One of Goya’s etchings in the series called *Los Caprichos* of 1796 depicts a sleeping figure, his head resting on a writing table, pen and paper scattered around him. Around the sleeping man hovers a shadowy swarm of bat- and owl-like creatures, and at his feet lies a fierce looking cat, perhaps a witch’s cat. The inscription of the etching reads: “El sueño de la razón produce monstruos”—the sleep (or dream) of reason produces monsters. The meaning of this allegorical tableau has been construed in two different and opposing ways. One interprets it to mean that when reason sleeps the dark monsters of irrationality are then free to venture forth unchecked—a rather Freudian reading. The other interpretation holds that the dream of reason itself produces the nightmare vision: that the monsters are the very spawn of reason—what might be called the Burkean reading. Whichever, if either, is right, the second serves as a *leitmotif* running through the criticism of scientifically planned societies that began in reaction to the French Revolution. From Edmund Burke and Joseph de Maistre in the eighteenth century through such twentieth-century critics as Lewis Mumford, Karl Popper, and Isaiah Berlin, the utopian concept of a rationally planned or *dirigiste* society is viewed as one of reason’s most nightmarish monsters.

Burke, the British statesman and political theorist, believed

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*Condorcet and the Logic of Technocracy*
that the “metaphysicians”—by which he meant the Enlightenment *philosophes*—bore responsibility for the convulsions of the French Revolution. Of these figures, he famously declared:

> a more dreadful calamity cannot arise out of hell to scourge mankind. Nothing can be conceived more hard than the heart of a thoroughbred metaphysician. It comes nearer to the cold malignity of a wicked spirit than to the frailty and passion of a man. It is like that of the Principle of Evil himself, incorporeal, pure, unmixed, dephlegmated, defecated evil.¹

In England, the radical William Godwin, author of *Political Justice*, was held by his enemies to be just such a demonic influence: his ideas, claimed Burke, were “the brood of that putrid carcase [sic] the French Revolution,” and Horace Walpole designated him “one of the greatest monsters exhibited by history.”² In this perfervid vein, anti-Jacobin opinion developed the trope of the rationalistic social philosopher creating a wild, death-dealing force—Revolution—that he cannot control and that ultimately destroys its creator. This, of course, is the plot of *Frankenstein*; and, indeed, many explications of Mary Shelley’s novel discover in it an attack not only on rogue science, its ostensible subject, but even more so upon the political philosophy held liable for the French Revolution, the Enlightenment’s own Frankensteinian Monster. Read so, *Frankenstein* appears as an allegorical version of Burke’s *Reflections on the Revolution in France*, itself described as “an externalized, Gothic melodrama” that “denounces armed insurrection as a pernicious monster set free by experimenters and reformers.” Thus Dr. Frankenstein becomes the fictive equivalent of a Voltaire, a Rousseau or a William Godwin, who—not so incidentally—was Mary Shelley’s father.³

Percy Shelley’s chemistry, writes one of his critics, is but a cipher for his politics⁴; similarly Mary Shelley’s chemistry—or what-

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ever science accounts for Victor Frankenstein’s creation—is a “political chemistry,” cautioning against the reformist radicalism of her father and his sort, whose utopian schemes contained the seeds of pernicious historical monstrosities. Frankenstein thus emerges as the archetype not only of the mad scientist of science fiction, but also of the mad social scientist of twentieth-century dystopias: the Well-Doer of Zamyatin’s We (1921), the World Controller of Huxley’s Brave New World (1936), Big Brother of Orwell’s Nineteen Eighty-Four (1948) are avatars of Frankenstein-as-social-scientist.

The concept of a science of society—the possibility, that is, of discovering a “social physics,” to employ Auguste Comte’s phrase—emerged in the Enlightenment and reached its apogee, if not its end, in the nineteenth century with Positivism and similar movements. In such schema, society must be artificially—that is, scientifically—recreated, according to some rational blueprint drawn up in accord with the laws of social physics and realized by the techniques of social engineering. Rousseau, in a crucial passage in The Social Contract, offers the essential desideratum of the utopian social engineer:

He who dares to undertake the making of a people’s institutions ought to feel himself capable, so to speak, of changing human nature, of transforming each individual, who is by himself a complete and solitary whole, into a part of a greater whole from which he in a manner receives life and being; of altering a man’s constitution for the purpose of strengthening it; and of substituting a partial and moral existence for the physical and independent existence nature has conferred on us all. He must, in a word, take away from man his own resources and give him instead new ones alien to him, and incapable of being made use of without the help of other men. The more completely these natural resources are annihilated, the greater and more lasting are those which he acquires, and the more stable and perfect the new institutions.5

Although Rousseau offers nothing approaching a methodology that could be called a “social physics” to realize such a utopia, still his stated goals could best be met (theoretically, anyway) by precisely the systematic application of the principles and techniques of scientific social engineering. I want now to sketch out the logical postulates entailed by the concept of a scientifically planned and administered society—a technocracy—and to consider how this logic directs the social philosophy of one of the first and most fas-

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cinating of the proto-technocrats, the Marquis de Condorcet.

In a chapter entitled “Artificially Created Societies” in The Scientific Outlook of 1931, Bertrand Russell writes: “No society can be regarded as fully scientific unless it has been created deliberately with a certain structure in order to fulfill certain purposes”—that is, on the model of a machine. While both the American and French Revolutions attempted to establish “intentional” societies, both had only limited political aims. However, Russell continues, “Scientific technique has so enormously increased the power of governments that it has now become possible to produce much more profound and intimate changes in social structure than any that were contemplated by Jefferson or Robespierre. . . . [I]t is becoming possible to create societies as artificial as the steam engine, and as different from anything that would grow up of its own accord without deliberate intention on the part of human agent” (204-05). Obvious in this line of thought is the rejection of nature in favor of art, of the organic conception of society in favor of the mechanical. Implicit, of course, is that art entails an artist, the mechanical a mechanic. Or, less metaphorically, as Russell concludes: “If there is to be scientific experimentation in the construction of new kinds of societies, the rule of an oligarchy . . . is essential” (211). Technocracy, that is, necessitates a ruling class of experts, which, possessed of the requisite scientific knowledge, must exercise exclusive rights to social decision making: a class of technocrat kings.

The evolution of Condorcet from a revolutionary republican to a proponent of scientific oligarchy provides an instructive, concrete example of the logic of technocracy. On the one hand, Condorcet is the last of the great philosophes, a passionate believer in liberty, equality and representative government, an active and influential participant in the Revolution of ‘89. On the other hand, he was among the first theoreticians of a science of politics—what he termed “social mathematics”—whose ideas profoundly influenced the Positivist thought of the subsequent century: indeed, Comte called Condorcet his “spiritual father.” The work of this Janus-like figure that proved most influential was the Esquisse d’un tableau historique des progress de l’esprit humain, one of the central documents in the history of the idea of Progress, written in 1793 when,

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ironically, Condorcet was in hiding from the forces of the Terror that he had helped unleash. Croce called the *Esquisse* “the last will and testament” of the eighteenth century, the perfect expression of the ideas and hopes of the Enlightenment; but another historian pronounced it “the starting point for the social theory of the nineteenth century.” Both are right. In the duality of Condorcet’s thought the liberal-democratic values that were the best heritage of the Enlightenment contend with the scientistic imperatives that culminate in the authoritarian sociology of Comte (a system that J. S. Mill once described as medieval Catholicism minus the Christianity).

Clearly the liberal values predominate in most of Condorcet’s writings; the technocratic ones are less pronounced and often only implicit. He saw his social mathematics as a liberating, egalitarianizing technique, a methodology for implementing the collective will of the people. Following his mentor Turgot, he argued that “nature has joined together indissolubly the progress of knowledge and that of liberty, virtue and respect for the rights of man.”

Indeed, in the *Esquisse*, liberty and reason are correlates, progress their mutual development: Condorcet could envision no conflict between liberty and reason. The faith in the future that animates this work—particularly the prophetic Tenth Epoch—stems from Condorcet’s belief that ever more people will become ever more reasonable, as ignorance and superstition retreat before the inexorable advance of scientific knowledge. The progress of mankind

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“is indeed no more than the sum of that development realized in a large number of individuals joined together in society”; and, “since nature has set no term to the perfection of human faculties . . . the progress of this perfectibility . . . has no other limit than the duration of the globe upon which nature has cast us” (210-11).

But the Condorcet who—in Frank Manuel’s fine phrase—“democratized the idea of progress” is clearly not the Condorcet in whom Comte would find a spiritual father. The element in Condorcet’s thought that links him to Saint-Simon and the Saint-Simonsians, to Bentham and the Utilitarians, and ultimately to Comte and the Positivists is his belief that a science of politics is possible, that all moral and social questions could be conclusively resolved by application of the proper methodology. In these areas no less than in the physical sciences, he proclaimed in his reception speech before the Academie Francaise in 1782, “The method of discovering truths has been reduced to an art, one could almost say to a set of formulae. In meditating on the nature of the moral sciences, one cannot help seeing that, as they are based like the physical sciences upon the observation of facts, they must follow the same methods, acquire an equally exact and precise language, attain the same degree of certainty.”9 This emphasis on method reflects the belief, which began with Bacon and Descartes, that the right process of inquiry would inevitably result in the resolution of the thorny moral, political, and metaphysical problems that plagued humanity in the “pre-scientific” era.10 The promise of progress, then, depended on discovering the correct method: once discovered, it would render politics simply a matter of applying the general formula to the specific problems. If, Condorcet writes,

the theory of the constitution of the states and the sciences of legislation and administration have fixed principles—if . . . all these sciences consist in deducing the consequences of these principles in such a way that all particular questions relating to these subjects are decided by them—then there will remain almost no questions to be decided according to those vague [political] principles . . . .

9 Selected Writings, 5. For the background to this belief, see Louis I. Bredvold, “The Invention of the Ethical Calculus,” in The Seventeenth Century, eds. Richard Foster Jones et al. (Stanford: Stanford University Press, 1951), 165-80.
Almost nothing will remain arbitrary; government will scarcely be
worth the effort. . . (18).

Evident here is not only the social engineer’s faith that the set
of correct formulae can solve all problems, but also the utopist’s
phobia of social conflict, his obsessive will-to-harmony. In Con-
dorcet, one critic notes, “the historic approach makes a scientific
junction with the utopist.”  

The specific methodologies that Condorcet developed—a
complicated calculus of probabilities resembling modern “game
theory”—is too complex and technical to enter into here, except
to note its general ideological import. Keith Michael Baker sum-
marizes it thus:

Subjected to mathematical analysis, the propositions of the moral
sciences can be as certainly and precisely expressed as can the
truths of the physical sciences. It was thus theoretically possible to
bring the moral and physical sciences together on a sliding scale
of probabilities that could at all stages be expressed and evaluated
with mathematical precision. . . . The result, the philosophe was
convinced, would be a science in which the contingencies of human
life and action could be subjected to mathematical rule.

While Condorcet envisioned his mathematique sociale as a de-
motic science, available to any legislator or legislature, the impli-
cation nevertheless inescapably emerges that, for decision making
to have the infallibility he claimed for it, the calculus would have
to be deployed by a class of probability-calculating experts, a sort
of scientific civil service, the (pardon the pun) mathematapparatchiks. Here the seed of technocracy is sewn.

Progress in the natural sciences, Condorcet and his century
believed, was the work of the great thinkers and was sustained
by uniquely endowed and specially trained men. Why would
progress in the social sciences be achieved any differently? Here,
Frank Manuel notes, “Condorcet faced one of the central historic
problems of the idea of progress—the relative worth of intensive
scientific progress among the elite and of extensive progress of
scientific knowledge among the masses. Which should be pre-
ferred?” Condorcet wanted both, of course, but ultimately opted for the imperatives of what we now call “elite science” and thus, by implication, of elite social science. “Once progress has become the absolute of human behavior,” Manuel continues, “there was an implied immorality in not bringing quickly to fruition the complete development of which humanity was capable. . . .”

To decelerate the pace for whatever reason was therefore a great iniquity, for it was a refusal to bestow happiness upon fellow men. By introducing libertarian safeguards [Condorcet] hoped to avoid the more flagrant impositions and dangers of institutional control. . . . He was often markedly uncomfortable with the denial of absolute liberty, but ultimately in the name of progress he allowed himself to be enticed into the new order.13

And the new order, it appeared, would be headquartered in a Baconian House of Solomon.

Near the end of his life, almost literally in the shadow of the guillotine, Condorcet wrote Fragment sur l’Atlantide (1793), at once an homage to and an extension of Bacon’s vision of a “republic of science” projected in The New Atlantis (1623). In this brief work the disjunction between Condorcet’s liberal and his technocratic values appears most openly. In scientific matters, he argues, the electorate must defer to the expert, to “the opinion of men enlightened on these questions, which are necessarily foreign to the greatest number.”14 The advancement of science is recognized as an inherently hieratic process: “the capacity to decide the means of arriving at new truths can never have the people as judge. . . . There will always be an enormous difference between the man . . . capable of receiving limited instruction, and the man who joins the force and activity of genius to knowledge and the means of enlightenment conferred by the passion for study and the ability to learn” (286). Furthermore, the goals of society at large and those of scientists can never be the same:

that of society is the maintenance of equal rights of each of the members in their greatest extent; that of a scientific association in the advancement of the sciences. In the one, the forms must be within the grasp of the least enlightened individuals; in the other, one must suppose only men accustomed to following a chain of reasoning and to organizing ideas. . . . In one, an equal influence is

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14 Selected Writings, 186. For a discussion of this imperative throughout much of utopian thinking, see Gorman Beauchamp, “Imperfect Men in Perfect States,” Philosophy and Literature 31 (2007), 280-93.
a right for each individual in every decision; in the other, inequality can be in conformity with reason, and it is in conformity with justice. (299)

Condorcet advances here a doctrine of two truths, a truth that governs social life and a truth that governs science. No conflict between the truths governing each realm need arise, except for his belief that politics ought to be a science, capable of the same degree of certainty as physics—and thus, presumably, subject to the same objective criteria as other sciences, where the inequality arising out of expertise is nevertheless compatible with reason and justice. If a hierarchy of ability serves the cause of science, why not the cause of social science? “Here Condorcet raised one of the cardinal issues in the history of the idea of social science,” writes Keith Michael Baker. “He revealed the latent tension involved in that idea between an authoritarian conception of society administered by a scientific elite upon the basis of an unequivocal scientific plan, and that of a libertarian society guided by the public interplay of subjective political action and often uninformed interests.” In the case of scientific organization the tension is resolved “by limiting the power of decision . . . to a most enlightened elite of experts. It was clearly only necessary for Condorcet to take one further step—that of applying this model of scientific organization to the administration of society—to arrive at the fully technocratic conception of social science reached by Saint-Simon and Comte. Yet,” Baker concludes, “Condorcet resolutely refused to take this step.”

Others disagree. Manuel argues, for instance, that Condorcet believed that with “the calculus of probabilities the state would be run by social mathematics—without debate. With one stride the first sociologist of scientific creativity traversed the age of . . . parliamentarianism and arrived at the ideal of the all-knowing technocrat as the ruler of society.” Whether or not Condorcet took the final step into technocracy (whatever that might mean) need not concern us here; what is unmistakable, however, is that the logic of a mathematique sociale—with its guarantee of scientific certitude—be run by social mathematics—without debate.”

15 “Scientism, Elitism and Liberalism,” 137, 164.

in the resolution of social issues—leads inexorably in that direc-
tion, for precisely the reasons that Russell explained that it must. That an irresolvable conflict exists between the sort of democratic egalitarianism that Condorcet espoused, on the one hand, and the imperatives of a science of society such as he desired to institute, on the other, is precisely the point. The tension within the thought of Condorcet evaporates in the utopian schema of Saint-Simon and his followers and those of Comte and his, in which the authoritarian implications of technocracy are not merely conceded but celebrated.
Marquis de Condorcet, title of Marie Jean Antoine Nicolas Caritat, 1743-1794. French mathematician and philosopher known for his work on the mathematical theory of... Condorcet and the logic of technocracy. Dictionary browser. It is an oxymoron and worse, to combine democracy (which is a political system) and Technocracy (which is an economic system). The “experts” who demand to run society are simply deluded by this kind of thinking. The popular rebuke to reason that was Britain’s vote to leave the European Union is a wake-up call. Yet this is present in all international organizations from the United Nations and the Council of Europe to the European Space Agency and CERN, European’s particle-physics lab. These bodies have been built on the belief in the rule of experts “people like us” our rational decision-making and, if we’re honest, our preference for avoiding overt political and public deliberation. It is time to reappraise these axioms of both European and global governance.