RELIGION AND FRANCIS BACON'S SCIENTIFIC UTOPIANISM

by Stephen A. McKnight

Abstract. Francis Bacon often is depicted as a patriarch of modernity who promotes human rational action over faith in divine Providence and as a secular humanitarian who realized that improvement of the human condition depended on human action and not on God's saving acts in history. Bacon's *New Atlantis* is usually described as a "scientific utopia" because its ideal order, harmony, and prosperity are the result of the investigations of nature conducted by the members of Solomon's House. I challenge these characterizations by showing that Bacon's so-called scientific utopianism is grounded in his religious convictions that his age was one of Providential intervention and that he was God's agent for an apocalyptic transformation of the human condition. I examine the centrality of these religious themes in two of his philosophical works, *The Advancement of Learning* and *The Great Instauration*, which are well known for setting out Bacon's critique of the state of learning and for presenting the principles of his epistemology. Analysis of *The Advancement of Learning* demonstrates Bacon's conviction that his reform of natural philosophy was part of a Providentially guided, twofold restoration of the knowledge of nature and the knowledge of God. Examination of *The Great Instauration* reveals that Bacon sees his age as one of apocalyptic transformation of the human condition that restores humanity to a prelapsarian state. Analysis of the *New Atlantis* shows that utopian perfection can be achieved only through a combination of right religion and the proper study of nature. Moreover, when the "scientific" work of Solomon's House is recontextualized within the religious themes of salvation and deliverance that permeate the *New Atlantis*, the full scope of Bacon's "scientific utopianism" can be seen, and this project is not the one usually portrayed in scholarly treatments. Bacon's program for rehabilitating humanity and its relation to nature is not a secular, scientific advance through which humanity gains dominion over nature and mastery of its own destiny but rather one guided by divine Providence and achieved through pious human effort.

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Francis Bacon is frequently depicted as a patriarch of modernity who promotes human rational action over faith in divine Providence and as a secular humanitarian who realized that improvement of the human condition depended on human action and not on God's saving acts in history.[1] His *New Atlantis* is almost always described as a "scientific utopia" because its ideal order, harmony, and prosperity are the result of the investigations of nature conducted by the members of Solomon's House.[2]

In this essay I challenge these characterizations of Bacon and the *New Atlantis* by demonstrating that his so-called scientific utopianism is grounded in his religious convictions that his age was one of Providential intervention and that he was God's agent for an apocalyptic transformation of the human condition. To develop this argument, I examine the centrality of these religious themes in two of Bacon's principal philosophical works as well as the *New Atlantis*. The two philosophical texts are *The Advancement of Learning* and *The Great Instauration*, which are well known for setting out Bacon's critique of the state of learning and for presenting the principles of his new epistemology. Analysis of *The Advancement of Learning* demonstrates that Bacon was convinced that his reform of natural philosophy was part of a Providentially guided, twofold restoration of the knowledge of nature and the knowledge of God. This dual emphasis is obscured by the abbreviated title *The Advancement of Learning* but evident in the full title, *Two Books of Francis Bacon of the Proficiencie and Advancement of Learning Divine and Human*. Investigation of this text also shows that the program for the "advancement of learning" is also the restoration of *prima philosophia*, through which natural philosophy leads ultimately to a mystical union with God. Examination of *The Great Instauration* reveals that Bacon sees his own age as one of apocalyptic transformation of human nature and the human condition, which restores humanity to a prelapsarian state. Analysis of the *New Atlantis* shows that utopian perfection can be achieved only through a combination of right religion and the proper study of nature. Moreover, when the "scientific" work of Solomon's House is recontextualized within the religious themes of salvation and deliverance that permeate the *New Atlantis*, the full scope of Bacon's "scientific utopianism" can be seen, and this project is not the one usually portrayed in scholarly treatments of the *New Atlantis*. Bacon's program is not a secular, scientific advance through which humanity gains dominion over nature and mastery of its own destiny. His program for rehabilitating

humanity and its relation to nature is guided by divine Providence and achieved through pious human effort.

The Advancement of Learning

The Advancement of Learning was published in 1605, two years after the coronation of James I, and the work is dedicated to the king. In the text Bacon criticizes the current state of learning and calls for a thorough reform. He introduces the theme in his dedication by expressing his high regard for the king, especially for his excellence in learning:

> . . . leaving aside the other parts of your virtue and fortune, I have been touched, yea and possessed, with an extreme wonder at those your virtues and faculties which the philosophers call intellectual; the largeness of your capacity, the faithfulness of your memory, the swiftness of your apprehension, the penetration of your judgment, and the facility and order of your elocution: and I have often thought that of all the persons living that I have known, your Majesty were the best instance to make a man of Plato's opinion, that all knowledge is but remembrance, and that the mind of man by nature knoweth all things, and hath but her own native and original notions . . . again revived and restored: such a light of nature I have observed in your Majesty, and such a readiness to take flame and blaze from the least occasion presented, or the least spark of another's knowledge delivered. (*The Works of Francis Bacon* [*WFB*] 3:261–62)

Bacon is following a standard theme when he praises the erudition of James I, and a book about the state of knowledge would appropriately focus on that reputation.[3] But Bacon's tribute goes beyond conventional practice. First, it asserts that true knowledge is remembrance, a concept that Plato develops to explain the difference between the confused state of opinion held by most people and the philosopher's truth. According to Plato, the soul, before being born into the terrestrial realm, participates directly in divine knowledge and has a perfect understanding of reality. This understanding is compromised and fragmented by being immersed in the physical world and distorted by the senses.[4] Through the use of disciplined reason, the senses can be brought under control and recollection (*anamnesis*) of the true state of existence can be accomplished. Bacon uses this allusion in order to praise James I as one who has been able to overcome the limitations that plagued most people and thereby recover true knowledge. This manner of praising James introduces the primary motif of Bacon's text. The advancement of learning depends on being able to move away from prevailing ignorance and error. Moreover, this advance is simultaneously a recovery and restoration of the soul's proper understanding of God and nature.

Bacon then turns from the personal virtues of the king to his civil or political virtues, which he links to the portentous circumstances of the time.

> And as in your civil estate there appeareth to be an emulation and contention of your Majesty's virtue with your fortune; a virtuous disposition with the fortunate regiment; a virtuous expectation (when time was) of your greater fortune, with

the prosperous possession thereof in the due time; a virtuous observation of the laws of marriage; a virtuous and most Christian desire of peace with a fortunate inclination in your neighbor princes thereunto; so likewise in these intellectual matters, there seemeth to be no less contention between the excellency of your Majesty's gifts of nature and the universality and perfection of your learning. (*WFB* 3:262–63)

Having characterized James's reign as an age of peace and prosperity, Bacon returns to his praise of the king's knowledge and asserts that "there hath not been since Christ's time any king or temporal monarch which hath been so learned in all literature and erudition, divine and human" (p. 263). After delineating the aspects of James's extraordinary learning, Bacon avers that the king's remarkable achievements have to be considered "almost a miracle" (p. 263). Bacon's association of James's wisdom with the age of Christ and the claim that this is almost a miracle links the reign of James I with Providence. Continuing his praise of James's erudition in both divine and human spheres of learning, Bacon claims: "there is met in your Majesty a rare conjunction as well of divine and sacred literature as of profane and human; so as your Majesty standeth invested of that triplicity which in great veneration was ascribed to the ancient Hermes; the power and fortune of a King, the knowledge and illumination of a Priest, and the learning and universality of a Philosopher" (p. 263). The reference to Hermes Trismegistus augments Bacon's emphasis on the recovery and advance of both human and divine learning and identifies the characteristics of the learning to be recovered. Hermes was believed to possess a complete understanding of the workings of nature that allowed him to draw benefits that he gave to his subjects. His kingdom, therefore, lived in peace, harmony, and prosperity. This reference to a theoretical understanding of the foundations of nature that produces useful knowledge anticipates Bacon's critique of traditional speculative philosophy and his advocacy of a recovery of the understanding of nature that provides useful results.

In these opening paragraphs we find a compact presentation of several key themes. First, the references to Platonic anamnesis links Bacon's advancement of learning with the recovery of true knowledge in which the human mind knows and directly experiences the divine. Second, Bacon praises James's erudition in both the divine and human spheres. The third prominent theme is the allusion to James's reign as an epochal turning point or the beginning of a Providential age.

Bacon's direct address to his king is followed by the beginning of his philosophical critique of the impediments to the restoration of natural philosophy. The first impediment to be cleared away is the erroneous claim that "the aspiring to over-much knowledge was the original temptation and sin, whereupon ensued the fall of man; that knowledge hath in it somewhat of the serpent, and therefore where it entereth into a man it makes him swell" (p. 264). Bacon cites biblical figures, including Solomon and Paul, who have been used to support the view that a preoccupation with knowledge leads to impiety and to alienation from God. Bacon,

however, maintains that the nature of original sin has been misinterpreted as have the cautions against a preoccupation with knowledge reflected in the admonitions of Solomon and Paul. The Fall from grace was not precipitated by the pursuit of "the pure knowledge of nature and universality, a knowledge by the light whereof man did give names unto the creatures in Paradise, as they were brought before him" (p. 264); the source of humanity's Fall was the pursuit of "the proud knowledge of good and evil, with an intent in man to give laws unto himself and to depend no more upon God's commandments" (p. 265). This prideful attempt to become autonomous causes humanity to swell up with pride and to fall from grace.

Bacon then claims that God intends humanity to have a full and complete understanding of nature. "God hath framed the mind of man as a mirror or glass capable of the image of the universal world. . . . If then such be the capacity and receipt of the mind of man, it is manifest that there is no danger at all in the proportion or quantity of knowledge, how large soever, lest it should make it swell or out-compass itself" (pp. 265–66). He affirms that charity—compassion for others—is the corrective against pride. In this context he quotes Paul's "if I spake with the tongues of man and angels, and had not charity, it were but as a tinkling cymbal" (p. 266). According to Bacon, the error is not in speaking with "the tongues of man and angels" but rather in pursuing knowledge without charity.

Having made this clarification, he explains that the cautions of Paul and Solomon are not against pursuing knowledge but in pursuing the wrong kind. At the conclusion of this paragraph, Bacon adds, "let no man, upon a weak conceit of sobriety or an ill-applied moderation, think or maintain that a man can search too far or be too well studied in the book of God's word or in the book of God's works; divinity or philosophy; but rather let men endeavor an endless progress or proficience in both; only let men beware that they apply both to charity, and not to swelling; to use and not to ostentation" (p. 268). These statements contain a key Baconian theme: Humanity has a God-given or God-imposed obligation to know God and to know the natural world as God's creation. The source of sin is not too much knowledge; it is the rebellion against God and the effort to become autonomous. The guard against prideful rebellion is to allow charity to be the motive for the pursuit of knowledge, because the effort to gain knowledge in order to help others prevents a preoccupation with the self.[5]

Bacon devotes the next several paragraphs to an inventory of the fields of knowledge, what is proper to them, and where and how knowledge has become derailed. He asserts that the restoration of true philosophy requires a return to first principles, *prima philosophia*. His concept of *prima philosophia* is important to understanding the religious dimensions of Bacon's restoration and advancement of learning. Bacon maintains that the purpose of the study of nature is for "the glory of the Creator and the relief of man's estate" (p. 294). In his descriptions of subjects appropriate

to *prima philosophia*, he provides a hierarchical structure that begins with Nature as God's creation. The next category is the realm of forms, which is followed by the spiritual realm. Bacon uses spirits or archangels to stress the importance of love and charity over power: "the first place or degree is given to the angels of love, which are termed Seraphim; the second to the angels of light, which are termed Cherubim; and the third and so following places to thrones, principalities and the rest, which are all angels of power and ministry; so as the angels of knowledge and illumination are placed before the angels of office and domination" (p. 296). The highest subject is God, and knowledge of God is acquired in two ways: through the scriptures and through creation. Reminding the reader of the primordial state of creation, Bacon turns to humanity's prelapsarian pursuit of knowledge: "After the creation was finished, it is set down unto us that man was placed in the garden to work therein; which work so appointed to him could be no other work than of contemplation; that is, when the end of the work is but for exercise and experiment, not for necessity" (p. 296). Human work could be nothing more than contemplation, because the creation was perfect and readily revealed its purpose and its benefits to humanity. Human beings did carry out empirical investigations and analysis, but this was not labor; it was rather the pleasure of intellectual discovery. After the Fall, however, humanity was alienated from both God and nature and was required to labor in order to discover the benefits of the creation. As a result, humanity's primary task was not simple contemplation but a laborious effort to attain what had been previously readily revealed.[6]

Bacon then turns to representative figures who were able to attain proper knowledge of both nature and the divine and reinstate the proper relation to God and nature. Bacon describes Moses as the lawgiver and the possessor of "all the learning of the Egyptians," which made him wise in theology, moral philosophy, and philosophy of nature. Next he cites Solomon, who was "enabled not only to write those excellent parables or aphorisms concerning divine and moral philosophy, but also to compile a natural history of all verdure" (pp. 298–99). Bacon describes the age of Christ as one in which knowledge was perfected: "for our Savior himself did first shew his power to subdue ignorance, by his conference with the priests and the doctors of the law, before he shewed his power to subdue nature by his miracles. And in the coming of the Holy Spirit was chiefly figured and expressed in the similitude and gift of tongues, which are but [carriers of knowledge]" (p. 299). The gifts of the Spirit were continued by "the ancient bishops and fathers of the Church, [who] were excellently read and studied in all the learning of the heathen" as well as to the scriptures (p. 299). Bacon then arrives at his own age and the restoration of learning that is underway: "And we see before our eyes, that in the age of ourselves and our fathers, when it pleased God to call the church of Rome to ac-

count for their degenerate manners and ceremonies, and sundry doctrines obnoxious and framed to uphold the same abuses; at one and the same time it was ordained by the Divine Providence that there should attend withal a renovation and new spring of all other knowledge" (p. 300). Here the recovery or restoration of knowledge includes a restoration of both divine and human knowledge. Having recited these instances in which recovery of the dignity of knowledge and the proper subjects of study have occurred, Bacon summarizes the two sources of knowledge: God has laid "before us two books or volumes to study, if we will be secured from error; first the Scriptures, revealing the will of God, and then the creatures expressing his power" (p. 301).

This brief analysis of the first part of *The Advancement of Learning* demonstrates that Bacon's purpose is to offer James I the opportunity to create a legacy of the restoration of the dignity of learning. This restoration entails a recovery and advance in theology as well as in natural philosophy. Spiritual recovery is already underway. The restitution of natural philosophy will be accelerated by Bacon's contribution of the new methodology, and this recovery and advance will contribute to the providential restoration of humanity to its proper relationship to God and nature. Clearly, Bacon is convinced that the human condition can be restored and humanity can regain its prelapsarian condition.

Much of the second part of *The Advancement of Learning* is taken up by a plea for the king to provide resources for the advancement of learning and is devoted to the practical matters of establishing libraries, research laboratories, and funding for scholars. This is followed by a catalogue or inventory of the various dimensions of learning. One section of this contains an important discussion of ecclesiastical history. This discussion occurs after Bacon has examined the dimensions of natural history and on the surface may appear to be an unusual shift to subject matter that has no obvious connection to the preceding discussion. Bacon explains that ecclesiastical history has three parts: the history of the church, the history of prophecy, and the history of Providence. It is this third component that ties Bacon's discussion of natural history to his ecclesiastical history. According to him, the history of Providence contains the correspondence between God's revealed will and God's secret will. Although the working of divine Providence usually remains hidden from the understanding of philosophers and theologians, there are extraordinary times and circumstances in which God reveals his secret design in obvious ways. Bacon clearly regards his own age as one of these extraordinary times.

Bacon then turns to a discussion of the three aspects of the one universal science, or *prima philosophia*: divine philosophy, natural philosophy, and human philosophy. The three contribute to a unified science because their common purpose is to know God through God's revealed word and through creation. The discussion of natural philosophy reveals the ultimate goal of

Bacon's epistemological reforms, which is mystical union with God the Creator.

Bacon's description of natural philosophy as a key component of *prima philosophia* is conventional in its description of the ascent from experience of the physical to mystical participation in the divine. Traditionally, the purpose is to allow the highest part of the human soul—its intellect—to attain unity with the divine intellect. The purpose in studying nature is to discover evidence of God's love, mercy, and omnipotence—the same truths that are found in God's other source of revelation, the scriptures. Bacon has the same ultimate purpose—union with God—but his nature mysticism also provides the knowledge that allows humanity to transform the corrupt and disordered world into paradise on earth.[7] In fact, Bacon makes the effort to understand nature in order to improve the human condition part of the punishment for original sin. In paradise humanity needed only to contemplate the grandeur of God's creation. After the Fall, both humanity and nature had to be restored, and this could be accomplished only through "the sweat of man's brow." These mystical dimensions of Bacon's epistemological reforms need to be kept in mind when claims are made that Bacon is proposing an empirical, objective inquiry into nature to replace traditional natural philosophy.

The third topic considered to be part of the *prima philosophia*, or universal science, is the philosophy of human nature, or anthropology. Bacon identifies the capacity for language as one of the most distinctive attributes of humanity and contends that language is not a human invention but is rather the result of the recollection of knowledge that humans already possess. This statement would be confusing were it not for the dedication in Part One where Bacon indicated that all knowledge is remembrance rather than invention. There he made the point that true knowledge and authentic language are an articulation of the proper understanding of nature that is provided to human beings by God. This reference also reinforces Bacon's view of *prima philosophia* as a reunion and participation in the divine. After the Fall, this clear understanding is lost and human language is confounded. Bacon repeats this point here. Because of the Fall, "the mind of man is far from the nature of a clear and equal glass, wherein the beams of things should reflect according to their true incidents; nay, it is rather like an enchanted glass, full of superstition and imposture" (pp. 394–95).[8]

Because of his fallen state, man must be reeducated, and Bacon describes various rhetorical means for training the mind and directing the will toward the pursuit of the highest good. Although the present state of disorder makes this difficult, it is not an impossible task because humanity can be reawakened to its proper nature and to the proper source of meaning, purpose, and ultimate satisfaction. In this discussion Bacon maintains that the results of misfortune and of humanity's fallen nature can be overcome through hard work, or, to be more precise, "through suffering," a

reference that recalls the opening sections of Part One where Bacon describes the consequences of the Fall and identifies hard work as the way to repair the damage.

Having promoted the benefits of the restoration of true knowledge, Bacon again cautions against the sin of pride and the attempt to know divine mysteries beyond the scope of human reason. Further on, Bacon says that the source of knowledge of matters of faith rests "upon the true and sound interpretation of the Scriptures, which are the foundations of the water of life" (p. 483). Toward the end of the discussion, Bacon affirms that the restoration of divine knowledge has already begun: "For I am persuaded . . . that of the choice and best of those observations upon text of Scriptures which have been made . . . in sermons within your Majesty's island of Britain by the space of these forty years . . . had been set down in a continuance, it had been the best work in divinity which had been written since the apostles' times" (pp. 487–88). This spiritual renewal offers the prospects for the advancement of divine learning, and Bacon's proposal for the advancement of natural philosophy serves as its complement.

The second part of *The Advancement of Learning* ends with this discussion of the recovery of divine truth that serves as a guard against various forms of sin, idolatry, and false religion. It also sets Bacon's work within the context of the providential renewal and restoration of knowledge. The context is a twofold recovery of scriptural truth and *prima philosophia*. Both have to be restored in order for humanity to enjoy a reunion with God and with nature.

The Great Instauration

The Great Instauration was published in 1620 when Bacon was Lord Chancellor and at the height of his political power. Originally Bacon envisioned this work as a six-part *magnum opus*. The first was to be an inventory of the scientific disciplines that were already complete, those currently underway, and those not yet begun. The second was to provide a clear statement of the first principles of the true scientific method. The third would be a natural history of phenomena to be studied by Bacon's new science in order to gain the fullest benefit for humankind. The fourth would offer examples or paradigms for applying the new science to crucial fields of investigation. The fifth was to catalog Bacon's own contributions to research, and the sixth and final section would provide a systematic statement of the "final goals and benefits of his new science." The text published in 1620 contains only a small portion of the project Bacon had envisioned, offering primarily an abbreviated statement of the second part of the proposed program—that is, a statement of the first principles of a true scientific method.[9] Bacon offers three justifications for publishing it in its abbreviated form. The first is that he wants to provide an outline of the kind of work that needs to be done so that it can be adopted by others

and thereby create a communal effort to interpret nature and to advance the kingdom of humanity. Second, he regards his most important contributions to be those of identifying the primary flaws in natural philosophy as it presently exists and setting out the fundamental principles for a new philosophy of nature. Third, he believes that any effort at cataloging would be preliminary and could only suggest the projects to be undertaken.

Analysis of the text makes it clear that Bacon thought this abbreviated work deserved to be published immediately because he was convinced that the time was right and that divine Providence was working through him to bring about a restoration of humanity to its prelapsarian state. The original Latin title of the work was *Instauratio Magna*. Although the term *instauratio* was not in general use in Bacon's time, his readers would have known it and recognized the context for its use in Jacobean England. Charles Whitney (1986; 1989) has shown that the primary meaning in Bacon's time derives from the Vulgate edition of the Bible, where the term occurs in more than two dozen passages alluding to the apocalyptic restoration of Jerusalem and the golden age of the Davidic-Solomonic kingship. The term used in the Vulgate for the rebuilding is *instauro,* which has the dual meaning of building up (construction) and rebuilding. The development of this apocalyptic motif centers on Josiah's rebuilding of the Temple of Jerusalem in the seventh century B.C.E. The Temple was originally built in the eleventh century B.C.E. through the efforts of Solomon. Because the Temple held the Ark of the Covenant, it stood as a symbol of God's presence among the Hebrews and associated the kingdom with religious piety and justice. It also identified the kingdom as the agency for both God's justice and God's mercy. The kingdom reached its zenith during the reign of Solomon when the Hebrews enjoyed unprecedented prosperity and freedom from religious or political interference by neighboring powers. After Solomon, the Hebrew nation was constantly threatened with the loss of both political autonomy and religious freedom. In 624 B.C.E., however, pressure from neighboring powers waned, and the young king Josiah was able to institute political and religious reforms, including rebuilding the Temple. During reconstruction, the Temple's Mosaic Law (the Deuteronomic Code) was rediscovered, and this crucial recovery was interpreted as the beginning of a renewed covenant with God. The biblical account makes it clear that the project of rebuilding was understood as providentially guided and signaled the restoration of God's relation to the people. Josiah's rebuilding is referred to in the Vulgate as an instauration. After Josiah's efforts at reconstruction, there was another loss of political autonomy, and the people again were dispossessed. In subsequent years the rebuilding of the Temple became the prime symbol for the reestablishment of true religion and represented recovery of the people's relation with God after a period of suffering due to sin, ignorance, and error.[10] This theme is particularly significant in the Jacobean period because King James

I was heralded as the new Solomon who would restore Jerusalem. The title *Instauratio Magna* would have signaled to readers that this text had to do with apocalyptic restoration and renewal.

The title page contains the epigram *multi pertransibunt et augebitur scientia* ("many shall go forth and knowledge will be increased").[11] The reference is to the increase of knowledge brought about by overseas exploration. The phrase, however, is a modification of the Vulgate version of Daniel 12:4 and has a strong apocalyptic emphasis. The context is a prophetic vision in which the archangel Michael reveals God's plan to deliver Israel and install the kingdom of God on earth.

The title page is followed by Bacon's Proemium, where he explains why he has undertaken this project of instauration: "he thought all trial should be made, whether that commerce between the mind of man and the nature of things . . . might by any means be restored to its perfect and original condition" (*WFB* 4:7). According to this statement, Bacon intends to attempt to rebuild the correspondence between the human intellect and its proper object of study—the natural world; and the goal is to rebuild it to its "perfect and original condition."

The Dedication follows the Proemium. Bacon begins by telling his monarch that the king might feel that Bacon has been neglecting his responsibilities as Lord Chancellor while he has worked on this project. He assures the king, however, that the work itself is a service to both king and nation. He describes the work as "a child of time" that "may be ascribed to the mercy and goodness of God, and to the felicity of your Majesty's times" (p. 11). Bacon adds that because God's hand is in the project, the work that he is dedicating to James I will make the king's reign "famous to prosperity" as "times of the wisest and most learned of kings" in which the "regeneration and restoration of the sciences occurred." Bacon links the reign of James I to the recovery and advancement of learning by associating James with Solomon: "you who resemble Solomon in so many ways" (p. 12). Bacon is not only emphasizing God's mercy; he is also identifying the reign of James I with an apocalyptic moment in time. This apocalyptic period is associated with the restoration of knowledge by linking James I to Solomon, and this, in turn, links God's new mercies to the restoration of knowledge through Bacon's program of instauration.[12] It should be noted that Bacon depicts himself as one who has been chosen by God to be the instrument for bringing relief to the human estate through advancement of knowledge that will correct the ignorance and errors that have accumulated over the course of history. It should also be remembered that this instauration will restore the correspondence between the mind and the natural world to its "original condition," that is, to the original condition of Adam before the Fall.

The Dedication is followed by the Preface, near the end of which Bacon changes his tone and offers a prayer that God will bless the work he is

undertaking and that through his hands God "will provide the human family with new mercies" (p. 20). This prayer recalls his suggestion in the Dedication that his work would provide great blessings for the human race because it is the work of divine Providence. Although many works conclude with a petition that God may bless what is being offered and use it for some divine purpose, the portion of Bacon's prayer that immediately follows this common motif is not so conventional. He prays that "things human may not interfere with things divine, and that from opening the ways of the sense and the increase of natural light there may arise in our minds no incredulity or darkness with regard to divine mysteries" (p. 20).

It would be fairly standard to differentiate natural philosophy from theology or reason from revelation, but Bacon goes further. He is more directly concerned with the equation of knowledge with sin or of the human effort to master nature with prideful rebellion against humanity's creatureliness. Original sin often was equated with pride and with rebellion against humanity's creatureliness. The temptation by Satan was to obtain the knowledge necessary to avoid dependence on God and be able to overcome the creature's debt to the Creator and thereby become like God (Genesis 3:6). Bacon takes pains to clarify or redefine the connection between original sin, pride, and knowledge by linking pride with seeking knowledge that is properly the province of God alone. He specifically identifies this knowledge with the divine mystery of salvation and grace. According to Bacon, the desire for knowledge of the natural world is neither forbidden nor sinful, and the proper remedy for sin is directing the quest for knowledge to its proper subject and using human reason and art as God intended: "For it was not that pure and uncorrupted natural knowledge whereby Adam gave names to the creatures according to their propriety, which gave occasion to the fall. It was the ambitious and proud desire of moral knowledge to judge of good and evil, to the end that man may revolt from God and give laws to himself, which was the form and manner of the temptation" (p. 20). God charged human creatures with the duty and privilege of "naming" the lesser creatures. Naming means defining the essential traits of the created world in relation to human needs and concerns. Human beings are to be actively involved in exploring the creation, seeking out its characteristic traits and putting them to use. Knowledge of nature, therefore, cannot be sinful.

This brief reference to the Fall and to original sin helps to clarify the full scope of Bacon's program of instauration. He wants to restore knowledge to its original condition before the Fall. He wants to return humanity to its duty of obtaining true and uncorrupted knowledge of the creation according to its God-given properties. Further on, Bacon will argue that human beings cannot save themselves from the profound alienation that they have caused. The only way they can be saved is if God grants mercy and offers guidance that can lead them back to their unalienated state.

This is the context for understanding Bacon's project. In his view, God has chosen the present age for granting new mercies, and Bacon is the means. It is also the basis for Bacon's conviction that utopian perfection is achievable. After this prayer Bacon addresses himself to his readers and exhorts them to join the instauration of the foundations of true knowledge. Then he urges readers to have hope and to expect dramatic results. The Preface therefore concludes with the same emphasis on hope and apocalyptic expectation that is present in the earlier parts of *The Great Instauration*.

The foregoing analysis of *The Great Instauration* and *The Advancement of Learning* demonstrates the full scope of Bacon's program of instauration. The primary use of the term in Jacobean England referred to the restoration of the Solomonic kingship and the Solomonic temple. This meaning was intensified through the court's portrayal of James I as the new Solomon. Bacon draws upon this meaning of instauration, especially when he is addressing James I, but he adds a significant dimension. His program of instauration has as its ultimate goal the restoration of humanity to its prelapsarian condition. His goal is not the restoration of political order or the creation of a secular realm in harmony with the spiritual realm but rather to provide the path for spiritual regeneration and renewal that overcomes the separation of God and humanity, and he portrays the instauration of natural philosophy as a key component in this. Bacon reminds his readers repeatedly that original sin alienated humanity from God and from creation. The result of the alienation from God is spiritual confusion; alienation from the creation is to be removed from the benefits God placed in nature. Bacon's view of the recovery emphasizes the necessity of humanity's working to overcome the alienation that original sin produced. Humans, of course, cannot overcome their alienation from God; only God can do this through mercy and forgiveness, and Bacon understands the spiritual recovery underway as evidence of God's providential action. Bacon also sees God's providential guidance in directing humanity toward the recognition of the benefits that God has placed in nature for humans to use and enjoy.[13] Whereas God points the way, humans must labor in order to produce the full benefits. Bacon's program of instauration and utopian perfection is based not upon the rejection of traditional religion and metaphysics but rather upon a conviction that his own age is one of apocalyptic promise. The instauration requires humanity to be actively involved in the restoration, and this active involvement requires a spiritual regeneration that will cleanse humanity of its arrogance and pride.

The *New Atlantis*

We can now examine Bacon's *New Atlantis* to determine how religious themes found in *The Advancement of Learning* and *The Great Instauration* are related to his "scientific utopianism." I briefly investigate three episodes in the narrative: the storm that brings European sailors to Bensalem,

the Europeans' interviews with the Governor of the Strangers' House, and the climactic audience with a Father of Solomon's House. The activities of Solomon's House are what most often are discussed. Usually the focus is on Bacon's description of collaborative efforts of specialized sciences to collectively advance empirical knowledge and bring relief to the human condition. The analysis offered here places Bacon's references to Solomon and Solomon's House in the context of the iconography of the court of James I, particularly portrayals of James I as the new Solomon who would restore Solomon's Temple and usher in a providential age of peace, harmony, and prosperity. I show that Bacon conceives of Solomon's House, or the recovery of natural philosophy, as the complement to the rebuilding of Solomon's Temple, or the restoration of true religion. When the "scientific" work of Solomon's House is recontextualized within the religious themes of salvation and deliverance that permeate the *New Atlantis*, the full scope of Bacon's "scientific utopianism" can be seen—and this is not the scientific utopianism usually portrayed. Bacon's project is not a secular, scientific advance through which humanity gains dominion over nature and mastery of its own destiny. Bacon's instauration is a program for rehabilitating humanity and its relation to nature that is to be guided by divine Providence and achieved through pious human effort.

The *New Atlantis* begins with a European expedition, sailing from Peru en route to China and Japan, being blown off course and becoming lost "in the greatest wilderness of the waters in the world" (*WFB* 3:129). Helpless and disoriented, the sailors pray to God, begging for mercy and deliverance. Night closes in, leaving them to wonder at their fate. When dawn comes, they discover that their prayers have been answered; they are within sight of land. They approach the island (Bensalem), but people on the shore warn the Europeans not to disembark. The Europeans beg for assistance, explaining that they have several sick sailors on board who may die without medical attention. In response to this urgent need, an official of the country sails out to their ship and offers provisions, medication, and repairs that will enable the Europeans to get underway. The offer is presented on a scroll written in four languages—Hebrew, Latin, Greek, and Spanish—and marked by a cross and cherubim's wings.[14] The apprehension of the Europeans is relieved by the obvious charity and learning of the inhabitants of this country but most of all by the familiar sign of the cross. Similarly, the Bensalemites modify their guarded reception of the foreigners when they declare themselves to be from a Christian land, and the Europeans are invited to the island to recuperate.

This opening segment is noteworthy for its introduction of the leitmotif of divine intervention and salvation. In describing the event, the Europeans compare their experience to that of Jonah and acknowledge that it was divine grace that brought them to Bensalem. The theme of salvation and deliverance is developed further as the Europeans experience Bensalemite

charity. The sailors are so struck by the people and by the society that they say that it "seemed to us that we have before us a picture of our salvation in heaven; for we that were awhile since in the jaws of death. . . ." On other occasions they say that they have "come into a land of angels" or that they are presented with a "picture of salvation in heaven" (p. 136).

When given an opportunity to learn about this remarkable island, the first question that the Europeans hope to have answered is how the island had been converted to Christianity. The Governor of the Strangers' House explains that the conversion occurred as the result of a miraculous event that happened about twenty years after the resurrection and ascension of Jesus. One night a great column of light topped by a cross appeared about a mile out on the ocean. A few brave souls from Renfusa, the nearest city, boarded boats and sailed toward the hierophany. When they had come within about sixty yards, they were mysteriously restrained from drawing closer. One of the boats, however, had a member of Solomon's House on board, and he prayed: "Lord God of heaven and earth, thou hast vouchsafed of thy grace to those of our order, to know thy works of creation, and the secrets of them; and to discern . . . between divine miracles, works of nature, works of art, and impostitures and illusions of all sorts" (p. 137). He then declared the column to be a genuine miracle and begged God to reveal its true meaning. The wise man was then allowed to move closer, and, as he did, the Pillar of Cloud was transformed, leaving an ark (small chest) floating in the water. As the wise man moved toward it, the chest opened to reveal a book and a letter. The book found in the ark contained canonical books familiar to the Europeans and "some other books of the New Testament which were not at that time written" (p. 138). The letter was from the apostle Bartholomew, who stated that he had received a vision in which God instructed him "to commit the ark to the floods of the sea." When the ark reached its appointed destination, the people of that land would receive "salvation and peace and goodwill from the Father and from the Lord Jesus" (p. 138).

Several aspects of this account deserve comment and development.

1. Bensalem's conversion does not occur through ordinary missionary activity. It results from direct intervention by God, who has chosen the island for a special benediction. Also, Bensalem's conversion occurred shortly after the ascension of Jesus—a period when his teachings and deeds were vivid in the minds of the apostles.

2. The Bensalemites evidently have been able to preserve the purity of the Christian kerygma and have founded a true Christian kingdom—one that the Europeans likened to Heaven and its inhabitants to angels. The purity of religion in Bensalem stands in contrast to the degenerated Christianity of Europe, where doctrinal disputes and ecclesiastical corruption have contaminated the lifeblood of the faith.

3. The ark that brings salvation to Bensalem calls to mind the ark that saved Noah and his family from the devastating flood that destroyed all other peoples. An ark is also an integral part of the history of God's selection of the Hebrews as the chosen people. The culminating event of the Exodus-Sinai experience is Moses' placement of the God-given law in the Ark of the Covenant, which served as the throne of God's presence among the people. This ark is therefore the most sacred object in Hebrew history, playing a ritual role in the crossing of the Jordan River into the Promised Land, the establishment of the Davidic-Solomonic kingship, and the consecration of Jerusalem as the seat of religious and political order. The ark functions similarly in the account of Bensalem's conversion, where it is a prime symbol of the special election of the Bensalemites as God's new chosen people. Perhaps this is why the country is named Bensalem (heir of peace or inheritor of Jerusalem's renown).[15]

4. The choice of Bartholomew as the apostle who receives the vision and sends the ark on its way is noteworthy. According to tradition, Bartholomew had a special ability to receive and interpret dreams and revelations. Tradition also holds that he was the author of two noncanonical works, *The Gospel of Bartholomew* and *The Book of the Resurrection of Christ*, both of which contain accounts of Christ's resurrection, harrowing of Hell, and rescue of Adam. Bartholomew is therefore another important symbol of a pure religion capable of healing the ruptured union with God and recovering humanity's condition prior to the Fall.

5. The function of the member of Solomon's House is important to note and to understand properly. Though this appearance is brief, it establishes Solomon's House as the interpreter of both natural and supernatural or divine events. So, from the first, Solomon's House is presented in a religious context and is not depicted as a secular, scientific think tank. The description of the activities of Solomon's House, which is provided in a later interview, makes it clear that the Brethren study the creation in order to better understand God. Theirs is a pious search for the benefits in nature provided by the divine. This first appearance of a member of Solomon's House makes it clear that their efforts are devoted to the search for truth in its natural and supernatural forms. The demeanor of the member of Solomon's House is reverent as he prays to God to reveal the meaning of a supernatural event that he is able to recognize as a miracle but cannot interpret without divine revelation.

The climactic episode is the Europeans' interview with a member of Solomon's House. The Father provides an extended account of the purpose, activities, and contributions of Solomon's House. The purpose is first succinctly stated: "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" (p. 156). A detailed description of the investigation of the natural world follows: from caves to

mountain observatories to marine investigations. These investigations produce a breadth and depth of knowledge beyond anything imagined in Europe. But these investigations are only the preliminary stage. The intent is to use them to improve the human condition through the improvement of existing orders and to create new phenomena. Experiments in the "Lower Region," for example, produce new artificial metals that are used for curing diseases. There is also a "great variety of composts, and of soils, for the making of the earth fruitful." There are artificial wells and fountains, including one called Water of Paradise, created by the Brethren "for health and the prolongation of life" (pp. 157–58). The Father indicates that "we have also large and various orchards and gardens . . . [and] make them also by art greater much than their nature; and their fruit greater and sweeter. . . . And many of them we have so ordered as they become of medicinal use" (pp. 155–58). Further, the Father explains, Solomon's House has apothecaries, centers for the mechanical arts, furnaces, and laboratories for light and acoustics, as well as houses for the study and exposure of deceit, impostitures, and illusions.

The Father next explains the duties or offices of the various members, which include advancing the practical aspects of research, developing new theoretical insights, and producing new products and inventions that benefit the nation. He ends by describing daily religious observances intended, evidently, to remind the Brethren of their religious and moral obligations to use their God-given wisdom prudently: "We have certain hymns and services, which we say daily, of laud, and thanks to God for his marvelous works: and forms of prayers, imploring his aid and blessing for the illumination of our labours, and the turning of them into good and holy uses" (p. 166).[16] Shortly after the statement that "we do also declare natural divinations of diseases, plagues, swarms of harmful creatures, scarcity, tempests, earthquakes, great inundations, comets and (etc.)" (p. 166), the text breaks off.

This account of collective efforts to advance the theoretical and practical applications of the study of nature is the reason Thomas Sprat and others describe Solomon's House as a model for the Royal Society, and it also justifies Bacon's place of honor in the frontispiece to Sprat's *The History of the Royal Society* ([1667] 1958). But the analysis offered here demonstrates that Bacon presents Solomon's House after establishing a context of religious imagery of salvation, deliverance, and rehabilitation. It is, therefore, important to consider the function of Solomon's House in relation to these motifs in more detail. More specifically, we need to examine the linkages Bacon establishes between Bensalem's king Solamona and the biblical Solomon and between Solomon's House and Solomon's Temple.

Let us begin by recalling the Governor's account of King Solamona and his founding of Solomon's House.

There reigned in this island, about nineteen hundred years ago, a King whose memory of all others we most adore; not superstitiously, but as a divine instrument, though a mortal man; his name was Solamona: and we esteem him as the lawgiver of our nation. This king had a *large heart*, inscrutable for good; and was wholly bent to make his kingdom and people happy. . . . [A]mongst the excellent acts of that king, one above all hath the preeminence. It was the erection and institution of an Order or Society which we call *Salomon's House*; the noblest foundation (as we think) that ever was upon the earth; and the lanthorn of this kingdom. It is dedicated to the study of the Works and Creatures of God. Some think it beareth the founder's name a little corrupted, as if it should be Solamona's House. But the records write it as it is spoken. So as I take it to be denominate of the King of the Hebrews, which is famous with you, and no stranger to us. For we have some parts of his works which with you are lost; namely, that Natural History which he wrote, of all plants, from the *cedar of Libanus* to the *moss that groweth out of the wall*, and of all *things that have life and motion*. (pp. 144–45)

One notable feature of this account is the connection between Solamona's "large heart," that is, his piety and charity, and the establishment of Solomon's House. Bacon's reference to Solamona's "large heart" evokes the use of the phrase in 1 Kings 4:29 to describe Solomon. According to the text, Solomon found favor with God, and God offered to grant him any wish. Solomon asked for wisdom in order to be able to rule his kingdom with intelligence and compassion. The request pleased God, and it was granted. God also gave Solomon great material wealth as well. The biblical reference to a large heart is augmented in the Governor's account of Solamona's reign through descriptions of the king's devotion to making his kingdom and his people happy and to perpetuating peace and prosperity. This emphasis on the benevolence of the king also defines his kingship in terms of the primary Christian virtue: charity. The *New Atlantis* makes it clear that benevolence and charity are the motives for Solamona's establishing Solomon's House. It is referred to several times as "the lanthorn of the kingdom," providing enlightenment and prosperity; and enlightenment encompasses religious knowledge as well as philosophical knowledge of the workings of nature that can be applied for the benefit of humanity.

While Bacon uses biblical descriptions of Solomon's piety and charity to link Solamona's kingship with the Hebrew king, he significantly modifies the conventional notions of Solomonic wisdom. The famous biblical account of the judgment of Solomon accents his psychological insight that allowed him to understand his subjects and to rule them justly. In the *New Atlantis* Bacon associates Solomonic wisdom with his understanding of the workings of nature, and the Governor claims that Bensalem possesses a copy of Solomon's *Natural History*; and the work of Solomon's House advances the knowledge it contains. There is, of course, no mention of this *Natural History* in the biblical accounts. Bacon makes the biblical connection by quoting fragments from the biblical description of Solomon's knowledge of the natural order: "of all plants, from the *cedars of Lebanus* to *the moss that groweth out of the wall*, and of *all things that have life and motion.*"

And, as we have seen, Bacon connects Solomonic knowledge to charity and piety; the work of Solomon's House brings relief to "man's estate" and demonstrates the love and mercy of the Creator.

The transformation of the attributes of Solomonic wisdom is complemented by transformation of the Solomonic Temple into Solomon's House. Whitney has provided the most penetrating study of this transformation and has shown how the references to the biblical Solomon and to the appropriation of the Solomonic Temple are tied to Bacon's concept of instauration. As already noted, Whitney showed that the Vulgate edition of the Bible created a typology that centered on the apocalyptic motif of the rebuilding of the Temple of Jerusalem. He demonstrated that Bacon uses the notion of instauration as no previous author had, making it the root symbol for his program. Moreover, according to Whitney, Bacon employs the connotation of building or rebuilding as edification or reedification. The word *edifice* and its derivatives can refer either to a structure or to the building up or the construction of knowledge (edification). Bacon chooses to emphasize the latter. For him instauration depends upon a recovery of knowledge that clears away accumulated epistemological errors and reestablishes a proper foundation. This notion of instauration is developed in the *New Atlantis* by utilizing the dual meaning of edifice and edification. King Solamona builds an edifice—Solomon's House—that is responsible for rebuilding and advancing knowledge (edification).

According to Whitney, Bacon's emphasis on the revitalization of natural philosophy, that is, the rebuilding of Solomon's House, displaces the biblical notion of a spiritual recovery and advance represented by the apocalyptic motif of the rebuilding of Solomon's Temple. The *New Atlantis*, however, does not depict Solomon's House as a displacement of Solomon's Temple; it presents it as its complement. In the *New Atlantis* Bacon several times demonstrates the importance of purified religion as a spiritual basis for the well-being of the people and associates it with providential action on behalf of the people. So, Bacon does not dismiss or displace the idea of spiritual renewal but chooses to emphasize what for him is an equally important part of recovery or rebuilding, and that is to rebuild natural philosophy so that human beings can recover the benefits God instilled in the creation. The goal of Solomon's House is not primarily utilitarian, however. The Governor of the Strangers' House and the elder of Solomon's House make it clear that its first pursuit is "Light." The members of Solomon's House use Solomon's *Natural History* to guide their study of nature and affirm that the purpose of their work is to seek "God's first creature, which was Light: to have light (I say) of the growth of all parts of the world" (*WFB* 3:147). Light as enlightenment is a basic religious and mystical motif, and Bacon never changes its religious and mystical connotation. At the same time, natural philosophy not only leads to reverence for God and God's creation but also provides practical insights into how to relieve human

suffering and improve the human condition. While others stress the need for spiritual regeneration, Bacon emphasizes the need for the complementary instauration of knowledge.

Conclusion

The foregoing analysis reveals that Bacon's apocalyptic expectation of a transformation of the human condition is based upon his deeply held conviction that there were abundant signs of God's providential action that had precipitated and was leading the reform of both religion and natural philosophy. Bacon especially associates the reign of James I with heightened prospects for England's having an apocalyptic or providential destiny. James I is the king who would be capable and worthy of being called Solomon because of his intellectual and spiritual commitments and interest. James had already inspired important work in religion and biblical scholarship, and Bacon hopes to persuade him that the reform of natural philosophy is an equally important development and in fact is necessary for England to reach its providential destiny as the new Jerusalem.

An important and distinctive feature of Bacon's concept of Providence is his understanding of the relationship between divine and human action. Bacon maintains that human beings must labor, that is, carry out extensive empirical investigations into nature, in order to discipline the mind and bring it back to a proper investigation of nature. This labor, however, would be inadequate to accomplish the instauration without Providence's active involvement in guiding human effort in the proper direction. Bacon's writings show that he is concerned that the opportunity could be lost as a result of the failure to recognize Providential signs and to understand their meaning.

Bacon's understanding of providential action is grounded in his apocalyptic understanding of history. It is especially important to note with regard to Bacon's expectation of utopian perfection that the apocalyptic age is one in which humanity's redemption is complete. It is not a transitional phase that is reversible. Apocalyptic or eschatological history is linear and leads to a final result: the end of human sin and error and the restitution of humanity to its original condition. The end of history, therefore, is a return to the beginning of history before the Fall. We have seen from his accounts of the creation that Bacon identifies the Fall with human pride, which alienates humanity both from God and from nature. His discussion makes it clear that utopian reform requires both spiritual renewal and a restoration of the proper relation to nature. Both aspects require a transformation in the study of nature. In his portrayal of the apocalyptic nature of his own time, he indicates that the spiritual reform is underway already and that he is providing the means for the recovery of the proper relationship to nature. Proper study of nature ends ultimately in reunion with God.

Without realizing the apocalyptic thrust of Bacon's view of his providential age it is not possible to understand his extraordinary optimism that the long history of human ignorance, error, and suffering is coming to an end and that humanity will live in peace, harmony, and prosperity as Adam lived in Eden. We have seen that Bacon repeatedly portrays humans as weak, prideful, and deluded. The only way that his vision of a remarkable transformation of humanity can make sense at all is within this broad apocalyptic context. It is the only way to understand how Bacon's dual instauration will transform and redeem humanity. It also is the only way to fathom how Bacon can believe that human pride can be overcome and that humanity will devote itself to charitable acts that will improve the human condition and install the kingdom of God on earth.

This restoration of humanity to its prelapsarian state is also a realization of a true Christian self who seeks to obey the divine commandment to love God and the neighbor as the self. Bacon's confidence that an instauration can occur is firmly grounded in his conviction that human beings are created in the image of God—that we have the capacity to understand the natural world and that human nature is suffused with love, which is the primary attribute of God. This love in human beings is a love for God the Creator but also for other human beings who are the children of God and therefore the brothers and sisters of all other human beings. The connection between piety, charity, and right knowledge is repeated throughout the *New Atlantis* and is also a key theme in *The Great Instauration*. If these connections are overlooked or ignored, the nature of Bacon's instauration is distorted. He is not proposing a utilitarian exploitation of nature to create a luxurious state. The benefits available in nature can be brought to light only by investigators who are capable of escaping the idols of the mind and devoting themselves to a pious study of God's creation.

Given the importance of these religious elements of Bacon's program, it is difficult to understand why he is so often characterized as antireligious or irreligious and his vision of utopian perfection described as a secular enterprise achieved through human effort. Bacon was not attempting to purge religion from natural philosophy; he was attempting to (re)establish their proper relationship. This was an enormous undertaking because of the profound disorder in both religion and natural philosophy. But Bacon believed reform in both fields was providentially guided, and he was convinced that he was called to demonstrate how the reform of natural philosophy was an integral component of the reconciliation of humanity, nature, and God. As he attempted to reveal signs of providential instauration, he drew upon and modified key biblical motifs including the creation, Fall, and apocalyptic restoration. So, whereas it is possible to characterize Bacon's program as "scientific utopianism," it is incorrect to characterize it as secular, rational, and accomplished by human agency rather than divine Providence.

Notes

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1. This portrayal occurs as early as the eighteenth century and is at the heart of "Baconianism." See Rossi 1973, 172–79; Pérez-Ramos 1988, 7–31; Gaukroger 2001, 1–4. Portraying Bacon as an antireligious or irreligious secular modern has continued to be a predominant feature of scholarship. F. H. Anderson, for example, credits Bacon with emancipating natural philosophy "from the dominant conceptions of traditional theology" (1948, 297), and Richard Olson argues that "secular power rather than spiritual well being or pure knowledge was at the heart of Bacon's interests" and contends that "Bacon dissociates spiritual salvation from the notion of man's dominion over nature" (1982, 279–80). One of the most highly influential studies of Bacon's *New Atlantis* is Howard B. White (1968), who argues that Bacon is concerned with the City of Man and not the City of God. Marina Leslie asserts that Bacon inverts the spiritual and material worlds and claims that Bacon transforms spiritual salvation into material well-being accomplished by humans and not by God (1998, 91, 93). David C. Innes contends that Bacon is responsible for transmuting Christian hope for spiritual salvation into a secular dream of material comfort and argues that the Christianity of Bensalem is actually a "fundamental assault upon, transformation of and ultimate displacement of Christianity" (1994, 4–5). While this continues to be the prevailing approach to Bacon, it has not been the exclusive one. Essays by Elliott M. Simon (1988), John C. Briggs (1996), Benjamin Milner (1997), Perez Zagorin (1998), and Silvia Alejandra Manzo (1999), for example, make convincing arguments that Bacon's use of religious terms and concepts is a reflection of his genuine belief and not a cynical manipulation of prevailing religious sentiment. For two recent monographic studies of religious themes in Bacon's writings see McKnight 2006 and Matthews 2004.
2. Krishan Kumar is representative of this view. He describes Bacon's *New Atlantis* as "the most famous scientific utopia of all time" and asserts that "the motto of Solomon's House can still stand as the banner of all later scientific utopias: 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" (1999, 54).
3. Michael Kiernan provides a useful account of James's intellectual interests, his own scholarly writings, and his support for learning and helps explain why Bacon had good reason to expect James's support for his projects (see Bacon 2000, xxxvii note 203 and the text on xxxix). His coronation pageantry and his court iconography associated the rule of James I with Solomonic wisdom and the Solomonic virtues: justice, peace, charity. Bacon draws upon these themes and gives them his own special focus in relation to his project for the advancement of learning.
4. The myth is found in *Phaedo*, 75e.
5. On Bacon's concept of the Fall and the importance of charity, see Harrison 2001, 280–81, 288–89. Jerry Weinberger maintains that Bacon transmutes the biblical concept of charity into a source of political disorder and "dangerous politics" (1985, 147). Such an interpretation is not commensurable with Bacon's references to Christian charity in this text or in other writings.
6. Weinberger misunderstands the redemptive possibilities in the requirement that man "till the soil." He interprets the necessity of the human arts as a result of "divine revenge" and concludes that Christianity teaches humanity that it is in the hands of "a malicious God" (1985, 191).
7. This description of first philosophy is reminiscent of Ficino's description in his *Theologica Platonica* ([1576] 1959). Ficino states that the purpose of his work is to inspire love of God and prove the immortality of the soul. By studying the natural world, humans can come to understand that its beauty, order, and harmony derive from God and also that the benefits placed in the natural world are expressions of God's mercy. Ficino describes the movement from the study of material things to the understanding of the spiritual forces that shape and order the cosmos, and then ultimately to the source of the order and harmony, as a Platonic ascent. In this ascent the human soul is gradually purged as it depends less on the senses and increasingly attunes the human intellect to the mind of God. Ficino describes this ascent as divinization. It is this process of divinization that proves the immortality of the soul. It does so by demonstrating that the human mind is part of the divine mind and is therefore immortal.

Ficino then describes humanity as a kind of god, who controls nature and uses it as his creative arena. This is similar to Bacon's position that knowledge becomes the power to transform and restore nature to its prelapsarian state.

8. The image of a mirror was also used in the opening paragraphs of Part One, where Bacon likened the human mind before the Fall to a mirror.

9. This statement refers to *The New Organon*, which was published with *The Great Instauration*. The *Instauratio Magna* and the *Novum Organum* were published as a single volume. The *Novum Organum* offers an aphoristic statement of the second part of Bacon's proposed six-part plan.

10. The Vulgate also uses the verb *instauro* to describe God's renewal of the world and the apocalyptic Christ's renewal of the world and the fulfillment of time. According to Whitney, "the Vulgate in effect creates a typology or symbolism of *instauration* by lexically connecting the architectural instauration of Solomon's Temple both to a prophetic 'rebuilding' of Israel and to a Christian instauration of all things in the apocalypse" (1989, 277). This typological connection does not exist in the Hebrew and Greek originals.

11. The quotation was highly important to Bacon. Versions of it appear in *The Advancement of Learning* (*WFB* 3:340), *De augmentis scientiarum* (Latin, 1:514; English, 4:311–12), and *The New Organon* (4:92).

12. For a discussion of Bacon's equation of James and Solomon see Bacon 2000, 35ff. For a discussion of "Bacon and the British Solomon," see pp. xxxviii–lvi. The theme of restoration or regeneration was prominent in the iconography of James I court pageantry (Dollimore 1984; Goldberg 1983; Orgel 1975).

13. For additional discussion of Providence in Bacon's writings, see Warhaft 1990.

14. The cross is an obvious Christian symbol, and cherubim's wings are a key symbol from the Old Testament, representing God's presence among his chosen people. Bacon makes use of this symbol several times in the *New Atlantis*, especially with reference to Solomon's House. For an excellent discussion, see McCutcheon 1972.

15. The name Bensalem also establishes a parallel with England as the New Jerusalem, a common apocalyptic motif during the reign of James I.

16. Here is another instance where Bacon associates knowledge of nature with piety and charity, which Bacon contrasts to the sins of pride and selfishness. Simon has observed that the 36 scientists of Solomon's House may be considered analogous to the 36 just men in Jewish Talmudic legend. Both groups are motivated by their sense of charity, have their calling imposed on them by God, and are religious benefactors to humanity (1988, 60 n31). Also see Fisch 1964, 257–59. Nevertheless, Olson (1982, 286) and others persist in the claim that "the aims of Solomon's House are conspicuous in their lack of religious references."

References

Anderson, F. H. 1948. *The Philosophy of Francis Bacon.* Chicago: Univ. of Chicago Press.

Bacon, Francis. 1857–1874. *The Works of Francis Bacon*. 14 vols. Ed. James Spedding, Robert L. Ellis, and Douglas D. Heath. London: Longman and Company.

———. 2000. *The Oxford Francis Bacon*. Ed. Graham Rees and Lisa Jardine. Vol. 4, *The Advancement of Learning*, ed. Michael Kiernan. Oxford: Oxford Univ. Press.

Briggs, John C. 1996. "Bacon's Science and Religion." In *Cambridge Companion to Bacon*, ed. Markku Peltonen, 172–99. Cambridge: Cambridge Univ. Press.

Dollimore, Jonathan. 1984. *Radical Tragedy: Religion, Ideology and Power in the Drama of Shakespeare and His Contemporaries*. Chicago: Univ. of Chicago Press.

Ficino, Marsilio. [1576] 1959. *Opera Omnia*. Ed. Mario Sancipriano and P. O. Kristeller. Torino: Bottega d'Erasmo.

Fisch, Harold. 1964. *Jerusalem and Albion: The Hebraic Factor in Seventeenth Century Literature.* New York: Schocken Books.

Gaukroger, Stephen. 2001. *Francis Bacon and the Transformation of Early-Modern Philosophy*. Cambridge: Cambridge Univ. Press.

Goldberg, Jonathan. 1983. *James I and the Politics of Literature: Jonson, Shakespeare, Donne, and Their Contemporaries*. Baltimore: Johns Hopkins Univ. Press.

Harrison, Peter. 2001. "Curiosity, Forbidden Knowledge, and the Reformation of Natural Philosophy in Early-Modern England." *Isis* 92:265–90.

Innes, David C. 1994. "Bacon's New Atlantis: The Christian Hope and the Modern Hope." *Interpretation* 22:3–37.
Kumar, Krishan. 1999. *Utopianism*. Buckingham, England: Open Univ. Press.
Leslie, Marina. 1998. *Renaissance Utopias and the Problem of History*. Ithaca, N.Y.: Cornell Univ. Press.
Manzo, Silvia Alejandra. 1999. "Holy Writ, Mythology, and the Foundations of Francis Bacon's Principle of the Constancy of Matter." *Early Science and Medicine* 16:181–92.
Matthews, Steven. 2004. Apocalypse and Experiment: The Theological Assumption and Religious Motivations of Francis Bacon's Instauration. Ph.D. diss., Univ. of Florida.
McCutcheon, Elizabeth. 1972. "Bacon and the Cherubim: An Iconographical Reading of the *New Atlantis*." *English Literary Renaissance* 2:334–55.
McKnight, Stephen A. 2006. *The Religious Foundations of Francis Bacon's Thought*. Columbia: Univ. of Missouri Press.
Milner, Benjamin. 1997. "Francis Bacon: The Theological Foundations of *Valerius Terminus*." *Journal of the History of Ideas* 58:245–64.
Olson, Richard. 1982–1990. *Science Deified & Science Defied: The Historical Significance of Science in Western Culture.* 2 vols. Berkeley: Univ. of California Press.
Orgel, Stephen. 1975. *The Illusion of Power: Political Theatre in the English Renaissance*. Berkeley: Univ. of California Press.
Pérez-Ramos, Antonio. 1988. *Francis Bacon's Idea of Science and the Maker's Knowledge Tradition*. Oxford: Oxford Univ. Press.
Rossi, Paolo. 1973. "Baconianism." *Dictionary of the History of Ideas* 1:172–79. New York: Scribners.
Simon, Elliott M. 1988. "Bacon's *New Atlantis*: The Kingdom of God and Man." *Christianity & Literature* 38:43–61.
Sprat, Thomas. [1667] 1958. *The History of the Royal Society in London.* St. Louis, Mo.: Washington Univ. Press.
Warhaft, Sidney. 1990. "The Providential Order in Bacon's New Philosophy." In *Francis Bacon's Legacy of Texts*, ed. William A. Sessions, 151–67. New York: AMS Press.
Weinberger, Jerry. 1985. *Science, Faith and Politics: Francis Bacon and the Utopian Roots of the Modern Age: A Commentary on Bacon's Advancement of Learning*. Ithaca, N.Y.: Cornell Univ. Press.
White, Howard B. 1968. *Peace among the Willows: The Political Philosophy of Francis Bacon*. The Hague: Martinus Nijhoff.
Whitney, Charles C. 1986. *Francis Bacon and Modernity*. New Haven, Conn.: Yale Univ. Press.
———. 1989. "Francis Bacon's Instauratio: Dominion of and over Humanity." *Journal of the History of Ideas* 50:371–90.
Zagorin, Perez. 1998. *Francis Bacon*. Princeton, N.J.: Princeton Univ. Press.