorithm is to maximize clicks or time spent on the media platform, not human values such as promoting the quality of information or establishing meaningful social connections. The more one relies on these technical means of communication, the less room there is for authentic engagements with others. The process of technological innovation continuously shapes and reshapes human societies in its autonomous development toward optimization and expansion.

These examples—and others could be made, such as innovations in agriculture, political campaigning, or medicine—show how techniques' applications trigger a chain reaction of further innovations, creating a self-perpetuating system that transcends initial human intentions. Innovations in one field often lead to innovations in others. For example, automobile innovations have created ripple effects in mass production, materials science, logistics, and precision engineering, among others. Auto production has also had unintended negative consequences, such as environmental pollution, traffic congestion, and urban sprawl. Both positive and negative

effects call forth further technical innovations. This inherent drive toward expansion and optimization, independent of human control, provides the dynamics of Ellul's technological system.

The three aspects of his concept of technique are interconnected and mutually reinforcing, creating a far more powerful system than the individual components. Each element shapes and supports the others in a feedback loop that drives the continuous expansion and intensification of the technological system. The drive for efficiency, productivity, and control reinforces the development of new physical means and organizational structures and procedures to achieve these goals. Complex organizational structures are required to manage workflows and coordinate labour and resources to maximize the productivity of new physical technologies. Bureaucracies, management systems, and specialized divisions of labour are all products of the rational pursuit of goals. They are integral to coordinating and managing increasingly complex production processes, workforces, and markets worldwide.

According to Ellul, the interconnectedness of the three aspects of technique means that each element strengthens the others in a self-perpetuating system far more than the sum of its parts. The system continues to rationalize, constantly seeking optimal efficiency in achieving goals—whether they are profit, defence, votes, budgeting, or the myriad other goals of organizational structures. This systemic effect exerts a pervasive influence on human societies, shaping extraction and production processes, social structures, belief and value systems, and ways of life.

For example, Elizabeth Eisenstein (1979) demonstrated that the introduction of the printing press provided a new physical means of communication and necessitated new organizational structures for producing and distributing printed materials. By 1500 CE, every major European city had at least one print shop (pp. 43–44). Her historical analysis focused on the effects of these early print shops on Europe's social structure and culture over the next 100 years. These workshops were capitalist enterprises, creating new occupational groups and developing and utilizing new technologies and techniques.

Eisenstein (1979) characterized the relationship as that of the shops coordinating scholarly, religious, state, and scientific activities while producing commodities for profit. As such, these shops represented a new destabilizing force in Europe, both in their organization and in their products. As capitalist enterprises with consequent increases in overhead and debt, the shops had to search constantly for ways to expand their markets to increase their profits. In many of these shops, job printing accompanied book printing in which printers would produce commercial advertising, official documents, propaganda for the state and the church, seditious material for radicals (think of *The Communist Manifesto*), and the necessary documents for state and private bureaucracies.

There were various motives behind the power of the press in 16th-century Europe: profit, evangelical outreach, individual fame, bureaucratic necessity, and extension of the power of the state among them. In this sense, Eisenstein (1979) stated, the press was not a single technological innovation that changed everything but an invention that the church, state, capitalists, and scholars could use to further their goals. Accordingly, structural context is essential when considering technological innovation, specifically the importance of the material interests of elites. Eisenstein's analysis—which can easily be extended to radio, television, computers, and the internet—also indicated that the development of communication technologies and techniques might be qualitatively different from others as catalysts for socio-cultural change.

Ellul tends to downplay the stimulus for innovation by economic and government organizations, focusing instead on the internal logic of the technological system itself. However, he does acknowledge that government and private organizations also have a role in fostering innovation. The largest disrupter in the past 100 years has been the widespread adoption of computer technology. The initial development of the computer was driven by Allied military needs during the Second World War, particularly the need for accurate ballistic calculations for artillery. Military needs led to the creation of

the Electronic Numerical Integrator and Computer, which significantly accelerated the advancement of computer technology. This technology was quickly adapted over the next 50 years to become standard office equipment throughout formal organizational structures in advanced technological societies and eventually in almost every home.

In the meantime, military interest in the computer continued with the development of a computer network by the US Department of Defense. The Advanced Research Projects Agency Network linked universities and other defence contractors so that they could share and use information stored in different computers. By January 1983, this network had established a new communication protocol called Transfer Control Protocol/Internet Protocol, which allowed different networked computers to communicate with each other through a universal language. Thus, the internet was officially established, soon linking much of the world. These links significantly advanced the reach of computer technology and virtually changed everything (the pun is intentional). As government and private organizations became further enlarged and centralized, they adapted and improved this new technology to manage vast amounts of data globally in their drive for efficiency, productivity, and control. The relationship between physical and organizational techniques is not merely one way, for they constantly interact with and influence each other.

Human Techniques

In Ellul's theory of the technological system, education and other "human techniques" (propaganda, advertising, counselling, spectator sports, and entertainment) are essential for its maintenance and expansion. Human techniques shape public perceptions and behaviours to meet the system's demands. These techniques involve direct persuasion and the subtle shaping of desires, needs, and expectations to fit the structures and dynamics of the system. The changing nature

of higher education, with its growing emphasis on STEM (science, technology, engineering, mathematics) and its de-emphasis on critical thinking, is a compelling example (see Chapter 5). Another is advertising, which does not just sell products but also creates a culture of consumerism, aligning individual desires with the logic of mass production and consumption inherent in the technological system.

Ellul also asserts that the massive development of technique in the modern era creates new needs in the individual and society. Leisure activities, movies, sports, television shows, and other types of entertainment provide individuals with an escape from the system's demands. Many of these entertainments reinforce the dominant values of the system, portraying technological development as inherently positive and downplaying negative consequences. Such entertainments and consumables are "thoroughly indispensable in making up for the uninteresting work, the deculturation caused by specialization, the nervous tension due to the excessive speed of all operations, the acceleration of progress requiring difficult readjustment" (1980, p. 62). In sum, entertainments serve as compensations; they function to adapt individuals to the technological system, to equip them "to live and work efficiently within this universe" (1980, p. 313).

Propaganda is a relatively new human technique developed and employed by organizations to attain organizational goals more efficiently by directly influencing the thoughts and behaviours of individuals. Equally compelling, it dictates which issues are important and worthy of discussion, shaping the frames within which individuals think and act. Using communication technology and social science findings and methods, government, voluntary, and private organizations attempt to shape public opinion and behaviour and, through these manipulations, public policy. Depending on organizational goals, propaganda can be a technique to manufacture consent and foster conformity and integration of individuals into the social order, or it can manipulate perceptions of individuals to oppose or change that order. In either case, the technique is used by

formal organizations to align public attitudes and behaviours with the goals of the organization wielding the technique.

Propaganda often consolidates the control of those who benefit most from the technological system (those at the top of dominant formal organizations)—promoting ideologies and maintaining social order by influencing how the individual perceives reality. These techniques often justify and legitimize the technological system and its continuing expansion, presenting technical advances as inherently beneficial and downplaying negative consequences. Thus, propaganda contributes to the self-perpetuating nature of the system by creating public support for ongoing development even when the development contradicts established science as well as physical evidence of harm. Ellul argues that individuals are often unaware of the forces of propaganda shaping their attitudes and beliefs, which reflects the broader theme of the loss of autonomy within a technologically driven society. Human techniques are crucial mechanisms that sustain and propagate the technological system and homogenize culture worldwide. Ellul argues that the growth of technique leads to a homogenization of culture, in which the uniqueness of human experiences is eroded, and human character is reshaped consistent with the needs of an evolving technological society.

It is mere escapism to claim that human character is the result of many influences—tribal, familial, social currents in communities and among peers—so why worry about the effects of technique? Ellul answers that just because individuals are subject to many different influences is not a reason to subject them to yet others. However, more importantly, “there is a difference between the spontaneous and lightly coercive influence of an individualistic social group and the calculated, precise, and efficient influence of techniques” (1964, p. 393). Ellul asserts that those who hold that propaganda does not threaten human freedom and democracy have too much faith in the “inalienable value of the individual” (1965, p. 256). By claiming that propaganda is harmless, they leave themselves open to its influence, and their will to resist it is greatly diminished. People must be made

“aware of their frailty and their vulnerability” (1965, p. 257), and that propaganda is a serious weapon against their freedom of thought and action. Only by acknowledging its power can resistance be devised and maintained.

Human techniques are interrelated; therefore, one cannot measure the effects of one apart from those of the others. One must also recognize that techniques are part of an economic-political system; they originate and are developed within it, and the system determines their applications. Human techniques are the integrating mechanism of a technological society, replacing traditional institutions that previously performed this function, such as family, religious institutions, and community. With their mechanical/electronic foundations and bureaucratic hierarchies, technical societies form a framework that applies human techniques to coordinate their populations.

Human techniques thus have no existence apart from this milieu. They are developed collectively to condition, coordinate, and manipulate human thought and behaviour. They are continually refined to meet the needs of efficient productivity. Without “unremitting productivity,” Ellul writes, the resources necessary for their refinement and application would not exist (1964, p. 394). Productivity promotes technique just as technique promotes productivity. Human techniques and their continued refinement to become more efficient and productive are integral to a technological society.

Moreover, in the 70 years since Ellul first wrote about technique, there have been tremendous advances in psychology and the social sciences; psychological theories and methods are far more potent now than they were in the mid-20th century. There have also been considerable advances in physical technologies and organizational techniques. Biologists have mapped and can now manipulate the human genome; electronic media have proliferated as many carry the internet in their pockets. Surveillance and big data mining are ubiquitous, propaganda is more highly developed and targeted to individual tastes, and numerous mind-altering drugs have been developed to make living in technological societies more palatable for many.

Human Character

Whereas most social theorists focus on adapting machines to humans, Ellul contends that the opposite occurs just as often. He argues that they are in a co-evolutionary relationship, techniques adapting to already adapted individuals, thus becoming progressively more manageable as the two by degrees fit together hand and glove. Ellul points to the “fixation” of workers on their work, using the assembly line as an example, admittedly an extreme case of the worker’s repetitive motion, boredom, and hierarchical control from above. Ellul writes about how human beings are unsuited to this type of work.

Nevertheless, they discipline themselves to the inhuman conditions because they have no other choice but to make a living. One can make a similar argument regarding the inhuman conditions of caretakers for the elderly or any helping profession in which workers must give care and empathy to strangers eight hours a day, five days a week, 50 weeks a year. In the past, such care was given to family members where bonds often existed, and the care was often for the short term. No wonder “burnout” rates among such workers are so high in many helping professions.

Workers in such fields often say that they are satisfied when asked, but Ellul has a different interpretation. Psychological studies reveal that the workers have adapted by becoming numb, not by taking initiative at work or any responsibility for the job. He does admit that this might not apply to all workers, but he believes that it does represent the tendency among jobs in a technological society (1964, p. 396). In his conception, humans are highly adaptable and have exhibited this adaptability throughout history and across societies. However, personal adaptability is limited, Ellul writes, and one can imagine conditions in which some individuals could not live or, to do so, would have to lose their very humanity. Think of ordinary soldiers in wartime or sweatshops in many industrializing nations. There are reports of sweatshops, particularly in industries such as garment and

electronics manufacturing, in which nets or safety barriers have been installed to prevent workers from jumping off buildings because of extreme working conditions, stress, and mistreatment. Although Ellul is confident that many people will adjust to the requirements of a technological society, for adaptation characterizes humans, it might not be possible for all of those who live in a world increasingly dominated by technique. There might be no place for those who cannot integrate into the complexities of ever more technical societies.

Up to this point, Ellul argues, adaptation has been a product of hit and miss, inefficient socialization, education, and training processes and interactions between humans and material conditions that do little to promote success. Nevertheless, over time, human adaptation will be much more firmly based on the human sciences in a thoroughly technical society. In addition, more sophisticated techniques (physical and organizational) will be explicitly designed to adapt the individual to the technical realities of social life. Ellul claims to have little conception of what this new individual will be like, and even today's technicians have only an inkling. However, he asserts, we can foresee what people will gain and what they will lose in this new technological society.

The primary loss that Ellul details is the human disassociation of thought from action produced by techniques. By design, for reasons of efficiency and standardization, modern work processes separate thought from action. Decisions are made by the front office; lower bureaucratic offices or front-line workers execute those decisions. Most front-line workers have limited control over their actions at work; they exercise control over their actions and express their personalities only during leisure times. The ideal state on the job is a dreamlike sleep, completely disassociating the psyche from mechanical bodily action. (Faculty often see this disassociated state in the classroom, especially among young men.) However (echoing Marx), Ellul believes that work is an "expression of life" (1964, p. 399). It has served throughout human history as an expression of personality and accomplishment. Nevertheless, making industrial-bureaucratic

labour fulfill such needs is counter to standardization and efficiency. To force workers to disassociate while at work is to mangle their personalities, to close them off from meaningful parts of life.

To expect that leisure can fulfill the masses is to expect too much of the modern leisure industry. "Only see what leisure has made of the bourgeois classes of society!" Ellul exclaims (1964, p. 399). Far from being a break from work, leisure has been invaded by techniques, technical amusements, and sports. By design, modern leisure conforms to the needs of technical society, reinforcing productivity and efficiency goals. It is no freer from technique than labour itself (1964, p. 401). Ellul concludes his thoughts on leisure by saying that it is idealistic for anyone to think that leisure can compensate for the meaninglessness of modern work and naive to think that it can take on the function of providing the whole meaning of life. Leisure can be more meaningful, but so can work and human nature. "But if we are going in for all these conditionals, paradise could also find a place on earth" (1964, p. 402).

By disassociating during work and leisure, many individuals escape "into illusion and unconsciousness," and others escape into action, real or otherwise, Ellul argues (1964, p. 402). He gives the example of a person who becomes a political activist. Such rebellion might give the activist feelings of accomplishment and satisfaction. However, it, too, is merely another technical activity that enables people to adapt to technical society. Therefore, Ellul's thesis is that the unconscious plays "an ever more important role in the conduct of human life." Furthermore, it is to the unconscious that human techniques make their "fundamental appeal" (1964, p. 403).

Technological society is evolving toward mass society, and techniques such as sociological propaganda have developed to help individuals adapt to this new social form. In a thought experiment, Ellul suggests that, if technique were to strengthen today's men and women in 19th-century individualism, then the results would be a misfit between institutional structures and widespread individual tendencies. However, he asserts, there is no possibility that such

technical disjunction can ever happen; it is, after all, a system. If it did happen, then it would lead to an unacceptable disruption of efficient production processes and even more individual disorders such as mental illness, depression, drug abuse, and unemployment.

“Human techniques must therefore act to adapt man to the mass” (Ellul, 1964, pp. 405–406). They contribute to the evolution of human beings to a “normal type” who will work, play, and thrive in mass society. The process by which technique arrives at these types is usually involuntary, an unconscious process in which success causes technique to reinforce and amplify the changes. As an illustration of the process, Ellul points to advertising techniques. The overt purpose of an advertisement is to sell a product to a consumer, but its other social function is to sell a way of life. Advertisements push the objects for sale as being indispensable for modern life: that is, up to date with current trends, involved with all aspects of leisure and freedom, yet part of the technological world of science and progress.

One of the other vital functions of advertising is to create new needs, things, and services that modern people cannot live without. Ellul points out, however, that they are not arbitrary but correspond to the “ideal of life” that people can easily accept as part of modern consumer society. Advertising promotes a way of life that appeals to comfort and status prized by all modern people “and refers to a world in which there are no spiritual values to form and inform life” (1964, p. 407). America’s consumer society did not come about by chance. There was a long-term conditioning process through advertisements beginning in the early part of the 20th century. Rather than appealing to the rationality of the consumer, ads began to use psychological and empirically validated tools to manipulate the consumer.

Given the nature of technique itself, adapting individuals to the needs of modern organizations evolves into a measured and planned process managed by technicians. As Ellul details, governments and political parties have picked up on manipulative techniques and used them effectively in undertaking political campaigns and governing diverse societies. With the consequent rise of the internet and social

media, as well as the proliferation of consulting firms for government and capitalist organizations, the tools have spread further to local governments, educational institutions, non-governmental organizations, interest groups, domestic and international terrorists, and groups seeing conspiracies in all the wrong places. Ellul asserts that one can get a general feel for the new human type that propaganda creates by studying the American way of life (1964, pp. 407–408). This is even more true today than when he wrote it 60 years ago.

Another way of fostering mass society occurs on a more conscious level, according to Ellul. This massification promotes group integration and unity (1964, p. 408). Humans are social animals; in social groups, we gain identity, protection from others, and direction in life. Group integration is necessary for the individual to experience some equilibrium and tranquility. Many consciously integrate into social groups as psychological adaptation to technological society. Techniques that build group identification and morale reinforce this natural tendency to develop commitment to achieve organizational goals. Such psychological collectivization is necessary to move people more efficiently to action. Calling forth images of family and community, and having the organization take on communal functions such as daycare, medical services, workout facilities, and the like, are part of this technique of engendering seemingly spontaneous solidarity with the organization's overall goal. By interweaving humanistic goals with organizational goals of efficiency and productivity, Ellul argues, the purpose is to enable people to thrive in an alien, technical culture (1964, p. 409).

Furthermore, the psychological conditioning and manipulation of masses of people require their strong identification with groups, for it is in the collective that individuals are more susceptible to suggestion. Most important in this regard are technical groups focused on specific functions, such as the military, political parties, educational institutions, and corporate organizations. Group integration and unanimity are essential for efficient psychological manipulation; thus, such technical groups are among the most potent weapons in

the propagandists' arsenal (Ellul, 1964, p. 410). These psychosocial methods aim to unify the group around core ideas or personalities and minimize fragmentation and disagreement.

Socio-Cultural Evolution

Ellul identifies several motive forces behind the development and proliferation of techniques. The primary force that he identifies, of course, is rationalization, the drive for ever greater efficiency. Societies increasingly favour methods that maximize productivity and minimize waste; such methods are likely to be propagated throughout the system and, through cultural contact, spread to other social systems. Enough has been written about this that it has become a mantra. However, it is a powerful social force.

Ellul also recognizes that technique has developed specific characteristics only now coming to the forefront of public consciousness and debate with the development of general artificial intelligence. With the accumulation of techniques throughout human existence, societies have developed a collective body of information, understanding, and skills. This collective body—combined with cultural norms and values, historical awareness, and shared experiences—comprises the knowledge base of a society. Given the size of this knowledge base, Ellul suggests, techniques have become autonomous, evolving in accordance with their own logic without being guided by human desires or goals. In addition, they are becoming more monistic: that is, physical technology, organization, and mindset are interacting more often and developing at an accelerating rate.

In other words, the real technological work is done in areas in which it is possible, with methods that are possible. Now, what makes an operation possible? Previously existing material, method, organization, resources, competences, know-how—this combination allows not only performing the exact task for which all that was done, but also trying a new step along the

technological route. It is precisely the use of acquired instruments that not only permits but even provokes technological development. The technician gets the idea of applying a certain procedure that was hitherto confined to some domain or other—of employing a certain chemical product in an original composition with another—of treating the organization of an army the way people have been treating an industrial ensemble, etc. In other words, technology progresses only in terms of and because of prior technological results. There is a sort of pressure a-stern, forcing advancement. It is the pressure exerted by the mass of ideas, tools, machines, organizations, ideologies, manual or intellectual training, all of which is technology. There is no call toward a goal; there is constraint by an engine placed in the back and not tolerating any halt for the machine. In this self-generation of technology, we must obviously recall that technology is ambivalent, causing new problems the instant it solves old ones, and that it grows by itself through the problems that it raises. (Ellul, 1980, pp. 272–273)

Civilizations rise and fall, but the knowledge base—the accumulation of technical skills and information—continues to grow.

Finally, Ellul asserts that the forces favouring the development of technique can be advanced or hindered by the political-economic context of a society. Groups and organizations within the social structure can promote certain technologies and organizational structures to achieve specific ends. Alternatively, they can hinder the employment of available techniques counter to their interests. American corporate elites, for example, have successfully blocked or seriously hindered developments in health care, defence, climate change study and mitigation, and a host of other areas. Conversely, they have promoted technical developments in computer technology, space exploration, agriculture, and military logistics and equipment.

The power of organizations varies with the resources that they command. Developments in the human techniques of education, propaganda, and media, in particular, have increased the power and influence of formal organizations over individuals. However, social

institutions are in a constant state of flux. For example, the relationship between governments and capitalist organizations has shifted as corporations have grown in size, wealth, and political power. Economic competitors change the playing field, disruptive technologies develop, and new interest groups are formed as societies face political, economic, and social crises. Since the mid-19th century, a new organizational development speaks to interests other than economics. Social movement organizations include non-economic goals such as civil rights, environmental protection, consumer rights, and other forms of social justice in their causes. These organizations have had only marginal success, but their history is short, and their potential is great.

Overall, Ellul stresses, the evolution of technique has been a complex interplay of these forces, fundamentally changing social structures and the character of and relationship between individuals and society. The growth of technique began slowly in prehistory with the adoption of language and simple tools. It accelerated as small innovations provided conditions for further advances, reaching critical mass around 1500 CE with the Industrial Revolution (1964, pp. 42–60). Over time, the same forces have pushed innovation to the breakneck speed of the 21st century. Ellul's view of social evolution reduces human autonomy to a minimum; technical development is almost outside human control except for the temporary interests of organizations. His image of the social system is that of a cloud of techniques—technology, organization, and mindset—in which the various elements interact to produce further innovations, with no discernible direction or order except ongoing action to achieve greater efficiency and productivity over time.

There is another major force behind the evolution of technique that Ellul minimizes but that holds great explanatory power. He downplays the role of physical technology in the evolutionary process, perhaps because many others emphasize it. For example, in criticizing Lewis Mumford's assertion that the force behind the evolution of technique was the various modes of exploiting energy, Ellul calls such

assertions “incomprehensible unless technique is restricted to the machine. . . . [T]he change is not in the use of a natural force but in the application of technique to all spheres of life” (1964, p. 42). But the physical technologies and social practices used to exploit energy sources are the application of technique in an essential sphere of life. A society’s physical relationship with its environment—its ecology—must be seen as a significant factor in developing technique and thus socio-cultural evolution (Elwell, 2013, pp. 32–33). A society’s ecology is constantly in flux because of natural processes and the impacts of its physical techniques on the environment. The relations that society has with its environment, both physical and social (relations with other societies), are ever-changing. Changing environmental constraints of resources stimulate changes in physical technologies and social practices that determine the amounts and types of resources required for survival. Such technologies and practices include the extraction of energy and raw materials, the fashioning of these resources for human use, and those resources that determine the size and characteristics of a population. In other words, physical technologies and goal-oriented social practices that adapt the system to its ever-changing social and physical environments are central to its survival.

Since prehistory, social evolution has been characterized by the escalating expenditure of energy to draw more significant amounts of natural resources out of the environment; increased productivity of energy, goods, and services; and accelerating population growth (Harris, 1979, p. 67). All three evolutionary characteristics have resulted from innovations in physical technique, which have intensified the harvesting of the Earth’s energy and resources and converted them into accelerating production and reproduction. This evolutionary force has gradually intensified as the knowledge base of social systems has grown exponentially and the impacts of social systems on global environments have increased. Consequently, humans have largely escaped the vagaries of nature—the want of food, clothing, and shelter—but are now subjected to the ever greater demands and constraints of a technical society.

The process of intensification starts very slowly, moves in fits, but increases over time. However, the evolutionary direction has always been toward the Holy Grail of ever greater productivity and efficiency in the exploitation of environments. The techniques of exploitation strongly influence a society's social structure, favouring organizations and practices that promote growth and inhibit any widespread social practice viewed as counterproductive.

Although they are analogous, Ellul's theory of technique has the advantage over Weber's rationalization because it explicitly encompasses physical technologies, organization, and goal-oriented procedures and behaviours. Ellul describes how these components rationalize and interact with one another and their growing impact on the entire socio-cultural system. He describes the force of "technological autonomy" as fuelling this evolutionary movement; the function of technique is to select the most efficient means to an end. Thus, rational thought processes enable humans to manipulate their physical and social environments through technique ever more effectively. Integrating infrastructural-environmental relationships into Ellul's theory of technical evolution adds a potent force that, unlike his hypothesis of technical autonomy and monism, provides a motive force for technical development from early humans through to today.

Future Technical Societies

Ellul's analysis suggests that the convergence of "systems or complexes of techniques" will necessarily lead to more centralized and authoritarian forms of society unless human agency intervenes. "Always and in all circumstances, technique has historically gone along with centralization and the concentration of power." Totalitarian societies are logical extensions of a fully developed technological society (Ellul, 1990, p. 270). Ellul asserts that human thought and behaviour will eventually be bound by an interdependent system

of techniques (technologies, organization, and rationality) (1964, p. 391). This convergence will be spontaneous, a product of the evolution of technique in its well-worn path toward greater efficiency and productivity. Overall, Ellul suggests, technique imposes a form of instrumental rationality that values means over ends, focusing on efficiency and results over ethical and humanistic concerns.

As technique advances, it leads to increased specialization and a more detailed division of labour, thus creating the conditions for a more stratified workforce. Different roles are valued based on technical demands and competencies, often resulting in gross power, status, and wealth disparities. Complex technological systems spread over vast geographical areas require standardization; a detailed division of labour demands extensive bureaucratic mechanisms to function smoothly. Advances in surveillance, data collection, and management technology give those at the top of these hierarchies the power and authority to monitor and control populations through various human techniques. In addition, the chaos and destruction of the natural environment caused by the employment of physical technologies—climate change, habitat destruction, sea level rise, species extinction, and pollution of land, air, and water—will necessitate further controls. Finally, the chaos and destruction caused by the employment of disruptive physical and organizational technologies—job loss, growing income and wealth inequality, homelessness, and terrorism—will be the impetus for yet further controls.

This process of intensification—an increase in the size, complexity, and interrelationships of physical technologies and practices—leads to the growth of secondary organizations to coordinate and control these activities and the increased population levels. As these bureaucratic organizations expand, there is a consequent decline in the number of functions performed by primary groups, along with a decline in their influence on the individual and society. The growth of physical and organizational techniques leads to a goal-oriented mindset, the rational thought processes interconnecting the system. Finally, there are the feedback loops, the rational mindset devising

organizational strategies and physical innovations to improve efficiencies and organizations developing new technologies and strategies to preserve and extend their power and control.

The growth of technique in modern societies has led to their standardization and a reduction in diversity since it imposes conformity in products, services, and lifestyles. Individual autonomy diminishes as people become more dependent on the technological system. Power and authority become ever more enlarged and centralized as the complexity and interdependence of the system necessitate coordination, administration, and control. The power of these centralized systems over individuals is further magnified by the growth of techniques, particularly advances in communication, surveillance, data management, education, and propaganda. With this enlargement and centralization of power, governments and private organizations have used these techniques to tighten their grip on their populations. In more democratic societies, it has undermined checks on the concentration of power and placed decision making into fewer hands. Ellul's analysis indicates that the inherent logic of technological systems contributes to the emergence of more centralized and authoritarian forms of government to manage these complex systems. This march toward authoritarianism can be seen in many traditional democracies worldwide.

As technique develops and allows us to modify additional limits imposed by the environment, as well as our physical and mental limitations, we become more subjected to the artificial necessities of technique. As we have seen, the demands of technological society on many people can be harsh and implacable, though less physically menacing than nature. Ellul fears that the long-term social evolutionary process will unify material, organizational, and psychological techniques, and humanity will be fully integrated into the social order. Today most people experience a dual reality: one part of the day is given over thoroughly, body and mind, to the "monster" that is technological society; the other part of the day is reserved for the self, inner life, and family. The division is complicated and causes

great suffering in many individuals, but it does grant them some limited freedoms. Nevertheless, as technique continues to invade every aspect of life, this “cleavage of personality” is becoming harder to bear since many, especially the elderly, still have attachments to the traditions and values of the past (Ellul, 1964, p. 410).

This cleavage, according to Ellul, is readily apparent and felt by the psychotechnicians—psychologists, sociologists, propagandists, and teachers. They have humanistic values and want to restore the lost unity that technical advances have caused. Unfortunately, he writes, they can only reach this goal through technological means. The human sciences are used to round “up those elements of the human personality that are still free and forcing (‘reintegrating’) them into the expanding technical order of things” (1964, p. 411). People, therefore, are subjected to overt and covert techniques to integrate their thoughts and actions further. These techniques restore unity to individuals but at the expense of losing their individuality. Eventually, this process leads to the complete integration of the individual into the social whole.

Ellul asks us to consider—as an example of the process—policing as it existed at the mid-point of the 20th century and how it is likely to evolve. Historically, policing was “inquisitorial and brutal,” operating as it pleased with little oversight, carrying out arrests arbitrarily. Many citizens lived in fear. However, Ellul writes, it is evolving toward near-total surveillance and keeping dossiers on all citizens. He writes that overt action will not be needed when this technique is sufficiently advanced, and the terror will steadily disappear. “The police exist only to protect ‘good citizens.’ They no longer carry out raids, and nothing is mysterious about them; therefore, they do not feel oppressive. Police work has become ‘scientific’” (1964, p. 413).

Ellul writes of physical files and dossiers, but technical progress since his writing has surpassed them, thus giving police access to electronic records of an individual’s movements geographically, biologically, and economically. Cameras throughout society that read licence plates or use facial recognition to track individuals are

becoming common. A parallel development is even further advanced through surveillance and data mining of computer activity, with individuals giving up their privacy and reams of personal information to corporations and governments for the convenience of shopping, cruising the web, and receiving their preferred brands of propaganda online. No one can evade constant monitoring, and eventually no one will want to. Machine, organizational, and human techniques will be developed to such a degree that they become invisible to the individual and thus ever easier to bear (1964, p. 413).

Ellul claims that technical society must immerse most individuals into the organizational social order or risk collapse. People are capricious and unpredictable when left to their own devices and chaotic social institutions. These “faults” can be corrected, made to respond to stimuli-response situations, and moulded in thought and behaviour. Moreover, that is the path that social evolution has taken, at least after 1500 CE, though the roots of the process might predate human history. At one time, Ellul writes, the goal of technique was thought to be production and consumption, leading to ease and comfort. The “ideal type was capitalist Switzerland or socialist Sweden” (1964, p. 421). However, with the two World Wars, the Cold War, and mutually assured destruction (a real thing in the 1960s and still today), it became apparent that the real goal of technique is power. Is there any way out of the trajectory that technological society is on? Ellul asks rhetorically. Yes, he answers, but there is little possibility that either scientists or other technicians (e.g., lawyers, physicians, politicians, or professors) will guide us there; they see problems between humans and machines or organizations as merely technical issues that can only be addressed by technical solutions that promote further adaptation (1964, p. 414).

Before the Second World War, Ellul says, technological development—physical, organizational, and human—was at a comfortable pace, growth was orderly, and people and techniques had some time to adapt. However, technological development accelerated during and after the war, especially among the great powers. With this

increased tempo, Ellul asserts, an American myth was born (much like the Nazi and Communist Party myths of old, all of which have similar religious traits): a belief in national power, control, and exceptionalism. Ellul states that, unlike the previous myths, the American myth was still in a spontaneous phase in 1964: that is, not yet fully organized and technically developed. Since his writing, change has been faster than ever. Ecstatic phenomena increase because of the growth and proliferation of techniques; Ellul ties them directly to the pace of change. The tempo of technical development is critical; when it increases, the mystique follows. He posits that, the more restrictive the outlets, the more exaggerated the ecstatic phenomena.

“Technique fully satisfies the mystic will to possess and dominate,” Ellul (1964, p. 423) argues. In addition, by alienating the individual from the self, technique promotes individual identification with something outside the self. Whether it be a father figure, a movie star, a television personality, or a political creed, people are drawn to a charismatic quality, which lends a certain intensity and excitement to a technological society. At the same time, ecstasy takes on a mechanical character, increasingly organized, mechanized, and exploited through technique (p. 423). Ellul concludes that ecstasy integrates anarchic and antisocial individuals into the technical system, and they are progressively deployed in every technical society. “Technique diffuses the revolt of the few and thus appeases the need of the millions for revolt” (p. 425).

Ellul foresees a time when there will be more complete knowledge of human physiology, psychology, and sociology. There will be a better understanding of the forces acting on and within people and how to apply this knowledge in coordinating and manipulating their thoughts and behaviours. In the 1960s, Ellul warned that our spontaneous activities would soon be subjected to observation and analysis in all of their aspects and that our behaviours, thoughts, and emotions were being “systematized, schematized, and tabulated,” and such activities could well lead to “the complete conditioning of human behavior” (1964, p. 395). This will be a future in which

humans merge with their technologies and become little more than programmed robots: humanity fully integrated into the complex social order.

The human character, Ellul argues, was already modified by a technical society barely a century old; he predicts that people will continue to adapt to the technique as the technique itself adapts to them and that such alterations of human character will become easier over time. He does not believe that technological society is in imminent danger of becoming transformed into a technological dystopia. However, that is a future possibility that might not be as remote as some believe (1964, p. 395). He asserts that there is a probability that human society will eventually become identical to the technical system unless human agency intervenes.

Ellul asserts that societies are increasingly shaped by the demands of technique, which is deeply integrated into the fabric of modern life and exerts a powerful influence on human affairs:

But there is always something unpredictable, incoherent, and irreducible in the social body. A society is made up of multiple systems, multiple types, multiple patterns, on different levels. Saying that technology is the determining factor of this society does not mean it is the only factor! Above all, society is made up of people, and the system, in its abstraction, seems to ignore that. It is only at an extreme point that we can view the society and the [technological] system as one and the same. But nobody can seriously maintain that this extreme has been reached. (1980, p. 18)

Ellul posits a time when technological society will achieve the near-perfect integration of human motivation and character, a vision shared by many who have studied human society with an eye on the evolution of technique (see Huxley, 1958 Mumford, 1970/1964, 1967/1966; Postman, 1992; and Seidenberg, 1950, 1961):

It will not be a universal concentration camp, for it will be guilty of no atrocity. It will not seem insane, for everything will be

ordered, and the stains of human passion will be lost amid the chromium gleam. We shall have nothing more to lose, and nothing to win. Our deepest instincts and our most secret passions will be analyzed, published, and exploited. We shall be rewarded with everything our hearts ever desired. And the supreme luxury of the society of technical necessity will be to grant the bonus of useless revolt and of an acquiescent smile. (Ellul, 1964, p. 427)

Ellul is not saying that this is our inevitable future; rather, it is the evolutionary path that we are on, and we must turn away from it if we wish to preserve our humanity. Nevertheless, he cannot identify a moderating or countertrend to the social evolutionary process of growing rationalization.

Social Movements and Individual Transcendence

Many critics claim that Ellul underestimates human agency and the possibilities for society to control and shape technological development according to human values and traditions; this underestimation leads to charges of pessimism and technological determinism regarding the future. However, his work is more nuanced; he aims to raise awareness of and thus action on the potential consequences of letting technique develop without critical oversight (1964, p. xxx). Ellul describes technique as a social force that can determine collective and individual thought and behaviour. It is not that modern individuals are “more determined today than in the past,” only that the forces that condition their lives are increasingly those of technique (1964, p. xxviii). These forces are mounting; they operate in increasingly broad areas of social life and are more calculated, coordinated, and promulgated by the formal organizations that dominate modern societies.

Ellul’s model of social movements in *The Technological Society* (1964) is the labour movement. For Ellul, labour unions highlighted that such movements become bureaucratic in organization with the goal of integrating individuals into the existing technical system.

The idealized myth was that the proletariat would be revolutionary and work to overthrow the “primacy of the economy” over humanity. Instead, the labour movement concentrated almost entirely on human technical production and consumption, thus becoming an integral part of the economic order itself (p. 220; see also pp. 357–358). Ellul views the labour movement as a means for workers to blow off steam, defanging some of the revolutionary instincts of its members so that they could be more effectively managed. However, the labour movement did better the working conditions and compensation packages of many workers, integrating human values into an economic system solely focused on amassing capital. Its success in the United States was evident from the resistance of corporate elites to the establishment of unions (the country has the bloodiest labour history of any advanced industrial nation) and their progressive weakening at the behest of these elites since the 1980s.

Going further, and most cynically, Ellul likens all social movements to mere burlesque—play acting, with technique controlling the stage. All of the movements to secure peace and social justice—pacifism, communism, environmentalism, anarchism—are merely relief valves to let the marks release some steam. “They all fall into the same pattern and fulfill the same function” of integrating people into the system (1964, p. 426). Some movements might be more authentic than others at expressing human revolt, and others might have some success in refashioning the aggressive instincts of their followers, thus better integrating them into the technological system.

Although some observers see possibilities for systemic change in outbursts of passion and violence, Ellul asserts that these forces are allowed as safety valves, tightly encircled and localized, causing no harm to the technical system itself. According to him, movements based on sex, a passion for nature, the humanities, or even social and political action are acceptable. They can allow some people to adapt to or fine-tune the system for greater efficacy. Nevertheless, such movements cannot change the system’s heart—they cannot successfully challenge technique. “They question nothing, menace

nobody. Behemoth can rest easy” (1964, p. 416). The passions for life are turned into amusements, confined within strict limits set by technological society. Ellul quotes the great law of Goebbels regarding technical society: “You are at liberty to seek your salvation as you understand it, provided you do nothing to change the social order” (1964, p. 420).

Ellul writes that authors can criticize their cultures and advocate crazed solutions to perceived problems (e.g., anarchism to defang technical society). The idea here is that criticism and rebellion are necessary for technological society as long as they do not seriously threaten the system. Furthermore, the published word comes into play, for Ellul marks books and reading as ready-made for the most radical ideas and critiques. However, readers of books are not partisans of authors; they are not a genuine community since there is a technical “screen” between them. There are so many “cultural modalities” that a reader can choose from (and hundreds more produced by the day), and the reader is like a butterfly, sampling a variety of flowers: “A few printed pages out of the deluge of printed matter will never make the butterfly a revolutionary” (1964, p. 424). Again, Ellul speaks in eloquent absolutes. It is perhaps more accurate to say that such printed matter alone will not make a revolutionary movement.

However, his perspective on social movements broadened in the late 1960s. In *Perspectives on Our Age: Jacques Ellul Speaks on His Life and Work* (1981, p. 56), Ellul points out that the student unrest (he calls it the “hippy movement”) in many technological societies caused him to revise some of his thinking and become more hopeful about the future. “I was, I might say, more pessimistic before 1968 than after. I used to think that we were so trapped in the technological system that we had no further resources to draw on. And then 1968 brought an explosion which opened certain paths, and which showed that we were not truly conditioned.”

It is surprising that it took the revolts of 1968 for Ellul truly to consider the potential countervailing force that social movements pose to technocracy. Social movements focused on human rights

and social justice were little known in history. They first came about in the early 19th century, developing with technological advances in communication and transportation. Movements such as the abolition of slavery in Europe and North America and the rise of labour in response to the worst abuses of capitalism had great success. Their organizational techniques and strategies gradually spread to other causes.

The latter half of the 19th century and the early 20th century saw the rise of the women's suffrage movement and social movements promoting minority rights. By the mid-20th century, social movements became far more numerous. Ongoing labour disputes in America were common throughout the first half of the century. The civil rights movements in Gandhi's India (1930s and 1940s) and in Black America (1950s and 1960s) formed the pattern for a wide variety of modern social movements to follow from the late 1960s to today: antiwar, women's rights, environmentalism, LGBTQ+, Occupy Wallstreet, Black Lives Matter, Antifa, and many others. Many of these movements forced substantial social changes in technological societies, moderating some of the worst exploitation and abuse of people and the environment, although the long-term viability of their reforms is open to question.

Since Ellul's writings, resistance to the furtherance of technique has intensified with the spread of the environmental movement and related movements for social justice. Such organizations engage in demonstrations, lobby governments, and produce propaganda for their causes, such as the recent First Nations protests against technical development on their spiritual lands in North America and Australia. Similar issues involving the development of nuclear power plants or waste facilities, strip mining, and deforestation often require state intervention and corporate public relations to push technical development to fruition. Still, when social opposition is organized and well-funded, it is effective in stopping some developments and getting national governments to begin to focus on social justice and environmental issues.

Of course, there are powerful institutions that counter these popular social movements, institutions that are organized, well-funded, and focused on preserving their power and wealth. These pro-development interests are joined by reactionary movements (many sponsored by elite organizations, a form of political astro-turfing) aimed at stopping or reversing government regulations on industries, advocating technical growth, and minimizing the perceptions of havoc that technique is causing in the natural and social environments.

However, one must admit that the movements for social justice and the counter-movements sponsored by elite interests are technical organizations. Their power comes from technique in all of its forms: physical technology (particularly in communications), organization (bureaucracy and office machinery), and human techniques (education, public relations, and propaganda). The demands of social justice movements are often for government protection against the ravages of capitalism, redistribution of income and wealth, economic regulation, more inclusive planning and investment to address climate change and environmental destruction, universal medical care, programs to develop alternative energies, and social services to address inequalities. In other words, national and international social movements continue the evolutionary pattern set from the beginning of modernity; they further technique (physical technology, organization, and rationalization), albeit in the name of social justice rather than the aggrandizement of elites. Perhaps for this reason, Ellul was not a vociferous advocate and insisted that they remain small and active on a local (human) level.

However, humanists (and others) might respond that such popular global movements are necessary in countering a worldwide trend toward technocracy. They can successfully address some of the gross inequalities within and between societies, promote less cruelty to our fellow human beings, bring capitalism under some human control, and advance environmental restoration and stability—even if they do not address our addiction to technique itself. Although it is

doubtful that such movements will create a social utopia, they might be able to inject enough humanism into our social systems to avoid the dystopia that many foresee. Economic and political elites fuel one major force against these social justice movements. The goals of corporate elites often open the floodgates to exploitation: techniques that favour capital over labour, markets, and ecology. Government elites favour the concentration and enlargement of their power. Ever more effective human techniques assist both.

Suppose that popular social justice movements ultimately fail or only make modest reforms. In that case, the elites who control major social organizations will continue to dominate our societies, capturing most of the benefits of technique for themselves and their progeny and leaving the vast majority of people with the costs: that is, if they do not destroy the environment first to satisfy their greed for wealth and power. In time (and, if valid, a very long time), self-government and all semblance of human freedom will disappear. If social justice movements succeed or partially succeed, then the process has been forestalled; we preserve some freedom for ourselves and our children, which might permanently affect the course of social evolution in our society. The actions of social movement organizations toward freedom and justice are the only social forces capable of altering the social evolutionary trend.

On the individual level, Ellul advocates not getting rid of technology but “transcending” it. However, he admits that he does not yet know how to do that (1964, p. xxxiii). However, how he led his life might offer some clues. Ellul demonstrated a commitment to truth and social justice in both his writings and his actions. He participated in the French Resistance against the fascism of Hitler’s Germany and in several social movements promoting economic justice and a more inclusive democracy both before and after the war. He was active in local groups pressing for environmental justice. He served on the National Council of the French Reformed Church for 15 years, advocating that the church become more active in promoting social justice. In other areas of action, he worked directly with adolescents

in his community for years and was a champion of social programs to prevent delinquency rather than use the hammer of criminal justice to punish it. In sum, Ellul practised a life consistent with his writings.

In *Technopoly*, Neil Postman (1992) gives additional thought to how the individual can transcend technique. He was a communication theorist much influenced by Ellul. Like Ellul, Postman does not offer social programs or reforms to limit the expansion of technique. However, he does offer some ideas on how to transcend the technical juggernaut personally: “Be a loving resistant fighter” (p. 183). The loving part of the resistance is his plea not to give in to the hopelessness and despair around us but to hold on to the traditions, narratives, values, and symbols of democracy and freedom:

A resistance fighter understands that technology must never be accepted as part of the natural order of things, that every technology—from an IQ test to an automobile to a television set to a computer—is a product of a particular economic and political context and carries with it a program, an agenda, and a philosophy that may or may not be life-enhancing and that therefore require scrutiny, criticism, and control. In short, a technological resistance fighter maintains an epistemological and psychic distance from any technology, so that it always appears somewhat strange, never inevitable, never natural. (pp. 184–185)

Postman advocates taking actions such as refusing to accept efficiency as the holy grail, taking the bonds of family members and friends seriously, and holding honour, loyalty, and truth as important values in life. Resistance fighters refuse to let polls, sheer numbers, or the “social sciences” substitute for judgment, common sense, or truth. They respect traditions, values, emotions, religiosity, and the difference between the sacred and the profane.

To add to Postman’s (1992) list, individuals should carefully consider their life’s work and choose a living for the satisfaction that it gives them and their communities. They must insist that the companies for which they work or from which they buy serve all

stakeholders (employees, consumers, the community, sustainability, and the environment), not just stockholders. Individuals should severely limit social media (something new since Postman wrote, or he would surely have included it). They should not get addicted to entertainment and spectator sports—they should practise moderation in all things. Such individuals integrate the humanities and the arts into their lives as much as possible. They find meaning in life and live for it. They seek several news sources; educate themselves on social, economic, and political issues; and act in their enlightened self-interests: that is, in the interests of all. Finally, they should take social action, democracy, and individual freedom seriously, for they are under constant attack.

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