The Ellul Forum

Number 73 Spring–Fall 2024



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Publisher

The International Jacques Ellul Society
ISSN 2638-0447

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The Ellul Forum

About

Jacques Ellul (1912–94) was a French thinker and writer in many fields: communication, ethics, law and political science, sociology, technology, and biblical and theological studies, among others. The aim of the *Ellul Forum* is to promote awareness and understanding of Ellul's life and work and to encourage a community of dialogue on these subjects. The *Forum* publishes content by and about Jacques Ellul and about themes relevant to his work, from historical, contemporary, or creative perspectives. Content is published in English or French.

Subscriptions

The *Forum* is published twice a year. Annual subscriptions are $48 USD. Subscriptions include membership in the International Jacques Ellul Society, and subscribers receive regular communications from the Society and other benefits. To subscribe, please visit www.ellul.org.

Submissions

The *Forum* encourages submissions from scholars, students, and general readers. Submissions must demonstrate a degree of familiarity with Ellul's thought and must engage with it in a critical way. Submissions may be sent to ijes@ellul.com.

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Crimes Against Humanity as Technique: Jacques Ellul's Thought Applied to the Khmer Rouge

Virginia W. Landgraf

Setting the Scene: Cambodia Under the Khmer Rouge, 1975–1979

In the spring of 1975, television viewers around the world met with a startling sight. The newly victorious Communist rulers of Cambodia, the Khmer Rouge, were evacuating the country's cities. Thousands of people—men, women, old, young—were leaving the capital, Phnom Penh, taking what belongings they could. At the beginning of 1976, they announced the name of their regime—"Democratic Kampuchea"—but it seemed anything but democratic.[1] Over the succeeding months and years, reports filtered through from refugees of forced labor, starvation rations, arbitrary executions, a suspicion of anyone educated, and the need to obey orders by the mysterious "Angkar," which simply meant "organization."[2] The regime seemed to have a particular animus toward cities. François Ponchaud, a Catholic missionary who was in Cambodia when the Khmer Rouge took over, quotes a political operative as saying, "The city is bad, for there is money in the city. People can be reformed, but not cities. By sweating to clear the land, sowing and harvesting crops, men will learn the real value of things. Man has to know that he is born from a grain of rice!"[3] Ethnonationalist aspirations also seem to have played a role in the Khmer Rouge's methods. Elizabeth Becker, one of the few Western journalists granted an interview with Khmer Rouge leaders, notes that an early pseudonym of

Landgraf, Virginia W. "Crimes Against Humanity as Technique: Jacques Ellul's Thought Applied to the Khmer Rouge." *Ellul Forum* 73 (Spring–Fall 2024): 3–25. © Virginia W. Landgraf, CC BY-NC-ND.

Saloth Sar, who later became the supreme leader of the Khmer Rouge and is better known as Pol Pot, was "Original Khmer," implying nationalism and self-conceit.[4]

The Khmer Rouge seemed to be anti-city, anti-foreigner, and anti-education, but their agricultural goals did not entail a wholesale rejection of technology or capital accumulation. While phrases such as "agrarian utopia" continue to be used to describe the Khmer Rouge's aspirations, a look at Khmer Rouge leaders' writings before they took power and the projects they promoted while in government reveals that their goal was not a condition in which no techniques intervened between nature and human effort.[5] Khieu Samphan, who later became head of the state presidium and was eventually convicted of crimes against humanity and genocide for his part in the Khmer Rouge's actions, finished his dissertation for the faculty of law and economic sciences at the University of Paris in 1959. He combined advocacy of greater industrialization of Cambodian agriculture with a plea to put more resources into "productive" farming, fishing, industry, or artisanship over "unproductive" service provision or the purchase of luxuries.[6] Samphan traces the distinction between productive and unproductive labor to Adam Smith, who identifies productive labor as that which adds value to a commodity that can be sold later, whereas unproductive labor does not produce anything that can be sold later. Only productive labor can contribute toward the accumulation of capital.[7]

In the final summary statement of his dissertation, Samphan says, "Cambodia can industrialize because it has no vicious circle of poverty which cannot be broken by conscientious human effort. But the responsibility for industrialization must be assumed by the state, whose program must include rigorous control of foreign relations and a well-thought-out effort at structural reform."[8] Becker says that Samphan's dissertation parallels the beliefs of the non-Communist Cambodian bourgeoisie at the time: that the country's economic development was being held back by peasants' failure to make the most of the land because of bad working habits and inadequate leadership.[9] When the Khmer Rouge took power, they directed resources—or propagandized that they were directing resources—toward infrastructure as well as production *per se*. Ponchaud cites official radio

broadcasts of Democratic Kampuchea in late 1975 as reporting extensively on dams, canals, and other irrigation works.[10]

Over the years since the Khmer Rouge were in power, scholars have questioned the reliance of early sources, such as Ponchaud, on refugee reports. Historian Michael Vickery criticizes what he calls the "refugees' Standard Total View" of the Democratic Kampuchea regime. The main components of this view are that the Khmer Rouge sought to exterminate all former military personnel or civil servants of previous regimes and everyone who had more than a primary-school education; that they tried to abolish basic institutions such as the family, education, medicine, and religion; that they deliberately withheld adequate food rations, causing the deaths of many; and that they specifically targeted ethnic minorities. Vickery adds that a component of this basic outlook is that "the policies outlined above were invariant as to time or place" while the Democratic Kampuchea regime was in power. Without wishing to deny that the Khmer Rouge did commit atrocities, he shows that local conditions varied. Some educated people were not summarily executed but rather employed by local Khmer Rouge authorities in positions that used their expertise. Some families stayed together longer than the Standard Total View would expect. Some of the reports of atrocities told in refugee camps and publicized by international media turned out to have been misunderstandings—journalists who understood neither Khmer nor Thai were sometimes working through a chain of interpreters—or cases of mistaken identity.[11]

Even when the complexity of local conditions is taken into account, however, the net result of Khmer Rouge efforts at industrialization of agriculture, even for those who were engaged in food production and managed to escape further forced migrations or political purges, was anything but prosperous. Total estimates of the number of excess deaths under the Khmer Rouge, compared with those expected under non-crisis conditions, vary. The Democratic Kampuchea government came to power after a five-year civil war, including an American bombing campaign that disrupted agriculture and added to the refugee population over and above what could have been expected from armed conflict between guerrillas and government forces alone. The regime came to an abrupt end at the beginning of 1979,

when the Vietnamese invaded Cambodia and installed a government they could cooperate with, called the People's Republic of Kampuchea, although Khmer Rouge guerrillas regrouped in frontier areas. Demographer Meng-Try Ea calculates that Cambodia lost almost 1.1 million people, about 15 percent of its population, between 1975 and 1979, when it would have been expected to grow by slightly over that number.[12]

Much of that loss reflects deaths due to famine, forced migration, disregard for medical expertise, and political purges. Also, emigration due to horrific circumstances, even if it does not lead to a death, should not be trivialized. Geographer James Tyner points out that the famine during the Democratic Kampuchea regime was the second of three famines in Cambodia during the decade: the first during the civil war, the second under the Khmer Rouge, and the third under the People's Republic of Kampuchea, because the Vietnamese invasion also disrupted farming that year.[13] However, the Khmer Rouge's replacement of currency by rice rations, and their withholding of rice from workers in order to use it for foreign exchange, added up to a policy that was equivalent to starvation. Khmer Rouge officials recommended a reduction in rice rations even though they knew that people did not have enough to eat.[14] Tyner's estimate of the proportion of Cambodians who died under the Khmer Rouge is higher than Ea's: one-quarter to one-third.[15]

Whether the excess deaths of ethnic Khmers, as opposed to ethnic minorities, during the Democratic Kampuchea regime constitute a "genocide" is a matter of debate. The United Nations defines genocide as intent "to destroy, in whole or in part, a national, ethnical, racial, or religious group" by killing, causing "serious bodily or mental harm," "deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part," preventing births within the group, or forcing the removal of children from the group.[16] Since the Khmer Rouge did not intend to exterminate the Khmer nation, and since political groups are not considered protected groups under this definition, the actual crimes for which senior Khmer Rouge leaders Samphan and Nuon Chea have been convicted of genocide in the Extraordinary Chambers of the Courts of Cambodia involve only the attempts at eliminating the Vietnamese and

Cham minorities.[17] They have also been convicted of the broader category of crimes against humanity, which includes atrocities "committed as part of a widespread or systematic attack directed against any civilian population," including politically designated groups.[18] Many people use the term "genocide," however, to refer to the whole of the Khmer Rouge's actions that led to mass death. Wikipedia's article on the topic is titled "Cambodian genocide." Tyner, who uses the term in its more inclusive sense, notes, "In Democratic Kampuchea, the individual body was inconsequential. [...] Populations were to be productive, politically loyal—or nothing. This is why Pol Pot, on his deathbed, continued to exhibit no remorse for the death he unleashed on Cambodia."[19]

Jacques Ellul in 1982 on the Khmer Rouge: Working the Population to Death

For Jacques Ellul, the disastrous course of Democratic Kampuchea came as a source of distress, but it would not have been a complete surprise. In his 1982 book *Changer de révolution*, he gives the Khmer Rouge's policies and their consequences as an example of what he thinks always happens in industrialization and its successor, technicization: the formation of a proletariat. Karl Marx's exposition of the workings-out of capital is paradigmatic: workers have a portion of the value they create taken by capitalists to start the accumulation of capital, and the more that capital is able to wield power against the workers that build it, the more workers become a class without roots or much life beyond being able to reproduce themselves.[20] But Ellul does not think that this phenomenon is limited to supposedly capitalist economies. When Lenin and the Bolsheviks wanted to create a revolution to bring in socialism and then communism, they—following Marx—knew that they had to take Russia's economy from its existing peasant-dominated condition to an industrial stage, because socialism is built on the abundance of industrial products made possible by capitalism. So they needed to have more people working in industry, and fewer in agriculture. How to get these people to work? Ellul thinks that the labor camps are precisely such a technique: not because the prisoners produce items of economic value (they

do not) but because their existence instills fear and conformity in other workers. Ellul calls this a "dictatorship over the proletariat."[21]

Despite differences in strategy, China also did not escape the trap of proletarization, in Ellul's view. Under Mao, although there were various attempts to break class hierarchies, such as sending intellectuals to work in the countryside and peasants to the city, and the efforts at decentralized industrial production in the countryside were supposed to avoid the pitfalls of having a capitalist class, there was still the problem that a tremendous amount of work was being demanded of citizens by the state. If these work projects were successful, they could lead to capital accumulation.[22] If large amounts of human-labor power were engaged to do things that more industrialized economies would have done with machines, these operations replicated the conditions that obtained at the beginning of the Industrial Revolution in Europe—conditions that were ripe for the formation of a proletariat.[23] With the death of Mao and eventual ascent of Deng Xiaoping to power, pragmatism took the field, and China started to integrate into the global capitalist economy. As of 1982, Ellul saw China as a mixed case. It had some aspects of the Soviet "dictatorship over the proletariat," insofar as it had labor camps and had commandeered large numbers of workers for specific projects at state direction, but its interest in developing a capitalist economy meant that its proletariat would probably grow to resemble that of Western capitalist economies. In neither case was the development of a proletariat avoided.[24]

In Western economies as of 1982, Ellul saw a different kind of "proletariat" developing: a class defined not by a physical condition of indigence, combined with the inability to survive except by selling one's labor, but by the condition of having both work and leisure defined by Technique. As he had written in *The Technological Society* nearly three decades earlier, he saw techniques as imposing themselves as mathematically determined and crowding out other ends.[25] Technically dominated workers may be adequately housed and fed, but the determination of their life by Technique means that they have little rootedness, culture, or individuality apart from superficial technical imitations of such. At work, these employees or managers may have responsibility for a certain operation, but in a sense, they

are not in charge. It is Technique that determines what they must do. As to amusements, Ellul thinks, people in these kinds of jobs tend to pursue leisure activities that will help them bear their work or keep their mind off it.[26]

Ellul's discussion of Cambodia concludes a chapter titled "The Sinking of the Third World into the Proletariat." He sees colonialism and neocolonialism as having played roles in the development of proletariats in nonaligned countries, insofar as workers in those economies are often exploited, being lower on the totem pole than workers in richer countries, and the main geopolitical blocs that want to influence these countries have economies that engender types of proletarization. But even when these countries are trying to be independent of any bloc, they usually try to overcome poverty by industrialization, which leads to capital accumulation, which eventually produces a proletariat. Even so, Ellul thinks, Cambodia is an especially distinctive case, an example of "auto-proletarization."[27] He finds the policies of the Democratic Kampuchea regime and their horrific results especially tragic considering that Cambodia's agricultural productivity had traditionally been enough to feed its population, blunting any demand for industrialization (*contra* Khieu Samphan or the bourgeois Cambodians, who, according to Becker, bemoaned the Cambodian peasantry's supposed laziness). Ellul sees the Khmer Rouge as having taken atrocity to a new level because of their ideology of work. Imprisonment, political purges, and even massacres all had more precedent as practices of autocratic regimes, he thinks, than the deaths through work of a country's own citizens. He sees Khmer Rouge policies as having justified "the mortal enslavement of a whole people" because of the mutual reinforcement of two ideological beliefs: that the revolution, whose purpose is ostensibly happiness, must be sustained by "production at any price," and that work is "at once producer, redeemer, educator, bearing in itself its meaning."[28]

Ellul's emphasis on the Khmer Rouge as paragons of industrialization brings out an aspect of their strategy that would have been visible to anyone who had read Khieu Samphan's dissertation or listened to radio broadcasts from Democratic Kampuchea about the construction of irrigation works—but it contrasts with interpretations of them as isolationist, ethnonationalist, or aiming at agrarian purity. Yet it also raises questions because of

Ellul's dialectical stance toward the city. An undialectical reading of his book *The Meaning of the City* could proceed as follows: "Ellul identifies the city as theologically exemplifying human rebellion against God, because its builders construct an environment entirely made by human beings.[29] Then won't Ellul identify with that Khmer Rouge ideologue who saw the city as the site of moneyed corruption and the rice fields as the site of purifying labor?" Not necessarily.

Theologically, Ellul's reading of the Bible also recognizes that God gives cities to fallen human beings: first, cities of refuge in ancient Israel, and eventually, eschatologically, the new Jerusalem.[30] Ellul lived in the city and tried to be a critical voice within it. For Ellul, one's attitude toward God and the other (whether other people, or non-human nature) is a more fundamental measure of one's capacity to resist the demands of Technique than one's physical location in city or country. The exaltation of work can be a sign of a desire to attain power and control even when money is abolished, and Ellul's criticism of pro-work ideologies differentiates him from that Khmer Rouge enthusiast. Many themes in Ellul's books, such as the discussions of political religions in *The New Demons*, the tendency for revolutions to reinforce the power of the state in *Autopsy of Revolution*, and violence as begetting more violence, in his book *Violence*, can be applied to the Democratic Kampuchea regime.[31] In this essay I will concentrate on aspects of how the search for efficiency, which Ellul described as crowding out other ends, in *The Technological Society*, fits in with the Khmer Rouge's policies. Mass atrocity became Technique, because it was believed to be the most efficient way to retain power and sustain national independence.

James Tyner: Documentary Evidence as Complicating the Categories of Autarky and Communism as Applied to the Khmer Rouge

Over the past few decades, James Tyner has written several books on different aspects of life and death under the Khmer Rouge, using primary sources from the Documentation Center of Cambodia. One of his overarching aims is to challenge what he, building on Vickery, calls the "Standard Total View" of the Democratic Kampuchea regime and to publicize theories that

allow for more complex explanations of the evidence. Vickery, writing in 1984, was referring to refugees' accounts of the regime, summarized by journalists and commentators who were often further removed from the actual events and not aware of local conditions, which could differ.[32] Tyner, writing in 2017, defined the Standard Total View (by now, not just something reported by refugees but something that has passed into general thought and the impressions of non-specialists) as seeing the Democratic Kampuchea regime as "a totalitarian, communist, and autarkic regime seeking to reorganize Cambodian society around a primitive, agrarian political economy. [...] Democratic Kampuchea [...] constituted an isolated, completely self-reliant prison state."[33] Tyner shows that the Khmer Rouge did not seek total isolation or total self-reliance but instead pursued foreign trade within the bounds of national sovereignty; that their objectives were oriented not toward "primitive" agrarianism but toward industrialization; and that, far from trying to pursue a form of communism, they were actually pursuing a form of state capitalism.[34] He does not seek to excuse any atrocity, whether committed (as in political purges) or permitted (as in paying starvation rations of rice as wages), but to expose the courses of causes and reasoning that go into them in order that they may be prevented.

Tyner freely acknowledges his philosophical debt to Karl Marx, Michel Foucault, and Giorgio Agamben. From Marx, he derives the critique of capitalism, whether conducted by private exploiters or states, as denying workers much of the value of what they create; with Foucault he takes an interest in body politics, discipline, and surveillance; and he sees Agamben's concept of the *homo sacer*, someone who is so stripped of normal life connections that they have only "bare life" and exist only to be sacrificed, as fitting ordinary people under the Khmer Rouge (and other regimes that show indifference toward life).[35] Like Ellul, Tyner is influenced by Marx yet highly critical of the kinds of regimes that many supposedly Marxist parties have set up. Tyner does not cite Ellul or identify Technique as a deciding factor in social trends, although he sometimes cites a desire for efficiency on the part of policymakers as a contributing factor in their decisions.

I will now examine what Ellul says in his *Technological Society* about how

Technique operates, and see how it compares with Tyner's analyses of documents from the Khmer Rouge era. We will look at four areas: economic technique as antidemocratic, judicial technique as substituting order for justice, work and propaganda as human techniques, and the conflict between the politicians and the technicians.

Economic Technique as Antidemocratic

In *The Technological Society*, Ellul characterizes economic technique as "antidemocratic." He applies this thesis across the board, to both non-communist and communist countries. Whether the desire for efficiency comes from the state or private enterprises, even those with worker participation in management, it is Technique, not worker or consumer desires, that determines what will be produced, and how. The apparent blurring of social classes caused by standardization is not to be confused with democracy, because it is Technique that is enforcing conformity, not people's desires to be uniform.[36]

Khmer Rouge economic techniques included several components, some of which were supposed to be temporary and others longer lasting. The forced evacuations of cities had an economic rationale and was supposed to lead to a more settled, productive peasantry. During the war, many peasants fled their farms for towns and cities, and the Khmer Rouge wanted to rebuild the economy on the basis of agriculture. Tyner says that Khmer Rouge policies of forced relocation out of cities and towns, and organization of workers into cooperatives, which began in Khmer Rouge–controlled zones even before 1975, resembled the "war communism" of the Soviet Union of 1917–1921, when the Bolsheviks faced the challenge of postwar reconstruction. They recognized the need "to organize and control labor in a useful, effective manner," leading to the strategy of "labor militarization," whereby work would be organized and directed by the army. In postwar Cambodia, the relocation of former peasants from the cities back to the countryside was seen as part of post-conflict reconstruction and rebuilding the agricultural economy. Many farmers had fled to the city under the pressure of the American bombing campaign. However, Tyner depicts the Khmer Rouge's carrying out of this rational program of population rebal-

ance, even before the April 1975 seizure of national power, as summary and as tolerating no opposition. The newly victorious authorities used threats of violence and fear-based reasons for leaving, such as (in the case of Phnom Penh in April 1975) saying that Americans were about to bomb the city.[37]

Tyner also describes the organization of rice production and the distribution of its harvest as having rational components but, in the end, depriving ordinary workers of choices about their working conditions or benefits from what they made. It was Khmer Rouge policy to emphasize rice production because that was Cambodia's comparative advantage, and the (theoretically) excess rice produced over what the population consumed would be used for foreign exchange. This strategy was part of an effort at import substitution inspired by the nonaligned movement.[38] Work brigades were segregated by labor power, age, and sex. Certain tasks were generally assigned to men, women, the elderly, and children. Theoretically, those who used more energy working or were pregnant or had just given birth were to be given more rice rations. Tyner sees in this policy "an embryonic distributive justice."[39] However, whatever justice this policy may have had ran into the roadblock of overall insufficient production to pay for both food consumption and exports. The fact that the government had abolished currency and substituted rice rations for wages, while also referring both to rice as food and to rice as a means of foreign exchange, meant that workers were not receiving the fruits of their labor, just as in private capitalism. "Workers [...] did not collectively appropriate their own surplus production, nor did they distribute it according to collective need; rather, state functionaries appropriated the surplus and exchanged it for commodities on the global market."[40]

Both of these examples—forced migration and the use of rice—show how the economic techniques of the Democratic Kampuchea regime, seen by their perpetrators at the time to be the most efficient for rational ends, functioned in an antidemocratic way. The need for more workers in the countryside was solved not by persuading people that relocation was in the best long-term interests of the society but by guns and propaganda. The zeal for (hoped-for) sustainable national independence won out over the immediate needs of hungry people in how rice was distributed.

Judicial Technique as Substituting Order for Justice

Ellul sees technical law as betraying the law's link with justice. Justice cannot be wholly abstract. It has to be linked to persons and to the concrete. But when concern for persons and concrete circumstances cannot be taken into consideration, it turns into a set of rules that cares only for order, security, and obedience. Ellul goes as far as to say that efficiency *is* order in this context. If techniques can be found to persuade people to behave according to the law's standard, then those techniques can be applied, and the law need no longer exist. In this way, the dialectic between the law and persons is lost. There is no law over against persons, and there are no persons to be regarded by the law.[41]

Tyner sees a similar phenomenon happening in the way that guilt by association, enforced by bureaucratic lists, substituted for trials with evidence, in what functioned as the Khmer Rouge's legal system. A fundamental distinction was that between "base people," people who had been loyal to the Khmer Rouge in the parts of the countryside that they had controlled before the final takeover of the country, and "new people," who were former city dwellers now forcibly relocated to the countryside.[42] The regime favored the former over the latter. Although the Constitution provided for courts, they were never established. Instead, the Communist Party of Cambodia's statutes, which emphasize that Party members must be vigilant about pure ideology and personal history, functioned as a way of disciplining both Party members and those outside. People could be arrested and killed because they were associated with someone who was suspected of disloyalty. Low-level officials reported on incidents that deviated from expectations (e.g., the breaking of tools) and sent these up to the next level. By accumulating lists of personal networks and incidents in which people had been involved, a biography could be built up, which, if an incident occurred that implicated someone in one's social network, could lead to torture or death.[43]

A well-developed security apparatus and multiple networks of surveillance were fundamental to the functioning of this system of administration. People kept tabs on their subordinates and their peers. They would need to produce autobiographical statements (a form of surveillance of oneself) if

accused of a crime. Prisons, in this system, were defined not by isolation from the rest of the world—although, obviously, guards and structures were intended to keep prisoners from leaving—but by their function as nodes of information. Torture was used as a means of extracting not only confessions about deeds committed but also information about social networks.[44] Tyner thinks that the top leaders of the Khmer Rouge believed in the infallibility of themselves and their revolutionary strategy yet also felt vulnerable to betrayal, leading them to suspect that conspiracies against them were ever-present.[45] Yet he disagrees with the view that accusations came only from the top, or that there was no process of evaluation of confessions but only an attempt to flatter superiors.[46] The attempts to conform to the regime came from multiple directions. Appropriating concepts from Walter Benjamin, Tyner sees these processes of surveillance, torture, and execution as "law-preserving violence" following a founding act of "law-making violence," the initial purge of former Khmer Republic officials that legitimized the regime. The job of the legal order was to convey legitimacy, not to deliver justice, which fits in well with Ellul's expectations of law in a society dominated by Technique.[47]

Work and Propaganda as Human Techniques

Ellul classifies as "human techniques" all those methods that attempt to adjust us to our situation of living and working in the technological society. When he refers to the "technique of work," he means such developments as ergonomics, workplace counseling, and vocational guidance, which he thinks are not necessarily meant to enable workers to develop meaningful relationships deeper than work but to integrate them more fully into work processes. Propaganda functions as a human technique insofar as it, if it succeeds, bends our behavior in a certain way. It may help us get more adjusted to work or more eager to consume things. In this connection, advertising belongs to the species of propaganda. Propaganda can also create virtual worlds that contradict what we would see with our naked eyes, but they are put within a context in which they seem real and urgent.[48]

The Communist Party of Kampuchea believed that the process of manual labor would bring about a transformation of consciousness. Work was

not just supposed to produce items for consumption and infrastructure but produce people conscious of their role as shapers of nature.[49] Hence, there was little room for contemplation in the Khmer Rouge's directives for how people should use their time.[50] What time was not used for work should be occupied by gardening, cleaning, and "light study of culture and politics."[51]

Khmer Rouge propagandistic photographs and songs were aimed at depicting a world in which people were happy working and the earth produced in abundance. Song lyrics referred to specific policy goals and practices, such as increasing rice production, building dikes and canals, participating in cooperatives, and performing gender-appropriate work. Some songs had a more general message of social transformation and working together to overcome obstacles. The message was that "through collective efforts, discipline, and hard work, anything was possible: the perceived environmental problems—including starvation itself—could be overcome."[52] Tyner interprets many photographs used in Khmer Rouge publications as designed to normalize the societal changes that the Democratic Kampuchea regime had wrought, such as the separation of the sexes in work brigades, the idea that soldiers and ordinary laborers should work alongside each other, and the organization of work and living into communes. He thinks that the photographs' original viewers would have recognized many familiar things. However, he notes the lack of depictions of familial or social relationships, difficulties, or suffering. If "agrarian utopia" is not a term that fits the reality of the Democratic Kampuchea regime, it nevertheless seems to be what is communicated by these photographs (which in fact also include images of industry, so are not exclusively agricultural). Tyner says that "one can only speculate at this point on the contradictions that must have been experienced by those men, women, and children who lived and died in a reality far removed from the imaginative geographies depicted in these photographs."[53]

Imagination of a better future that contradicts one's present reality is not necessarily cognitive dissonance. One can be sick but imagine what one's life could be like if healing were possible. One can be in a dysfunctional job or relational situation but imagine what a better situation respectful of everyone's gifts and needs could be. In this sense, imagination is foundational

to being a responsible person. And imagination that goes beyond individual subjectivity is not necessarily manipulation. Art can reflect a reality beyond one's immediate experience. Leaving aside explicitly religious art—because its use as the paradigmatic example could embroil this argument in a conversation about the truth of a particular set of religious beliefs, which is not at stake at this particular juncture—Heather Cox Richardson's "Letters from an American" post provides an example. She notes that artist John Trumbull painted a picture of General George Washington's resigning his commission at the end of the Revolutionary War for the rotunda of the United States Capitol in 1817, choosing the subject because it represented voluntary relinquishment of power.[54] Since 1817, has there been unjust power exercised in the name of the United States? Undoubtedly. Could such a painting give comfort to believers in American exceptionalism that "excessive use of power cannot happen here?" Of course. However, the ideal of the painting expressed by its maker still stands over against such injustice and delusion.

The problem with the depictions of Democratic Kampuchea that Tyner describes is that they were meant to function in a society without room for contemplation, lament, or any kind of critical thinking that did not toe the Party line. Work and life do contain problems, dilemmas, premature death, and various other forms of suffering even without a government that is exploiting its people as forced laborers. A philosophy based on respect for the contributions of workers should, in theory, recognize the complaints of workers as potentially legitimate. Ellul thinks, however, that such recognition is unlikely to come from Technique. Its purpose is adjustment, not questioning. Art created at the behest of the Khmer Rouge functioned in the same way.

The Conflict Between the Politicians and the Technicians

In *The Technological Society*, Ellul mentions a conflict that he will develop more fully in his *Political Illusion*: that between politicians and technicians. In many countries, even the Soviet Union, there is a corps of technicians whose judgments are supposed to be beyond politics. These are not necessarily people who would be thought of as technicians at the popular level;

the military, for instance, can be seen as technicians in this sense. Politicians are in a bind with respect to the technicians, because what the technicians recommend is the most efficient way, and (in a society in which the technical phenomenon rules) people will eventually demand the efficient way. There may be constituencies that want something else, however, at least at present. Should the politicians listen to that constituency, they will be penalized when it turns out to be less efficient and other constituencies complain. A way out of this dilemma is to develop a political technique that coordinates and exercises power over different spheres of activity. Ellul argues that this is what Lenin did.[55]

Reading Ellul's work about the conflict between politicians and technicians and then looking at Khmer Rouge political decisions about technical sectors, it is striking that the conflict often does not exist, because the politicians, i.e., the Communist Party of Cambodia, in effect appointed themselves as the technicians in that sector. An example is medicine. Before the Khmer Rouge took over, Cambodians used a combination of traditional Khmer and Western medicine and pharmaceuticals. After the regime change, many doctors either fled the country or were under political suspicion for being "new people" and therefore potential enemies of the new regime. The Khmer Rouge encouraged teenagers with little training to become medical staff. Sometimes illiterate, they were trained to administer medicines and decode symbols on pill bottles. Such people would be unlikely to serve as a rival technical authority opposed to the politicians.[56] As for political technique, the Khmer Rouge imitated Lenin in believing that they should "smash" the old state and "smash" political opponents.[57] Killing educated members of one's population does not seem like a strategy to induce efficiency in health, literacy, or engineering outcomes. But it may buy time before the next rice harvest, if the educated are suspected to be likely to stir up unrest.

Evaluation

Many of the things that Ellul wrote about in 1954 fit the Khmer Rouge regime, even though Ellul was writing about mid-twentieth-century industrialized societies (whether communist or capitalist), whereas the Khmer

Rouge were in a situation in which the main economic activity was agriculture and the country would have been experiencing postwar privation even without the forced migrations and forced labor that the regime demanded. Economic technique was imposed in a way that suppressed individual desires about working conditions and their very sustenance. Even in the absence of courts, a system of sanctions arose in which order was more important than justice. Work was not only supposed to accomplish its material aim of producing rice or irrigation systems but also supposed to act as a tool to form consciousness. Propaganda was supposed to integrate people into the life of total work, even while the song lyrics spoke of fertile landscapes that were not yet realized and ignored the reality of the ever-present threat of death. Even the paucity of technicians in some sectors can be seen as an example of political technique, evident in the Khmer Rouge's political purges. Khmer Rouge techniques also fit in with Ellul's assessment of the theological meaning of the city as a place where human beings construct an environment entirely of their own making. Even though they were forcing people to evacuate the city and resettle in the country, they were making them go there to set up a kind of industrial agriculture. It could be seen as an attempt to reshape the countryside completely according to human demands, thus turning the entire country into a city in the aforementioned theological sense.

Ellul started writing about Technique because he wanted to investigate what he saw as the dominant force shaping his era, as he believed capital had been in Marx's time.[58] If Ellul is right, does that mean that the search for efficiency ought to be an independent variable over against the need for, or power of, capital, the desire to retain political power, or just plain hubris? I am not sure that the Khmer Rouge's disastrous policies prove that it is. Yes, there is a search for efficiency, but there is a specific end in mind: the sustainability of the Khmer Rouge regime. The ones in power were cognizant of people's needs for food, yet chose to direct rice toward foreign exchange because that was supposed to lead to long-term sovereignty. Even with a truncated anthropology that reduces people to labor power, they could have realized that killing people who seemed politically suspect is destroying a resource.[59] Yet they seemed to have faith that their ideology would make

things turn out right in the end, despite then-current dire conditions and the fear of traitors that necessitated an enormous network of surveillance and punishment.

This combination of faith and hubris exhibited by the Khmer Rouge leaders brings up another dimension of Technique: self-justification. Although in *The Technological Society* Ellul tends to talk about Technique as an actor that is self-augmenting and self-perpetuating and crowding out human ends and morals, in *Presence in the Modern World* he identifies Technique as "self-justifying," with the theological implications that that use of terms entails. "It is God who justifies," proclaims Paul's letter to the Romans (8:33)—but Technique seems to be the justifier in the modern world. So it was for the Khmer Rouge.[60]

When I started this project, aware of Ellul's dialectical approach to cities and his view of the Khmer Rouge as epitomizing industrialization, as well as interpretations of the Khmer Rouge as seeking agrarian purity and seeing cities as a threat to that purity, I was intrigued by the idea of cities as sites of potential resistance to a totalitarian regime. Cities, after all, are places where people of vastly different backgrounds may rub elbows. The challenge becomes, in an environment in which we are encouraged to hurry along and ignore people, to stop and listen to our neighbors, hear their stories, and perhaps be changed by them. If nature in its stubborn workings represents one challenge to our attempts to reshape our environment according to what is most efficient for our convenience, human diversity represents another, even though the fact that we are living in a city may have attenuated that diversity. Investigating the Khmer Rouge's practices further, however, has reminded me how any site, urban or rural, can be an arena in which we attempt to build—or find ourselves imprisoned in—artificial environments that are hard for people unlike us, or for non-human nature, to penetrate. Information bubbles, to give one example, have had such a tendency. Ellul was under no illusions that a pure environment suitable for receptivity to God existed in the fallen world.

"Who will rescue me from this body of death? Thanks be to God through Jesus Christ our Lord!" (Rom 7:24–25). Tracing Ellul's theological response to the dominance of death-dealing techniques such as employed by the

Khmer Rouge would go beyond the scope of this paper. It would also be un-Ellulian to recommend a set of strategies, guaranteed to prevent the next crime against humanity. Human efforts to achieve specific ends may be co-opted by the cult of efficiency. But the Democratic Kampuchea regime's spectacular failure to achieve an economy that could feed its people shows some things to avoid, and, conversely, other things to recommend. I base these precepts on the four aspects of Technique from *The Technological Society* reflected in practices of the Khmer Rouge (Technique as antidemocratic, specifically with respect to the economy; technical order as replacing justice in law; propaganda as creating virtual worlds that contradict what one sees in life; and political techniques designed to eliminate enemies):

- *Do not* let dogmatic goals blind you to the basic needs or life goals of you or of those to whom you are accountable.
- *Do* pursue honest conversations among all interested parties about the difficulty of meeting these needs or goals in times of adversity.
- *Do not* collaborate with efforts to stifle cries for justice by imposing order, or suppose that if everything is orderly, then everything must be just.
- *Do* pursue knowledge about ways the order you live in may be perpetuating injustice, and possible ways to remedy those injustices.
- *Do not* ignore cognitive dissonance, but use it as a signal to expose lies and problems.
- *Do* be open to considering imagined better futures that may not reflect current reality, but do not foreclose honesty about problems.
- *Do not* see other people and non-human nature as enemies to be smashed.
- *Do* see other people and non-human nature as potential collaborators and doors to learning. When (as does happen in a fallen world) other fellow creatures exhibit toxicity, pursue nonviolent means to neutralize the toxicity.

Notes

1. "Kampuchea," etymologically, is the same word that has been Westernized over the centuries as "Cambodia."
2. Some of the earliest reports, in addition to the author's own experience leaving Cambodia during April–May 1975, are collected in François Ponchaud, *Cambodia: Year Zero*, trans. Nancy Amphoux (Holt, Rinehart and Winston, 1978).
3. Ponchaud, *Cambodia: Year Zero*, 21.
4. Elizabeth Becker, *When the War Was Over: The Voices of Cambodia's Revolution and Its People* (Simon and Schuster, 1986), 76.
5. "The purported goal [of the Khmer Rouge] was to transform the Southeast Asian country into a classless agrarian utopia." "Cambodia 1975–1979: Introduction," United States Holocaust Memorial Museum. https://www.ushmm.org/genocide-prevention/countries/cambodia/cambodia-1975.
6. Khieu Samphan, *Cambodia's Economy and Industrial Development*. Translated by Laura Summers. Data Paper no. 111 (Cornell University, Southeast Asia Program, Department of Asian Studies, 1979), 52–56, 112. See James A. Tyner, *The Killing of Cambodia: Geography, Genocide and the Unmaking of Space* (Ashgate, 2008), 113.
7. Adam Smith, *The Wealth of Nations*, ed. Edwin Cannan (Modern Library, 2000), 360–63.
8. Samphan, *Cambodia's Economy*, 112.
9. Becker, *When the War Was Over*, 79–80.
10. Ponchaud, *Cambodia: Year Zero*, 76–77.
11. Michael Vickery, *Cambodia: 1975–1982* (South End, 1984), 28, 36–63.
12. Meng-Try Ea, "Recent Population Trends in Kampuchea," In *The Cambodian Agony*, ed. David A. Ablin and Marlowe Hood, 3–15 (Sharpe, 1987), 6.
13. James A. Tyner, *Famine in Cambodia: Geopolitics, Biopolitics, Necropolitics* (University of Georgia Press, 2023), 61–125.
14. Tyner, *Famine in Cambodia*, 1.
15. James A. Tyner, *Genocide and the Geographical Imagination: Life and Death in Germany, China, and Cambodia* (Rowman & Littlefield, 2012), 111.
16. "Definitions of Genocide and Related Crimes." United Nations, Office on Genocide Protection and the Responsibility to Protect. https://www.un.org/en/genocide-prevention/definition.

17. "Khmer Rouge Leaders Found Guilty of Cambodia Genocide." BBC, November 16, 2018. https://www.bbc.com/news/world-asia-46217896. Chea was convicted of genocide against both the Chams and Vietnamese, and Samphan was convicted of genocide against the Vietnamese.
18. "Profile: Khmer Rouge Leaders Nuon Chea and Khieu Samphan." BBC, August 7, 2014. https://www.bbc.com/news/world-asia-28654147. See "Definitions of Genocide."
19. Tyner, *Genocide and the Geographical Imagination*, 145.
20. Jacques Ellul, *Changer de révolution. L'inéluctable prolétariat* (Seuil, 1982), 13–22.
21. Ellul, *Changer de révolution*, 48–96.
22. Ellul, *Changer de révolution*, 98–103.
23. Ellul, *Changer de révolution*, 109-110.
24. Ellul, *Changer de révolution*, 111–47.
25. Jacques Ellul, *The Technological Society*, trans. John Wilkinson (Knopf, 1964), 79–80, 96–100.
26. Ellul, *Changer de révolution*, 197–220.
27. Ellul, *Changer de révolution*, 148–84.
28. Ellul, *Changer de révolution*, 190–96.
29. Jacques Ellul, *The Meaning of the City*, trans. Dennis Pardee (Eerdmans, 1970), 15–20.
30. Ellul, *The Meaning of the City*, 85–94, 188–96.
31. Jacques Ellul, *The New Demons*, trans. C. Edward Hopkin (Seabury, 1975), 166–208; Jacques Ellul, *Autopsy of Revolution*, trans. Patricia Wolf (Knopf, 1971), 147–72; Jacques Ellul, *Violence*, trans. Cecelia Gaul Kings (Seabury, 1969), 100–103.
32. Vickery, *Cambodia*, 28, 36–37.
33. James A. Tyner, *From Rice Fields to Killing Fields: Nature, Life, and Labor Under the Khmer Rouge* (Syracuse University Press, 2017), xi.
34. Tyner, *From Rice Fields to Killing Fields*, 2–9, xiii.
35. Tyner, *From Rice Fields to Killing Fields*, 9–17; *Famine in Cambodia*, 8–12.
36. Ellul, *The Technological Society*, 208–215.
37. Tyner, *From Rice Fields to Killing Fields*, 63–66.

38. Tyner, *From Rice Fields to Killing Fields*, 111–16.
39. Tyner, *From Rice Fields to Killing Fields*, 125–26.
40. Tyner, *From Rice Fields to Killing Fields*, 123–25, 129.
41. Ellul, *The Technological Society*, 291–300.
42. Tyner, *Famine in Cambodia*, 92.
43. James A. Tyner, *The Politics of Lists: Bureaucracy and Genocide Under the Khmer Rouge* (West Virginia University Press, 2018), 46–48, 74–86, 119–48.
44. Tyner, *The Politics of Lists*, 86–109, 126–27, 142–43.
45. Tyner, *The Politics of Lists*, 109–110.
46. Tyner, *The Politics of Lists*, 135–36.
47. Tyner, *The Politics of Lists*, 165–66.
48. Ellul, *The Technological Society*, 349–75.
49. Tyner, *From Rice Fields to Killing Fields*, 131–33.
50. Ellul, *Autopsy of Revolution*, 285: "It would represent a vital breach in the technological society, a truly revolutionary attitude, if contemplation could replace frantic activity."
51. Tyner, *Famine in Cambodia*, 87–88.
52. James A. Tyner, *The Nature of Revolution: Art and Politics Under the Khmer Rouge* (University of Georgia Press, 2019), 95–99.
53. Tyner, *The Nature of Revolution*, 123–24.
54. Heather Cox Richardson, *Letters from an American* (blog), December 22, 2024. https://heathercoxrichardson.substack.com/p/december-22-2024.
55. Ellul, *The Technological Society*, 255–67.
56. Tyner, *From Rice Fields to Killing Fields*, 142–48.
57. Tyner, *From Rice Fields to Killing Fields*, 68.
58. Jacques Ellul, *In Season, Out of Season: An Introduction to the Thought of Jacques Ellul*. Based on interviews by Madeleine Garrigou-Lagrange, trans. Lani K. Niles (Harper & Row, 1981), 175–76.
59. Ellul, *The Technological Society*, 223: "Stalin, as well as the liberal economists, considered man as 'capital.'"

60. Jacques Ellul, *Presence in the Modern World*, trans. Lisa Richmond (Cascade, 2016), 45.

Jacques Ellul's Theology of Technique: An Introduction

Frédéric Rognon

Jacques Ellul's *Technological Society*, published sixty years ago, is the English translation of the French *La Technique ou l'enjeu du siècle*, written in 1949 and published five years later in 1954. The simple fact of the five-year gap between this book's writing and its publication demonstrates the extent to which people were unreceptive to Ellul's ideas and the manuscript was initially of no interest to publishers. In hindsight, we can see how the intuitions developed in this book were confirmed afterward in our history and remain just as relevant today as when they were written. The examples given by the author to illustrate his thesis are certainly dated, but the general trends that Jacques Ellul analyzed already in 1949 have only been amplified and generalized since.

It is also important to re-situate this book in the overall Ellulian *oeuvre*. *La Technique* was the first of a trilogy of books devoted to the technical phenomenon. It was followed by *Le Système technicien* (*The Technological System*) and *Le Bluff technologique* (*The Technological Bluff*). Gravitating around this three-part foundation are some thirty more specialized books, each detailing this or that dimension of the technological society: politics, art, the image, propaganda, social classes, revolution, etc.

A Dialectic of Sociology and Theology

The ensemble of these books constitutes the sociological side of Jacques Ellul's work, with none of them speaking of the Bible or his Christian faith. The other side of his work is theological, biblical, and ethical, and is quantitatively equivalent to the first side (another thirty or so books on this side too), allowing our author to confess his personal faith and to present the

Rognon, Frédéric. "Jacques Ellul's Theology of Technique: An Introduction." *Ellul Forum* 73 (Spring–Fall 2024): 27–36. © Frédéric Rognon, CC BY-NC-ND.

reader with his own reading of certain biblical texts and understanding of Christian truths. The structure of this second side is more complex than the first, even if there is a trilogy here also—*Ethics of Freedom*, *Ethics of Holiness*, and *Ethics of Relationship* (or *Ethics of Love*), with this trilogy itself preceded by a two-volume introduction (*To Will & To Do*). In addition, the first part of this ethics trilogy is itself made up of two volumes in French (*Éthique de la Liberté* and *Les combats de la Liberté*); the second part of this trilogy (*Ethics of Holiness*) will be published in French for the first time only in 2025, in two huge volumes under one title; and finally, the third part (*Ethics of Relationship*, or *of Love*) will never appear, since Jacques Ellul spoke of it but, alas, never had time to write any of it.

These two components of the architecture of Ellul's work are in no way separated or sealed off from one another. Ellul himself often affirmed that his entire project must be grasped as an "architecture in movement" (to borrow a formula from the subtitle of his commentary on the Book of Revelation)—or, more precisely, as a continual dialectical movement between the two sides, between the critique of the technological society in its various dimensions, on the one hand, and by the confession of his faith and his hope, supported by meditations on Scripture and by biblical commentaries, on the other. Jacques Ellul describes this dialectic in various formulations. For example, in his interviews with Patrick Chastenet he says, "Hope is the connection between the two parts of what I have written, which corresponds to a kind of dialectical play in which hope is both the point of crisis and the way forward." And he clarifies: "If you only consider the theological dimension, you will lack the element of incarnation. If you are uniquely interested in the sociopolitical dimension, you will constantly run up against an absence of response or opening."[1] Indeed, it is because he was a Christian that he was able to observe and analyze the technological society in all its horror and its tragic dead ends, without abandoning his research halfway through or committing suicide (on the same page as the citations above, he evokes suicide, since in the absence of God, life has no meaning).

Inversely, it is because he was a jurist, historian, and sociologist—that is, because he was concerned with facts and with real life—that his theology is anything but disincarnate and abstract. On the contrary, it is at grips with

the daily realities of the women and men of today. On this topic, he further said in the same interview with Chastenet, "I describe a world without exit, with the conviction that God accompanies man throughout his entire history." Thus, even if each of his books is expressed in either a sociological or a theological register, if we are to understand Ellul's thought in its own logic we must always read them keeping the other side in mind. We can even try to establish correlations between each of his books on one side and on the other: for example, *The Politics of God and the Politics of Man* forms a dialectical counterpoint to *The Political Illusion*; *The Humiliation of the Word* is a counterpoint to *Propaganda*; *Living Faith* is a counterpoint to *The New Demons*; *Hope in Time of Abandonment* is a counterpoint to *The Technological System*. And as for *The Technological Society*, it is undoubtedly *The Ethics of Freedom* that constitutes the dialectical and theological counterpoint.

A Dialectic of Necessity and Freedom

To understand *The Technological Society* as the first moment in a dialectic that leads to *The Ethics of Freedom* is to set the order of necessity or determination, which is that of Technique, in tension with the regime of freedom, which is that of Christian ethics. Technique is anything but freedom. Ellul demonstrates this point in *The Technological Society* by speaking of the self-augmentation of Technique: Technique proceeds without decisive human intervention, it is self-engendering and becomes exclusively causal, losing all teleology. Ellul also evokes this point in relation to the progression of techniques: they entail one another because the preceding technique renders the following technique necessary, with each innovation bearing irremediably within itself the conditions of determination for the emergence of the following innovation. Finally, Ellul places Technique once again in the order of necessity as concerns its final characteristic, autonomy. Technique is independent of the economy, politics, finance, morality, and spiritual values. Humans rigorously cannot inflect its trajectory in the name of some other parameter. This anchoring of Technique in the order of necessity, and thus of anti-freedom, will be decisively reexamined in *The Technological Bluff*: the "bluff" will consist precisely in calling technical progress

a progress of freedom, when in fact it amounts to a regression of freedoms, which are sacrificed on the altar of power and efficiency.

The dialectic between *The Technological Society* and *The Ethics of Freedom* will thus play on the tension between freedom and determination. By its very essence, Christian ethics is an ethics of freedom. This freedom must be understood not as the ability to act without hindrance (as the current definition of the word would have it), but as liberation in Christ—that is, as this movement of liberation regarding oneself, in reliance on the God of Jesus Christ. The biblical God is at once the Wholly Other, absolutely transcendent from the world (and thus from the technological system), and the one who came to us by incarnating himself in Jesus Christ. It is precisely because he is at once Wholly Other and Wholly Near that he is capable of pulling us away from ourselves, of allowing us some distance from ourselves, and notably in relation to the grip that technical thinking maintains on our imagination.

Technique as Sacred

The ethics of freedom thus means taking a critical distance vis-à-vis technical determinations. It is not about doing without all technique, but of putting Technique back in its place, of no longer making Technique a question of absolute finality, of bringing it down to the level of a simple means—in short, of de-absolutizing or desacralizing Technique. This mention of a "sacralization" of Technique, already present in *The Technological Society*, will play a decisive role in the dialectical reexamination of the question of Technique from the perspective of theology and Christian ethics. If Jacques Ellul speaks neither of his faith nor of his hope in *The Technological Society* and his other sociological books, he has no trouble analyzing the sacral dimension of Technique for those around us in contemporary society.

Technique is not a neutral material, something submitted to our moral or spiritual values and political choices. It has an eminently immaterial dimension, it is an impersonal power endowed with its own force, and it provokes a mix of fascination and fear. In short, it has become sacred. It is the new sacred of the men and women of the post-Christian age. The great paradox is that Technique is the vector of desacralization of the world

par excellence. But since human beings cannot stop believing in something, humanity has reinvested the vector of desacralization itself with a certain sacrality. The new sacred is this power of efficiency, speed, and comfort promised by Technique. And this is precisely where we find the supreme alienation through sacralization. Whence this formula of Jacques Ellul in his book *The New Demons*: "It is not technique which subjugates us, but the sacred transferred onto technique."[2] This means that instead of placing Technique at their service, human beings have made themselves the devoted servants of Technique, all while believing that they maintain their mastery over it. Alienation is a synthesis of submission, of being dispossessed of oneself, and of complete illusion regarding one's own condition. In the face of Technique, our condition is one of servility, though we think of ourselves as all-powerful demiurges. Technophilia has transformed into technolatry as Technique has become our new idol. Sacralizing Technique means consecrating our life to it, sacrificing everything in our existence that is not Technique (our relationships, imagination, spontaneity, spiritual life). It is to consider all technocritical discourse to be sacrilege: "consecrate," "sacrifice," and "sacrilege" are all concepts of the same semantic family as "sacred" or "sacralize."

The Theology of Technique

Of course, this sacral dimension of Technique, which Jacques Ellul highlighted already in *The Technological Society*, will play a pivotal role in this dialectical play. For the theological and ethical evaluation of Technique will be based precisely on this sacral characteristic, which touches on religiosity. If on the one hand the sociological side of the Ellulian *oeuvre* never mentions God, faith, or hope, on the other hand, in its dialectical revaluation, the theological and ethical side of his work refers abundantly to Technique, as to the state, power, politics, or propaganda, etc. This situates the field of application of Christian ethics in an extremely concrete manner and allows us to derive practical consequences in these aspects of daily life.

The Ellulian theology of Technique can be summarized in two fundamental principles: first, Technique is the means by which man has developed to do without God; and second, as a logical consequence of the first principle,

a Christian ethic that seeks to be faithful to the God of Jesus Christ will place a significant priority on transgressing (or, more precisely, profaning) the sacred of Technique. It is indeed a matter of profanation, since the Christian ethical gesture *par excellence* amounts to removing every sacral aura, every absolutization, and all postures of veneration toward Technique. In the technological society, the complex of sacralization of Technique has a name, that of "Gabor's law," formulated by the technocritical Hungarian physicist Dennis Gabor (1900–79), recipient of the 1979 Nobel Prize in physics. This law is formulated as follows: "Whatever can be technically realized, will be realized." Whatever the financial, social, human, ethical, or spiritual costs might be, Technique thus presents itself as the steamroller of our lives, before which no resistance can hold up. It is thus the absolute determination, the iron law of human history. It is in this sense that Christian ethics aims to be a profanation of Gabor's law.

Christian ethics contests the absolute necessity of this law, contests its status as an "irrefutable" law. It refuses all fatality and all resignation before this so-called fatality. It thus seeks to "de-fate" history, to free history from all fate-like determinations. Against this orgy of power set in motion by the adventure of Technique, and against this exacerbation of efficiency—which has become the supreme value, the altar on which we sacrifice every other value—in short, against what we might describe as the jealous monotheism of Technique, Christian ethics presents itself as an ethics of "non-power."

An Ethics of Non-Power

Modeled on the notion of nonviolence, Jacques Ellul has effectively forged a new concept—that of "non-power." Ellul sets up a dialectic between three terms: power, powerlessness, and non-power. Power is the capacity to do something; powerlessness is incapacity to do something; and non-power is the capacity to do something and the choice to not do it. Or, said differently, non-power is refusing to do everything that we can do—"*even* in the interest of defending one's own life," he specifies.[3] Non-power thus has nothing to do with powerlessness. Jesus, as all-powerful God, adopted an attitude of non-power, not only of nonviolence. He asks John the Baptist to be baptized by him; he refuses to accomplish certain miracles that are not

oriented toward life and love but only toward the expression of his omnipotence. At the moment of his arrest, he does not call upon legions of angels to help him, and he resists those who tell him to come down from his cross.

In all these examples, Jacques Ellul sees Jesus applying his teaching in the Sermon on the Mount: "Love your enemies." Following Christ, Christians are thus invited to take a path of non-power: a path of discernment among all the possibilities before us, and of choice, choosing those that are connected to life and love but not power for the sake of power. And this is a direct profanation of Gabor's law. Now, living in the technological society that Ellul described in this book, we have become extremely powerful: we are capable of accomplishing through Technique what Jesus accomplished through miracles. Transhumanists currently promise us victory over death in the next thirty years—that is, our accession to omnipotence.

Jacques Ellul invokes this principle of non-power when he lays out the diverse facets of that which (according to the Gospels) is the most contrary to human nature, while trying to explain the vectors of the "subversion of Christianity." He writes: "What about this other idea which seems essential to us in the life of Jesus Christ, that of non-power, which is connected with antipolitics. What could be more contrary to what we are?"[4]

> The spirit of power is the heart of man. How truly intolerable then is a preaching, to say nothing of a life, centered on non-power! Not the sacrifice for a cause that we would like to see victorious, but truly a love for nothing, a faith for nothing, a gift for nothing, a service for nothing! Consider others as greater than yourselves; in all things seek the good of others. If you are brought before the judge, do not seek to defend yourselves; the Holy Spirit will take care of it. Non-power is infinitely more difficult and extensive than non-violence (which it contains). For nonviolence implies a social theory and generally has an objective, whereas non-power implies neither.[5]

The relations between non-power and nonviolence thus resemble concentric circles, since nonviolence is described as "contained" within non-power. And yet, the choice of non-power "does not exclude an incidental act of violence." In *Theology and Technique*, Jacques Ellul clearly delineates his position on this topic:

> The latter is obviously included in the former, but is not identical with it. For people have wanted to make non-violence a strategy or a tactic to win a political struggle. There again, we are facing a triumph of the technical spirit: bringing the non-violent to justify themselves by proving that non-violence is efficient and can earn successes. That may be legitimated at a political level, but one must be aware that this is subscribing to the technical system. It is admitting that what does not succeed is not efficient, has no value! Hence the fragility of the position: if, to obtain a given result, non-violence pays, we use it; if not, we enter violence. And this concern for efficiency is always what brings about a crisis in non-violent movements and ends up with the non-violent group being overtaken by a violent wing. If we try to show, thanks to Gandhi, that we succeed in defeating the adversary, we bring back non-violence to a technique among others (a soft one to be sure!) that must therefore obey the technical spirit of success and efficiency. It is admitting that we cannot convince the men of our society otherwise than through a proof of efficiency, and that telling them "Of course, it is not efficient (so what?), but it is good, just and true," has no value! It is indeed entering the technical system whose spirit of power is the norm and the criterion of the values recognized by all. Thus, non-power puts an end to all these misunderstandings. It is true that it is not efficient, and for that very reason it is the only path that is critical of the technical system. All the rest is idle playthings.[6]

Concretely, non-power consists in profaning Gabor's law, in not pursuing all the technical innovations that we could pursue when we are uncertain of their effects. But everyone can put non-power into practice in their daily lives: in limiting the speed of their car, in refusing professional competitiveness, in applying a pedagogy of cooperation rather than of competition with their children (or with their students). And Ellul unhesitatingly proclaims, "Today, only non-power has a chance to save the world."[7]

A Kierkegaardian Dialectic

This year is not only the sixtieth anniversary of the publication of *The Technological Society* in English but also the year in which the translation of *Theology and Technique* has been published, ten years after its 2014 French pub-

lication. This book, which Ellul completed but did not manage to publish during his lifetime, bears the subtitle *Toward an Ethic of Non-Power*. This book contains Ellul's most extended discussions of the theme of non-power. But above all, its very title—*Theology and Technique*—indicates the book's dialectical intention. It seeks to display the dialectic between the two sides of Ellul's *oeuvre* within itself. It is thus a publishing event of decisive importance for the anglophone world, allowing for a better understanding of the very logic of the thought and work of Jacques Ellul. By placing Technique and theology in tension, but by beginning with the latter of this pair, Ellul reveals the very foundation of his approach to Technique in light of his faith and his hope. *Theology and Technique* will help us clarify just what kind of dialectic is at work in the *oeuvre* of Jacques Ellul.

Where does the Ellulian dialectic between sociology and theology, between critique of the technological society and a confession of faith and hope based on meditations upon Scripture, come from? What is its source of inspiration? It is not the dialectic of Socrates, which was far too limited to a language game, without a clear impact on concrete life. Socratic or Platonic dialectic is too strictly conceptual to serve as the matrix of Ellulian dialectic. Nor is this Hegel's dialectic. This latter proceeds by overcoming contradictions between two poles through the mediation of a third pole that reconciles the first two, rejecting that which opposes them and retaining what is compatible in them, in a superior stage of history. In Hegel's result, history is conceived as a kind of progress, since the overcoming of contradictions guarantees an evolution that is always positive.

Jacques Ellul could not countenance this progressive vision. In his estimation, while there may be scientific or technical progress, there is no human or spiritual progress; man is still the same (fallible) man today as he was five centuries before Christ. The Ellulian dialectic is thus inspired by a third dialectical model, that of Kierkegaard. Kierkegaard's dialectic is a permanent movement that consists of enduring tensions, contradictions, oppositions, by way of a continual back-and-forth between the poles in tension. No way out is presented for going beyond these contradictions to a harmonious and non-conflictual higher synthesis. Life, and especially Christian existence, is

made up of conflicts, for the Christian is composed of finite and infinite, of temporality and eternity, of relative and absolute.

Transposed onto the technological society via the pen of Jacques Ellul, the Kierkegaardian dialectic becomes an unceasing movement between social critique and theological development, with each one pointing back to the other, feeding off one another. The Christian life is a life of tension between determination by Technique and an ethics of freedom, the subjugation and alienation by Technique continually at work and the process of liberation that must be renewed continually, reworked constantly. The roots of Ellulian dialectic are thus Kierkegaardian—that is, not a purely conceptual or historical dialectic but an existential dialectic. Such is the foundation, in light of which we can better grasp the orientations of *The Technological Society*—this book that we take to be a masterpiece, but one piece among others, in the puzzle that the work of Jacques Ellul constitutes in its entirety and in the internal logic of its architecture.

Notes

1. Jacques Ellul, *Jacques Ellul on Politics, Technology, and Christianity: Conversations with Patrick Troude-Chastenet*, trans. Joan Mendès France (Wipf and Stock, 2005), 21–22.
2. Jacques Ellul, *The New Demons*, trans. C. Edward Hopkin (Seabury, 1975), 206.
3. Jacques Ellul, *If You Are the Son of God: The Suffering and Temptations of Jesus*, trans. Anne-Marie Andreasson Hogg (Cascade, 2014), 84.
4. Jacques Ellul, *The Subversion of Christianity*, trans. Geoffrey W. Bromiley (Eerdmans, 1986), 164–65.
5. Ellul, *The Subversion of Christianity*, 164–66.
6. Jacques Ellul, *Theology and Technique*, trans. Christian Roy (Wipf and Stock, 2024), 245.
7. Jacques Ellul, *What I Believe*, trans. Geoffrey W. Bromiley (Eerdmans, 1989), 151.

La Théologie de la Technique de Jacques Ellul : une introduction

Frédéric Rognon

Nous commémorons le soixantième anniversaire de la publication de *The Technological Society*, traduction de *La Technique ou l'enjeu du siècle*, écrit en 1949 et édité en français en 1954. Ce simple écart de cinq années entre la rédaction et la publication du livre montre à quel point le discours ellulien était alors inaudible et n'intéressait pas les éditeurs. C'est donc aussi le soixante-quinzième anniversaire de la réalisation de ce texte que nous commémorons, et nous pouvons voir, avec le recul historique, combien les intuitions développées dans cet ouvrage se sont confirmées par la suite, et n'ont pas pris une seule ride. Seuls les exemples évoqués pour illustrer la thèse de l'auteur sont datés, mais les tendances de fond analysées par Jacques Ellul dès 1949 se sont plutôt amplifiées et généralisées.

Il importe cependant de resituer ce livre dans l'économie générale de l'œuvre ellulienne. On sait que *La Technique ou l'enjeu du siècle* est le premier étage d'une trilogie consacrée au phénomène technicien, les deux autres étant *Le Système technicien* et *Le Bluff technologique*. Autour de ce pilier ternaire gravitent une bonne trentaine de livres plus spécialisés, chacun déclinant telle ou telle dimension de la société technicienne : la politique, l'art, l'image, la propagande, les classes sociales, la révolution, etc. L'ensemble de ces ouvrages constituent le versant sociologique de l'œuvre de Jacques Ellul, qui dans aucun d'eux ne parle de la Bible ou de sa foi chrétienne. L'autre versant, d'ordre théologique, biblique et éthique, est quantitativement équivalent au premier (une bonne trentaine de livres, ici aussi), et permet à notre auteur de confesser sa foi personnelle, et d'offrir au lecteur sa propre lecture d'un certain nombre de textes bibliques et sa compréhension des

Rognon, Frédéric. « La Théologie de la Technique de Jacques Ellul : une introduction. »
Ellul Forum 73 (Spring–Fall 2024): 37–46. © Frédéric Rognon, CC BY-NC-ND.

vérités chrétiennes. La structure de ce second versant est plus complexe que celle du premier, car si l'on trouve bien ici également une trilogie, l'*Éthique de la Liberté*, l'*Éthique de la Sainteté*, et l'*Éthique de la Relation* (ou *Éthique de l'Amour*), d'une part cette trilogie est précédée d'une introduction en deux volumes (*Le Vouloir et le Faire* et *Les Sources de l'éthique chrétienne*), d'autre part le premier étage de la trilogie comprend lui-même deux volumes en français (*Éthique de la Liberté* et *Les combats de la Liberté*), le second étage (*Éthique de la Sainteté*) ne sera publié pour la première fois que cet automne en français, en deux énormes volumes mais sous un seul et même titre, et enfin le troisième étage (*Éthique de la Relation*, ou *de l'Amour*) ne paraîtra jamais, Jacques Ellul l'ayant annoncé mais n'ayant hélas pas eu le temps d'en rédiger la moindre ligne.

Ces deux versants de l'architecture de l'œuvre ellulienne sont tout sauf juxtaposées et hermétiques l'une à l'autre. Jacques Ellul lui-même l'a souvent affirmé, il faut saisir son œuvre globale comme une « architecture en mouvement » (pour reprendre la formule du sous-titre de son commentaire de l'Apocalypse), plus précisément comme un mouvement dialectique continu entre les deux versants, entre la critique de la société technicienne dans ses diverses dimensions, et la confession de sa foi et de son espérance, étayée sur sa méditation de l'Écriture et sur ses différents commentaires bibliques. Jacques Ellul rend compte de cette dialectique sous des formulations variées : « L'espérance est le lien entre les deux parties de ce que j'écris, qui se correspondent dans une sorte de jeu dialectique dont l'espérance est le point de crise et d'issue », précise-t-il dans ses entretiens avec Patrick Chastenet (*Entretiens avec Jacques Ellul*, 1994, p. 41). Et Jacques Ellul précise : « Si vous ne prenez en compte que la dimension théologique, il vous manquera l'élément d'incarnation. Si vous vous intéressez uniquement à la dimension sociopolitique, vous buterez constamment sur une absence de réponse ou d'ouverture » (*ibid.*, p. 40). C'est en effet parce qu'il était chrétien qu'il a pu observer et analyser la société technicienne dans toute son horreur et ses impasses tragiques, sans quoi il aurait arrêté ses recherches en cours ou se serait suicidé (il évoque le suicide dans la même page, car en l'absence de Dieu la vie n'a aucun sens) ; inversement, c'est parce qu'il était juriste, historien, sociologue, c'est-à-dire soucieux des faits et de la vie concrète, que

sa théologie est tout sauf désincarnée, hors-sol, mais au contraire en prise avec les réalités quotidiennes des femmes et des hommes d'aujourd'hui. À ce propos, il dit encore ceci : « Je décris un monde sans issue, avec la conviction que Dieu accompagne l'homme dans toute son histoire » (*ibid.*). Ainsi, même si chacun de ses livres relève soit du registre sociologique, soit du registre théologique, nous devons toujours le lire en songeant à l'autre versant, afin de comprendre la pensée ellulienne dans sa logique propre. Nous pouvons même nous essayer à établir des corrélations entre chacun des livres d'un volet et chacun de ceux de l'autre volet : *Politique de Dieu, politiques de l'homme* vient en contrepoint dialectique de *L'illusion politique* ; *La parole humiliée* vient en contrepoint de *Propagandes* ; *La foi au prix du doute* vient en contrepoint des *Nouveaux possédés* ; *L'espérance oubliée* vient en contrepoint du *Système technicien*. Et pour ce qui concerne l'ouvrage que nous célébrons aujourd'hui, *La Technique ou l'enjeu du siècle*, c'est sans doute l'*Éthique de la Liberté* qui en constitue le contrepoint dialectique et théologique.

Comprendre *La Technique ou l'enjeu du siècle* comme le premier moment d'une dialectique qui conduit à l'*Éthique de la Liberté*, c'est mettre en tension l'ordre de la nécessité ou de la détermination, qui est celui de la Technique, avec le régime de la Liberté, qui est celui de l'éthique chrétienne. La Technique est tout sauf Liberté. Jacques Ellul montre ce point dès *La Technique ou l'enjeu du siècle*, en parlant de l'auto-accroissement technicien : la Technique progresse sans intervention décisive de l'homme, elle s'engendre elle-même et devient exclusivement causale, perdant toute finalité ; il l'évoque également au sujet de l'enchaînement des techniques : elles s'entraînent les unes les autres parce que les précédentes rendent nécessaires les suivantes, chaque innovation technique portant en elle, de façon irrémédiable, les conditions de détermination de l'émergence de l'innovation suivante ; enfin, il place encore la Technique sous l'ordre de la nécessité à propos de la dernière caractéristique de la Technique qu'est son autonomie : la Technique est indépendante à l'égard de l'économie, de la politique, de la finance, de la morale et des valeurs spirituelles, l'homme ne peut donc rigoureusement pas en infléchir la trajectoire au nom d'autres paramètres. Cet ancrage de la Technique dans l'ordre de la nécessité, et donc de l'anti-liberté, sera

repris de façon décisive dans *Le Bluff technologique*, puisque le bluff consistera précisément à faire passer le progrès technique pour un progrès de la liberté, alors qu'il revient à une régression des libertés, sacrifiées sur l'autel de la puissance et de l'efficacité.

La dialectique entre *La Technique ou l'enjeu du siècle* et l'*Éthique de la Liberté* jouera donc sur la tension entre détermination et liberté. L'éthique chrétienne est par essence une éthique de la Liberté. Cette liberté doit être comprise non pas comme le pouvoir d'agir sans entraves, selon la définition courante du vocable, mais comme la libération en Christ, c'est-à-dire comme ce mouvement de libération à l'égard de soi-même, en s'appuyant sur le Dieu de Jésus-Christ. Le Dieu biblique est à la fois le Tout-Autre, absolument transcendant au monde et donc au système technicien, et celui qui nous a rejoints en s'incarnant en Jésus-Christ. C'est précisément parce qu'il est à la fois le Tout-Autre et le Tout-Proche qu'il est capable de nous arracher à nous-mêmes, de nous permettre de prendre du recul par rapport à nous-mêmes, et notamment par rapport à l'emprise de la mentalité technicienne sur notre imaginaire. L'éthique de la Liberté est donc une prise de distance critique vis-à-vis des déterminations techniciennes. Il ne s'agit pas de se passer de toute technique, mais de remettre la Technique à sa place, de cesser d'en faire la finalité absolue, de la ramener au rang de moyen, en bref de la désabsolutiser ou de la désacraliser. La mention de la sacralisation de la Technique, déjà présente dans *La Technique ou l'enjeu du siècle*, va jouer un rôle décisif dans la reprise dialectique de la question de la Technique du point de vue de la théologie et de l'éthique chrétienne. Si Jacques Ellul ne parle pas de sa foi ni de son espérance dans *La Technique ou l'enjeu du siècle* comme dans aucun des livres du versant sociologique de son œuvre, il n'en analyse pas moins la dimension sacrale de la Technique pour nos contemporains. La Technique n'est pas une matière neutre, soumise à nos valeurs morales ou spirituelles et à nos choix politiques : elle a une dimension éminemment immatérielle, elle est une puissance impersonnelle dotée de sa force propre, et elle suscite chez les êtres humains un mélange de fascination et d'effroi, en bref elle est devenue sacrée. Elle est le nouveau sacré de l'homme à l'ère de la sortie du christianisme, et le grand paradoxe est que la Technique est le vecteur de désacralisation du monde par excellence,

mais l'homme ne pouvant cesser de croire en quelque chose, il a réinvesti de sacralité le vecteur de désacralisation lui-même : le nouveau sacré est cette puissance d'efficacité, de vitesse et de confort que promet la Technique. Et c'est là que se situe précisément l'aliénation suprême par la sacralisation ; d'où la formule de Jacques Ellul dans *Les nouveaux possédés* : « Ce n'est pas la technique qui nous asservit, mais le sacré transféré à la technique ». Cela signifie qu'au lieu de mettre la Technique à son service, l'être humain s'est fait serviteur dévot de la Technique, tout en croyant la maintenir sous sa maîtrise : l'aliénation est une synthèse de soumission, de dépossession de soi, et d'illusion complète quant à sa propre condition. Notre condition face à la Technique est faite de servilité, mais nous nous pensons nous-mêmes comme des démiurges tout-puissants. La technophilie s'est convertie en technolâtrie, la Technique étant devenue notre nouvelle idole. Sacraliser la Technique, c'est consacrer notre vie à la Technique, sacrifier tout ce qui, dans notre existence, n'est pas Technique (nos relations, notre imagination, notre spontanéité, notre vie spirituelle…), et c'est considérer comme sacrilège tout discours technocritique : « consacrer », « sacrifier » et « sacrilège » sont bien des concepts de même famille sémantique de « sacré » ou « sacraliser ».

Cette dimension sacrale de la Technique, pointée par Jacques Ellul dès *La Technique ou l'enjeu du siècle*, va bien entendu jouer un rôle-pivot dans le jeu dialectique. Car c'est précisément sur cette caractéristique qui touche à la religiosité, que va s'appuyer la reprise théologique et éthique de la Technique. En effet, si le versant sociologique de l'œuvre ellulienne ne mentionne jamais Dieu, la foi ou l'espérance, en revanche, dans sa reprise dialectique, le versant théologique et éthique se réfère abondamment à la Technique, comme à l'État, au pouvoir, à la politique ou à la propagande, pour situer de façon extrêmement concrète les lieux d'application de l'éthique chrétienne, et pour en tirer des conséquences pratiques dans ces champs de la vie quotidienne. La théologie ellulienne de la Technique peut être résumée en deux principes fondamentaux : d'une part, la Technique est le moyen que l'homme a élaboré pour se passer de Dieu, et d'autre part, en conséquence logique de ce premier principe, une éthique chrétienne qui se veut fidèle au Dieu de Jésus-Christ consistera prioritairement à transgresser, plus précisément à profaner le sacré technicien. Il s'agit bien de profanation,

puisque le geste éthique chrétien par excellence revient à retirer tout aura sacrale, toute absolutisation, et toute posture de vénération à l'endroit de la Technique. Dans la société technicienne, le complexe de sacralisation de la Technique a pris un nom : celui de « la loi de Gabor », énoncée par le physicien hongrois technocritique Dennis Gabor (1900-1979), prix Nobel de physique en 1979. Cette loi s'énonce ainsi : « Tout ce qui peut être techniquement réalisé sera réalisé ». Quels que soient les coûts financier, sociaux, humains, éthiques, spirituels, la Technique se présente ainsi comme le rouleau compresseur de nos vies devant lequel aucune résistance ne pourrait tenir ; elle est donc la détermination absolue, la loi d'airain de l'histoire de l'humanité. C'est en ce sens que l'éthique chrétienne se veut une éthique de la profanation de la loi de Gabor. Elle conteste toute nécessité absolue de cette loi, elle lui conteste le statut de « loi » irréfutable, elle récuse toute fatalité et toute résignation face à cette soi-disant fatalité, elle cherche donc à dé-fataliser l'histoire.

Face à cette débauche de puissance que déploie l'aventure technicienne, et face à cette exacerbation de l'efficacité, devenue valeur suprême sur l'autel de laquelle nous sacrifions toute autre valeur, en bref devant ce que l'on pourrait qualifier de monothéisme jaloux de la Technique, l'éthique chrétienne se donne à voir comme une éthique de la « non-puissance ». Sur le modèle de la notion de « non-violence », Jacques Ellul a en effet forgé un concept nouveau : celui de « non-puissance ». À ce sujet, il institue une dialectique à trois termes : la puissance, l'impuissance et la non-puissance. La puissance est la capacité de faire ; l'impuissance est l'incapacité à faire ; et la non-puissance est la capacité de faire et le choix de ne pas faire, ou pour le dire autrement, le renoncement à faire tout ce que l'on serait en mesure de réaliser, « même pour défendre sa vie », précise-t-il. La non-puissance n'a donc rien à voir avec l'impuissance. Or, Jésus, qui en tant que Dieu était tout-puissant, a adopté une attitude de non-puissance, et non seulement de non-violence : lorsqu'il demande à Jean-Baptiste d'être baptisé par lui, lorsqu'il résiste aux trois tentations du Diable qui l'incite à manifester sa puissance, lorsqu'il refuse d'accomplir certains miracles lorsqu'ils ne sont pas orientés vers la vie et vers l'amour mais seulement vers l'expression de sa toute-puissance, lorsqu'au moment de son arrestation il ne fait pas appel à

des légions d'anges, et lorsqu'il résiste aux injonctions qui lui sont faites de descendre de sa croix. Jacques Ellul voit dans tous ces exemples une application par Jésus de son enseignement du Sermon sur la montagne : « Aimez vos ennemis ». À la suite du Christ, les chrétiens sont donc invités à entrer dans un chemin de non-puissance : un chemin de discernement parmi tous les possibles qui sont devant nous, et de choix de ceux qui sont connectés à la vie et à l'amour, mais non à la puissance pour la puissance. Ce qui est en lien étroit avec la profanation de la loi de Gabor. Or, dans la société technicienne, que Jacques Ellul décrit dans *La Technique ou l'enjeu du siècle*, nous sommes devenus extrêmement puissants : nous sommes capables de faire par la Technique ce que Jésus réalisait par miracle. Et les transhumanistes nous promettent la victoire sur la mort d'ici une trentaine d'années, c'est-à-dire l'accession à la toute-puissance.

Mais de fait, Jacques Ellul invoque ce principe de non-puissance lorsqu'il décline les diverses facettes de ce qui, dans l'Évangile, est ce qu'il y a de plus contraire à la nature humaine, afin de tenter d'expliquer les vecteurs de la « subversion du christianisme » : « Et que dire de cette autre idée qui nous était apparue essentielle dans la vie de Jésus-Christ, celle de la non-puissance, liée à l'antipolitique. Quoi de plus contraire à ce que nous sommes ? » En effet,

> l'esprit de puissance est bien au cœur de l'homme. Alors combien est vraiment intolérable une prédication, et bien plus une vie, centrée sur la non-puissance ! Non pas le sacrifice pour une cause que l'on veut faire triompher, mais vraiment un amour pour rien, une foi pour rien, un don pour rien, un service pour rien ! Considérez les autres comme étant au-dessus de vous-mêmes ; en toutes choses recherchez l'intérêt des autres. Si vous êtes traînés devant les tribunaux, ne cherchez pas à vous défendre, le Saint-Esprit s'en chargera. La non-puissance est infiniment plus étendue et difficile que la non-violence (qui y est contenue). Car la non-violence comporte une théorie sociale, et en général a un objectif : la non-puissance, point. (*La Subversion du christianisme*, p. 255–256).

Les relations entre non-puissance et non-violence s'apparentent donc à des rapports de cercles concentriques, puisque la non-violence est dite « contenue » dans la non-puissance. Et cependant, le choix de la non-puissance

« n'exclut pas accidentellement un acte de violence ». C'est dans *Théologie et Technique* que Jacques Ellul explicite le plus clairement sa position à ce sujet :

> [La non-violence] est évidemment englobée dans [la non-puissance], mais ne lui est pas identique. En effet, on a voulu faire de la non-violence une stratégie ou une tactique pour gagner un combat politique. Là encore, nous sommes en présence d'un triomphe de l'esprit technicien : amener les non-violents à se justifier en prouvant que la non-violence est efficace et peut remporter des succès. Cela se légitime sur le plan politique, mais il faut prendre conscience que c'est adhérer au système technicien. C'est reconnaître que ce qui ne réussit pas, n'est pas efficace, n'a pas de valeur ! D'où la fragilité de la position : si, pour obtenir tel résultat, la non-violence est payante, on l'utilise, sinon, on entre dans la violence. Et ce souci de l'efficacité est toujours ce qui provoque la crise dans les mouvements non violents, et finit par faire déborder le groupe des non-violents par une aile violente.
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> Si l'on cherche à démontrer, grâce à Gandhi, que l'on arrive à vaincre l'adversaire, on ramène la non-violence à une technique parmi d'autres (douce, certes !) qui doit donc obéir à l'esprit technicien, de réussite et d'efficacité. C'est reconnaître que l'on ne peut pas convaincre les hommes de notre société autrement que par la preuve de l'efficacité, et que leur dire "Bien sûr, ce n'est pas efficace (et après ?), mais c'est bien, juste et vrai", cela n'a aucune valeur ! C'est bien entrer dans le système technicien dont l'esprit de puissance est la norme et le critère admis par tous.
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> Ainsi la non-puissance coupe court à tous ces malentendus. C'est vrai qu'elle n'est pas efficace et pour cela même elle est la seule voie critique du système technicien. Tout le reste, ce sont des amusettes (*Théologie et Technique*, p. 318–319).

Concrètement, la non-puissance consiste à profaner la loi de Gabor, en ne poursuivant pas toutes les innovations techniques que nous pourrions faire, lorsqu'il y a un doute sur leurs effets. Mais tout un chacun peut mettre en œuvre la non-puissance dans sa vie quotidienne : en limitant la vitesse de son véhicule, en refusant la rivalité professionnelle, en appliquant avec ses enfants (ou avec ses élèves) une pédagogie de coopération plutôt que

de la compétition… Et Jacques Ellul n'hésite à le proclamer : « Seule la non-puissance aujourd'hui peut avoir une chance de sauver le monde… » (*Ce que je crois*, p. 201).

Cette année 2024 n'est pas seulement le soixantième anniversaire de la publication de *La Technique ou l'enjeu du siècle* en anglais, mais aussi l'année de la traduction et de l'édition de *Theology and Technique*, dix ans après la sortie en français de *Théologie et Technique*, en 2014. Or, ce livre, que Jacques Ellul avait terminé mais qu'il n'avait pas eu la possibilité de publier de son vivant, et qui a donc été édité à titre posthume, porte pour sous-titre : *Pour une éthique de la non-puissance*. Nous avons là les développements les plus importants sur la thématique de la non-puissance. Mais surtout, le titre lui-même : *Théologie et Technique*, indique bien l'intention dialectique du volume. Il s'agit donc d'un livre qui cherche à faire jouer en son sein même la dialectique entre les deux versants de l'œuvre ellulienne. Cette année 2024 est donc l'année d'un événement éditorial tout à fait important pour le monde anglophone, pour une meilleure compréhension de la logique même de la pensée et de l'œuvre de Jacques Ellul. En mettant en tension Technique et théologie, mais en commençant par la seconde, Jacques Ellul révèle le fondement même de son approche de la Technique à la lumière de sa foi et de son espérance. Et ce livre : *Théologie et Technique*, va nous aider à préciser, pour terminer, quel est le type de dialectique à l'œuvre chez Jacques Ellul.

La dialectique ellulienne entre sociologie et théologie, entre critique de la société technicienne et confession de la foi et de l'espérance sur la base d'une méditation de l'Écriture, à quel modèle de dialectique renvoie-t-elle, quelle est sa source d'inspiration ? Il ne s'agit pas de la dialectique de Socrate, trop limitée à un jeu langagier sans claire conséquence dans la vie concrète. La dialectique socratique ou platonicienne est trop strictement conceptuelle pour servir de matrice à la dialectique ellulienne. Il ne s'agit pas non plus de la dialectique de Hegel. Celle-ci procède par dépassement des contradictions entre deux pôles par la médiation d'un troisième pôle qui réconcilie les deux premiers, en rejetant ce qui les oppose et en ne retenant que ce qu'ils ont de compatible, en un stade supérieur de l'histoire. De ce fait, l'histoire est conçue comme un progrès, puisque les dépasse-

ments de contradictions assurent une évolution toujours positive. Jacques Ellul ne peut avaliser cette vision progressiste, car à ses yeux, s'il y a un progrès scientifique et technique, il n'y a pas de progrès humain ni spirituel : l'homme est toujours le même, c'est-à-dire faillible, aujourd'hui comme au cinquième siècle avant Jésus-Christ. La dialectique ellulienne s'inspire donc d'un troisième modèle : celui de Kierkegaard. La dialectique de Kierkegaard est un mouvement permanent qui consiste à endurer les tensions, les contradictions, les oppositions, en refaisant sans cesse le va-et-vient entre les pôles en tension. Aucune issue ne se présente pour dépasser ces contradictions en une synthèse supérieure harmonieuse et a-conflictuelle. La vie, et notamment l'existence chrétienne, est faite de conflits, car le chrétien est un composé de fini et d'infini, de temporalité et d'éternité, de relatif et d'absolu. Transposé sur le plan de la société technicienne, la dialectique kierkegaardienne devient sous la plume de Jacques Ellul un mouvement incessant entre critique sociale et élaboration théologique, chacune des deux renvoyant à l'autre, se nourrissant de l'autre et nourrissant l'autre. La vie chrétienne est une vie de tension entre détermination technique et éthique de la liberté, asservissement et aliénation par la Technique toujours à l'œuvre et processus de libération toujours à reprendre, toujours à remettre sur le métier. Les racines de la dialectique ellulienne sont donc kierkegaardiennes, c'est-à-dire non pas une dialectique purement conceptuelle ou historique, mais une dialectique existentielle. Tel est le fondement à la lumière duquel nous pouvons mieux saisir les orientations de *La Technique ou l'enjeu du siècle*, comprise comme une pièce maîtresse, mais une pièce parmi d'autres, du puzzle que constitue l'œuvre de Jacques Ellul prise dans sa globalité et dans la logique interne propre à son architecture.

Ghost in the Machine

Brandon Dorn

> The soul never thinks without an image.—Aristotle, *On the Soul*
>
> Because humanity in technique does not distance itself in relation to its own creations, it can no longer symbolize them. At this point humanity loses control of its own world, which it has created, a creation that humanity has forgotten but which it must not forget.—David Lovekin, *Technique, Discourse, and Consciousness*

Imagining Technique

One of Ellul's central insights in *The Technological Society* is that although Technique manifests in discrete instances across society, it is properly understood as a single, unified social phenomenon, the aspects of which are "ontologically tied together."[1] Indeed, he talks about Technique as if it has a life unto itself beyond any person's intent or influence. As he puts it, "Technique has taken substance, has become a reality in itself. It is no longer merely a means and an intermediary. It is an object in itself, an independent reality with which we must reckon."[2] And later: "A whole new kind of spontaneous action is taking place here, and we know neither its laws nor its ends. In this sense it is possible to speak of the 'reality' of technique—with its own substance, its own particular mode of being, and a life independent of our power of decision."[3] And while he gives plenty of then-current examples of the presence of Technique in society (the fifth chapter of *The Technological Society*, "Human Technique," enumerates many of these), he stops short of providing salient, overarching metaphors to describe it that would help readers *imagine* this unified phenomenon.

If the intent of *The Technological Society* is to describe Technique as objec-

Dorn, Brandon. "Ghost in the Machine." *Ellul Forum* 73 (Spring–Fall 2024): 47–61.
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tively as possible ("I have deliberately not gone beyond description"), it's possible that Ellul shies away from figurative language in order to maintain an objective tone to counterbalance his discursive style.[4] He is determined to allow readers to come to their own conclusions about the nature of Technique. His reluctance to reduce Technique to a simple formulation may also have prevented him from constructing the book around a core metaphor or set of images. The first point he makes is that Technique is not to be confused with machines but is something bigger, more complex and encompassing, with its own dynamics. And yet he helpfully offers the reader concise descriptions of Technique—for example, "Technique is the translation into action of man's concern to master things by reason, to account for what is subconscious, make quantitative what is qualitative, make clear and precise the outlines of nature, take hold of chaos and put order to it."[5]

These straightforward descriptions, however, fail to represent the dialectical nature of Technique and man's relationship with it, and they pale in comparison with the passages in which he draws on figurative language. For example, his description of Technique as a "fatal cancer" abetted by economic liberalism evokes the Faustian bargain made with the environmentally and culturally unsustainable means of modern productivity.[6] Or his image of how Technique "surrounds us like a total and encompassing cocoon" brings to mind the way our efforts to protect ourselves from the vagaries of the natural world ultimately suffocate and separate us from our sources of life.[7] His most powerful metaphor, again mentioned in passing, is that of a technological wilderness:

> Modern man surrounded by technique is in the same situation as pre-modern man surrounded by nature. [...] Both environments give life but both place him in utter peril. Both represent terrifying powers, worlds in which man is a participant but which are closed against him. In the joy of conquest, he has not perceived that what he has created takes from him the possibility of being himself.[8]

Ellul introduces this metaphor late in the book as a distillation of the tragedy of Technique: in attempting to control chaos, we have created a new chaos that we cannot control. We are without a guide in a wilderness of our own making.

This brief passage is his most effective figurative representation of Technique because it draws together its core characteristics: its internal cohesion (what Ellul calls Technique's "monism"), its propensity to propagate (its "self-augmentation" and "automatism"), the interconnectedness of its parts and functions (the "linking together of technique").[9] What occurs organically in a natural wilderness now occurs "organically" in the artificial wilderness of Technique. People lose their way in either. And while the image of the technical wilderness serves as a fitting capstone to *The Technological Society*, Ellul doesn't elaborate it any further than in the passage above. Giving this and other metaphors such brief treatments, he leaves it to readers to develop their own interpretive understandings of Technique.

This isn't a deficiency of the book. He expects readers to rise to the occasion of understanding this complex phenomenon, and *The Technological Society* yields its insights to those willing to meet the challenge. However, one wonders if the book would have received broader cultural engagement, then and now, were it grounded in metaphoric language—if Ellul had taken further steps to help readers imagine Technique, and, by consequence, envision their relationship with it. Given that metaphors are fundamental to the way we think and act, would we counteract the incursions of Technique more effectively if we had enduring images and metaphors for understanding it?[10]

A Role for Art?

Given Ellul's pessimism about the potential for visual art to effectively represent Technique, much less radically alter its trajectory, it's tempting to discount its role in shaping our understanding of the phenomenon. His perspective on the role of art in relation to Technique is best understood when triangulating his thesis of *The Technological Society* with those of *The Empire of Non-Sense: Art in the Technological Society* and *The Humiliation of the Word*:

- Technique is a comprehensive phenomenon by which means become ends, which perpetuates itself apart from the intent of any individual actor (*Technological Society*).
- Because Technique is so encompassing, we cannot see it from the "out-

side"; therefore it cannot be symbolized by any art. In fact, aesthetic attempts to subvert Technique only reinforce it, serving its own ends (*Empire of Non-Sense*).

- Even if Technique could be symbolized, art, and visual art in particular, can convey only the concrete experience of Technique, not its meaning, since images are the *lingua franca* of *reality*, whereas language is the medium of *truth*. Visual art therefore cannot give us an effective vantage point from which to see our true state of being situated in, yet not fully determined by, Technique (*Humiliation of the Word*).

Taken together, his arguments seemingly leave no room for the visual arts to prophetically challenge Technique. And while Ellul is rightfully critical of the superficial consequences of twentieth-century aesthetic "productivist" movements such as Pop art, with their myopic focus on production and experimentation for their own sake ("It confirms and expresses nothing more than the reality of the technical society"), I want to argue that his absolutist position on the impotence of creativity in the technical society extends too far.[11] Visual art *can* meaningfully frame our relationship with Technique, serving as a source of freedom and hope, a vital complement to the truth that is the domain of language, but only when it doesn't aim to directly represent Technique in and of itself, but rather our relationship with it. Art of this orientation serves to "develop and multiply tensions," by cultivating sympathetic attention to the reality of our condition without reifying the dynamics of Technique; it reflects the reality of our situation vis-à-vis the technical society, without hopelessly confirming it.[12]

I'll look at three examples of a visual art that I believe accomplishes this aim: a kinetic sculpture, a photography series, and a video game, arguing that each exists in a dialectic with Technique—being in its world, yet not of it, and as such provides a vision of being human in the technical society. Each of them uses surrealist approaches to show the comedy and tragedy of human work in such a society. A cursory reading of any of the works reveals only their tragic meaning, seeming to confirm the impossibility of human freedom amidst Technique, simply reflecting Ellul's critique of contemporary art. This is especially the case given the technical nature of each work.

The sculpture is a robotic arm reminiscent of those on automated assembly lines; photography is a deeply "reality-bound" visual art; video games are arguably the most technical visual medium, being completely artificial environments that are pure manifestations of code (now often written *by* machines). However, I hope to show that certain kinds of images can arise from the technical *milieu* that play with its clichés, horror, recursion, and irrationality without succumbing to these things, or perpetuating them. More specifically, I maintain that the "serious play" of these works, which contrasts with the *cynical* play of much of the art Ellul critiques, allows them to engage with Technique without reifying it.

The Vulnerable Machine

Since the advent of the industrial age, our sense of the sacred has gradually shifted from natural phenomena to man-made technology—railroads, bridges, skyscrapers, and, more recently, digital devices and software. And though we still are in awe of mountain ranges, sunsets, and tsunamis, more often than not our experience of wonder is mediated through technology. We look through screens, through airplane windows. The technological medium is primary. The technological sublime came to replace the natural sublime, which, David Nye argues, is ultimately a glorification of human *reason*: "Whereas in a sublime encounter in nature human reason intervenes and triumphs when the imagination finds itself overwhelmed, in the technological sublime reason has a new meaning. Because human beings created the awe-inspiring steamboats, railroads, bridges, and dams, the sublime object itself was a manifestation of reason."[13]

Human reason, and therefore human work, takes on a cosmic meaning in the experience of the technological sublime—it comes to represent a kind of omnipotence, an indomitable channeling of human will over obstacle and uncertainty. Coming to see reason as omnipotent, it was inevitable that our sense of the sacred—closely tied to the sublime—would transfer to technology and ultimately to Technique: "The individual who lives in the technical milieu knows very well that there is nothing spiritual anywhere. But man cannot live without the sacred. He therefore transfers his sense of the sacred to the very thing which has destroyed its former object: to

technique itself. In the world in which we live, technique has become the essential mystery."[14]

The sense of omnipotence granted by Technique is of course an illusion, the mass delusion of grandeur prompted and sustained by Technique. Technique modifies our sense of power to the kinds of power it can offer us. And it obscures the fact that it is as dependent on human life as humans are on the products of Technique. Being a social phenomenon, Technique cannot survive without us. It does not stand alone, as traditionally sacred phenomena do. All of this raises the question, what might it look like to demystify Technique?

The 2016 kinetic sculpture *Can't Help Myself*, by artists Sun Yuan and Peng Yu, addressed this question in a remarkable way. The artists mounted a Kuka industrial robot arm (typically used on assembly lines) onto a wooden platform, set within a clear acrylic box, and programmed it to sweep a dark red, viscous oil back into its base as it continually leaked away in all directions.[15] When its optical sensors detected that the oil had been constrained to a narrow-enough circle, the arm performed one of thirty-two "dances," wiggling and doing jazz hands for museum-goers. Its task, however, was doomed from the start: with each sweep, it lost some of the oil that it relied on to function. The sculpture systematically performed its Sisyphean task for three years at the Guggenheim, until it ceased in 2019.

Critics have read *Can't Help Myself* as a grim comment on compulsive, self-destructive behavior, on meaningless labor in capitalist society, on the increasing corporate surveillance of such labor. The controversial nature of the artists' previous projects invites morbid interpretations, and so does the ambiguous title of the work itself. *Can't Help Myself* can be read as mindless automatic repetition ("can't stop myself") as well as the futility of achieving wholeness ("can't heal myself"). It sounds like something a hapless sitcom character might say, and the colloquial tone only intensifies the tension between a clearly inhuman object and the emotions it elicits. Viewers were prompted to identify and sympathize with the machine in ways they weren't expecting. The artists made no effort to make the robotic arm look human; there was no risk of falling into an uncanny valley when observing it at its work. Yet the fastidiousness with which it met its task, its celebratory danc-

es, and, most significantly, its evident vulnerability as it cheerily maintained its futile task, created an image that inverted the technological sublime. Sublime things are experienced as eternal, immutable, yet *Can't Help Myself* can be talked about only in the past tense.

The image of a vulnerable machine complicates our sense of omnipotence bestowed by Technique, by imagining as finite what we take to be infinite. The sculpture makes concrete the tragic irony of the "yearning after absolute efficiency that has become a disembodied abstraction, endlessly embodied."[16] If Technique has conditioned us to think of ourselves as machines ("Man himself is overpowered by technique and becomes its object"; "The machine tends not only to create a new human environment, but also to modify man's very essence"), it takes showing the vulnerability of a machine to recognize Lovekin's notion of the technical consciousness, the "form of mysticism that worships the finite infinite."[17] *Can't Help Myself* created an enduring image of rationality to the point of irrationality, the vulnerable machine visualizing the "failed transcendence" promised by Technique.[18]

Wise Passivity and Liminal Spaces

While surrealist art is likewise an effective means of cultivating an awareness of the irrationality of life in the technical society, much of it doesn't lead to a deeper awareness of our condition but merely stuns viewers into shocked passivity. This is especially the case with surrealist visual art. Its impossible situations (e.g., the paradoxes of Escher's buildings) and decontextualized reveries (e.g., Dada collages) can make for experiences of the Gothic wonder in a modern context, yet they often don't go further than to create a passing sense of perplexity and chaos. As Ellul writes, "In the context of the technological society, given the nature of man as we know him, the depiction of horror produces no positive reaction: it is simply an intensification of the horror."[19] This is as true of art as it is of our social-media feeds: What feels like radical awareness is more often than not a kind of submission to the overwhelming presence of Technique. Documentary photography tends toward this end, channeling unvarnished suffering experienced around the world directly to our devices, "intensifying the horror" of life rather than fully representing the complex reality of being human

in the technological society, and the experience of determinism and freedom, futility and potential, excess rationalism and irrational play that that entails.[20] In other words, both surrealist art and documentary photography tend toward non-dialectical representation in the technological society.

When surrealist and documentary styles combine, however, something interesting happens to temper the excesses of each and more fully represent the presence of Technique and our presence within its domain. The work of Swedish photographer Lars Tunbjörk, particularly his *Office/Kontor* series, fuses these styles to grant uncanny glimpses of people being their strange, unpredictable selves in technical settings. Published in 2002, *Office/Kontor* compiles photographs Tunbjörk made while visiting corporate offices in New York, Japan, and Sweden to take candid photos of employees going about their workdays.[21] Taken with a sharp sense of the absurd, the images are at once melancholy yet humorous, institutional yet intimate. Yet what prevents them from descending into cynicism, merely depicting the drudgery of office life at the turn of the century, is the fact that they are neither voyeuristic (his subjects pay no attention to the camera as he is among them in shared space) nor condescending. They are shot with a sympathetic eye keen for evidence of humor and unselfconscious expression beneath the layers of computers, cables, desks, fluorescent lights, and administrative debris.

Tunbjörk's images juxtapose humane irrationality with the inhumane rationality of the technical environment. A group of colleagues standing up for their mid-day stretch; a woman underneath a boardroom table, taking notes on a pile of legal documents; a forlorn birthday cake amidst rows of day-traders; an empty trashcan reminiscent of a whirlpool. Tunbjörk's images show life expressing itself in the least likely of spaces, indirectly confirming Ellul's insight that "the individual cannot be 'absent' from his work without great injury to himself. Work is an expression of life."[22] The seeming passivity of the people in these scenes stands in contrast to the activist posture taken by other visual art toward the dehumanization of work wrought by Technique. Unlike the protagonists of *Fight Club* or *Office Space* (movies released a few years before *Office/Kontor*), for example, Tunbjörk's subjects aren't agitators actively protesting against the faceless

system; they're everyday people unconsciously resisting their deadening environment, with the tragedy and comedy these strategies of resourcefulness and wise passiveness entail, to borrow Wordsworth's phrase. Freedom exists in the cracks and margins of the technical society.[23]

Taken together, Tunbjörk's photos in *Office/Kontor* imagine the office as a liminal space and the ways in which people endure the subtle inhumanities of the technological society—an image that can frame Technique more generally. Describing his inspiration for the book, Tunbjörk notes that he "photographed a lot of empty interiors: welfare offices just after family therapy, empty reception rooms. [...] I noticed that even after the people left, a feeling of them stayed in the room, a sense of sadness." Tunbjörk wondered if he could capture that same lingering sadness in corporate offices, which he calls "the most common—but closed and secretive—place in the western world."[24]

Tuned to the liminality of these spaces, their "lingering sadness," his images bear witness to human sorrow, spontaneity, and strangeness in the midst of the irrational repetition and inhospitable space of the corporate office—spaces designed to the effective minimum required to keep employees productive. Absent their occupants, these spaces become haunted landscapes, which some of Tunbjörk's photos also show.

Often found in science fiction and horror, liminal spaces are where "the world-as-such becomes decoupled from its appearance," where vacuousness (physical, mental, emotional) implies the uncanny presence of—or access to—something other. Whereas the term was originally used by anthropologists to describe rites of passage and rituality, liminality is "fundamentally an idea about thresholds and grand moments of change. [...] As a subject becomes separated and enters the marginal (or liminal) phase, not only does the world around them change in meaning, but they become Other."[25] Liminal spaces are where things and people are no longer as they seem, where the banal and the supernatural brush shoulders, and where the environment dominates yet is dependent upon and responsive to the individuals who inhabit it. As with Technique, neither the subjects nor the environment are fully in control.

Bureaumancy and the Bad Infinity

Liminal spaces have taken on a life of their own on the internet. Subreddits such as r/LiminalSpace, r/UrbanExploration, and r/AbandonedRetail overflow with images of derelict spaces and architectural decay, epitomized in the viral image "The Backrooms," which spawned an online urban legend and helped inspire the TV show *Severance*, a show saturated in corporate dystopia.[26] And novels such as Charles Stross's *Laundry Files* series intermingle the occult with office life, spawning a genre that's been dubbed "bureaumancy."[27] In a society fully enclosed within Technique, empty malls, abandoned office parks, and corporate departments tasked with managing paranormal events serve as a kind of comfort that *this isn't all there is*, that the endless fluorescent corridors aren't in fact endless, that we aren't fully in control of our environment, that Technique doesn't have the final say. If, as David Lovekin writes, "in modern society the ultimately real is absolute rationality" and therefore Technique is "the current mystery," images of liminal spaces recalibrate our sense of reality by envisioning the porousness of the technological milieu: its artificiality, its vulnerability, its ultimate irrationality.[28]

This porousness is the premise of the 2019 video game *Control*, which explores themes of autonomy, psychological trauma, and workplace dynamics, set in a liminal office building. Focusing on the tension between the individual and bureaucracy, the game can be read as an extended reflection on Ellul's notion that "administration has created its own language and keeps secret its plans and projects, its decisions regarding action, and its procedures. Those who are subject to such administration cannot have any sort of open relationship with it."[29] Playing as Jesse Faden, players explore the headquarters of the Federal Bureau of Control, a mysterious government agency that keeps safe "Objects of Power" created by "Altered World Events"—an FBI for paranormal activity and artifacts. The game centers upon Jesse's role as the Bureau's new director and her efforts to rid the Bureau of a malevolent presence, ominously referred to as "the Hiss," as she searches for her brother. The game takes place entirely inside the Oldest House, a shape-shifting Brutalist skyscraper that is itself an Object of Power that responds to its director—a role Faden has been assigned but which

she does not yet have authority over. Space in the Oldest House is often distorted, paradoxical, and seemingly infinite; a subterranean floor, the "Quarry Threshold," for example, contains a seeming universe unto itself.

The central tension of *Control* is Faden's attempt to gain control of the Oldest House, something she progresses toward yet never fully achieves. The indeterminacy of the literal space reflects the indeterminacy of Faden's authority in the agency. With guidance from the "Board"—a disembodied voice that intermittently sends garbled messages from an alternate dimension—Faden progressively gains supernatural powers that make her increasingly adept at manipulating her environment and combating the mysterious Hiss (and the employees it has possessed). By the end of the game, players can alter the configuration of entire floors, create shields out of desks and whiteboards, hurl chairs at enemies. Yet even as her autonomy grows, Faden never has full authority over the Oldest House or her fate within it. After finishing the final level, players are shown the game's closing credits, which unexpectedly go haywire. The game seemingly starts over, with Faden now robbed of her powers and in the position of a new hire in the Bureau performing menial tasks for overbearing managers. At this point, players are essentially put through an office simulator game (endlessly delivering memos to empty desks) until Faden discovers that she's been possessed by the Hiss and is experiencing a surreal dream of servitude. The dream ends when she finds and kills the building's original director.

Control is a decidedly terrifying game. Pitting players against overwhelming bureaucratic forces—at one point even fighting against herself—the game envisions life in Hegel's "bad infinity," in which technique becomes a "disembodied abstraction, endlessly embodied." Like the programmed repetition of *Can't Help Myself*, the mazes, self-defeat, and menial tasks in *Control* make literal the mindless recursions of Technique: "an infinity of one more technique."[30] Yet what makes the game an apt representation of Technique is the fact that this recursion occurs in a space defined by ambiguity. Faden is both threatened by and empowered by the mysteries that surround her. Reality is porous. Both Tunbjörk's photos and *Control* create an uncanny tension between the banal and the fantastic as they visualize the strategies we use to endure in our technical environment. Absent an anti-technical

ideology, the liminality in *Control* and *Office/Kontor* is ambiguous, both a threat and a hope. The incursions of Technique are countered by a disarming humor, even gentleness, hinting that the way to resist Technique isn't by using its own devices—literally and figuratively—but by following a different rationality, one founded in wonder, play, and grace.

The Ghostly Image

Jacques Ellul claims that "the technical system is in no danger from an art that is conditioned by that very system," and it's arguable that the examples here—a robotic arm, a photography series, a video game—are forms of media most open to this critique.[31] These works, like all contemporary works, are influenced by Technique by virtue of having been created in the technological society. However, if it's true that "wonder is the enemy of technique," then it follows that genuine experiences of wonder can draw us into a truer awareness of our human state in the technological society, both determined by the environment we've created yet free to act within it.[32] And I've tried to argue that depictions of workplace liminality are particularly apt for imparting this kind of vision through the ways that they imagine they expose the vulnerability of the seemingly permanent, and the presence of life and freedom in inhospitable space. These works express the complex reality of being human in the technological society, and the experience of determinism and freedom, futility and potential, excess rationalism and irrational play that that entails. They approach the level of dialectic expression, in other words.

Images like these are particularly relevant in a moment in which we are struggling to understand our relationship with emerging technologies, particularly the acceleration of developments in AI. Technological progress outpaces our ability to describe the consequences of what we are creating. We use metaphors such as *deus ex machina*, literally "god from the machine," often phrased "ghost in the machine," to describe the animate life that may arise from silicon and software combined in just the right ways. Now a cliché used to describe the specter of AI dominance, the phrase's origin is in fact much quainter, coming from Greek theater, when actors were brought on stage using a machine (either a crane or trapdoor) to swiftly resolve the

drama's central conflict. Far from being a malevolent force, the "god" was an object of literal and fictive artifice—disturbing the continuity of the narrative in order to bring it to completion. One can imagine the anarchic glee of seeing Helios's granddaughter Medea carted away on a dragon-drawn chariot to refuge in Athens.

I've come to think of liminal images in these terms, especially uncanny images of the workplace, at a time when our sense of reality and of ourselves—of ourselves in the technological society—is conditioned by reductive images telling us that our lives are either completely free, a form of hopeless optimism, or fully determined, a form of hopeless pessimism. Neither are completely true, of course, a point that Ellul briefly addresses in his second foreword to *The Technological Society*, in which he disclaims the pessimism of which he's been accused ("I do not seek to show [...] that man is determined, or that technique is bad, or anything else of the kind."[33]) Liminal images like these undermine techno-optimism at the same time that they undermine techno-nihilism. They arrive unexpectedly, ghosts from the machine, to give visions of creative survival in the technological wilderness, which, like Ellul's book, don't resolve the problems of the technological society as much as they convey the ambiguous truth of our predicament.

Notes

1. Jacques Ellul, *The Technological Society*, trans. John Wilkinson (Vintage, 1964), 95.
2. Ellul, *The Technological Society*, 63.
3. Ellul, *The Technological Society*, 93.
4. Ellul, *The Technological Society*, xxvii.
5. Ellul, *The Technological Society*, 3, 43.
6. Ellul, *The Technological Society*, 200.
7. Ellul, *The Technological Society*, 64.
8. Ellul, *The Technological Society*, 428.
9. Ellul, *The Technological Society*, 79, 85, 94, 111.
10. George Lakoff and Mark Johnson, *Metaphors We Live By* (University of Chicago Press, 1980), 3.

11. Jacques Ellul, *The Empire of Non-Sense*, trans. David Lovekin and Michael Johnson (Papadakis, 2014), 75.
12. Jacques Ellul, *The Political Illusion*, trans. Konrad Kellen (Wipf and Stock, 2009), 210.
13. David Nye, *American Technological Sublime* (MIT Press, 1996), 60.
14. Ellul, *The Technological Society*, 143.
15. Jean-Pierre Dalbéra, "Can't Help Myself," by Sun Yuan and Peng Yu (Venice Biennale, 2019). https://brandorn.com/img/ellul-forum/yu-yuan-cant-help-myself.jpg.
16. David Lovekin, *Technique, Discourse, and Consciousness* (Associated University Presses, 2001), 102.
17. Ellul, *The Technological Society*, 127, 325, 104.
18. Ellul, *The Technological Society*, 102.
19. Ellul, *The Empire of Non-Sense*, 97.
20. See the November 11, 2016, viral tweet from @missokistic: "*wakes up and looks at phone* / ah let's see what fresh horrors await me on the fresh horrors device." https://x.com/missokistic/status/796870708412358657.
21. Lars Tunbjörk, "Gothenburg, 1997." https://brandorn.com/img/ellul-forum/tunbjork-gothenburg-1997.jpg.
22. Ellul, *The Technological Society*, 399.
23. See Ellul's note in *The Humiliation of the Word* on the folly of attempting to reduce language to "closed" structures in order to isolate its meanings: "Meaning filters down precisely between the structures—in the gaps and incoherences [of the system]." Freedom and meaning can be neither manufactured nor fully snuffed out; they persist despite our efforts to bend them to our will. *The Humiliation of the Word*, trans. Joyce Main Hanks (Eerdmans, 1985), 267.
24. Joshua Kors, "Alien at the Office." https://www.joshuakors.com/tunbjork.htm.
25. Peter Heft, "Betwixt and Between: Zones as Liminal and Deterritorialized Spaces." *PULSE* 8 (2021), 7. https://www.pulse-journal.org/vol-8-2021.
26. Eric Francisco, "Severance Reveals the 'Scary' and 'Surreal' Underbelly of Office Work in 2022." *Inverse* 22 (February 2022). https://tinyurl.com/24pw6bxu.
27. Damien Walter, "Bureaumancy: A Genre for Fantastic Tales of the Deeply Ordinary." *The Guardian*, August 12, 2017.

28. Lovekin, *Technique, Discourse, and Consciousness*, 15.
29. Ellul, *The Humiliation of the Word*, 266.
30. Lovekin, *Technique, Discourse, and Consciousness*, 104.
31. Ellul, *The Empire of Non-Sense*, 93.
32. David Lovekin, "Re-Imagining the Image, Re-focusing the Word." *Ellul Forum* 70 (2022): 5–20, p. 13.
33. Ellul, *The Technological Society*, xxviii.

Technological Morality Versus the Ethics of Freedom

Jacob Marques-Rollison

Ever since Ellul's writings first gripped me fifteen years ago, I have been in continual and ever-deepening dialogue with his thought. This has necessarily implied an evolving approach to the most widely read and historically potent of Ellul's sociological writings, *The Technological Society*. It is worth recalling that Aldous Huxley, author of the globally influential dystopian novel *Brave New World*, said that *The Technological Society* "really made the case" that he tried to make, suggesting that it would become "one of the twentieth century's most authentic documents of social criticism."[1] I think Huxley is right; this work's influence is still growing, and new translations continue to expand its reach. But as I will show, properly understanding this powerful book requires a balanced understanding of how Ellul's work communicates, to avoid important pitfalls.

In this chapter I comment on Ellul's project generally and on *The Technological Society* in particular, before proposing suggestions for reading his works well. I seek to portray aspects of Ellul's ethical thought in broad but accurate brushstrokes. In that respect, I am not seeking to do anything particularly original; the most original contribution of this chapter will be the inclusion of translated passages from some of Ellul's untranslated writings that affect how we situate his ethical approach. Before we approach Ellul's ethics, however, three preliminary comments are in order.

Preliminary Comments

First, Ellul's work is a *communicative address*. Everything in the multiple genres of his writings—history, sociology, theology, ethics, etc.—is situated within an address to the reader. The ultimate value of his writings does not

Marques-Rollison, Jacob. "Technical Morality Versus the Ethics of Freedom." *Ellul Forum* 73 (Spring–Fall 2024): 63–74. © Jacob Marques-Rollison, CC BY-NC-ND.

come from how many big universities or famous people take them seriously but from their status as words spoken by one human to another. That means they have a universal communicative intent: anyone can read them and feel addressed by them; anyone can respond to them by taking them seriously and questioning themselves. We might say that Ellul's project is ultimately rhetorical, if we take rhetoric not as a technique for winning arguments but in the sense of a spoken human word—with all the incarnate and even spiritual dimensions that speech involves.

But this universal communication is double-edged. If, on one hand, it addresses anyone with ears to hear, on the other hand it calls them to a lot of intellectual labor. His work challenges academics because they are not used to being personally addressed, and it challenges the average layperson because they are not used to such heavy intellectual lifting. Approaching Ellul carefully means highlighting the challenge to both sides, taking care that the academic actually *hears* Ellul's work as an address, but also spurring the layperson on to doing the work necessary to get what Ellul is saying.

Second, Ellul's *oeuvre* works like a puzzle. To understand a piece of the puzzle, you must see how it fits synthetically into the whole picture. But in the case of Ellul's work, acquiring a reasonably full image of the "big picture" on the puzzle box requires an extraordinary amount of reading and time. Things conspicuously absent from one book might receive a chapter or even a book-length treatment elsewhere. This means that taking one book individually—such as *The Technological Society*—opens the reader to the risk of accurately grasping the book's content but being unable to properly situate it in relation to everything else he wrote. The only corrective is to keep going, to take the dialogue further.

Both of these communicative and synthetic aspects are in play in positive and negative ways in the reception of *The Technological Society*. When this work landed in the United States in the mid-sixties, it was surprisingly difficult to treat it as a piece of social analysis because the communicative aspect hit its readers like a rhetorical ton of bricks. Two careful readers from the American South, James Holloway and Will Campbell, wrote that "Ellul speaks to our guts and to our heads."[2] And if Ellul's address ultimately aimed to *liberate* his readers by making them aware, an unbalanced reading

sometimes led to the opposite outcome. Some readers felt paralyzed. John Wilkinson, the intellectual who translated *The Technological Society* into English, said that "Ellul's book had acted more like an infectious disease than as a serious social critique. The participants [in a reading group who read this text ...] simply couldn't get beyond it. [It had] something like the hypnotic power of the fabled basilisk."[3]

Or worse than paralysis, without the fine-tuning gained through reading Ellul's works *synthetically*, this "hypnotic" power sometimes led its readers to ethically deplorable actions. Witness the case of its most infamous reader, the Harvard-educated mathematical prodigy who was completely convinced by *The Technological Society*'s arguments and then embarked on the mail-bomb campaign that created the biggest case of domestic terrorism in the US until 9/11. I am, of course, referring to Ted Kaczynski, the "Unabomber." While his narrow reading of Ellul wasn't the *only* force at work in the decisions he made, sampling almost any of Ellul's theology books would have counterweighted the rhetorical force of *The Technological Society*, challenging in advance any justification Kaczynski might have had for his violent actions.[4]

Third, I suggest that hearing Ellul as a *prophet in the technological wilderness* is still the most robust way to take him seriously.[5] The word "prophet" simply does not fit into most of our contemporary categories but purposely pushes back on them and reframes them. Ellul sought not merely to analyze but to exhort; not only to expound but to interrogate; and not simply to write history but to encourage a different future. The label of "prophet" rigorously captures these exhortative, communicative, and temporal dimensions. It also provocatively indicates the source of the hope driving Ellul's theology, which is the self-giving and liberating presence of the God of love who revealed himself in Jesus Christ. Finally, reading Ellul as a prophet invites the reader into continual dialogue with this God, a dialogue that transcends all technique.

Ellul's Original Plan for *The Technological Society*

The Technological Society was not originally intended to be published in the form in which we now know it. In an exchange of letters at the end of his

life, Ellul gives a rare glimpse of his original intention. In the long quotation that follows, Ellul boils his whole project down to one question. This question involved two poles in tension, the foundation for the architecture of his sociological-theological investigations. He writes:

> I certainly conceived of my books as a whole. Fundamentally, my big question was: Does knowledge of historical and sociological "facts" put in question the faith in the Revelation that I received, and reciprocally, how can this faith, made present, respond to certain problems of modern man and society? In other words, I decided to undertake a critique of the world in which I lived, on the basis of the Truth in which I believed. But reciprocally, did this deepened knowledge of this society, of Western modern man, of modern thought, allow for a critique of this Truth? Does this truth hold fast in the face of science, technique, and philosophy—and also amidst the events of our time? This was my question and the reason I researched and wrote. I wrote less for others than to clarify both the gravity of this Revelation and the meaning that appeared to me in this world in which I lived. What elucidates this project rather well was the first of my books, which was never published as I had written it. I am referring to [*The Technological Society*]. The work that I produced was twice as long as what was ultimately published. More than a thousand pages! And unpublishable, since the author was a nobody! My book was conceived thus: one chapter of sociological analysis of technique [...] and a chapter of theology or ethics (we might say: of "systematic theology"), which was intended to form a counterpart. And between this pair and the following pair (another chapter of sociological analysis and one of systematic theology), a literary "interlude." No publisher was interested, and finally [the publisher] Colin accepted [...] the "sociological" chapters. The others were bundled together and constituted the three volumes of [*The Ethics of Freedom*].[6]

Examining this original intention reveals a few things. First, recalling Frédéric Rognon's essay in this *Forum* issue, we can see just how faithful Ellul was to Soren Kierkegaard in the architecture of his work: for both authors, we really must read everything to understand almost any part of their thought properly, and if we read only one part, we misunderstand it because we get only one moment of a larger movement. We also see here just how seriously Ellul conceived of his more than sixty books as one giant

project, to be understood together. But most importantly, we see that *The Technological Society* is understood correctly only when placed in tension with *The Ethics of Freedom*. Rognon already sketched this out by showing how, for Ellul, technique manifests an order of necessity to which humanity belongs today; technique names the way things are heading unless we do something to change it. *The Technological Society* paints a picture of just how demanding such change would be. *The Ethics of Freedom*, on the other hand, is an invitation—to Christians and non-Christians alike—to discover freedom beyond all technique, through hope, proposing hope in Jesus Christ as a superlatively liberating force.

Because *The Technological Society* and *The Ethics of Freedom* are in tension with one another, I will now develop the contrast that Ellul lays out between "technical morality," morality that conforms to technique, and an ethics of freedom.

"Morality" Versus "Ethics"

The difference in terminology that Ellul stipulates is very significant: technical *morality*, versus an *ethics* of freedom. Why not use the same term in both cases, such as "technical morality versus morality of freedom," or "technical ethics versus ethics of freedom?"

In Ellul's usage, these two terms, "morality" and "ethics," mean different things, and at times he even opposes them to one another. He discusses their difference in two places: first, in his introduction to Christian ethics, *To Will & To Do*, and second, in his *Éthique de la sainteté* [*The Ethics of Holiness*].[7] To draw out the contrast between morality and ethics, I will highlight three points about morality from *To Will & To Do* before examining a long citation from *The Ethics of Holiness*.

In *To Will & To Do*, first, Ellul notes how "morality" is a group phenomenon. For, whatever else it involves, moral behavior demonstrates a relation to a given group. Obeying or disobeying a group's morality respectively demonstrates either independence or belonging to the group. Second, morality expresses this group's approach to questions of good and evil. In Ellul's sociology, the good is not an absolute principle transcending societies

and cultures; instead, Ellul focuses on the apprehension of good and evil by a given group at a given time. And third, whether consciously or unconsciously, a group's morality acts as a justification for being the way it is. Ellul is particularly critical of how morality plays this justifying role, keeping people from putting themselves in question. His theology in this volume uses the Protestant doctrine of justification in Christ alone to ruthlessly stifle this function of morality, thereby leaving the individual exposed to a superlative and relentless questioning. This does not mean that morality is always constraining, or restrictive, or wrong, or anything like that. But for Ellul, "ethics" is something wider and broader. Ethics takes morality into account, but it cannot be reduced to it.

In the following passage from *The Ethics of Holiness*, Ellul summarizes the things that I have just described, before drawing a sharp contrast with ethics.

> Certainly, we must first differentiate—and I would even say oppose—ethics and morality, which are not at all the same thing. Morality is an ensemble of precepts or rules, formulated more or less clearly, often with a purely pragmatic origin. [...] It is [...] a practice that we assimilate to the good by way of the group's justification of itself. Morality lays down the "you must" and the "you must not" according to the social body; it is justifying and "edifying" in the banal sense (and not the evangelical sense), which is to say that it leads to certificates of good conduct and makes a model of the virtuous man. Morality situates good and evil, vice and virtue, at the level of normal opinion. But it is formulated into a body of clearly conceived rules and imperatives. Ethics is exactly the opposite. [...] It is not a knowledge of the rules of good and evil, since, precisely, the autonomous determination of good and evil is sin itself. [...] If we examine all the ethical orientations from the Old Testament, the Gospels, and the Epistles, we see a proclamation (coming from God) of a being of man. It is the orientation of a way to be pursued, but it is a path that is neither readymade nor clearly marked or signposted (which would be morality again!), but a path that is made bit by bit, carved out as we walk, in accordance with our desire to live (here, to live according to the will of God) and (here) according to the gifts of the Holy Spirit. Ethics is thus the contrary of readymade rules; it is a lived

> freedom that is not constructed ahead of time; it is not a category of human nature but a continuously renewed creation. [...] It is a call, a proclamation, a signpost, the search for a conviction; it puts our back against the wall; it is exhortation but also a surgical operation destroying morality and having, Pharisaism and laxism, self-satisfaction and suicidal nihilism. It is the opposite of a well-made philosophical fabrication, systematic and structured, that would cover the whole range of "moral questions." Thus, ethics obliges us to point the finger at ourselves, while morality is the means for hiding, masking ourselves, disappearing behind rules and precepts. [...] Certainly, ethics implies a way of speaking. It must be spoken, not as a system and in precepts but rather as an interrogation.[8]

In describing a technical morality, Ellul is applying his theses regarding technique to questions of the human relation to right and wrong, to living and acting. In behavior defined by Technique, the freedom and unpredictability of ethics is already far too inefficient to be enframed in a technical system; ethics must be reduced to morality so that Technique can progress unhindered. The justification permitted by morality in general becomes more rigorous once morality becomes technical. This morality restricts the operation of human language, cutting off any deep self-questioning, whether individual or social. Morality's justifying function becomes primary, since the logic of Technique implies reducing anything that would impede its function. Against this, Ellul's ethical interrogation seeks to rehabilitate the humiliated human word, to unleash its ability to question everything, including ourselves and the direction of our society. He calls us to be present—that is, to open our ears and eyes, to listen and look, in our bodies, and with that other part of our humanity that is irreducible to material, whatever name we may give it (whether mind, or spirit, or soul, etc.)—in the time and place where we live.

Having now seen what is at stake in these two terms, I will turn more specifically to technical morality and the ethics of *freedom*.

Technical Morality Versus the Ethics of Freedom

It would be foolhardy to try to summarize all that Ellul says about these two topics in such a short space; his writings on freedom alone exceed two

thousand pages. I will offer just a few lines of what seems most pertinent in the present context.

A chapter in the first volume of *To Will & To Do*, titled "Technical Morality," examines morality in the technological society. Though written sixty years ago, I think this chapter still describes the society in which we live today. Here is what I consider the briefest summary of the chapter:

> The morality that currently exists in our society [...] is composed of two rather different elements: one part is a leftover from the Christian morality produced in the Middle Ages that was transformed in the sixteenth and seventeenth centuries, emphasizing individual virtues and oriented toward charity; the other part is a technical morality, emphasizing collective virtues and oriented toward work. [...] We are witnessing the formation of a new morality, purely technical, in which the elements of the Christian morality contained in bourgeois morality are progressively being eliminated. This technical morality is not yet complete; its constitution is currently in progress, but it is assuredly the morality of tomorrow.[9]

Ellul offers several characteristics of the new technical morality. First, "normal" replaces "moral." Children grow up wanting to be normal, not to be good; conformity to a standard model becomes morally desirable and a requirement. Likewise, we are critical not so much of immoral behavior but of deviant behavior, which departs from an accepted norm. Second, this new morality values success; a thing is good because it works or succeeds. Success becomes proof of goodness. Third, technical morality is concerned with behavior. Things such as motives or personal interpretation are seen as non-essential; what matters is behavior that conforms. Or, sometimes, behavior is left to individual decision—but only when it has become insignificant. We can do whatever we want only when nobody is worried that it will change anything important. This is a morality of conformity, of function, of efficiency, of productivity.[10]

In contrast, Ellul sketches an ethics of freedom in the book bearing that title. The full French text is nearly twelve hundred pages and constitutes only part of his Christian ethics. Ellul's overarching project of Christian ethics could be described as follows. First, Ellul thinks that God's action liberates. It breaks up hardened social unities, undoes sociological determinations,

and creates a free people. It is thus firstly an ethics of freedom. Second, it separates this free people, making them into something new and different from what they were before. This break and newness are communicated by the word "holiness"; it is thus secondarily an ethics of holiness. And finally, this separation is not one of being "better" than others in any way; it is separation for *a specific act of service*, for the creation of a new relationship, a new social unity defined by love. It is thus thirdly an ethics of love. Freedom, then separation and re-creation (that is, holiness), and, finally, a new relationship of love.[11] The "morality" described above becomes a reference point for Christian ethics; it is taken into account as a matter of communication. At different times, the Christian ethics of freedom will both obey and disobey, respect and transgress, this technical morality.

In *The Technological Society*, Ellul described the breakdown of local, traditional social unities as a precondition for the rise of Technique. His sociology and his theology thus offer contrasting narratives of social transformation: both technique and the Word of God break up social unities and transform them, but the orientation, means, and kind of change differ greatly.

Ellul intends *The Ethics of Freedom* as a liberating word responding to the necessity discernable in the development of society driven by technique. I suggest reading *The Ethics of Freedom* as a sort of contemporary Protestant spiritual exercise.[12] The whole thing is constructed on a division taken from Martin Luther, between "freedom from" and "freedom for." It reads as if Ellul walks with the reader, starting in alienation and slavery, moving toward freedom, learning what we are freed from, and then exploring what we are freed for.

Concluding Remarks

I offer two final comments. First, for readers who are new to Ellul's theology: in Ellul's interpretation, the God we meet in Jesus Christ is nonviolent and opposed to all forms of domination. Instead of dominating, Ellul's God freely gives *himself*, preferring to be killed than to kill. This God's Creation-wide political rule is expressed precisely in a refusal to dominate those under his power. Instead, God's politics is a creative, caring presence,

given graciously and freely to all. Ellul's God is both radically free, frighteningly beyond our grasp, and intimately present in human and creaturely affairs. Unlike the logic of technique, Ellul's God is less concerned with control and consequences than with freeing humans to be his dialogue partners. To be a valued dialogue partner is precisely *not* to be the object of a technical operation.

Second, I read Ellul's theology as an extended meditation on incarnation—both in general, in the sense of our life as both material and spiritual, and in Christianity, that is, in God's taking on human flesh in the person of Jesus Christ, living among us, instituting a new way of relating to one another.[13] God's incarnation bestows a profound dignity and meaning on the simple fact of being a human creature. All of technique's promises to increase our control, to alter the proportions of our relationships with one another and with time and space, to augment our power—are so many temptations to exchange that dignity and meaning for something that is ultimately destructive of this kind of incarnate freedom. Ellul proposes a pedagogy, a "learning to be human"—that is, to be limited, relative, humble creatures—living in the presence of God. The second, as-yet-untranslated tome of *The Ethics of Freedom* contains what I consider to be one of the most beautiful passages in Ellul's writing, which describes three "categories of freedom for Christian ethics." These are the useless, the provisory, and the relative. They oppose the use value that characterizes our society's way of measuring, the eternal that describes certain philosophical approaches to truth, and the absolute, in the presence of which no freedom is possible. In this light, if it would not be precise to call Ellul a postmodern thinker, he is certainly trying to untangle the Christian life from Enlightenment and technical ways of thinking and being.

In conclusion, all of this is evoked in Ellul's reading of Jesus's three temptations in the wilderness, a reading that he shares with his friend Charbonneau (and that is filtered through Dostoevsky). For Ellul, Jesus refuses to incarnate anything other than a humble dialogue with God the Father. By refusing any other ways of being who he is, Jesus's relation to God encapsulates the most robust definition of freedom that Ellul gives: "Only the unmediated relation with God is total freedom."[14] By refusing power and

domination, Jesus throws down the gauntlet of true human freedom, and, for Ellul, the West does not take it up and succumbs to the seduction of power instead.[15]

If we have ears to hear Ellul's prophetic address, that gauntlet is again thrown down to us today. May we let his ethical interrogation do its work, inquiring as to what is really going on at the heart of our life together.

Notes

1. Cf. John Wilkinson, "The Divine Persuasion." In *Introducing Jacques Ellul*, ed. James Holloway, 161–83 (Eerdmans, 1970), 168.
2. James Y. Holloway and Will D. Campbell, "Introduction." In *Introducing Jacques Ellul*, 12.
3. Wilkinson, "The Divine Persuasion," 171.
4. See especially Jacques Ellul, *Violence: Reflections from a Christian Perspective*, trans. Cecelia Gaul Kings (Seabury, 1969).
5. David Gill first proposed this description of Ellul in "Jacques Ellul: The Prophet as Theologian." *Themelios* 7, no. 1 (1981): 4–14. It then served as the title of the 2012 conference of the International Jacques Ellul Society at Wheaton College in Wheaton, Illinois.
6. Jacques Ellul with Didier Nordon, *L'Homme à lui-même. Correspondance* (Éditions du Félin, 1991), 26–27 (my translation).
7. *Éthique de la sainteté* was published in French for the first time in 2024. Its publication reminds us that a full understanding of Ellul's ethical project is still to come. This new publication thus happily answers to one of the specific needs laid out in David Gill's evaluation of the state of our understanding of Ellul's ethics, in "Jacques Ellul's Ethics: Legacy and Promise." *Ellul Forum* 39 (2007): 3–8. Gill's article offers not only a helpful overview of Ellul's ethics but also a convenient and prescient description of scholarly work to be done to achieve a fuller understanding of Ellul's ethics.
8. Jacques Ellul, *Éthique de la sainteté* (Labor et Fides, 2024), 15–16 (my translation). In *Presence in the Modern World*, Ellul wrote that a Christian ethic is essential as practical guidance for life in the world because such life is a struggle, even an "agonistic" way of life. He notes that any Christian ethic is thus temporary (needing to be restated in each generation in light of changing circumstances and challenges)

and apologetic (not functioning as our justification but as guide to a positive communicative witness in word and deed to the world). *Presence in the Modern World*, trans. Lisa Richmond (Cascade, 2016), 9–12.

9. Jacques Ellul, *To Will & To Do: An Introduction to Christian Ethics*, 2 vols., trans. Jacob Marques-Rollison (Cascade, 2020), 1:172–73.
10. Ellul also notes the distinction between "lived morality" and "theoretical morality"—the values and principles that actually guide behavior, versus the more abstract theories proposed by intellectuals. Technique increasingly rules both, if in different ways.
11. It is beyond the scope of this essay to explore Ellul's broader framework in detail, but his threefold schema of Christian ethics is deliberately grounded in St. Paul's theological virtues of faith, hope, and love—understood not in classical terms as acquired habits of character but as (Kierkegaardian) existential "stances" toward the living God. Our stance of faith relates to the holiness that God accords us; in connection with our hope, God grants freedom; and in conjunction with our love, God grants relationships. Ellul's threefold Christian ethics explores how all of this plays out in our (technological) milieu. This is anything but a simplistic flight to an otherworldly piety.
12. Cf. Louis J. Puhl SJ, *The Spiritual Exercises of Saint Ignatius: Translation Based on Studies in the Language of the Autograph* (Loyola, 2021).
13. This should be understood in dialogue with the thought of Ellul's lifelong friend Bernard Charbonneau, whose writings also concentrate on humanity as the incarnation of spirit in flesh.
14. Jacques Ellul, *Vivre et penser la liberté*, ed. Jean-Philippe Qadri (Labor et Fides, 2019), 480 (my translation). In Ellul's recent, posthumously published and translated *Theology and Technique* (which is subtitled *Toward an Ethic of Non-Power*), we see that Ellul is not after an ethic of "powerlessness," which would be the inability to act or do something. Instead, "non-power" names a deliberate refusal to do that which we could do, to dominate and create relationships of subordination, opting instead for the ways of love, freedom, and service. *Theology and Technique: Toward an Ethic of Non-Power*, trans. Christian Roy (Wipf and Stock, 2024).

Ancient Chinese Technology: A Missing Piece in Ellul's *Technological Society*

Yanyu Sun

The accomplishments in science and technology during ancient China are distinguished by their significant contributions and pioneering innovations, which have left an indelible mark on the development of human knowledge across multiple disciplines. From the Qin and Han Dynasties to the middle of the Ming Dynasty, China was in the world's leading position. Gunpowder, compasses, papermaking, and printing are outstanding representatives of the progress and prosperity of scientific and technological development. According to historian Joseph Needham, "The Chinese had some scientific and technological inventions in many important respects, were ahead of the legendary figures who produced the famous Greek wonders, were on a par with the Arabs who possessed all the cultural wealth of the ancient Western world, and maintained a level of scientific knowledge that the Western world could not match between the third and the thirteenth centuries."[1] Ancient Chinese technology made great contributions to the social change and the rise of science in modern Europe, and the progress of human civilization as a whole. The fact that such an important period of technological history did not attract Ellul's attention becomes a missing part of Ellul's research. Ellul's *Technological Society* has very little discussion of China. His analysis of ancient global technological history omitted the contributions of China. Although ancient Chinese technology was highly developed and advanced for its time, it did not develop into a "technological society," as Ellul termed, and failed to produce modern science and technology.

Because of the close relation between ancient Chinese science and technol-

Yanyu Sun. "Ancient Chinese Technology: A Missing Piece in Ellul's *Technological Society*." *Ellul Forum* 73 (Spring–Fall 2024): 75–102. © Yanyu Sun, CC BY-NC-ND.

ogy culture and ancient Chinese philosophy and political culture, ancient Chinese science and technology culture presents its own unique characteristics. It is of great significance to study the history of ancient Chinese technology from the perspective of Ellul's technology theory. At the same time, the history of ancient Chinese technology can well reflect Ellul's theory and analysis of the world's ancient technology. With a new perspective, this paper addresses some questions, within Ellul's framework, such as what people can do in the technological society, and what alternative to that technological society might be seen through the Chinese traditional culture of "harmony between heaven and man" (天人合一) hidden behind the history of ancient Chinese technology.

The Technological Society's Absence of Ancient Chinese Technological History

In *The Technological Society*, the word "China" appears only twelve times. Apart from the translator's notes and references, Ellul mentions "China" ten times, mainly focusing on China's modern technological development. He mentions ancient Chinese technological civilization only when discussing the four characteristics of traditional technology: "Certain important covariations traditionally existed, and these factors covariant with technique, changed according to the type of civilization. There was, for example, the association of technique and the state among the Egyptians and the Incas; of technique and philosophy in Greece and China."[2] Ellul skates over China in his macro analysis of technique. For example, in speaking of the universality of technology, Ellul argues that "this does not mean that they have all reached the same point, but they are situated at different points along the same trajectory. The United States represents the type that France will represent in thirty years, and China in possibly eighty."[3] When analyzing the expansion of technology, Ellul argues that the export of technical personnel is important. "Since 1956 we have been witnessing the same diffusion of technicians from the Soviet Union, and more recently from China, to Syria, Guinea, Ghana, and Cuba."

In many references, Ellul uses only the summary word "East" and does not specify China directly. "Another embarrassing fact: when in her de-

cline Greece applied herself to technical inquiry and the development of industry, she looked to the East for methods. And in the first century, when Rome—the perfect example of the technical spirit in antiquity—took up industry, she too turned to the East for industrial techniques, the refining of silver and gold, glassmaking, the tempering of weapons, pottery, ship construction, and so on. All these techniques came to Rome from the East, either early, through the Etruscans, or much later, after the conquests. We are far indeed from being able to support this traditional cleavage between East and West. In fact, during classical antiquity, it was the East which possessed the concrete, inventive mind that grasps the truth and exploits it."[4]

Ellul continues,

> At the beginning of the 12th century, a technical movement began to form, very weak at first, which developed under Eastern influences. [...] The technical impetus of our civilization came from the East, at first through the intermediacy of the Judaei' and the Venetians, and later through the Crusades. But even so, it limited itself to imitating what it had seen—except in art. Certain autonomous discoveries did take place, especially as a result of commercial necessity, but this development was no more intense than it had been under the Roman Empire.[5]

Obviously, it is perfectly correct to replace the word "East" with "China" in these sentences. As Marx said, "Gunpowder, the compass, and printing are the three great inventions that heralded the coming of bourgeois society. Gunpowder blew the knighthood to pieces, the compass opened world markets and established colonies, and the printing press became the instrument of Protestantism in general, the means of scientific revival, the most powerful lever for creating the necessary prerequisites for spiritual development."[6]

Ellul is not completely ignorant of China. He has a certain understanding of China's modern history. Ellul frequently uses China as an example in *The Betrayal of the West* and also studies Mao Zedong's propaganda theory in *Propaganda*. All these books reflected his familiarity with China's modern history. Indeed, Ellul does not mean to write a complete history of "technological society." His purpose is to study the characteristics and essence

of technology in modern times rather than to systematically analyze the technological history of countries and civilizations around the world. As Ellul writes, "It is scarcely possible to give here a history of technique in its universal aspect, as we have just defined it." "My book is not a history. I shall speak in a historical vein only when it is necessary to the understanding of the technical problem in society today."[7] Ellul believes that the understanding of the history of technology can come only from reading. It is enough to recall the works of André Leroi-Gourhan, Richard Lefebvre des Noettes, Marc Bloch, and others. This is probably an important reason why Ellul does not touch on the history of ancient Chinese technology. While Ellul briefly analyzes the characteristics of the technological development of Greece and Rome, it is a great pity that he neglected the history of ancient Chinese technology.

The Importance of Ancient Chinese Technology

The history of ancient Chinese technology has an important place in the development of science and technology in the world. With great wisdom and creativity, the ancient Chinese people created a brilliant ancient Chinese culture. Chinese civilization has lasted for thousands of years, forming a rare cultural system in the world. Science and technology culture, as part of Chinese culture, has outstanding achievements in various fields, such as mathematics, physics, chemistry, astronomy, geography, biology, agriculture, medicine, architecture, metallurgy, machinery, textiles, vehicles, ships, weapons, ceramics, papermaking, and printing, which have made significant contributions.

In the 1920s, some Western historians of science and technology who questioned the "European scientific center theory" gradually shifted their research focus to the traditional science and technology history of ancient China. In the preface to the Chinese translation of his *History of Science in Antiquity*, another famous British science historian, J.D. Bernal, said, "China has been one of the great centers of human civilization and science for many centuries. [...] It can be seen that in the process of the Western Renaissance from Greek abstract mathematical science to modern mechanical and physical science, China's technical contributions—the compass, gun-

powder, paper, and printing—played a role, and perhaps a decisive one. I am sure that China's great past contributions to technology will be surpassed by its future contributions."[8] An article in the *Frankfurter Allgemeine Zeitung* in 1990 noted that "many innovations and inventions that played an important role in the world's development originated in China, but the Europeans did not know about them. Even the Chinese themselves often forget that some things were invented by them first."[9]

Secondly, the history of ancient Chinese technology is different from the history of any other country's. Ancient Chinese technology is significantly different from the technology of ancient India, ancient Greece, and medieval Arab countries. Ellul summarizes China with the term "East" in *The Technological Society*, which is simplistic and less specific. Ancient Chinese science and technology, as an important part of the ancient Chinese civilization, developed under the unique historical conditions and geographical environment of China, as well as under the social conditions of various historical periods in China. Its development path, method of dealing with and solving problems, and even the content included have a special tradition that is different from that of other countries, with independence and specificity. In this sense, we can say that ancient Chinese science and technology has its own unique system, whether as a whole or in individual branches of science. The development path of ancient Chinese technology is completely different from that of the West. The geographical environment, political system, ideas, and the way of small-peasant agricultural economy determined the direction of ancient Chinese technology development and limited its development as well, forming a unique history. Although there was a certain degree of exchange with the outside world, the system of ancient Chinese science and technology was indeed formed independently. The basic tone of Chinese thought and cultural patterns remained spontaneous and uninterrupted, with China's geographical environment being relatively closed off enough to influence the distinctive tone of her culture and science.[10]

Thirdly, the historiography of ancient Chinese technology is characterized by an exceptionally rich corpus of historical sources, which significantly facilitates scholarly research and analysis. Joseph Needham believes that "no

civilization has a greater historical tradition than China, and the records of real events that occurred in various eras are the result of the meticulous and dedicated work of thousands of scholars. They have done everything that historians can do, and archaeological discoveries have repeatedly proved that their records are correct, and some are amazingly accurate. No other civilization has produced such a masterpiece as the *Twenty-Four Histories*, and these history books are supplemented by a vast number of unofficial histories." "China's social environment is actually conducive to the study of the history of science and technology. Those inventions and creations were not favored by Confucianism, so no one would want to. This social environment also prevented businessmen from forging non-artworks such as scientific instruments or weapons to pass them off as antiques. No one wanted to collect such items, and there was no profit in collecting them. Confucian bureaucrats always looked down on warriors, and military commanders were usually lower in rank than their corresponding civil officials. Those military classics gave people the impression that they were written in an extremely realistic manner, without the indirect and elegant style of other works. Falsification was indeed rare in these works. In short, we believe that the statements of Chinese historians and military writers are almost always reliable."[11]

Exceptions to the Theory of *The Technological Society*

Ellul believes that no matter how brilliant a civilization is, it is gradually being replaced by technological civilization. He pointed out that in a technological society, technology has saturated all fields. Without technology, nothing new can be discovered, no problem can be solved, and few ways of life do not rely on technology. Under the autonomy of technology, "henceforth, every component of civilization is subject to the law that technique is itself civilization. Civilization no longer exists of itself. Every activity—intellectual, artistic, moral—is only a part of technique. This fact is so enormous and unpredictable that we are simply unable to foresee its consequences."[12] Thousands of years ago, ancient Chinese society, like many societies today, had world-leading technology. However, the progress of discoveries and inventions in ancient Chinese society did not cause major

damage to culture and civilization. Technology has always been a subordinate of civilization—broader than Ellul's "technological society." China provides a positive counter-example to Ellul's question of whether there can be a civilization that is "inclusive of technology" and not fully dominated by it.

China, as a country with highly developed science and technology in ancient times, failed to produce modern science. Even when modern science was introduced into China from the West, it was met with indifference and resistance. Joseph Needham raised his doubts: "China had highly developed science and technology before 1500, and was the most advanced society in the world in science and technology at that time. Why did capitalism and modern science originate in Western Europe instead of China or other civilizations?"[13] The "Needham question" is the focus of many scholars, and numerous Chinese scholars have provided a multitude of insights and responses. There is no singular or definitive answer. Moreover, this question has now far exceeded the understanding and evaluation of Chinese science and civilization. Joseph Needham raised this "question" from the perspective of world history, and his ultimate goal was to promote mutual understanding between different cultures. Since Joseph Needham asked the question of "why" rather than "what," the "Needham question" is both profound and comprehensive. It covers both the history of science and technology and the history of culture, including Chinese and other Eastern civilizations as well as European civilizations, in both ancient and modern times.

In the preface to the Chinese version of *The End of Certainty: Time, Chaos and the New Laws of Nature*, Ilya Prigogine wrote,

> Western science and Western philosophy have always emphasized the duality between subject and object, which is contrary to Chinese philosophy that emphasizes the unity of man and nature. The results described in this book bring modern science closer to Chinese philosophy. The self-organizing universe is also a "spontaneous" world, which expresses a holistic view of nature that is different from the classical reductionism of Western science. We are getting closer and closer to the intersection of two cultural traditions. We must retain the analytical view of Western science, which has proven to be quite

> successful, and at the same time we must restate the laws of nature that include the spontaneity and creativity of nature.[14]

As Carl Mitcham pointed out, in such a technologically advanced environment, ancient China did not move toward Ellul's "technological society." "This is a refutation and challenge to some of Ellul's views."[15] Such exceptions in Ellul's "technological society" theory provide some possible ideas for the technology-dominated Western social order that Ellul is worried about. Ellul never demonstrated an understanding of the history of ancient Chinese technology—even if many of his theoretical analyses in *The Technological Society* coincide with the development process and essential characteristics of ancient Chinese technology.

The Practicality of Ancient Chinese Technology

In analyzing the history of Greek technology, Ellul notes that,

> Technique is essentially Oriental: it was principally in the Near East that technique first developed, and it had very little in the way of scientific foundation. It was entirely directed toward practical application and was not concerned with general theories, which alone can give rise to scientific movements. This predominance of technique in the East points up an error which is found throughout Western thought: that the Oriental mind is turned toward the mystical and has no interest in concrete action, whereas the Western mind is oriented toward "know-how" and action, and hence toward technique. In fact, the East was the cradle of all action, of all past and primitive technique in the present sense of the word, and later of spiritual and magical technique as well.[16]

This is exactly the case with ancient Chinese technology, which had very little scientific basis and was entirely focused on practical applications.

The number of various types of historical documents is directly proportional to the role of the discipline in governing the country, maintaining peace, and benefiting the people in ancient society. For example, traditional Chinese medicine is closely related to life and has a strong practicality, so medical documents have the largest number among ancient Chinese scientific and technological documents. According to the *Zhong Hua Yi Ji Kao*

(*Chinese Medical Books*), there were about three thousand kinds of medical documents from the Qin and Han Dynasties to the Daoguang period of the Qing Dynasty, such as the *Huangdi Neijing* (*The Yellow Emperor's Canon of Medicine*) in the Warring States Period, Zhang Zhongjing's *Shang Han Za Bing Lun* (*Treatise on Febrile and Miscellaneous Diseases*), Shennong's *Herbal Classic* in the late Han Dynasty, and Wang Weiyi's *Bronze Acupuncture Status*. Since agriculture is the foundation of the national economy and people's livelihoods, agricultural documents are also very rich, such as Shennong and Yelao in the Warring States Period, Ban Gu's *Han Shu Yiwenzhi* in the Eastern Han Dynasty, and Jia Sixie's *Qimin Yaoshu* in the Northern Wei Dynasty. According to the *Catalogue of Ancient Chinese Agricultural Books* edited by Zhang Fang and Wang Siming, there are 2,368 extant and lost Chinese agricultural books, and Chinese agriculture has formed a complete set of agricultural production technology systems.

The continuously strengthened and determined humanistic ideology of traditional Chinese culture affected ancient science and technology in a directional manner. It guided, restricted, and promoted the development of ancient science and technology toward serving people as its main purpose. The practical concepts generated around the development of production became not only the basis of ancient Chinese social psychology but also a distinctive feature of the development of ancient Chinese science, technology, and culture. Chinese Ancients rarely had the opportunity to think about abstract issues unrelated to production development. The four pillars of ancient Chinese science—astronomy, mathematics, agriculture, and medicine—all started from serving human life as their basic value orientation. If the characteristics of ancient Greek mathematics are abstraction and systematization, traditional Chinese mathematics is mainly known for combining and integrating theory and practice.

This practical orientation embodies a style that is completely different from Western mathematics and is on par with ancient Greek mathematics. Ancient Chinese mathematics focused on mathematical problems from daily life and production practice, forming mathematical concepts, refining mathematical methods, and then putting them into practice to solve specific problems. *Nine Chapters on Arithmetic*, written in the Han Dynasty, is

the core symbol in the establishment of the ancient Chinese mathematical system and the formation of mathematical characteristics. It contains a total of 246 questions, which are all practical problems in production and life at that time. It is divided into nine chapters: (1) Flatfield: explains the calculation of the area of acres and fraction calculations of various plane graphics, (2) Millet: explains the exchange ratio between grain and rice and the four ratio algorithms, (3) *Cuifen* (decrease progressively): explains social class, business, the proportional distribution problem of handicraft industry, (4) *Shao Guang*: Know the area, volume, find the length of one side and the diameter, etc., (5) *Shang Gong*: explains various projects (building cities, building embankments, digging canals, piles of grain, etc.), (6) Equal Loss: explains the taxation and tax calculations under the equalization system at that time, including complex proportional distribution calculations such as compound proportions and continuous proportions, (7) Profit and Deficiency: explains the solution to the profit-and-loss problem and the use of the profit-deficit technique (method of finding unknown number by two assumptions), (8) Equations: linear equations problem, (9) Pythagorean: using the Pythagorean theorem to solve and predict (calculate height and distance, depth and breadth).

These contents, distinguished by modern mathematics, can be divided into three major categories: first, computing technology, including four arithmetic operations, fraction operations, square-root operations, four proportion and proportion distribution operations, method of double setting, etc.; second, algebra, including the arrangement and solution of linear equations, which introduces the concept of negative numbers and the operation of positive and negative numbers; third, geometry, including rectangles, triangles, trapezoids, circles, bows, annulus, spherical and other planes, calculation of the area of graphics and calculations of cubes, cylinders, cones, right prisms with equal trapezoidal sections, and other complex three-dimensional figures, as well as calculations of many graphics and actual measurement problems based on the Pythagorean theorem.[17]

The Craftsmanship Spirit of Ancient Chinese Technology

Ellul points out that in premodern societies, the status of technology was

generally low. Ancient people did not attach importance to technology but regarded it only as a mediating tool, and did not think that it was related to human destiny. Technology was applied only in certain narrow and limited fields. Ellul believes that "the time given to the use of techniques was short, compared with the leisure time devoted to sleep, conversation, games, or, best of all, to meditation. As a corollary, technical activities had little place in these societies. Technique functioned only at certain precise and well-defined times; this was the case in all societies before our own. Technique was not part of man's occupation nor a subject for preoccupation."[18]

Due to the lack of theoretical summary and generalization, the development of technology depended on the accumulation of personal experience only, and the transmission of technology could be completed only through human senses and actual operations. "Father-son inheritance" or "master-pupil teaching" is the main form of technology transmission, and it is even spread in the form of secret recipes. "The master leads the way, and the practice is up to the individual" is an accurate description of this situation. "Realization" has an important position in the research and inheritance of ancient science and technology. Many famous technical experts' craftsmanship is directly realized from practice, and they are often unprecedented and unparalleled. Therefore, there are also a large number of exquisite technologies in China that have been lost. For example, when describing a skilled craftsman, the Ancients often said that his skills had reached the peak of perfection. But how did he reach this level? This depends on the accumulation in many aspects, such as Ouyang Xiu's description in *Oil Seller*, whose amazing oil-making skills are "nothing else but skilled," which means the key is the accumulation of experience.

In 1978, two *Bingjian* (utensils containing ice) were unearthed from the tomb of Zeng Houyi of the Warring States Period. They were wine vessels used by Zeng Houyi, the king of Zeng State during the Warring States Period, to hold important ceremonies or entertain important guests. According to the "Tian Guan" section of the *Zhouli* (the official book of the Zhou Dynasty), "*Bingjian* are offered for sacrifices." This shows that primitive refrigerators already existed in the Zhou Dynasty, but the ice was not available all year round, especially in the hot summer when ice was extremely

precious. The *Bingjian* are symmetrical and regular, with eight small dragons clinging to the four corners and the four central areas of the chest, each dragon's head supporting eight bracket-style bronze decorations. The hind legs of the beasts' bodies crawl on the ground. *Bingjian*'s intricate and exquisite patterns make it full of beauty. The bronze *Bingjian* requires high precision, and its casting is done mainly by the lost-wax method. Bronze objects cast by the lost-wax method have a smooth surface and high precision. Even today, people still use the lost-wax method to cast precision components such as aircraft parts. This ingenious and exquisitely crafted ice chest is the earliest refrigerator and air conditioner in human history. *Bingjian* has two layers, with ice placed in the outer layer and the inner layer used to chill fruits, vegetables, and wine. The lid of the ice chest also has a few holes, so in addition to being a refrigerator it can also expel cold air through these holes, making it a refrigerator and air conditioner in one. The 2008 drums used in the Beijing Olympic Games, arranged in neat rows and producing thunderous drum sounds, were inspired by the *Bingjian*.

The Endless Development of Ancient Chinese Technology

Ellul believes that before the eighteenth century, technological development had a third characteristic: it was local. Social groups were very powerful and not open to the outside world. In terms of material, there was almost no communication between them, and in terms of spirit, there was even less communication. Technology spread very slowly. In the thousands of years since ancient China entered the civilized society and established the country, the borders changed and there were constant struggles and integrations between the various ethnic groups in the region. But as a nation, it was basically stable in general. Geographically, our ancestors have lived on the Eurasian continent since ancient times. To the north of our country is the cold Siberian wilderness, to the east is the vast ocean, to the southwest are the towering Himalayas, to the west are the Altai Mountains, the Karakoram Mountains, as well as the desert and Gobi. This environment facing the sea on one side and having extremely inconvenient land transportation on the other three sides, with fairly wide internal room for maneuver, has created a state of relative isolation from the outside world.

Ancient Chinese science and technology were mainly created under their own existing conditions and were passively generated within their own scope. In the absence of external forces, this technology can run only along its independent trajectory.

The development of ancient Chinese technology mainly depended on the vigorous development of the feudal dynasty. Although ancient China has had constant contact and exchanges with other regions, nations, and countries, there was not a large-scale exchange of economy, thought, culture, and science and technology. In ancient times, the development of Chinese science and technology was less disturbed by the outside world, and it always maintained an independent and consistent development system without the technological faults caused by foreign invasions in other ancient civilizations such as India, Egypt, and Rome. This is also in line with the fourth characteristic of technology listed by Ellul—the possibility of choice reserved for human beings. Ellul divided many different types of societies into two types of civilizations: active and passive. Active civilization is oriented toward the exploitation of the earth, toward war, conquest, and expansion in all its forms. Other societies are inwardly oriented; they labor just enough to support themselves, concentrate on themselves, are not concerned with material expansion, and erect solid barriers against anything from without. From the spiritual point of view, these societies are characterized by a mystical attitude, by a desire for self-dissolution and absorption into the divine.[19]

Obviously, Chinese civilization belongs to the latter. Ancient Chinese society has continued to multiply in such a specific geographical environment, with an intensive small-peasant economy: agricultural production and various handicraft production as the main production activities, the concept of "harmony between man and nature" from beginning to end, and a centralized unified state was built relatively early, which formed a unique economic, political, ideological, and cultural tradition and naturally also formed a unique traditional science and technology.[20]

Compared with other ancient civilizations in the world, the most prominent feature of ancient Chinese civilization is that China's culture and civilization process has never been interrupted. That is to say, although the

maps and the country have been constantly changing in Chinese feudal society, the basic economic structure, cultural traditions, political system, and social lifestyle have never changed significantly, and there is obvious inheritance and stability. This inheritance and stability are also beneficial to the development of science and technology. Under the condition that feudal land ownership has always been dominant, the continuous adjustment of production relations has ensured that the productivity and scientific and technological power allowed by the feudal system have been maximized.

Marx pointed out in the first volume of *Capital* that under the conditions of centralization, the feudal dynasty "using the power of the state, that is, using concentrated, organized social violence" can promote the development of science and technology.[21] Specialized scientific research institutions such as the Imperial Astronomical Observatory and the Imperial Hospital appeared in China very early, and the state recruited a large number of specialized talents to engage in research in astronomy, mathematics, medicine, technology, and other fields. For example, the astronomical data recorded in historical books of various dynasties, and the medical books and pharmacopoeias published since the Tang Dynasty, were all completed through the cooperation of large-scale scientific and technological personnel organized by the government. Although dynasties have risen and fallen, this tradition has been passed down from generation to generation and continued. In fact, without the support of the country, the development of many scientific research projects would be out of the question. For example, Zheng He's seven voyages across the ocean marked the world's advanced level of navigation technology. In addition, organizing large-scale astronomical observations and building new large-scale water-conservancy projects are all difficult to do with individual strength. Therefore, during the development period of feudal society, the strong support and effective organization of science and technology by the state under the centralized power ensured that Chinese science and technology could always develop relatively smoothly.

The Unique Role of the Concept of "Heaven and Man" in the Evolution of Ancient Chinese Technology

The development of ancient Chinese technology was mainly influenced by

traditional Chinese culture.[22] Ursula M. Franklin believes that technology, as a practice, is directly related to culture. As Ellul said,

> Technique was an intrinsic part of civilization, and civilization consisted of numerous and diversified elements—natural elements such as temperament and flora, climate and population; and artificial elements such as art, technique, the political regime, etc. Among all these factors, which mingled with one another, technique was only one. It was inexorably linked with them and depended on them, as they depended on it. It was part of a whole, part of the determinate society, and it developed as a function of the whole and shared its fate.[23]

In other words, technology was not objective in the past, but subjective and related to its own culture. This is a rather large concept, including institutions, customs, academics, religions, and other aspects, among which academic thought plays a vital role in the development of technology.

"Heaven and man as one" is the core of traditional Chinese culture and also the guiding ideology of traditional Chinese science and the core of scientific and technological thought. It emphasizes the unity of man and nature and their overall harmony, as Zhuangzi said, 天地与我并生，万物与我一 ("Heaven and earth are born with me, and all things are one with me").[24] Ancient Chinese mathematics, astronomy, traditional Chinese medicine, agronomy, and other science and technology were all placed in the ideological framework of "heaven and man as one," which made the Chinese people's understanding of efficiency always constrained by the pursuit of this thought and gradually formed China's unique and traditional holistic natural science and technology view. There are already many studies on the Confucian "view of man and nature," so I will not repeat them here. This study will elaborate on the Mohist "view of man and nature" and its unique role in the evolution of Chinese technology.

The concept of "heaven and man" throughout the history of Chinese philosophy originated in the distant past, flourished in the Spring and Autumn Period, and boomed in the Warring States Period, with a "hundred schools of thought competing." Since the pre-Qin period, there have been hundreds of schools of thought. According to the *Story of Han Dynasty*, there

are a total of 189 named academic schools of thought and 4,324 works, which were later summarized into twelve schools. During the Spring and Autumn Period and the Warring States Period, the three major philosophical systems represented by Confucius, Laozi, and Mo-tse gradually evolved into the dominant Confucian culture, which gave Chinese traditional culture a distinct ethical characteristic.

In ancient Chinese philosophical thought, the relationship between heaven and man is the primary issue. The unity of heaven and man is the general summary of Chinese traditional culture, emphasizing the unity and coordination between man and nature. It can be said to be the core spirit and the most basic way of thinking in Chinese culture, which deeply influenced the development of ancient Chinese technology. After completing his masterpiece *Records of the Grand Historian*, Sima Qian talks about his ambition to "also want to explore the relationship between heaven and man, understand the changes of ancient and modern times, and form a school of thought" (亦欲以究天人之际，通古今之变，成一家之言).[25] Sima Qian believes that only by first exploring the relationship between heaven and man can we understand the evolution of ancient and modern times and thus have our own unique insights. Sima Qian's words reflect the extremely important theoretical significance of the relationship between heaven and man in ancient Chinese philosophy. The idea of "the unity of heaven and man" is also the primary issue in the history of traditional Chinese scientific and technological thought, and it is the core of the traditional Chinese "relationship between heaven and man" thought. It can be said that ancient Chinese philosophy started from the discussion of the relationship between heaven and man, and it developed and matured around the discussion of the relationship between heaven and man. The concept of "the unity of heaven and man" has played a good role in maintaining the country's political order and social stability and has also contributed to the emergence of Chinese religion to a certain extent.

The meanings of the concepts of "heaven" and "man" in Chinese history are extremely complex and diverse, and the theoretical issues involved in the thought are very wide. Different times and schools of thought led to different viewpoints and perspectives. Regarding the "relationship between

heaven and man," many interpret it as the "relationship between nature and man." Here, "heaven" is regarded as "nature," and "man" is regarded as "human being." However, the two concepts of "heaven" and "man" are not clearly defined and divided in ancient philosophical documents, and ancient philosophers used the words "heaven" and "man" with various meanings. Sometimes there is inconsistency in a philosopher's writings. In fact, the meanings of "heaven" and "man" are far from limited to nature and human beings.

In the history of Chinese philosophy, the meaning and name of "heaven" are varied, and they have been enriched and improved over time. Feng Youlan once summarized that

> The word "heaven" in Chinese characters has at least five meanings. One meaning is "material heaven," which refers to the vast sky that we see in daily life and is opposite to the earth, which is what we now call the sky. One meaning is "supreme being," which refers to the "supreme god" with personality and will in religion. Another meaning is "the heaven of destiny," which refers to the so-called luck in the old society. Still another is "the heaven of nature," which refers to the so-called nature of materialist philosophers. Finally, another is "the great righteousness" or "the moral heaven," which refers to the moral law of the universe invented by idealist philosophers.[26]

In theory, the relationship between heaven and man includes at least two aspects: "the distinction between heaven and man" and "the unity of heaven and man." Zhao Jiaxiang gave a relatively comprehensive explanation of this in *On the Thought of "Relationship Between Heaven and Man" in Ancient China and Its Theoretical Value and Practical Significance*. In his view, the first premise of "the relationship between heaven and man" is "the distinction between heaven and man," and the first ancient Chinese thinker to discuss this distinction was Zichan of Zheng State in the Spring and Autumn Period. Based on this, various attitudes of man toward heaven emerged: "passive inaction," "man conquers nature," "mutual victory between heaven and man," and "the unity of heaven and man." Therefore, we should regard "the relationship between heaven and man" as an organic whole, composed of multiple ideological elements that are both mutually distinct and interconnected, interacting and influencing each other.

Mo-tse and the Concept of "Heaven and Man"

Mo-tse (468–376 BC), whose surname was Mo and given name was Zhai, was the founder of the Mohist school. He was a famous thinker, educator, military strategist, social activist, mechanic, optician, logician, and military engineer. In his early years, Mo-tse studied Confucianism. Due to his dissatisfaction with the complexity of the Zhou rituals, he founded his own school, taking *Dayu* as his model, and was reflective and critical of Confucianism. Mohism and Confucianism were two prominent schools of thought in the pre-Qin period. After the Han Dynasty, however, Confucianism became the orthodox thought of ancient China, while Mohism became a "lost school." It was not until the Qing Dynasty that the study of Mohism began to revive.

The Mohist school was the most significant and influential school in the history of Chinese science. Disciples of Mohism have been with civilians and craftsmen for many years. Many of them were skilled craftsmen, able to achieve many scientific achievements. The representative work of Mohist thought, *Mojing*, is a remarkable book in Chinese culture. Two thousand years ago, it gave precise definitions or propositions to mathematical concepts or problems such as circle, multiple, straight line, and square, and physical concepts or problems such as end (atom), gravity, resistance, light, lever theorem, sound propagation, pinhole imaging, plane mirror, concave mirror, and convex mirror (two hundred years earlier than Archimedes). The Mohists explored not only philosophy, politics, society, and human relations but also the material world and the microscopic world. They can be fully integrated with the modern world, thus crossing history, regions, and nationalities, surpassing the various schools of thought and becoming the pinnacle of Chinese culture. Mo-tse's thought is an important part of the study of Chinese intellectual history.

Mo-tse advocated "respecting the virtuous, respecting the same, universal love, non-aggression, frugality, frugal burial, heaven's will, understanding ghosts, non-music, non-fate," etc. Among them, heaven's will, understanding ghosts, and non-fate are the main ideas of his theory of the relationship between heaven and man. The relationship between heaven and man is a four-dimensional structure of heaven, ghosts, monarchs, and people. With

the help of "heaven and ghosts," public opinion is checked and balanced on the monarchy. Mo-tse's political thought tending to be people-oriented, walked out of the shackles of primitive religion, embodied the spirit of humanism, and opened up a new face of Mo-tse's philosophy. Mo-tse strongly opposed Confucius's "destiny." He believed that determinism helped tyrants deceive the people, making the people content with the situation and unwilling to rebel or take action. In Mo-tse's study of heaven and man, *Tianzhi* (heaven's will) is the will of "heaven." "Heaven" is the good of the people in the world, and the will is kind. Heaven is omnipresent, all-knowing, and all-powerful, examining everything in the world. Heaven has the ability to reward good and punish evil and is the only standard for measuring right and wrong in the world. In the first part of *Tianzhi*, Mo-tse points out that if a man offends his parents or the monarch, there is still a place to escape, but if he offends heaven, there is nowhere to escape. Heaven's will constrains and regulates the behavior of "sage kings" and their subjects.[27]

Ming Gui (knowing ghosts) is another important concept in Mo-tse's view of the relationship between heaven and man. The meaning of "knowing ghosts" can be divided into two aspects: on the one hand, accepting and acknowledging the existence of "ghosts" in the traditional sense; on the other hand, explaining the gods of ghosts and regarding ghosts and gods as an important force to practice the will of heaven and supervise society. *Ming* means knowing and insight. Ghosts are the spirits of mountains and rivers or the spirits of ancestors.

Among philosophers, only a handful share Mo-tse's unwavering conviction in the existence of ghosts and gods. While other schools of thought tend to sidestep discussions on this topic, Mo-tse staunchly emphasizes their reality and presented specific rebuttals against atheistic arguments. From an empirical standpoint, Mo-tse insists that ghosts and gods were undeniably real entities. In his understanding, ghosts served as celestial aides to heaven, omnipresent observers who acted as messengers and enforcers of retribution for good deeds and punishment for evil ones. Although distinct in identity, both heaven and ghosts shared the common purpose of monitoring human behavior. At times, Mo-tse even amalgamated the concepts of "heaven" and "ghosts." Comparatively speaking, while ghosts played a

role in surveillance and punishment, it was heaven that represented the ultimate benevolence. Ghosts were omnipotent overseers who could even reward or punish emperors themselves. Their pervasive influence extended across various aspects of human life; they constituted an extraordinary force that could not be disregarded or manipulated easily.[28]

Heaven and ghosts are external, superior to all people, and yet able to embody human will and interests. The ghosts embody specific, local, individual, and direct will, and can embody the all-knowing ability and supervisory function of heaven for human beings, as well as convey human will and prayers to heaven. Thus, ghosts become the mediators for communication between heaven and human beings. The implementation of the will of heaven or the communication between heaven and human beings is manifested through spirits and the interaction between spirits and people. Through the reconstruction of the concepts of heaven, ghosts, etc., in traditional beliefs and their relationships with people (rulers and commoners), Mo-tse highlights the value and subjectivity of human beings.

The control of heaven over human beings is not direct and harsh. Therefore, the relationship between heaven and human beings is not a complete unity, nor is it an absolute opposition. On the one hand, people have the awareness of the separation of heaven and human beings and then produce the recognition of "self," which is one of the manifestations of human spiritual awakening. On the other hand, the relationship between heaven and human beings is not an absolute opposition. The relationship between heaven and human beings is not a master-slave relationship, nor is it a simple hierarchical relationship of superiority and inferiority, but it is an interactive and constructive relationship. It is not entirely determined, but interconnected through mediating forces. That is, humans influence the will of heaven, and the will of heaven influences the living environment, behavior, and social order of human beings. The will of the person who can influence the will of heaven is the will of mankind as a whole rather than the subjective whims of any individual. It is especially not the will of the nobility and officials but the great interests of the common people of the world and the public opinion that reflects these interests.

"Non-destiny" refers to Mo-tse's rejection of the concept of predestination.

Mo-tse adhered to the principle of "heaven's will" and posited that it rendered individuals passive and inert, leading them toward self-destruction. Consequently, he proposed "non-destiny" as a counterforce to resist and transcend the notion of predetermined fate. Mo-tse harbored deep disdain for the idea of predestination, asserting that societal and individual destinies were not governed by an external force but rather determined by one's diligent efforts. He believed that through industriousness and striving for progress, ordinary people could alter their own destinies, embodying an active and proactive philosophical stance. The doctrine of predestination inevitably fosters complacency with the status quo while discouraging advancement.

Standing in solidarity with common people, Mo-tse opposed the influence of fate on human lives, contending that through concerted endeavors people could transform their present circumstances. Mo-tse's highly tense relationship between heaven and man is a powerful tool for promoting "universal love" and "non-aggression" and is also an affirmation of human order and human spiritual values. However, it was not accepted by those in power and was subsequently submerged in the traditional Chinese culture, with Confucianism as the mainstream thought. Many experts also believe that it was the lack of attention paid to Mohism in its later period that led to the failure of the development of ancient Chinese science and technology to reach the level it should have.

The Limitations of the Concept of "Heaven and Man" on the Development of Science and Technology in Ancient China

China has always had a view of science and technology based on the traditional concept of "harmony between man and heaven." Tung Chung-shu's summary of this traditional concept of "harmony between man and nature" is the most famous: "The relationship between man and heaven is unity."[29] In traditional culture, man and nature (the three elements of heaven, earth, and man) are "the basis of all things." They are mutually responsive and mutually influential, and together constitute an organic whole. This concept of harmony between man and nature has, to some extent, driven

the development of ancient science and technology. Especially in the early development of science, people integrated man and heaven, overcame the excessively mystical understanding of the sky in the primitive period, and could know heaven from oneself and also know oneself from heaven. This actually affirmed the necessity and possibility of understanding nature, which is most obvious in astronomy. Understanding heaven can be obtained through observation of celestial phenomena. Astronomy connects human affairs and heaven, which in turn affirms the importance of astronomy.

Thus, traditional Chinese culture significantly constrained the trajectory of science and technology. Confucianism's dominant position within Chinese culture prioritized ethics and morality as the central tenets of traditional knowledge. Scholars and officials regarded science and technology with disdain, considering them menial pursuits rather than abstract scientific theories or crafts. The prevailing cultural politics in ancient China led to a devaluation, by both ruling elites and the general populace, of various technical knowledge and skills that lacked direct practical applications. The feudal rulers harbored an inherent apprehension toward non-official scientific and technological advancements, resulting in direct government control over agriculture, medicine, astronomy, arithmetic, and geography. Notably, although astronomy had reached a considerable level of sophistication in Chinese history, it progressively faced stringent restrictions and prohibitions imposed by successive dynasties since the Jin Dynasty. It became monopolized by the state to such an extent that during the Song Dynasty, public laws were enacted forbidding the study of astronomy under penalty of death. Consequently, this oppressive environment led to the regression of previously advanced astronomical knowledge.

China established Confucianism as its official philosophy, emphasizing veneration for tradition and adherence to classical texts and thereby constraining intellectual freedom. Furthermore, literature was prioritized over science, while skills and technology were belittled as mere trivialities—a perspective that compelled scientists to strive for knowledge amidst exceedingly challenging circumstances. As a result of these factors, numerous remarkable scientific achievements have been lost throughout history and remain unknown today. Many exceptional technological inventors, such

as Song Yingxing and Jia Sizhi, have remained unrecognized. This starkly contrasts with the philosophical tradition prevalent in ancient Greece and beyond, which consistently esteemed reason and revered scholars.

Ji Xianlin once said that Mo-tse was an encyclopedic cultural giant. His profound attainments and great achievements represented the height of an era in the history of human civilization, which is enough to make the Chinese people today excited and proud. Mao Zedong highly praised Mohist thought. He pointed out that Mo-tse was a saint who was better than Confucius. In 1856, Joseph Edkins, a British sinologist, published "A Review of Mo-tse's Personality and Works." "His [Mo-tse's] views, although very similar to Christian doctrines in form, may be close to the thoughts of Bentham and Paley in practical terms. If these two scholars lived in the same era as Mo-tse, they would definitely regard Mo-tse as an ally without hesitation."[30]

Joseph Needham devoted two chapters of his multi-volume *History of Science and Technology in China* to discuss the natural-science content of Mohism and gave it a very high evaluation, thus making the value of Mohism widely recognized by the international academic community. In his study of the Mohist school and the book *Mojing*, Needham put forward thought-provoking views from a macroscopic perspective and a comparative cultural approach. After analyzing the general characteristics of Chinese civilization and the similarities and differences between the scientific methods of Mo-tse and other schools of thought, he pointed out the reasons for the emergence of Mohist science and technology and its prominent characteristics. He pointed out that the Mohist practice in city building and defense led to their interest in basic methods and their research on mechanics and optics.

Needham made a special study of the natural-science content of *Mojing* according to the Western scientific classification research method and the categories of physics and mechanics, mathematics, and geometry. In the sixth part of the fifth volume ("Military Technology: Projectile Weapons and Attack and Defense Technology"), Needham and his collaborator Ye Shan devoted almost one-third of the space to explore the chapters on preparing city gates in *Mojing*, putting forward many refreshing views. Need-

ham believed that "in many respects, Mohism is more similar to Confucianism, but what distinguishes Mohism from Confucianism is its greater enthusiasm for the interests of all people."[31] One thing that cannot escape the reader's attention is that the Mohist debate on "normative thinking" has a strong similarity to the view that the logical discussion of models of contemporary science is progressing. From this point of view, the seven definitions of Mo-tse or his followers have a peculiar modern flavor.[32] British historian Arnold Toynbee once asserted that "Mo-tse's way is more suitable for the actual situation of modern people than Confucius' way."[33] He highly praised the constructive potential of "universal love" in Mo-tse's thought in modern society.

Among the hundreds of schools of thought in the pre-Qin period, Confucianism, Taoism, Legalism, and Yin-Yang all regarded science and technology as the lowest branch of knowledge, disdaining it. Only the Mohist school showed a unique scientific spirit, attaching importance to the study of natural sciences and the exploration of applied technology. In the classic work of the later Mohist school, *Mojing*, many research results of this school on natural sciences and applied technology are preserved, representing the highest level of science and technology in the pre-Qin period and occupying an important position in the history of science and technology in China and even in the world. There are many skilled craftsmen in the Mohist group, but they are different from other schools that are separated from production labor. They engage in production labor while conducting academic activities and scientific research. They are a school with a scientific spirit and logical cultivation. In the scientific thought of the Mohist school, there is both a rigorous experimental spirit and a rigorous logical method, which are indispensable for the development of science.

However, the rich scientific thought of Mohism did not align with the needs of the feudal ruling class and had nothing to do with political ethics. Therefore, it was not appreciated by the rulers at that time. Mohism opened up a very favorable path for the development of ancient Chinese science and provided a better development direction for Chinese traditional culture. The extinction of Mohism is an irreparable loss to both ancient science and technology and traditional Chinese culture. Due to the extinction of

Mohism, the spirit of focusing on science pioneered by Mohism was submerged and did not occupy its due position in traditional culture. From then on, the scientific spirit was lacking in traditional Chinese culture. The lack of use of Mohism is a huge loss to the development of ancient Chinese science. If the scientific spirit of Mohism had occupied its due position in traditional Chinese culture, the status and fate of science and technology in ancient China might have been different. Our ancestors' contributions to the world are far more than the four great inventions, and they may have reached Ellul's technological society.

Conclusion

Looking at the history of traditional Chinese technology from Ellul's perspective is an interesting and worthy perspective. Ellul carefully observed, pondered, thought, and predicted the modern world. A large part of his theory coincides with Chinese technological civilization. Such a surprise also reflects the scientificity and correctness of Ellul's research. But alongside this, in the five-thousand-year history of Chinese civilization, there is indeed quite a lot of traditional Chinese culture that is worth studying and learning from. "Stones from other mountains can be used to polish jade" (它山之石可以攻玉), which means that talents from other countries can serve one's own country. The difference between Chinese and Western scientific models comes from the difference in thinking mode, and the history and culture of other countries can also provide solutions to some theoretical dilemmas. I believe that the rich and long history of ancient Chinese technology can bring a new perspective to the study of Ellul's theory. Technological society is the fate of modernity, but this fate is not unchangeable and reversible. Ellul tried to explore a way out by himself, and at the same time he encouraged us to find answers ourselves while thinking. "At the end of my books, readers are called to take action and make their own decisions, and they surely say to themselves, 'This is very annoying. I don't see which action I can take.' They would prefer a last chapter in which someone would tell them, 'Here is what you must think and do.' This last chapter I will never write."[34]

As a cultural value, the concept of "heaven and man" has had a significant

and profound impact on the evolution of ancient Chinese technology, but the factors that affect its evolution are not limited to this. In fact, as Joseph Needham said in *The Titration of Civilization*, the characteristics of the evolution of ancient Chinese technology cannot be reduced to a single reason but to various complex systems. Therefore, when we discuss the impact of the "concept of heaven and man" culture today, we are also looking for the value dimension that has been lost in the development of technology. The "technological society" grasps only the function of technology itself and the efficiency it brings and ignores its connection with people's overall life, which is core to ancient Chinese wisdom. Wu Jing, a historian of the Tang Dynasty in China, mentioned in *Zhen Guan Zheng Yao* (贞观政要) that "using the past as a mirror, we can know the rise and fall; using people as a mirror, we can understand gains and losses."[35] Attaching importance to history, studying history, and learning from history are the fine traditions of the Chinese nation's five-thousand-year-old civilization. We believe that we can learn a lot of wisdom from the Ancients. If we examine Ellul's technological-society issues from the perspective of the application and constraints of Chinese traditional culture on technology, we can all gain new and positive research significance and value today and burst out with new vitality.

Notes

1. Joseph Needham and Xu Ruzhuang, "Science and Society in the East and West." *Chinese Journal of Nature* 12 (1990): 818–27, p. 818.
2. Jacques Ellul, *The Technological Society*, trans. John Wilkinson (Knopf, 1964), 79.
3. Ellul, *The Technological Society*, 117.
4. Ellul, *The Technological Society*, 33.
5. Ellul, *The Technological Society*, 34–35.
6. Karl Marx and Friedrich Engels, *The Complete Works of Marx and Engels* (Shandong People's Publishing, 1977) 47:427.
7. Ellul, *The Technological Society*, 33.
8. J.D. Bernal, *History of Science in Antiquity* (Peking University Press, [1959] 2012), 28.

9. "Many Western Inventions Owe Their Origin to China." *Frankfurter Allgemeine Zeitung*, November 13, 1990.
10. Du Shiran, *Science and Technology in Chinese Civilization* (Peking University Press, 2012), 28.
11. Joseph Needham, *Technologies in Ancient Chinese Science and Technology* (Science, 1975), 4–5.
12. Ellul, *The Technological Society*, 130.
13. Joseph Needham, *Science and Civilization in China*, vol. 1 (Shanghai People's Publishing, 2010), introduction.
14. Ilya Prigogine, *The End of Certainty: Time, Chaos and the New Laws of Nature* (Free Press, 1997), "Preface to Chinese version."
15. Carl Mitcham, "The Question Concerning China." *Ellul Forum* 68 (2021): 25–42, p. 26.
16. Ellul, *The Technological Society*, 28.
17. Zhou Han Guang and Wang Yi Liang, *Competition of Craftsmen* (East China Normal University Press, 2006), 77–78.
18. Ellul, *The Technological Society*, 66.
19. Ellul, *The Technological Society*, 76.
20. Li Meidong et al., *A Brief History of Science and Technology in China* (China Youth, 2009), 586.
21. Marx and Engels, *Collected Works*, 5:861.
22. Ursula M. Franklin, *The Real World of Technology* (Nanjing University Press, 2019), 15.
23. Ellul, *The Technological Society*, 69.
24. Lui Ying, *Zhuang Zi* (China Social Sciences, 2004), 95.
25. Qian Sima, *Bao Ren Shao Qing Shu* (报任少卿书). *Han Shu Sima Qian Zhuan* (Zhonghua, 2012); Wu Chucai and Wu Diaohou, *The Finest of Ancient Prose* (古文观止) (Zhonghua, 1995). Sima Qian, a great historian, literary figure, and thinker from the Western Han Dynasty of ancient China, authored the *Shiji*, the first comprehensive historical record in China's history that covers a period of over three thousand years, from the legendary Yellow Emperor era to the Taichu Period of Emperor Wu of Han. Qian Sima, *Shiji* (Zhonghua, 2014).
26. Feng Youlan, *A New History of Chinese Philosophy* (People's Publishing, 1982), 1:89.

27. Ren Jiyu, *Mo-tse and Mohism* (Beijing Press, 2016), 198.
28. Wu Yujiang, *Collation and Annotation of Mo-tse* (Zhonghua, 1993), 336.
29. Dong Zhongshu, *Luxuriant Dew of the Spring and Autumn Annals* (春秋繁露) (Zhonghua, 2017), 36.
30. Joseph Edkins, "Notice of the Character and Writings of Mo-tsi." *Journal of the North China Branch of the Royal Asiatic Society* 5 (1858): 165–76, p. 170.
31. Joseph Needham, *Chinese History of Scientific Thoughts* (Jiangxi People's Publishing, 2000), 193.
32. Needham, *Chinese History of Scientific Thoughts*, 221.
33. Arnold Toynbee and Daisaku Ikeda, *Choose Life: A Dialogue Between Arnold Toynbee & Daisaku Ikeda.* Translated by Xun Chunsheng (International Culture Publishing, 1997), 413.
34. Ellul, *The Technological Society*, 33.
35. Wu Jing, *Zhen Guan Zheng Yao* (贞观政要) (Yuelu, 2000).

About the Contributors

Brandon Dorn is a designer and photographer living in Durham, North Carolina. He has written and spoken on information systems and graphics, ethics in technology, the history of software design, and design practice. He published his first book of photography, *Fallen Things*, in 2022.

Virginia W. Landgraf has been a metadata analyst at the American Theological Library Association since 2004. She did her PhD work under Max Stackhouse at Princeton Theological Seminary, where her dissertation was on Jacques Ellul's theological and sociological perspectives on institutions. She has presented and published on various aspects of Ellul's thought at the Society of Christian Ethics, American Academy of Religion, Society of Biblical Literature, and several Jacques Ellul conferences.

Jacob Marques-Rollison is co-president of the International Jacques Ellul Society. He holds a PhD in divinity from the University of Aberdeen and is the author of *A New Reading of Jacques Ellul: Presence and Communication in the Postmodern World* and co-author of *Jacques Ellul: A Companion to His Major Works*. He is currently living and working at L'Abri Fellowship in Huémoz, Switzerland.

Frédéric Rognon is a pastor in the Église protestante unie de France (Reformed Church in France), professor of philosophy in the Protestant Theology Faculty at the University of Strasbourg, and director of the review *Foi & Vie*. His books include *Jacques Ellul. Une pensée en dialogue* (2007; second edition, 2013), *Générations Ellul* (2012), *Le Défi de la non-puissance* (2020), *Jacques Ellul. Exister c'est résister* (2022), *Pour comprendre la pensée de Jacques Ellul* (2022), *Jacques Ellul aujourd'hui* (2022), and *Prier quinze jours avec Jacques Ellul* (2023).

Yanyu Sun is a PhD student in the School of Marxism, Nanjing University, People's Republic of China. Yanyu holds a bachelor's degree in film, drama, and television literature (Nanjing University), a master's degree in film and television (University of Bristol, UK), and has studied Chinese television and theater. Her doctoral research focuses on Jacques Ellul's technology theory and media theory.

About the International Jacques Ellul Society

The International Jacques Ellul Society, founded in 2000 by former students of Ellul, links scholars, students, and others who share an interest in the legacy of Jacques Ellul (1912–94), longtime professor at the University of Bordeaux. Along with promoting new publications related to Ellul and producing the *Ellul Forum*, the Society sponsors a biennial conference. IJES is the anglophone sister society of the francophone Association internationale Jacques Ellul.

The objectives of IJES are threefold:

Preserving a Heritage. The Society seeks to preserve and disseminate Ellul's literary and intellectual heritage through republication, translation, and secondary writings.

Extending a Critique. Ellul is best known for his penetrating critique of *la technique*, of the character and impact of technology on our world. The Society seeks to extend his social critique particularly concerning technology.

Researching a Hope. Ellul was not only a social critic but also a theologian and activist in church and community. The Society seeks to extend his theological, biblical, and ethical research with its special emphases on hope and freedom.

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