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Beyond Ellul's Technique:
Science as *Ultima Ratio* according to Bernard Charbonneau
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Around 1948, intent on writing a book on the State to counter its overwhelming prestige in the postwar era, Bernard Charbonneau fatefully asked Jacques Ellul to write the book on Technique, the key concept he had himself pioneered in the early 1930s but for which his friend would become famous in the 1960s. As Ellul wrote in that book, “the state and technique—increasingly interrelated— are becoming the most important forces in the modern world; they buttress and reinforce each other in their aim to produce an apparently indestructible, total civilization.”¹ Both loomed large among the many to which Charbonneau would dedicate books (often long-unpublished) from that decade onward, most of them expanding on sections of a massive manuscript he kept rewriting over the 1940s and 1950s, referring to it as his *Summa*. Initially entitled *Par la force des choses*, using a French idiom about the irresistible power of impersonal necessity to refer to the human habit of abdicating freedom in its name, this may have been the “work on technocracy” mentioned in wartime correspondence with his friend Pierre Prévost.² When Ellul's own book on Technique came out in 1954, Charbonneau seems to have developed reservations about its relative neglect of Science itself as a driving force of what he still called “technical Progress” in a thousand-page version of the *Summa* from the late 1950s. Science is intimately tied to the central spiritual issue of freedom in a 300-page version entitled *La liberté* which not only sketched his essay *Je fus (I was)*, self-published in 1980, but also contains the kernels of his books on a range of topics, many also addressed by Ellul. Among these are two Latin-titled works dealing with Science written later in that decade: *Finis Terrae*, of which I have co-translated a sample (with David Bade) as *Land's End*, and

¹ Jacques Ellul, *The Technological Society*. Translated from the French By John Wilkinson. With an Introduction by Robert K. Merton. New York: Vintage Books, 1964, 318.

² Letter from Pierre Prévost to Bernard Charbonneau, December 2, 1941.

especially *Ultima Ratio*, from the legal phrase for a final argument of authority, which Science is to modern man.

Rather than stick to this definitive statement of Charbonneau's growing emphasis on Science, about which he never missed an opportunity to tell me that it differed from Ellul's on Technique³, I have chosen to trace in this paper some early statements of his alternate take on the relative significance of these twin phenomena. Their articulation is thus discussed around the mid-1950s in the first chapter of the third part of *La liberté*, initiating the examination of the dark sides of freedom by focusing on how it is put into question by Science and Technique, over three chapters dealing respectively with the ambiguity of Science, the imperatives of Technique, and organization. The latter is a broader concept also encompassing the State and political economy, and the common denominator of all forms of Progress as Charbonneau understood it, naming it as the enemy of Man in 1935.⁴

Twenty years later, he completes that thought by writing that if the spirit which drives science is that of freedom, left to its own devices, Science ends up destroying freedom, because of the nihilism they both harbour deep down. In its passion to get behind appearances and know the real, scientific research treats it as its god, ready to sacrifice everything to it, through profanation, criticism, analysis and measurement. For Science is atheistic, caring neither for the True, the Just, nor the Beautiful, leaving in their place an empty vastness beyond human scale where God is absent, ruled by blind chance and equally meaningless necessity. Hence the temptation to reintegrate God and Man within scientific knowledge, and to identify freedom with necessity in that new totality.

This process is then justified by two mutually contradictory strategies. On the one hand is the claim to neutrality of a Science that, being value-free, can supposedly do no wrong, unless it is misused by non-scientists. For unlike

³ See Ellul, *The Technological Society*, 11: "I shall often use the term *technique* in place of the more commonly used term *science*, and designate as techniques work that is usually termed scientific. This is due to the close association of technique and science which I have pointed out and which I shall discuss more fully later on."

⁴ Charbonneau's public lecture at the Athénée de Bordeaux on January 15, 1936, entitled "Le Progrès contre l'Homme", was announced in the *Journal intérieur des groupes d'Esprit*, November 1935.

religious knowledge, scientific knowledge gives us access to a sterile environment where our thought is not involved, remaining free from risk. This is the appeal of objective research as a kind of parlour game that dispels anxiety⁵, even as it allows us to get a grip on things. Perhaps unwittingly borrowing the anthropological framework of Ordre Nouveau personalists Arnaud Dandieu and Claude Chevalley in their groundbreaking phenomenology of the scientist⁶, Bernard Charbonneau points out that, “because Science grants us access to the mastery of powers, it is related to magic, only now a perfectly white magic, since black magic has disappeared,” along with the ancient taboos and prohibitions that clung to smiths as suspect wielders of raw, elemental powers. As Daniel Cérézuelle’s doctoral dissertation would later corroborate, for Charbonneau, “the spirit of Science remains that of magic; it is still seeking the philosopher’s stone: to pierce the secret of things in order to use their virtues; to intellectually dominate the material Universe so as to practically master it,” all the while putting doing above being.⁷ “And in a world that values Matter, the magician becomes a priest,” adds Charbonneau.⁸

⁵ See Charbonneau’s *Ultima Ratio* (1984-86), published as a diptych with the reissue of *Le Paradoxe de la Culture* (Paris: Denoël, 1965) under the joint title *Nuit et Jour. Science and Culture*. Paris: Economica, “Classiques des Sciences sociales” series, 199, 1172-1173: “À son tour la vérité scientifique prétend résoudre la contradiction fondamentale qui angoisse l’esprit humain et fonder ainsi la vie des individus et leur association. Cette fois elle le fait encore plus efficacement que le monisme religieux ou idéologique, par la suppression pure et simple de toute référence spirituelle: le Sens, c’est le non-sens, ce qui est impensable. La justification de l’homme et de son univers consiste donc à ne plus penser.”

⁶ See Christian Roy, “Prometheus Underground. Probing the Scientist in Depth as the Carnal First Act of French Phenomenology with Arnaud Dandieu and Claude Chevalley”, *Journal of Speculative Philosophy*, Vol. 38, No. 3, 2024, 274-286.

⁷ It is hard not to think here of all the advertising lingo, be it for cars or cosmetics, self-help or spirituality, that promises to “unlock the secret” of this-or-that so we can “tap into the hidden power” of this-or-that to do with it as we please and “deserve” as rightful masters of the real. See Ellul, *The Technological Society*, 212: “It is scandalous that there are such great unused reserves. Technique’s basic objective is to use everything, to make everything usable, that is, to assign a service purpose to what is independent, and to eliminate what exists on its own, in order to make it exist for man’s profit. The utilitarian spirit, that of profit, is the exact double of Technique.”

⁸ See Charbonneau, *Finis Terrae*, 181: “La vérité scientifique permet de manipuler la matière et d’en extraire la quintessence : l’énergie, et à partir d’elle de transformer le monde. La science est une magie, mais une magie efficace parce qu’elle est dépouillée de la part de rêve humain qui stérilisait l’ancienne. Elle réalise ainsi le projet des alchimistes. Et ses vérités opératoires le sont d’autant plus qu’elles s’appliquent dans une société qui, sous le couvert d’une liberté verbale, ne croit qu’à la matière et à la quantité, à la nécessité et à l’action qu’impose son diktat ; ou à l’idée qu’elle s’en fait.”

Thus, far from being neutral, following its other, opposite claim, Science becomes the only access to Truth and the Beautiful. For in a society where many religious certainties coexist wherever they even still exist, the only common certainties, beyond Churches or Nations, are scientific in nature. This was for instance the argument of philosopher of science Jean Bachelard for holding scientific rationalism as the supreme truth and sole guarantor of universal values applicable to all mankind. But for Charbonneau, this means that “Science, which owes its existence to doubt and criticism, inherits all the vices of Dogmas and Churches.” It is now Science rather than God that calls for blind trust in unexamined scientific truths. The narrow certainties provided by Science become Truth when a specialist dogmatically extrapolates to the whole Universe discoveries made in a tiny corner of it, be it market interest by an economist or the sex drive by a psychoanalyst.⁹ Counter to the liberal tenet that Science is the basis of democracy, once it has displaced and replaced Church authority with its own, it threatens not only reason, but the culture-bound, society-wide common sense that enables citizens to exercise judgment on public affairs. This age-old democracy of knowledge is supplanted by the modern monopoly of Science, i.e., of some scientists, which quickly extends from the realm of Nature to economic and social facts, and threatens to engulf the political on the way to complete takeover of the real. For Science’s “investigation of conditions leads to that of means: i.e., to Technique.”

Save for giving Science the initiative here, Charbonneau rehearses points made by Ellul about the difficulty of keeping track of the chicken and the egg in the interplay of Science and Technique, where the former’s responsibilities as theory are however often downplayed relative to the latter’s practice. But the modern novelty is precisely that it is hard to tell where Science ends and

⁹ See Charbonneau, *Finis Terrae*, 196: “L’existence personnelle se réduit aux exigences de l’inconscient et de la libido sexuelle, la vie sociale aux contraintes de l’économie et de la politique.”

176: “L’autorité étant indivisible, l’autorité du savant comme celle du prêtre ne peut se limiter à tel canton du savoir et de la vie. La connaissance a beau se spécialiser, elle donne droit à juger de tout, notamment de la politique intérieure, et surtout extérieure.”

Technique begins.¹⁰ “Just as scientific progress is the basis of technical progress, Science in turn would not progress if it did not have at its disposal machines and products manufactured by technique; and the scientist himself must increasingly turn into a mechanic.”¹¹ This kinship of Science and practice by the same token makes it converge with entities whose *raison d’être* is power: Money, and above all the State, as “disinterested” research would not be supported if it was not expected to pay off in the long run.¹² “This truth, long concealed in modern

¹⁰ As Ellul states in the “Science and Technique” section of *The Technological Society*, 7: “Everyone has been taught that technique is an application of science; more particularly (science being pure speculation), technique figures as the point of contact between material reality and the scientific formula. But it also appears as the practical product, the application of the formulas to practical life.

This traditional view is radically false. It takes into account only a single category of science and only a short period of time: it is true only for the physical sciences and for the nineteenth century. It is not possible therefore to base a general study on it nor, as we are attempting to do here, an up-to-date review of the situation.”

9-10: “...But it is not application which characterizes technique, for, without technique (previous or concomitant), science has no way of existing. If we disown technique, we abandon the domain of science and enter into that of hypothesis and theory. ...

...There we have, indeed, the final word: science has become an instrument of technique.

Later, we shall consider how it has come about that scientific utilitarianism has gained such momentum from technique that a disinterested piece of research is no longer possible. It has always been necessary to have a scientific substructure, but today it is scarcely possible to effect a separation between scientific and technical research.”

Compare Charbonneau, *Finis Terrae*, p. 181: “D’où la parenté profonde de la science et de la technique. Ceux qui veulent ôter à la science la responsabilité de ses produits prétendent distinguer l’une de l’autre. La science serait connaissance et théorie pures, la technique pure mise en pratique par des ingénieurs, des industriels, des militaires ou des politiciens : ce seraient eux qui auraient inventé la bombe atomique. Alors qu’aujourd’hui partout l’application technique suit la découverte scientifique comme son ombre...”

¹¹ See Ellul, *The Technological Society*, 9: “Pure science seems to be yielding its place to an applied science which now and again reaches a brilliant peak from which new technical research becomes possible. Conversely, certain technical modifications— in airplanes, for instance— which may seem simple and mechanical, presuppose complex scientific work. The problem of reaching supersonic velocities is one. The considered opinion of Norbert Wiener is that the younger generation of research workers in the United States consists primarily of technicians who are unable to do research at all without the help of machines, large teams of men, and enormous amounts of money.”

Compare Charbonneau, *Finis Terrae*, 181-182: “Ayant le même esprit, le dieu science et le diable technique ont les mêmes méthodes, et leur parenté est de plus en plus directe. Si à l’origine le progrès scientifique est dû à l’intuition d’un homme bien plus qu’à l’organisation et à l’équipement de la recherche, ceci a bien changé, aujourd’hui la science est enchaînée à ses bureaux et à ses machines. Que serait-elle sans les coûteux engins fournis par le grand Capital ou l’État ? Les mathématiciens eux-mêmes se servent d’ordinateurs, qui d’ailleurs n’existeraient pas sans les progrès de la mathématique. Impossible de dire aujourd’hui où finit la Science et où commence la Technique.”

¹² See Charbonneau, *Finis Terrae*, 194: “La science désintéressée, passion de la connaissance pour la connaissance, devient la Recherche scientifique dont le gouvernement, l’Armée et les

societies in peacetime, was revealed in wartime; and since then the State mobilizes Science for Production as well as for destruction”; not just for nuclear physics at the expense of other areas, but because Science allows the State to know the society it must dominate, and it is Science that gives it the means to do so.

Charbonneau spelled out the Biblical roots of his insights in a couple of 1957 articles in the Protestant weekly *Réforme*, identifying such stock-taking in the census as the root of all technique:

the necessary foundation of any efficient action, but also a procedure with fateful consequences under its aseptic appearance. It is not for nothing that Scripture saw in it the mark of the Beast; the census is the crucial act, a true spell that captures life in a paper covered with signs. An act of profanation that reduces it to the status of an object. The numbering of everything announces the use of everything.¹³

Trusts fixent les orientations aux fins d'accroître les profits et de la puissance. Cette recherche planifiée fait plutôt penser à celle que le chasseur impose à ses chiens. ”

Compare Ellul, *The Technological Society*, 9-10: “It is not a question of minimizing the importance of scientific activity, but of recognizing that in fact scientific activity has been superseded by technical activity to such a degree that we can no longer conceive of science without its technical outcome As Charles Carmichael has observed, the two are closer than ever before. The very fact that techniques advance with great rapidity demands a corresponding scientific advance, and sets off a general acceleration.

Moreover, techniques are always put to immediate use The interval which traditionally separates a scientific discovery and its application in everyday life has been progressively shortened As soon as a discovery is made, a concrete application is sought Capital becomes interested, or the state, and the discovery enters the public domain before anyone has had a chance to reckon all the consequences or to recognize its full import. The scientist might act more prudently; he might even be afraid to launch his carefully calculated laboratory findings into the world. But how can he resist the pressure of the facts? How can he resist the pressure of money? How is he to resist success, publicity, public acclaim? Or the general state of mind which makes technical application the last word? How is he to resist the desire to pursue his research? Such is the dilemma of the researcher today. Either he allows his findings to be technologically applied or he is forced to break off his research. Such is the drama of the atomic physicists who saw that only the laboratories at Los Alamos could provide them with the technical instruments necessary to the continuation of their work. The state, then, exercises a very real monopoly, and the scientist is obliged to accept its conditions. As one of the atomic- scientists put it: “What keeps me here is the possibility of using for my work a special microscope which exists nowhere else” (Jungk).” science has become an instrument of technique.”

¹³ “La technique. Un mécanisme qui met en jeu la liberté de l’homme”, *Réforme*, December 14, 1957, in Bernard Charbonneau, *Lexique du verbe quotidien*. Alexandre Chollier, ed. Geneva: Héros-Limite, 2016, 102. See Ellul, *The Technological Society*, 212: “*Domination* is also inseparable from *Technique*; with it, it is always a matter of mastering certain forces, of dominating certain areas, of taking possession of new bodies, and in reality, of a kind of extension of ownership. It is not the spirit of ownership that is dominant; this is only a consequence of technical possibility. It is when technical means allow it that property takes over and becomes established.”

Objective knowledge is compulsive power. With it, “continuing the adventure of Eden, we gain access to science.” But in the atomic age, “this science only reveals to us the divinity we were already worshipping energy. Nothing really exists, but energy. Everything else—man himself— is but a vain form”, destined to evaporate in time, like a mist.¹⁴ For “scientific nihilism already tended to teach us that, deep down, our subjectivity was the fool of appearances” it alone pierced to put at our disposal pure empty potential: “divine power, without the thought that alone can give it an expression. Like gods, we will be able to mold the universe as we please from its basic element. But since our powers act as substitutes for thought, we will only destroy the forms of creation to liberate its energy” (in Teilhard de Chardin’s favourite phrase), either in a solar cult of force or in a contraction of all force in a total system as the only alternative to chaos, unless perhaps a partial catastrophe wakes us up in time.¹⁵

We can see the nihilistic slide here from relativizing, objectifying knowledge itself to standardized plastic potential, and thence to Heidegger’s standing-reserve of power, or Jünger’s total mobilization of it and indifferent use for destruction and production under Technique’s all-consuming self-increase, intimately tied to Capital’s creative destruction of all that is solid, melting it into air. This gradient is implied in Charbonneau’s transition to *La Liberté*’s chapter on the imperatives of Technique from that on the ambiguities of Science, as anything but neutral; not meant to bring us Truth, Science merely sets problems. “It says nothing of ends, it only gives us means, all the more efficient as they are used for lower ends.” Thus, “what is true of Science is even truer of its product: Technique. Like Science, Technique considers means in themselves, outside of any ends they may serve; and it uses the same scrupulous methods for experimentation and verification. But its mind is even narrower than that of the Sciences, as it only takes into consideration an even smaller portion of the real: efficiency, in the material sense of the term. Science is disinterested, it

¹⁴ See Charbonneau, *Finis Terrae*, 196: “La science déréalise et désidentifie l’individu en lui révélant qu’il n’est qu’un reflet de forces impersonnelles ou collectives.”

¹⁵ “La question sans réponse : La chose”, April 20, 1957, in Charbonneau, *Lexique du verbe quotidien*, 86-87.

sometimes seeks knowledge for its own sake; Technique never is, it only takes into consideration a very limited aspect of the real: practice in itself.” With Ellul¹⁶, Charbonneau hastens to add that “there have always been techniques” to “act upon things efficiently,” only that Technique as such dates from the modern era.

In traditional societies practice in itself did not exist, practices always partook of rites, they were inseparable from religious or even moral concerns. Considering efficiency in itself, without referring to God, was inconceivable or monstrous; one had to be a magician to thus dominate the powers of the earth, and the magician too did not manage to be objective, he only escaped God to deliver himself to the Devil. The technical spirit was only able to triumph the day the Gods were driven out of Nature; and, likewise, technical consideration will only be able to extend to man the day man himself will be profaned: when man will be able to lay on the person or on society the same indifferent hands he puts on motor parts.

Charbonneau saw this day coming with the advent of human sciences and structuralism’s concomitant proclamation of the Death of Man after that of God. In 1957, he faced the end of a series of reflection camps he had been leading since 1953 with Ellul for some of the latter’s students, and which he now despaired of bringing to the next level as the nucleus of “a society that would not be the negation of persons”. With nothing to lose, he now challenged participants to engage in a public action of defiance of the new religion of Science, by posting on the doors of the University of Bordeaux, in the manner of Luther nailing his 95 theses on those of All Saints Church in Wittenberg, a number of clear propositions about the “human sciences” as an oxymoron: either they were human but could not claim the status of objective sciences, or they were indeed such sciences, but could only be inhuman, and abet the dehumanizing processes and the powers that be.¹⁷ But when Ellul’s students proved reluctant to take this

¹⁶ See Ellul, *The Technological Society*, 7: “Historically, technique preceded science; even primitive man was acquainted with certain techniques.”

xxix: “Primitive man, hemmed in by prohibitions, taboos, and rites, was, of course, socially determined. But it is an illusion— unfortunately very widespread— to think that because we have broken through the prohibitions, taboos, and rites that bound primitive man, we have become free. We are conditioned by something new: technological civilization.”

¹⁷ Charbonneau often returned to this formula, e.g. in *Finis Terrae*, 184: “Soit, fidèles à leur objet, les sciences de l’homme s’identifieront à lui, participant à ses mythes et à ses mœurs, et pour s’être voulues humaines ne seront pas scientifiques. Soit se voulant scientifiques elles se

step and even follow previous commitments, Charbonneau angrily discontinued his revolutionary strategy of over two decades. He had finally hoped it could at least issue in a kind of Bordeaux School, a free college of social research comparable to the Frankfurt School, which would have challenged the hegemony of Science and Technique even as universities, intellectuals and all institutions were becoming its zealous instruments.¹⁸ As a poor substitute for the constitution of alternative communities of persons determined to join thought and action in their shared lives, Charbonneau would eventually shift to writing books in hopes of alerting individual readers to the same issues he had been raising since the days when he first found a faithful ally in Ellul. He still differed from his friend's exclusive Christian approach when he wrote in the mid-eighties in *Ultima Ratio* that "what separates societies founded on spiritual truths or values becomes secondary compared to their commonalities in the face of the negation of the fact of spirit by scientific truth"¹⁹, whose totalitarian drive bypasses life's contradictions more perniciously than religions do, since these at least purport to make sense of existence.

Charbonneau thus called on living spiritual traditions to rally against Science as humanity's antagonist. In *Finis Terrae*, written under the nuclear cloud of the Cold War's final throes, he reworded parts of his *Summa* by significantly setting "scientific progress" rather than "technological progress" against freedom, democracy, and progress itself. He still squarely faced the possibility that "the kernel hidden under the veil of myths and religious traditions might have been sown in vain; and that homo, prematurely dubbed sapiens, might be unable, such as he is, to conceive, let alone put into practice, the destiny for which he was created. In that case it is science, that imperfect knowledge of conditions and means and not of ends, that will fulfill his self-destruction. Either the blind powers it grants him issue in catastrophe. Or, cut off from its spiritual source, rendered

réclameront d'une objectivité qui leur permettrait de s'abstraire de leur société particulière. Elles considèreront les faits humains de l'extérieur, refusant tout ce qui échappe à la méthode et au calcul des sciences, et elles ne seront plus humaines."

¹⁸ See Christian Roy, "La traversée du désert de Jacques Ellul et Bernard Charbonneau dans l'après-guerre", in Patrick Troude-Chastenet, ed., *Comment peut-on (encore) être ellulien au XXIème siècle?* Paris: La Table Ronde, 2014, 245ff.

¹⁹ Charbonneau, *Nuit et Jour*, 178.

sterile, it freezes, freezing him in an organization that saves him from chaos.”²⁰ Averting the system’s final consolidation would entail radicalizing the Copernican Revolution by turning it against its offshoot. For Science’s taboo is but the age-old religious conformism that makes us identify cosmic motion and divine order, as Galileo merely switched the terms of religious Authority and material power under Science’s falsely neutral cover, enabling Technique in all its forms.²¹

²⁰ *Finis Terrae*, 186.

²¹ *Finis Terrae*, 216.