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Bacon's *New Atlantis* and the Goals of Modernity

Dr. Timothy W. Burns
Professor of Government
Skidmore College
Ladd Hall 316
815 North Broadway
Saratoga Springs, NY 12866
tburns@skidmore.edu

We live in an age absorbed with technology yet deeply dissatisfied with it, one that is modern and postmodern. I attempt to gain some clarity about our situation by examining the work of one of the founders of modern science and technology, Francis Bacon. I attempt to understand the relation of the two important strands—scientific and political—of his thought. Bacon's *New Atlantis* provides us with some important guidance, if not the key, to this relation.

I begin with Bacon's expressed indebtedness to Machiavelli and his employment of three Machiavellian ideas—the form-less-ness of man, the need to conquer fortune, and the need to replace magnanimity with the virtue of “humanity”—as crucial strands in

the weaving of his new scientific method. That method is prepared in the *New Organon* by a severe criticism of ancient science. The Aristotelian starting point—our pre-scientific awareness of the division of the world into common-sense kinds or classes or forms of things—Bacon repudiates on the ground that it obscures our potential access to a more fundamental or underlying realm, of *homogeneous* phenomena that cut across kinds or forms of things, qualities like heat or light or sound or the pull of gravity. These “simple natures,” as Bacon christens them, can be conceived to operate according to general relational and causal principles that he christens “laws of nature.” These laws neither have nor presuppose any lawgiver other than science itself; they are emphatically not “first principles” in the sense of ultimate causes but are instead hypothesized explanatory rules, posited from induction and then tested or verified by the extent to which they allow scientists to predict and to manipulate, even to transform, the observable world. The laws emerge in the scientist’s mind when nature is put to “tests,” or “bound and tortured,” i.e., through controlled experiments. The new end, a theoretical activity of a new kind, requires a whole new approach to inquiry, entailing armies of experimenters and researchers. Their work is to be conducted in accordance with eliminative induction, through precise experiments, with the help of ever-improving assistance from new scientific instruments. The aim of science thus becomes a new sort of theory interwoven with practice, with the conquest of nature, or a progressive, humane “lordship over the universe” by human beings.

But a Socratic would object that reality or being is best understood as constituted by the interrelated forms of beings given in our common sense experience—even though that experience certainly needs (and could attain) severe purification by critical,

conversational self-scrutiny. What convinces Bacon that this is mistaken? What did the ancients fail to account for or to overcome, thereby dooming to failure their attempt to progress in knowledge of reality? In *The New Organon* Bacon traces the errors of previous thinking to certain influences and prejudices that he calls “idols.” The first of these, “the idols of the tribe,” is the most crucial: The reason mankind at large, seconded by the ancient philosophers, is so resistant to knowledge of general principles of the sort Bacon proposes is that human beings deeply long to find *instead* principles that can be referred to “final causes,” disclosing purpose and purposefulness in all that exists. Bacon associates this longing with a desire for a beneficent, divine ruling power. The ancient philosophers, he charges, were moved fundamentally *not* by a desire for knowledge, but instead by a “shallow” desire for reassurance of cosmic purposefulness. The new science unmask this and other “idols of the mind.” It posits laws of nature which do not and are not intended to disclose final causes or purposes in the physical world, but that will instead enable scientists to bring to a haphazardly ordered nature an *imposed* order.

The new scientific method is then directed explicitly against teleo-theological thinking. Yet it cannot by itself settle the great issue of whether the world is in truth ultimately governed by divine purpose and meaning, or by blind forces of grim necessity: all of its laws are self-consciously *hypothetical*. And given the wide prevalence, everywhere in human history past and present, of human beings testifying to their vivid personal experience of the presence and influence of mysterious divinity that places severe moral limitations, backed up by terrible punishments, on what science ought to do, the new science of nature stands in serious need of some means of disposing of the doubt

as to whether or not reality is at bottom governed by such divinity. The Socratic answer to this doubt was dialectics; Bacon's novel answer is disclosed in the *New Atlantis*.

The work presents itself as a tale narrated by an unnamed leader of an English ship and crew that has survived serious trouble—blown off course and facing death. The leader attributes their condition to their sinfulness, and orders his men to seek divine forgiveness. And when, as if in response to their prayers, an island appears on the horizon, and its people rescue them, the sailors declare that “God surely is manifested in this land.” As the sick are given white pills to hasten their recovery, the leader reminds the men of the continuing threat of death and the need to reform their ways so that God will continue to reward them with protection. Their preservation has it seems been, like Jonah's, miraculous, and they will need another miracle to return to Europe.

This pious orientation *changes* in the course of the sailors' stay on the island. For example, in their parting words to the Governor on the third day, the crew says “our tongues should first cleave to the roofs of our mouths, ere we should forget either his reverend person or this whole nation in our prayers.” The statement echoes the famous words of psalm 137, mournfully sung during the Israelites' Babylonian captivity: “If I forget thee, O Jerusalem, . . . Let my tongue cleave to the roof of my mouth; If I prefer not Jerusalem above my chief joy.” And the echo of the psalm stands in shocking contrast to the original. Not a violent and humiliating captivity of God's people, but a healing and comforting accommodation of their every wish, in a strange land, has begun moving the men to remember *not* Jerusalem, but their human saviors. By the middle of the tale the men are said to account themselves “as free men, seeing there was no danger of our utter

perdition,” i.e., of eternal damnation. They turn away from devotion to a just, loving, miracle-working God. Effecting this turn is the means of securing the new science.

Precisely what is at issue in securing the new science is made clear in the account of the miraculous revelation of the Christian Scriptures to the island. There happened to be present at that event a sage from “Salomon’s House,” which the Governor calls a college that is “the very eye of this kingdom.” This sage uttered a remarkable prayer certifying that what everyone saw was indeed a miracle, before uncovering all the canonical books of the Old and New Testaments—including at least one that had not yet been written. Now a number of things about this account suggest that the sage knew about this biblical God before the revelation—in other words, that the whole thing was a giant hoax. But can we really know that this is the case? The sage distinguishes “divine miracles” from “works of nature” and then describes the “laws of nature” as God’s “own laws,” which God contravenes or “exceeds” when working a miracle, for some “great end.” The laws of nature, he implies, are *not* permanent necessities that bind even God, but laws that God has, as it were, promulgated to govern normal relations of natural bodies, and that He contravenes when He wishes to disclose something great. The sage’s words imply, then, that there really are no necessities, since all of “nature” is susceptible of being suspended by the creator God. This would mean that there is not really a fixed nature at all, but only what *appears* so to those who remain unaware of or deny the existence of the creator and miracle-working God. Bacon thus presents as a serious possibility that a creator God who can suspend the merely apparent necessities of nature may have delivered by a miracle something that had not yet otherwise come into being;

he shows us the serious challenge to any science, and in particular to *his* science, that is posed by the possibility of a miracle-working creator God.

This central problem comes to a head in the Governor's account of the flood that wiped out the ancient Atlantians, Mexicans, and Peruvians; he speaks of the flood as the "Divine Revenge" upon Atlantis for its proud, imperial ambitions. We are thus given another example—the third—of an apparently great miracle by a just God. Yet the conclusion of the Governor's account attributes the flood to an "*accident* of time," and other things in his account suggest that a mere accident of nature, rather than God, was behind it. Now it is at first unclear which of these two explanations had been adopted by King Salomona, who re-founded Bensalem after the Atlantean flood. This humane king, who was "wholly bent on making his kingdom and people *happy*," promulgated a policy of isolationism for his island, with a firm confidence that strangers would almost always find life on his island happier than anywhere else. The isolationism might suggest a fear of divine vengeance for proud, imperial enterprises. But this confidence was grounded, it turns out, in the activities of Salomon's House, which he founded. That House is dedicated "to the study of the Works and Creatures of God," through "the finding out of the true nature of all things (whereby God might have the more glory in the workmanship of them, and men the more fruit in the use of them)." Soloman's House is a scientific think tank that looks into "the true nature of all things," for the production of fruitful goods from the inquiries. Some of its members are, in recurring twelve-year missions, constantly engaged in scientific and technological espionage around the world, acquiring knowledge, inventions and instruments that assist their work. The inhabitants of the island thus benefit from advances by others in arts, manufacturing, and inventions.

The scientific work of Solomon's House is here presented as a biblically sanctioned activity: God has the glory in the workmanship, while men have the fruits of the inquiry into it. But from the conclusion of the tale we can see that this is actually a temporarily necessary belief, presenting a confused middle ground. A "Father" of Solomon's house finally discloses to the narrator, privately—but with permission to publish what he says—that "The End of our Foundation is the knowledge of Causes, and secret motions of things; and the enlarging of the bounds of Human Empire, to the effecting of all things possible." In this final, frank statement of the purpose of Salomon's House, God, his purposes, his glory, and his work, are strikingly absent. Instead, the narrator learns of the most imperial human endeavor imaginable: "the effecting of all things possible"—and then hears a description of scientific experiments and inventions that discloses a staggeringly ambitious endeavor to utterly transform or re-make the given world, the world that was supposed to be God's work. And from this account's conclusion, it is clear that what King Salomona envisioned for the happiness of his people is made possible by scientists predicting and controlling, and thereby overcoming, by scientifically informed action, the destructive effects of phenomena like the Atlantean flood. The diffusion of this powerful science was at the heart of Salomona's confidence that his would become an enlightened, confident, happy nation.

The new science practiced in Salomon's House yields inventions touching every part of human life, and eliminating want, sickness, drudgery, physical suffering, and even, perhaps, death itself. Its fundamental premise is illustrated in what the Father says concerning plants: "We make them also by *art* greater much than their *nature*." One plant can be made to "turn into another." Similarly, concerning animals he says: "By art

likewise, we make them greater or taller than their *kind* is; and contrariwise dwarf them, and stay their growth; we make them more fruitful and bearing than their kind is; and contrariwise barren and not generative.” The scientists produce “many new kinds, and them not barren.” Kinds or species, in other words, are neither permanent nor respected as the product of a purposeful, divinely crafted order.

Significantly, the Father’s description also includes an account of the “houses of deceits of the senses,” where scientists reproduce “false apparitions, impostures, and illusions; and their fallacies.” The scientists could, says the Father, if they wished, deceive the senses and work to make particulars “seem more *miraculous*,” but “we” have severely forbidden impostures and lies to the fellows. Yet no one can call these scientists to account if and when they decide a deception of the populace is needed. And all of the wondrous elements of the tale of the biblical revelation are here mentioned as *replicable* by the scientists: lasers, fireworks, etc. We see now that the alleged revelation of scripture was indeed a giant hoax perpetrated by the scientists of Solomon’s House. But more importantly, we are provided with the principle through which belief in alleged miracles is to be overcome: knowledge of the laws of nature affords human beings the ability to replicate what *seem* to have been wondrous events, and thereby to remove their miraculous quality. Mere ignorance of the laws of nature and of the enormous capacity of human beings to reproduce extraordinary effects has hitherto led to the credulity that characterizes “young,” un-technological peoples—like the American Indians, survivors of the Atlantean flood—who have been halted by telluric catastrophes from advancing in awareness of artful progress over nature.

Bacon thus conducts us through three steps or phases in the disclosure of the new science. Step one is the implementation of the transformational findings of science, satisfying humans' bodily needs and thereby making them "happy." In the second, simultaneous step, there is a co-optation, through re-interpretation, of belief in the biblical God, as a being compatible with the activities of the new science. Nature's laws are presented as God's laws, and their uncovering as divinely sanctioned. Finally comes the authorized disclosure of the vast and even limitless transformative power of science as the means to earthly happiness, of a science that visibly improves human security, health, and ease, by reproducing "miracles." As it steadily does so, humans stand increasingly prepared to accept the truth: our situation is *not* purposefully ordered, but miserable. But the debilitating need for reassurance, for divine order, is extinguished with the mastery over nature. Mastery eliminates the fundamental, problematic "idol," the fear of disorder and purposelessness, which had brought both ancient "barren" science and religion into being. As that fear vanishes, so too does the (additional) fear of divine vengeance. The new, salvific science secures a universal acceptance of a purposeless world without god. The old, mistaken orientation, Bacon teaches, becomes a thing visibly belonging to the primitive ("young") age of human consciousness. Thanks to the new science, Progress can finally replace Return—repentance—as the guiding orientation of human life. We live today within the civilizational project sketched in *The New Atlantis*.