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AND FRANCIS BACON.**

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Arthur Saul Pfeffer

THE INSTAURATION OF SPIRIT: 'TRANSCENDENTALISM'
AND FRANCIS BACON

by

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ABBREVIATIONS

- BW Francis Bacon, Works, ed. James Spedding, Robert Leslie Ellis, and Douglas Denon Heath, 15 vols. (Boston, 1860-64). The Novum Organum is additionally cited as NO Book: aphorism.
- EJ Ralph Waldo Emerson, Journals, ed. Edward Waldo Emerson and Waldo Emerson Forbes, 10 vols. (Boston, 1909-14).
- EL Emerson, Early Lectures, ed. Stephen E. Whicher et al., 2 vols. (Cambridge, 1959-64).
- EM Emerson, Journals and Miscellaneous Notebooks, ed. William H. Gilman et al., 5 vols. (Cambridge, 1960-65).
- EW Emerson, Works, Centenary ed., 12 vols. (Boston, 1903-04).
- FC Francis Bowen, Critical Essays, on a Few Subjects Connected with the History and Present Condition of Speculative Philosophy (Boston, 1842).
- FP Bowen, The Principles of Metaphysical and Ethical Science Applied to the Evidences of Religion, Rev. ed. (Boston, 1855).
- NO See BW.
- OW Orestes Brownson, Works, ed. Henry F. Brownson, 20 vols. (Detroit, 1882-87).
- PW Theodore Parker, Works, Centenary ed., 15 vols. (Boston, 1907-13).
- TJ Henry David Thoreau, Journals, ed. Bradford Torrey and Francis H. Allen, 14 vols. (Boston, 1949).
- TW Thoreau, Writings, Riverside ed., 11 vols. (Boston, 1893-94).

A key to the abbreviations of the titles of current periodicals will be found in PMLA, LXXXII, iii (1967), [47]-59.

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DIAGRAM

Bacon: Human Learning

after p. 8.

Introduction

The introduction to A. Wigfall Green's Sir Francis Bacon: His Life and Works contains the following statement: "Bacon speaks truly when he says that he constructed the machine which the modern world may operate; that he rings the bell that rouses the world from its mediaeval lethargy."¹ In the New York Public Library's copy of this book, an anonymous dissident has scribbled in an additional remark, so that the passage concludes, "he rings the bell that rouses the world from its mediaeval lethargy to sleep everlasting H-bomb!"

The remark is typical of one common twentieth-century opinion of Francis Bacon: Bacon as the father of the computerized atomic wasteland, the black magician who made God disappear, the enemy of the human spirit. I must confess at the outset that I do not believe in the Bacon of sleep everlasting H-bomb. My own reading of Bacon's works--quite apart from the promptings of A. Wigfall Green--has convinced me that Bacon was no arch-fiend but a genuine visionary, no advocate of faceless technology but a passionate humanist, no enemy of the spirit but a believer in the divine sanction of his mission and of human destiny. Bacon's critique of society and learning in his own day is, in fact, similar to that made by some anti-Baconians in ours: man and his world have come undone; human claims have outstripped

¹Denver, 1952, p. x.

human performance; man must be reintroduced to nature, to himself, to his own best instincts.

My faith in the value of Bacon as a cultural force has been strengthened by the results of my investigation into the way in which his message was received by yet another group of social critics and prophets of a holy word: the American Transcendentalists. If Bacon stood for nothing more than sleep everlasting H-bomb, the Transcendentalists--themselves trying to reintegrate the human mind, the world of nature, and the will of God--could never have accepted him and taken up, to the extent they did, his slogans, his visions, and his values. As Emerson reported, a British disciple of Bronson Alcott described the Transcendental mission in this way: "We found it not easy to propose a question sufficiently comprehensive to unfold the whole of the fact with which our bosoms labored. We aimed at nothing less than to speak of the instauration of Spirit. . . ."2

Transcendentalism found in Francis Bacon--in his words and ideas if not always in his name--another prophet of a human renaissance. But one quite common view of Transcendentalism would render its radical acceptance of Bacon, with his interest in useful arts and commodities, unlikely; I refer to the notion that Transcendentalism was a resurgence of Platonic or neo-Platonic idealism, a kind of spiritualistic contempt for physical reality, a grand refusal to consider

²Dial, III (1842), 241.

the facts, a desire to locate the essence and ground of human existence in a realm beyond experience and sensation. Did not Orestes Brownson write that "there is a higher order of reality than the sensible, and more imperative interests than material interests,--the only real interests regarded with favor by modern civilization" (OW, IX, 562-563)? As typically Transcendental as Brownson's words might be, he wrote them, in fact, in 1875, long after his conversion to Roman Catholicism, whose exclusive claim to the higher order of reality he is asserting in this passage. If Brownson can proclaim the primacy of spirit over matter and yet be repelled by Transcendentalism, then there must exist in the Transcendental program some necessary element other than an idealistic or spiritualistic bias, some element unacceptable to the elder Brownson. That element, I believe, consists largely of ideas and values promulgated by Francis Bacon. Another Transcendentalist, Theodore Parker, set forth a kind of manifesto for the movement in which he displays some of these Baconian concepts: Transcendentalism, he says, is no speculative doctrine but has a work to do,

to revise the experience of mankind and try its teachings by the nature of mankind; to test ethics by conscience, science by reason; to try the creeds of the churches, the constitutions of the states by the constitution of the universe; to reverse what is wrong, supply what is wanting, and command the just. To do this . . . is no light work, not to be taken in hand by such as cannot bear the strife; . . . not to be accomplished by a

single man, a single age and race. . . .
 It looks to a future, a future to be
 made; . . . a society full of industry
 and abundance, . . . without ignorance,
 want, or crime, a state without oppres-
 sion; yes, a world with no war among
 the nations to consume the work of their
 hands, and no restrictive policy to hinder
 the welfare of mankind. That is the human
 dream of the Transcendental philosophy.
 Shall it ever become a fact? History says,
 No; human nature says, Yes. (PW, VI, 37-38)

At the same time, Parker claims that the Transcendental dream will be achieved only if America's preoccupation with material things and sensational experience can be overcome; but it is more important, I think, that his utopia, far from abolishing experience, matter, and the senses, provides for their rehabilitation and integration into the total scheme. As one modern critic has said, "whereas the ancients came to terms with their world by applying to it a system of general truths established upon what they conceived . . . to be divine authority, modern man has learned to come to terms with his world by seeking to determine whether divine authority may not rest in generalizations from the facts of his own experience."³ Like Bacon, the Transcendentalists do not wish to revert to the systems of the ancients or to any dogmatic system divorced from observable reality; in spite of their flirtation with neo-Platonism, they too are committed to facts, to experience, to the real world, in (and not beyond) which

³Wilbur Samuel Howell, "The Plough and the Flail: The Ordeal of Eighteenth-Century Logic," HLQ, XXVIII (1964), 77-78.

they have set themselves the task of discerning the presence of spirit. It is this desire to accept mankind's growing naturalism, to reestablish the importance of the created universe, and to make man at home in it, that constitutes what I consider the Transcendentalists' debt to Francis Bacon.

The whole question of "influence" and "debt" is a vexed one in literary scholarship. René Wellek, however, has provided some methodological guidelines for investigations into the ranks of poets, theologians, philosophers, and other Representative Men whom the Transcendentalists admired and read.⁴ The problem, Professor Wellek admits, is especially acute for the Transcendentalists because, he says, they voluntarily inherited "the whole intellectual history of mankind." But he recommends several steps: to avoid relying upon the vague "repute" of the supposedly influential writer in America; to distinguish between isolated quotations and genuine indebtedness; to establish influence by comparing the "whole systems" of the writers involved; and to eliminate fortuitous similarities by investigating the circumstances under which each Transcendentalist read the supposed influence. I have, within the limitations of space and time, attempted to follow these suggestions for most of the writers I have discussed. There are, nevertheless, some special conditions which hold for the study

⁴"The Minor Transcendentalists and German Philosophy," NEQ, XV (1942), 660-3.

of Bacon's influence, as opposed to that, let us say, of Kant, Schleiermacher, or Madamede Staël. In Bacon's case, for one thing, "repute" is not vague but, as I have found, a significant factor in determining Bacon's influence. He was so widely and elaborately discussed in most of the literature--periodical and otherwise--that the Transcendentalists read and in the schools they attended that what they say about Bacon and what they borrow from him is at least in part a response to his reputation. Secondly, Bacon, I must maintain, is a cultural figure of greater significance and more widespread influence than Cousin, Coleridge, de Staël, Fichte, Locke, and most of the others usually seen as sources for Transcendental ideas. I do not say he is a greater poet, philosopher, literary personage, etc., than any of these, nor that he solved problems that the others did not solve. But Bacon looms much larger than any of them in the history of Western culture; he speaks for his age, and in many things, for all succeeding ages. To him, in the literature of the seventeenth, eighteenth, and nineteenth centuries, was attributed the sponsorship or inception of the best and the worst features of modern civilization: science, technology, industrialism, the growth of trade, democracy, utopianism, empiricism, utilitarianism, progressivism. A whole corps of writers seems to have been engaged in a campaign to prove that Bacon had no influence at all; their numbers and their energy serve rather to

confirm the pervasiveness of his ideas. Francis Bacon's avowed disciples, in the period under study, range from John Milton and Abraham Cowley to Benjamin Franklin and Edward Everett. In the age of Transcendentalism, one could ignore Schleiermacher and Cousin, but not Bacon and Baconianism. Indeed, Bacon's very pervasiveness complicates the question of influence, for his concepts and slogans are echoed and re-echoed everywhere.

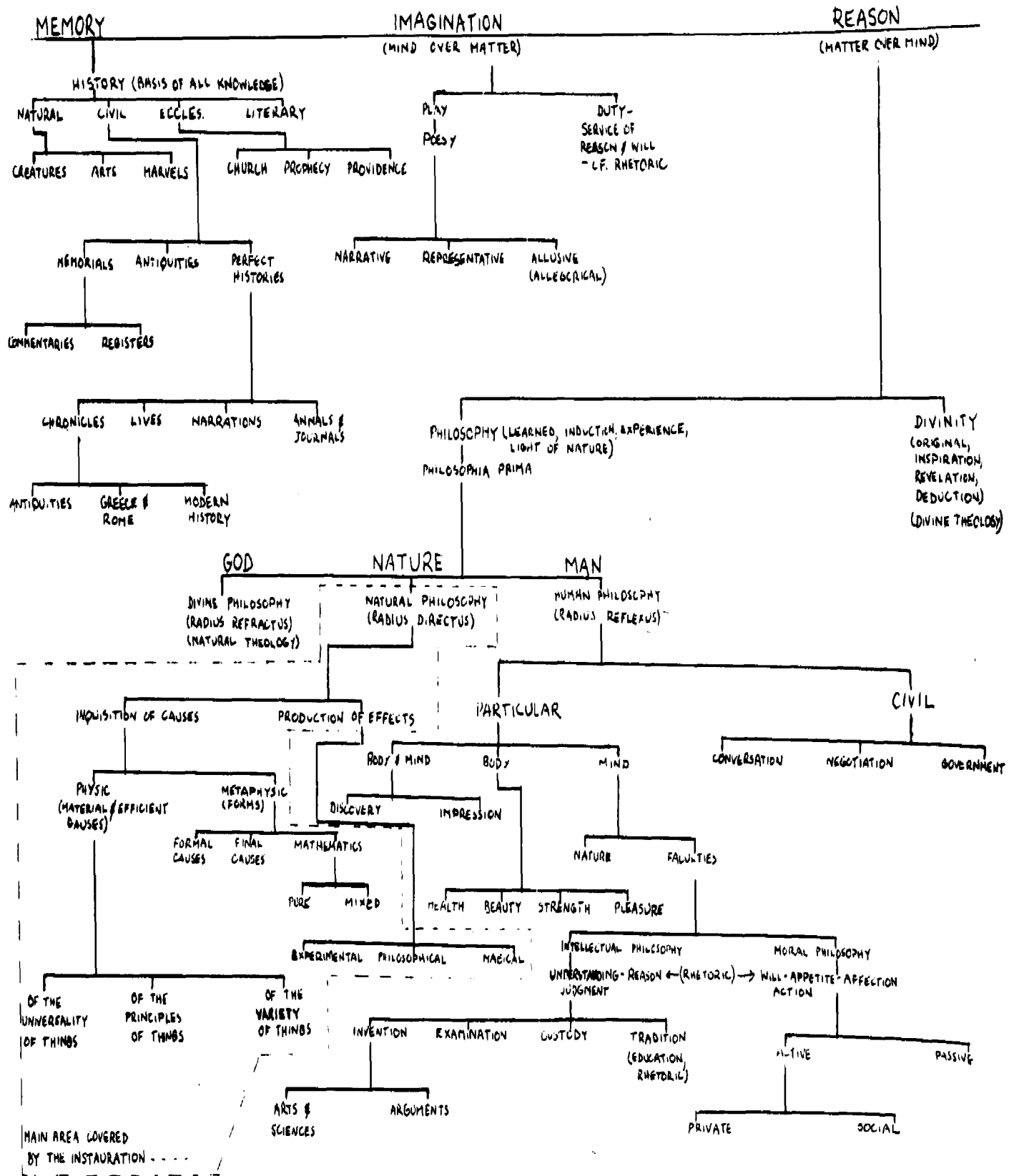
Finally, I have attempted a historical analysis of Bacon's reputation and influence among the spiritual and intellectual ancestors of Transcendentalism. I have intended not merely to sketch in background but rather to demonstrate that the Transcendentalists came to terms with Bacon and what he represented partly because their predecessors had done so. I have employed in this analysis Perry Miller's description of the progress of American thought "From Edwards to Emerson."⁵ As Professor Miller shows, Transcendentalism has its roots in the Puritanism of America's earliest settlers. Emerson and his colleagues inherited the Puritans' desire "to confront, face to face, the image of a blinding divinity in the physical universe, and to look upon that universe without the intermediacy of ritual, of ceremony, of the Mass and the confessional." The transition between Edwards and Emerson, Professor Miller says, is Unitarianism, which represents the union of the

⁵Errand into the Wilderness (Cambridge, 1956), pp. 185, 197.

optimistic rationalism of the Enlightenment and the social aspect of New England Calvinism; the Unitarians opened the door to the Transcendentalists' quasi-pantheistic identification of nature and man's inner impulses with God by abolishing the doctrine of man's depravity (though the Transcendentalists themselves retained a sense of the imperfection of knowledge and society which their Unitarian fathers and antagonists lacked). I have found that at every step of the way Francis Bacon and his Instauration were eagerly accepted (and in some cases reinterpreted) by each of the groups which comprise the ancestry of Transcendentalism. The Puritans and the Unitarians were able to combine their quest for the divine image with the Baconian quest for an earthly utopia. The Transcendentalists, in their turn, achieved the same synthesis. For them, Bacon was not the father of sleep everlasting H-bomb but a significant model. They perceived his faith in the divine authority of nature and in God's guarantee of the study of facts, and they attempted to reestablish this faith in an age which seemed to be losing it. They were perhaps the last men in America to believe as passionately as Bacon in a materially and spiritually healthy mankind living fruitfully in a healthy universe.

BACON -- HUMAN LEARNING

(THE ADVANCEMENT OF LEARNING)



I. The Baconian Vision

As a philosopher, Bacon during his lifetime was little noticed in England and less read, though his philosophical writings did achieve some fame on the continent. King James's famous dictum that the Novum Organum was like the peace of God that passeth understanding suggests the general response to Bacon's philosophical and scientific works upon their appearance.¹ Bacon, not despairing, recognized the discouraging reception of his Great Instauration and in his will left his name, as he said, to future ages and to foreign countries.² Both were quick to accept his bequest; and within a generation after his death, as one writer recently noted, "he was a European hero."³ Since then, Bacon's centrality in western thought and science has been demonstrated by the swirling and incessant controversy surrounding his life and writings, a controversy which has involved such men as Alexander Pope, Locke, Kant, Coleridge, Macaulay, John Stuart Mill, and the Transcendentalists. Bacon's life and character, despite the fact that they are incomparably better

¹See Stephen Beasley Linnard Penrose, Jr., The Reputation and Influence of Francis Bacon in the Seventeenth Century (New York, 1934).

²James Spedding, The Letters and the Life of Francis Bacon (London, 1861-1874), VII, 228. This is the standard biography. A good recent biography is Catherine Drinker Bowen, Francis Bacon: The Temper of a Man (Boston, 1963).

³Hugh Trevor-Roper, "Men and Ideas: Francis Bacon," Encounter, Feb., 1962, p. 74.

documented than those of his contemporary Shakespeare, continue to receive violently disparate interpretations: was Bacon emotionally "cold," was his political rise a result of merit or of influence, was he a good politician and an honest judge or inept and corrupt, was he right or wrong to participate in the condemnation of his patron Essex, did he love his wife, did he enter politics for self-gratification or for the advancement of human welfare, was he justly impeached and convicted, was he (even this) a homosexual? Likewise, Bacon's influence upon the history of science and of philosophy remains an area of controversy: was Bacon a scientist, a propagandist of science, or a self-deluded egotist, is his method useful for science and did he intend it for other disciplines as well, did he foster atheism and materialism, was he original or derivative, did he have a consistent philosophy or a set of contradictory notions and a confused terminology, did his ideas spell the doom of poetry, does he deserve a place in any pantheon? Moreover, his name figures prominently in the curious Shakespeare authorship controversy, in which he is ironically championed by victims of the very idols of the mind Bacon warned against. He is defamed, similarly, by others who wish to fix the blame for whatever moral or intellectual quandaries they find themselves in; according to their claims, the modern world is responsible for their situation and Bacon is responsible for the

modern world. Bacon, in sum, has been credited with originating the best features of contemporary life and damned for stimulating the worst.⁴

Because there are so many contradictory conceptions of Bacon's character, philosophy, and importance, it is imperative in any extensive study involving his ideas to define one's version of Baconianism, a version--hopefully--based less upon personal prejudices and the opinions of critics than upon an accurate reading of Bacon's writings. I cannot take up Bacon's biography (except as it becomes an issue in certain evaluations of his thought) nor can I

⁴For summaries of Bacon's reputation, see Bowen, Francis Bacon, pp. 3-19; Richard Foster Jones, Ancients and Moderns: A Study of the Rise of the Scientific Movement in Seventeenth-Century England, 2nd ed. (Berkeley, 1965), vii-xi; Rudolf Metz, "Bacon's Part in the Intellectual Movement of His Time," Seventeenth-Century Studies Presented to Sir Herbert Grierson (Oxford, 1938), pp. 21-25; John M. Robertson, Pioneer Humanists (London, 1907), pp. 42-114. For general evaluations and opinions of Bacon's value and significance, see Fulton H. Anderson, The Philosophy of Francis Bacon (Chicago, 1948), pp. 292-303; [Charles] Dunbar Broad, "The Philosophy of Francis Bacon," Ethics and the History of Philosophy: Selected Essays (London, 1952), pp. 140-143; R. W. Church, Bacon, English Men of Letters Series (London, 1902), pp. 186-187; J. G. Crowther, Francis Bacon: The First Statesman of Science (London, 1960), pp. 1-17; Loren Eiseley, Francis Bacon and the Modern Dilemma (Lincoln, Neb., 1962); Henry Margenau, "Bacon and Modern Physics: A Confrontation," PAPS, CV (1961), 487-492; Marjorie Hope Nicolson, The Breaking of the Circle: Studies in the Effect of the "New Science" upon Seventeenth-Century Poetry, Rev. ed. (New York, 1960), pp. 8-10, 124; A. E. Taylor, Francis Bacon (London, 1926), p. 8; Radoslav Andrea Tsanoff, "Francis Bacon and Philosophic Thought," Rice Institute Pamphlet, XIII (1926), 1-22; Alfred North Whitehead, Science and the Modern World (New York, 1926), p. 63. This list represents, of course, only a fraction of even recent evaluations of Bacon.

extensively analyze his influence; in this chapter I will be concerned primarily with Bacon's thought as expressed in his major writings. However, ruthless selectivity is imperative even in this case, for many entire books have have been written on Bacon's philosophy as a whole or in part, and I refer the reader to C. D. Broad and Richard Foster Jones for good brief summaries of Bacon and to Fulton H. Anderson and Benjamin Farrington for extensive surveys.⁵ I will not attempt a thorough nor even a particularly balanced account, but will concentrate upon only those aspects of Bacon's thought which will be most relevant to American Transcendentalism.

Bacon, to begin with, is a cultural reformist. In spite of his generally conservative politics and religion, Bacon's attitude toward much of human civilization is one of radical dissatisfaction. Man, he believes, dwells as a diminished creature in an impoverished world, dominion over which he has been given but has failed to exploit. Bacon makes much of the story of the Fall; man has been granted a paradise, has erred and lost it, and exists amid shrunken horizons.⁶ But where Bacon differs from the equally gloomy opinion of the millennial and hexameral

⁵Broad, "The Philosophy of Francis Bacon"; Jones, Ancients and Moderns, pp. 41-61; Anderson, The Philosophy of Francis Bacon; Farrington, Francis Bacon: Philosopher of Industrial Science (New York, 1949).

⁶See Jaroslav Pelikan, "Cosmos and Creation: Science and Theology in Reformation Thought," PAPS, CV (1961), 464-468.

traditions concerning the status of man is in his certainty that the human race can effect its own improvement by efforts of mind and will. Bacon thus joins disaffection for man's present estate with a vision of an enhanced estate not only in the Christian heaven but in this life and in this God-given world. "My purpose," he declares, ". . . is to try whether I cannot in very fact lay more firmly the foundations, and extend more widely the limits, of the power and greatness of man" (NO I:cxvi; BW, VIII, 147).

No one, perhaps, has sustained a balance finer or more tense than Bacon between a desire to reform institutions and an ability to work within them and thus to avoid the ostracism which befalls the obvious revolutionary in politics or in thought. Giordano Bruno was burned for his ideas, Galileo harassed, and Copernicus forced into lifelong silence; but Bacon, whose critique of the intellectual basis of institutions penetrated as deeply as Galileo's experiments, managed to retain his respectability and his benign appearance. Of course, his remarks were more general than those of Copernicus; his specific details seemed less dangerous to established institutions and intellectual systems than the discovery that the heavens change; and he wrote in the more liberal Protestant environment of England; but his writings constituted a direct and explicit challenge to society to behold itself, perceive its failings, and repair them.

The cause of mankind's poverty is intellectual, Bacon says. He does not directly advocate the reform of political

structures or of the Church or of most social institutions except the schools, which he denounces for their inefficacy and inutility (e.g., BW, VI, 174-176, 424-426; NO I:xc, BW, VIII, 126-127). But he argues that knowledge of institutions is lacking--knowledge of how society functions and how politics and morals may best serve human needs. And the implication of his argument is that in any contest between a political, religious, or social institution and the truth, the institution must eventually yield. Unlike a previous Lord Chancellor, Bacon was never called upon to choose between King and truth or Church and truth; he remained a monarchist and a High Church Anglican (despite his mother's Puritanism) because he felt that no other social forms were more likely to encourage learning and because order was more conducive to the Instauration than the disorder he felt was a probable result of democracy and religious sectarianism.⁷ But Christopher Hill, among others, sees Bacon nevertheless, because of the import and influence of his ideas if not of his politics, as one of the intellectual progenitors of the English Revolution; and Bacon has remained a hero to those who, like the French Encyclopedists, feel that dogmas must yield to mankind's demand for a better world.⁸

⁷For a view of Bacon as an anti-democratic reactionary, see John Willis Slaughter, "Francis Bacon and the Ideal Commonwealth," Rice Institute Pamphlet, XIII (1926), 56-72.

⁸Hill, Intellectual Origins of the English Revolution (Oxford, 1965), p. 2 et passim.

The better world must come through learning. Most human learning, Bacon asserts, especially those areas which affect behavior and practice, is deficient. The accumulated wisdom of man is inadequate to his needs; there is much that exists in reality that man does not know but can know; and any force or body which, through interest or ignorance, obstructs the progress of true learning must be circumvented and must suffer a diminution of its influence. In Book One of The Advancement of Learning, Bacon replies to the arguments usually offered against any vigorous pursuit of knowledge, and in the Novum Organum he describes the idols of the mind, the internal obstacles to truth. The seeker after knowledge must contend with these internal and external enemies, and, implicitly, Bacon demands that institutions withdraw whatever support they may give to the barriers against knowledge.

The Church, especially through its apologists and theologians, is perhaps the chief enemy, but not true religion, which, as we shall see, is no enemy but the guarantor of the Instauration. The arguments against learning which Bacon cites are principally religious: Adam fell because of knowledge, knowledge causes pride, knowledge fosters atheism and heresy, knowledge of the world draws the mind from God (BW, VI, 91-92). But politicians and businessmen also obstruct learning, claiming that it is endless and useless, wastes time and causes anxiety while contributing nothing. This last opinion is close to Bacon's own concerning scholastic learning, of course, and he notes the disrepute which the

learned themselves, by their example, bring upon learning. They affect rhetorical floridity, they ignore practical reality, they build hedges around learning and deny its benefits to mankind. Hence, Bacon advocates the disarming of factions and institutions associated with the Church, the state, and private affairs in their relation to the pursuit of knowledge; nothing may be allowed to stand between the mind and objective truth.

An essential part of the reform is to alert men to their need. One of Bacon's most characteristic roles is that of the trumpeter awakening men to their narrowed condition and to their limitless possibilities. Not only do men lack, but they even lack awareness of their lack. "Opinion of store," Bacon declares in one of his favorite aphorisms, "is one of the chief causes of want" (BW, VI, 418; VIII, 25). Bacon sees himself as a prophet, bringing to a darkened world news of light. Fully as much as any spiritual voyager, Bacon is the only resident of Plato's cave who has seen the light and who is compelled to relate the sight to benighted skeptics. He is seldom specific about what the world lacks; he does not, except in The New Atlantis, a late and unfinished work, itemize the concrete benefits of the Instauration.⁹ Though

⁹R. L. Colie, in fact, has shown that the scientific marvels of Salomon's House in The New Atlantis are mere borrowings from medieval and Renaissance scientific compendia, "Some Paradoxes in the Nature of Things," Reason and the Imagination: Studies in the History of Ideas, 1600-1800, ed. J[oseph] A[nthony] Mazzeo (New York, 1962), pp. 94-95. But see G. C. M. Smith (ed.), The New Atlantis (Cambridge, England, 1900), pp. xxvi-xxviii; Smith points out that even as early as 1900 many of Bacon's predictions had been fulfilled: submarines, cross-breeding of plants, etc.

he has often been accused of espousing a petty, mechanical-minded utilitarianism, he urges instead a general advance of all knowledge, both for its own sake (as a proper pursuit of a rational being made in God's image) and for the sake of the "fruits" it will eventually bring. It is not these fruits upon which he usually dwells but upon the need for a sure technique of acquiring accurate knowledge of the natural and social worlds for man's benefit. In The Advancement of Learning, Bacon claims that, far from having achieved all the knowledge that is accessible, men are still largely ignorant. They bandy glib abstractions; they yield to superstition, to false cosmologies, and to the distortions of a language divorced from facts; they parse and dispute; they scorn useful applications of knowledge; they allow themselves to be content with the few scraps of truth they possess and to be persuaded that no more can be had.

Authority is the principal target of Bacon's reformist ire. It must be remembered that Bacon does not at all propose substituting practical experience for learning gained from books. His essay "Of Studies," for example, advocates a beneficial balance between reading and practice (BW, XII, 252-253); in The Advancement of Learning, "learning" is by definition "books," and Bacon explicitly refutes the argument that "learning" is less valuable than "experience" (BW, VI, 101-102). Though some have invoked his name on the side of an anti-intellectual utilitarianism or scientism, Bacon, as a Renaissance humanist, reveres learning and classical culture and does not

hesitate to bring all its resources to bear upon the problem of improving man's estate.¹⁰ He decries those reformers who discard all tradition and speak on their own authority; he himself, he claims, though he goes beyond the ancients, comes in their name (BW, VI, 216). Yet, because the improvement of man's estate is the end of Bacon's efforts, books must be judged by how much they contribute to it, and insofar as they impede mankind's progress, they are to be shunned or overridden (NO I:1xxiii, BW, VIII, 104-105).¹¹ And unquestioning reverence for authority is the nemesis of the Instauration, which depends not only upon the arrangement and elaboration of what is known but also upon the discovery of what is unknown and not yet written. Here experience and observation must take precedence over learning, must complement, correct and augment what one is told by the authors. Hence Bacon's distinction in the De Augmentis Scientiarum (the Latin translation and expansion of The Advancement of Learning) between "magisterial" education, which conveys what

¹⁰See Geoffrey Bullough, "Bacon and the Defence of Learning," Seventeenth-Century Studies Presented to Sir Herbert Grierson, pp. 1-20; Edmund H. Creeth, "Bacon's Humanism," PMASAL, XLVII (1962), 637-648; George Gordon, "Francis Bacon and the Revival of English Humanism," The Lives of Authors (London, 1950), pp. 87-100.

¹¹On Bacon as a utilitarian, see J. B. Bury, The Idea of Progress: An Inquiry into Its Origin and Growth (London, 1920), pp. 50-63; Lewis Mumford, "Science as Technology," PAPS, CV (1961), 506-511.

has been discovered to the functionaries who will use and apply it, and "initiative" education, which teaches the methods of further discovery and inculcates doubt, curiosity, and intellectual independence (BW, IX, 122-123). The master will always know less, finally, than the disciple (BW, VI, 128-129). More than one critic has pointed out that in his own scientific experiments, such as those described in the Sylva Sylvarum, Bacon in fact often accepted the erroneous data he found in written sources and failed to check them by simple observations and experiments.¹² Despite such lapses, which may be attributed at least partly to the power of traditional assumptions over even the boldest of innovators, Bacon urgently advocates the rejection of stifling authority--whether promulgated by church, by university, or

¹²Thomas V. Wheeler, "Sir Francis Bacon in the Laboratory," TSL, IX (1964), 49-55. The critical consensus is that Bacon was no scientist. See Bowen, Francis Bacon, p. 8; Broad, "The Philosophy of Francis Bacon," p. 140; Morris R. Cohen, Studies in Philosophy and Science (New York, 1949), pp. 99-106; Griffith Conrad Evans, "The Place of Francis Bacon in the History of Scientific Method," Rice Institute Pamphlet, XIII (1926), 73-92; William Cecil Dampier-Whetham, A History of Science and Its Relations with Philosophy and Religion (New York, 1929), pp. 137-138; C. J. Ducasse, "Francis Bacon's Philosophy of Science," Structure, Method, and Meaning: Essays in Honor of Henry M. Sheffer, ed. Paul Henle, Horace M. Kallen, and Susanne K. Langer (New York, 1951), p. 117; D. G. James, The Dream of Learning: An Essay on The Advancement of Learning, Hamlet, and King Lear (Oxford, 1951), pp. 2-3; Metz, "Bacon's Part in the Intellectual Movement of His Time," p. 25; Robertson, Pioneer Humanists, pp. 78-105; Mary Sturt, Francis Bacon (New York, 1932), p. 115; Taylor, Francis Bacon, p. 10. But for a different opinion, see Eiseley, Francis Bacon and the Modern Dilemma, pp. 31-59.

by such "scientific" powers as the alchemists and natural magicians--in favor of careful, direct, systematic observation of the facts. For the sake of the polemic, to which Bacon, as a propagandist of discovery, must devote so much of his energy, he exaggerates the errors of Plato and Aristotle, hoping to destroy not their accomplishments but their repressive sway (where it exists) over men's minds; "truth is to be sought for not in the felicity of any age, which is an unstable thing, but in the light of nature and experience, which is eternal" (NO I: lvi, BW, VIII, 85; cf. VI, 122; VIII, 91, 94).¹³

The question of the inductive method has been a vexed one among commentators on Bacon's influence upon science and logic; hotly debated is the issue of whether Bacon ignored Aristotle's analysis of induction and falsely claimed the invention of true induction for himself. The issue is, I think, not the proper one to argue. Bacon's "inductive method," insofar as it goes beyond the simple principle of deriving laws from facts, is, as described in Book Two of the Novum Organum, a much more elaborate affair, with its tables and axioms and instances, than Aristotle's induction. But even if this were not so, and even if the basic principles of the inductive method are attributable not to Bacon

¹³ See Jonathan Wright, "The Lights and Shadows Bacon Threw on Science in the Novum Organum," Sci. Monthly, XXVI, 1928, 37-38; Robert E. Larsen, "The Aristotelianism of Bacon's Novum Organum," JHI, XXIII (1962), 435-450.

but to Aristotle or to Plato, the fact remains that Bacon saw that the application of Aristotelian methods was, in practice, producing no new and useful knowledge; that, whether accurate or inaccurate, Aristotle's directives were being so used as to stifle curiosity and inhibit the discovery of the unknown. The scholastics receive the brunt of Bacon's attack in this area (e.g., BW, VI, 118-124). Aristotle may have been right; but what men had made of Aristotle was wrong and as a spur to learning he must be dethroned. Such, I believe, is Bacon's true attitude toward all authority: may it always be right, but, right or wrong, if it obstructs knowledge it must go (cf. "Of Innovations," BW, XII, 160-161). There is no automatic or arbitrary rejection of the past in Bacon's scheme; there is only a desire to avoid being shackled by the past when it begins to make demands of its own which conflict with the truth of experience.

Bacon's reformism, then, is a necessary consequence of his belief that what is not yet known will prove of greater benefit to man than what is already known. Any book, any authority, or any institution which keeps the unknown unknown must be circumvented, whatever may be its value in its own domain. The truth of the Christian religion and the authority of the English Church are unquestioned by Bacon, but where they interfere with learning they must be prodded to stand aside. The divine right of the monarchy and the legitimacy of King, Lords, and Commons are also

beyond dispute, but they must all be shown the necessity of the Instauration and the foolishness--even criminality--of impeding it. Though "revisionist" critics from the early nineteenth century to the present day have attempted to discredit Bacon by demonstrating his sycophancy, his acquiescence in monarchial skulduggery, and his general religious and political orthodoxy, Bacon continues to serve--as he has always served--as the patron saint of innovation, of technical, cultural, and social progress, and of reform, nor--for all his orthodoxy--has he ever been invoked by the opponents of change.

A corollary of Bacon's reformism is a generous component of skepticism regarding human achievements and abilities. This is the reverse of the coin, the underside of the Instauration, the sense of human smallness and mediocrity as the reasons for the race's continued exclusion from the natural Eden as human pride shut it out from the divine. A recent commentator's assertion that Bacon fails to provide for human vice is ludicrously inaccurate; man in Bacon is most certainly a fallen creature.¹⁴ Bacon's ultimate vision is one of expansive development for mankind, of a world waiting to be discovered, of a total and satisfying integration of man and nature; but sometimes the vision blurs, and Bacon seems instead to anticipate only continued waste and ignorance, engendered by flaws inherent in the human constitution.

¹⁴Sidney Warhaft, "Science Against Man in Bacon," BuR, March, 1958, p. 168.

In Book One of The Advancement of Learning, Bacon defends the mind's capacity to know and to act upon knowledge and to avoid the pitfalls of error (BW, VI, 93), but elsewhere, he doubts it or severely qualifies it. Doubt, in fact, Bacon makes an essential element in the process of gaining true knowledge: "if a man will begin in certainties, he shall end in doubts; but if he will be content to begin with doubts, he shall end in certainties" (BW, VI, 133; cf. VI, 232-233). To end in certainties--such is Bacon's desire. But "the human intellect makes its own difficulties," he declares (BW, VIII, 17). "For while men are occupied in applauding the false powers of the mind, they pass by and throw away those true powers, which . . . are within its reach" (BW, VIII, 18). These "false powers" are essentially the unaided reason, which, if it be not furnished with facts and forced to operate upon objective reality, turns in upon itself and builds fantasies and illusions. "For 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 incidence; nay, it is rather like an enchanted glass, full of superstition and imposture, if it be not delivered and reduced" (BW, VI, 276). "The human intellect left to its own course is not to be trusted . . ." (BW, VIII, 31). In order to achieve his goal of self-betterment, man must paradoxically "humiliate" his "spirit" (BW, VIII, 33), recognizing the innate feebleness of his mental powers and

subjecting himself absolutely to the laws of nature, which is less symmetrical and regular and more complex and subtle than man's mind expects or desires. The mind alone is "quite unfit to contend with the obscurity of things" (NO I:xxi, BW, VIII, 72; NO I:x, xv, BW, VIII, 69, 79; VI, 276-278). (Even the senses are inept and require experiments and instruments to help them [BW, VI, 66, 267; IX, 71].) The mind desires speedy answers--"Anticipations of Nature"--instead of careful, patient observation and induction of the truth--"Interpretations of Nature" (NO I:xxvi, BW, VIII, 73); and even when they are established properly, the interpretations are less appealing to the mind than the hasty and wish-fulfilling anticipations (NO I:xxviii, BW, VIII, 73-74). The crux of Bacon's critique of the powers of man is his doctrine of the Idols of the Mind (NO I:xxxviii-lxviii, BW, VIII, 76-99). The Idols are too familiar to require detailed exposition here: the Idols of the Tribe, errors of the understanding and the senses which distort truth anthropomorphically; the Idols of the Cave, errors produced by one's individual inclinations and the contingent particulars of one's character, education, and life; the Idols of the Market Place, errors caused by imperfections of language; and the Idols of the Theater, fantastic and erroneous cosmologies and systems of dogma. In the essay "Of Truth," Bacon suggests the results of the mind's eagerness to cheat itself: men have a "natural" love for a lie and hence value plain truth less than glittering falsehood: "Doth any man doubt, that if there were taken out of men's minds vain

opinions, flattering hopes, false valuations, imaginations as one would, and the like, but it would leave the minds of... men poor shrunken things, full of melancholy and indisposition, and unpleasing to themselves?" (BW, XIII, 82).

In the essays in general, Bacon displays a skeptical view of human motives and behavior, a view that prompted William Blake to sputter, "Good advice for Satan's kingdom!"¹⁵ Indeed, the essays constitute one of the least complimentary analyses of mankind ever written, equalling in this respect the views of Hobbes, who, however, got the reputation of the bad boy of the English Renaissance instead of Bacon. In the essays, as elsewhere, Bacon frequently cites Machiavelli (the bad boy of the Italian Renaissance); the Italian, he says, has (inductively) shown us what we really are, not what we would be (BW, VI, 327). "Merit and good works is the end of man's motions," Bacon writes, describing the ideal ("Of Great Place, BW, XII, 113). But the reality is suggested by some of the topics alone: revenge, simulation and dissimulation, envy, seditions, superstition, cunning, wisdom for a man's self, seeming wise, suspicion, deformity, vainglory, anger--more appropriate subjects for a preacher than for the trumpeter of new eras.¹⁶ Perhaps the ardent Puritanism of Bacon's mother contributed to his keen awareness of human vice, but in any

¹⁵Poetry and Prose of William Blake, ed. Geoffrey Keynes (London, 1956), p. 768.

¹⁶Cf. Thomas H. Jameson, Francis Bacon: Criticism and the Modern World (New York, 1954), p. 31.

case, little of human absurdity or folly escapes his eye: the ways in which men advance their fortunes, manipulate their friends and subordinates, polish their images, exploit their colleagues--the subterfuges of man the social animal. Usury, Bacon says, is, as the divines tell us, evil; but it is here to stay, and so we would do well to study its degrees and its uses. Crafty men, braggarts, and fools warrant, if not our esteem, at least our attention, for they can be put to use according to the talents their vices confer upon them. Bacon's genius lies partly in his ability to separate things. He does not allow the deficiencies of one area of behavior or experience to incapacitate any other area, nor does he judge all things by a single system of values--except by their capacity for advancing human welfare. He separates, in his scheme, theology and science, ideal behavior from real, useful things from useless, imagination from reason. Therefore, Bacon is able to sustain both a skeptical opinion of human worth and power and a profoundly positive, optimistic view. What the mind alone cannot do, the mind plus experiments will accomplish. If one man is powerless, all men together are not. If all men together will not initiate the Instauration, the Prince will do it. As coldly pessimistic as Bacon's opinion of mankind may frequently appear, there never lacks some redeeming alternative among the possibilities, some way out. In psychology and in ethics, as in science, Bacon envisions not ideal but practical standards: if we cannot know everything about everything, we can know a great deal about a little, or

enough to satisfy us about what really concerns us. We can achieve the best of worlds by and through what we are and what we can do, and to bring Paradise back to earth--or bring it out of the earth where it is latent--requires our energy and our attention but not our rebirth as morally perfect creatures. Our talents may not be great, but it is death to hide them. To build the New Atlantis does require a baptismal event, but it is an ablution not of the soul or the moral being but the intellect; one must become "as a little child" and undergo "expiations and purgings of the mind" (NO I:lxviii, lxix, BW, VIII, 99-100).

Lest cynics take his critique of reason as disqualifying man from the pursuit of knowledge, Bacon comes to the rescue: "the human senses and understanding, weak as they are, are not to be deprived of their authority, but to be supplied with helps" (NO I:lxvii, BW, VIII, 98). The chief help for man's intellectual imperfection is the inductive method. Bacon's primary reform is epistemological, involving what he insists is a new concept of what man can know and how he can know it. The method insures that man will restrict himself to knowable things and that he will learn them. Bacon describes the three faculties of the mind: memory, whose area of learning is history; imagination, whose functions are poesy and the service of the other faculties; and reason, which comprehends both knowledge learned and knowledge revealed, philosophy and divinity, experience and inspiration (BW, VI, 182-183). Bacon has been accused of fostering modern irreligion by divorcing

reason and faith, but, in the scheme of human learning presented in The Advancement of Learning and De Augmentis, he does not actually do so; both worldly and divine truth, though diversely attained, are known by reason (BW, VI, 182; VIII, 408-409). What Bacon separates are "philosophy" and "divinity," which are, as areas of knowledge, functions of reason. Philosophy deals with the universe, nature, experience, facts known by sense and induction, whereas divinity, to which Bacon assigns the highest place in the mind of man, deals with knowledge of God, truths not learned but known by revelation and "inspiration."

Few issues receive so frequent and emphatic a treatment from Bacon as that of the distinction not between faith and reason but between natural and inspired knowledge of God. One cannot, Bacon insists, attain positive knowledge of God or of the mysteries of faith by studying nature or man. The knowledge of God which derives from philosophy, comprising sense, observation, induction, and experience, is incomplete. Nature demonstrates God's design and therefore, without the need for miracles (e.g., BW, VI, 212), convinces men that God exists: "all knowledge and specially that of natural philosophy tendeth highly to the magnifying of the glory of God in his power, providence and benefits. . . . natural philosophy is of excellent use to the exaltation of the Divine Majesty" (BW, VI, 423-424). But what to do and to believe beyond what nature tells is the province of divinity or inspired theology, which operates by revelation and is the

gift of God. Only revelation can give knowledge of God's will, moral law,¹⁷ true doctrine and proper worship. Many in Bacon's day did fear for the security of religious belief if the study of nature were given free rein, but Bacon's reassurances are firm: "I humbly pray, that . . . from the opening of the ways of sense and the increase of natural light there may arise in our minds no incredulity or darkness with regard to the divine mysteries; but rather that the understanding being thereby purified and purged of fancies and vanity, and yet not the less subject and entirely submissive to the divine oracles, may give faith that which is faith's" (BW, VIII, 35). The distinction here is primarily between faith and sense (which "shuts up the face of heaven," Bacon admits) rather than between faith and reason. Bacon complicates the matter, however, by treating reason or "understanding" as a faculty of the mind subject to study and opposed to "will" (in the categories of The Advancement, Reason--Philosophy--Human--Particular--Mind--Faculties--Understanding [BW, VI, 258-309; IX, 16-190]). It is this aspect of reason--as a faculty for judging and evaluating sense experience and ideas--that Bacon separates from faith (urging a scientific study of precisely to what degree this judging faculty may be used in religion), just as he separates revealed morality (Divinity) from "Moral Philosophy" (Philosophy--Human--Particular--Mind--

¹⁷ But cf. BW, VI, 395: the light of nature does confer enough knowledge of morality "to check the vice, but not to inform the duty."

Faculties--Will [BW, VI, 309-391; IX, 191-344]) which deals with man's appetites and affections as they influence public and private behavior.¹⁸

Both philosophy and divinity are kinds of knowledge in which things external to the mind govern the mind--nature and God--and thus can be known only if the mind humbles itself to them. In contrast, imagination enables the mind to create its own version of reality, and so this faculty must be carefully used and controlled, to avoid illusions and false knowledge (BW, VI, 203). Memory, like reason, is subject to external reality, but instead of discovering laws and principles, it tabulates and stores facts for the use of the reason; history, including natural history, is thus the basis of all philosophy (BW, VI, 221). Even in this scheme, which seems to grant man complete knowledge of the universe ("nothing parcel to the world is denied to man's inquiry and invention [i.e., discovery "][BW, VI, 93]), nature's ultimate truth is still inaccessible; knowledge of nature ascends from natural

¹⁸On the question of religion, reason, and faith, sense and divinity, see BW, VI, 92-97, 211-214, 393-411; NO I:1xxxix, BW, VIII, 124-126; IX, 345-355. The complexity of the reason-faith issue, especially as Bacon treats it in The Advancement (where he says more than elsewhere), is partly due to Bacon's intention to treat philosophy and divinity as areas of learning or subjects of study rather than to analyze or evaluate them per se. Hence the confusion between reason as one of the three chief mental faculties and as one of the two under "Mind--Faculties" which can be studied scientifically (the other being will). See D. G. James, The Dream of Learning, pp. 7, 25-30; F. P. Wilson, Elizabethan and Jacobean (Oxford, 1945), p. 10.

history to physics to metaphysics (knowledge not of spirit but of principles of matter), but "As for the vertical point, Opus quod operatur Deus a principio usque ad finem, the Summary Law of Nature, we know not whether man's knowledge can attain to it " (BW, VI, 222).¹⁹ Bacon's authority here is Ecclesiastes 3:11; one of his favorite texts is Ecclesiastes, which he takes as the voice of Solomon, King James's putative prototype, apportioning man's nature and knowledge between earthly and divine things, defining the limitations of the knowledge granted to mortals, and affirming the interest God takes in man's earthly prosperity and his dominion over nature (e.g., BW, VI, 92-95). This is a point to which I shall return, as well as to the point that despite accusations that Bacon's position is materialistic and purely naturalistic, Bacon here (and elsewhere) reserves the "summary law of nature" for the unknowable. That is, Bacon believes that at the point of its highest relations, nature partakes of the divine spirit and derives its order from the will of God. Partial knowledge of nature, however, suffices for the implementation of the Instauration. Except through revelation, the will of God cannot be known directly, but what can be known in nature, by the "light of nature," satisfies man's earthly needs. Morality and the forms and doctrines of religion and worship are known by revelation--which, as I have said, is not a suprarational

¹⁹Cf. BW, VI, 254-255, where Bacon questions whether man can know to what extent the soul is natural and to what extent spiritual.

but a rational function and as sound a basis for knowledge as philosophy, though in a different area. The chief theme of Bacon's message is that man's welfare, both spiritual and physical, is best served if he looks squarely at facts:²⁰

"The very beholding of the light is itself a more excellent and a fairer thing than all the uses of it;--so assuredly the very contemplation of things, as they are, without superstition or imposture, error or confusion, is in itself more worthy than all the fruit of inventions" (NO I:cxxix, BW, VIII, 163).

I do not intend to give a detailed account of Bacon's inductive method. Adequate analyses are available elsewhere;²¹ the method as outlined by Bacon in Book Two of the Novum Organum never achieved significant influence and is irrelevant to my purpose. The premises of the method appear, however, throughout Bacon's writings; it is these premises with which I am concerned. The complexity and obscurity of the method described in the Novum Organum have, indeed, enabled detractors of Bacon to deny his influence upon science and thought.²² Bacon, they say, promulgated an inductive method which is obviously unworkable and science has developed without its

²⁰Cf. Taylor, Francis Bacon, p. 24; Metz, "Bacon's Part in the Intellectual Movement of His Day," p. 31.

²¹E.g., Fulton H. Anderson (ed.), The New Organon and Related Writings (Indianapolis, 1960), pp. vii-xxxviii.

²²E.g., Wright, "The Lights and Shadows Bacon Threw on Science in the Novum Organum"; Metz, "Bacon's Part in the Intellectual Movement of His Day," pp. 28-29; Larsen, "The Aristotelianism of Bacon's Novum Organum," p. 450.

help. But in order to evaluate Bacon's true significance, we must make some distinctions. Bacon said he intended to take all knowledge for his province, and if we attempt to restrict him to a narrow role in science or technology we fail to do him justice. The Advancement and De Augmentis are efforts to survey the contemporary state of all knowledge.²³ They represent Part One of the Great Instauration, Bacon's plan for the development of "the sciences." The sciences include all knowledge but especially scientific knowledge or natural philosophy, the most neglected of all branches of learning, in Bacon's opinion, and therefore the most in need of attention. The Instauration becomes explicitly scientific in Part Two, which is represented by the Novum Organum, whose purpose is to provide a methodology primarily for natural philosophy. Although Bacon insists that the method is in detail applicable in such fields as politics and psychology, whose "phenomena" follow laws similar to those of nature (according to the doctrine of the Philosophia Prima, which I shall discuss below [cf. NO I:cxxvii, BW, VIII, 159]), nevertheless he concentrates almost exclusively upon nature--motion, attraction, qualities of bodies, etc.--in the Novum Organum. The succeeding parts of the Instauration are likewise restricted to natural philosophy; they consist of the collection of a natural history, the derivation of laws ("axioms") from the data therein, and the development of a complete "New

²³Cf. Taylor, Francis Bacon, p. 8.

Philosophy" of nature which will fructify in "new arts, endowments, and commodities" for the welfare of man (BW, VIII, 25-37). The Instauration, that is, comprises chiefly that area of human learning which Bacon calls "Natural Philosophy," though Bacon expects that benefits will issue from an advance in any field, including divinity. Bacon was able to complete only a small fraction of the work of Parts Three to Six of his program; he did, however, contribute to areas outside the domain of the program. His biography of Henry VII, for example, falls into the categories of History--Civil--Perfect Histories--Lives, according to the scheme of The Advancement. The Essays, or Counsels Civil and Moral clearly contribute to Philosophy--Human--Civil and Particular (i.e., personal and moral).²⁴ The Wisdom of the Ancients, though it is not actually poetry, is a contribution to Poesy--Allusive (i.e., allegorical).²⁵ Even Bacon's legal writings can be considered Philosophy--Human--Civil--Government. A place for everything, Bacon believes, and everything in its place.

Now, that the "inductive method" of the Novum Organum applies primarily to physical science does not mean that Bacon believes other kinds of knowledge are acquired non-inductively.

²⁴Cf. Wilson, Elizabethan and Jacobean, p. 24; Ronald S. Crane, "The Relation of Bacon's Essays to His Program for the Advancement of Learning," Schelling Anniversary Papers (New York, 1923), pp. 87-106; Charles Williams, Bacon (New York, n.d.), pp. 303-306.

²⁵Sidney Warhaft, "The Anomaly of Bacon's Allegorizing," PMASAL, XLIII (1958), 327-333.

We may speak of two "inductions" in Bacon's writings, a general method and a specific method. The specific method comprises Part Two of the Great Instauration and is described in Book Two of the Novum Organum as the process by which the laws of nature are "invented" or discovered through the tabulation, comparison, and coordination of data provided by observation aided by experiment. The general method, on the other hand, is defined or adumbrated everywhere in Bacon's writings. It is a process of learning which subjects the mind to the realities outside it, studies facts, eschews abstract reasoning except in relating facts to other facts, avoids the idols of the mind, and, in short, rests totally upon experience. This is experience not only in the sense of practice as opposed to reading but informed and controlled experience, allowing the mind to formulate true interpretations by furnishing it with accurate information. This general species of induction applies to all the categories of learning under Philosophy in Bacon's scheme, including natural theology and human philosophy.²⁶ History and poesy also can be studied, if not necessarily practiced, inductively. As commentators have pointed out, Bacon's biography of Henry VII, for example, is intended to employ the facts of history to teach proper behavior to a prince; but Bacon, unlike medieval writers of saints' and bishops' lives, does not distort his material to fit any preconceived notions of his subject's virtue and

²⁶Crowther, Francis Bacon, p. 1.

holiness but intends that Henry VII's mistakes as well as his triumphs should be put to pedagogical use.²⁷

Another aspect of the unity of all knowledge is what Bacon calls the "Summary Philosophy" or Philosophia Prima. This is a body of observations and principles which are common to all the branches of philosophy--divine (natural theology), natural, and human--and are "of a higher stage" (BW, VI, 131-132, 207-211). These primary principles are "footsteps of nature" and include such things as the cadence, which is used to conclude periods in both rhetoric and music, and the principle of the attraction of opposites. These principles, being philosophical, are discovered, of course, inductively, by observation and comparison, but they demonstrate Bacon's belief in the vitality of nature and the divine artistry underlying all creation.²⁸ The Philosophia Prima is a concession, perhaps, to man's demand for aesthetically symmetrical patterns in nature, and this may help explain why Emerson was so much taken with the idea. It serves to unite all human learning; it guards against the excessive specialization and compartmentalization of knowledge which Bacon's detractors have incorrectly accused him of

²⁷ Leonard F. Dean, "Sir Francis Bacon's Theory of Civil History-Writing," ELH, VIII (1941), 161-183; Thomas Wheeler, "The Purpose of Bacon's 'History of Henry the Seventh'," SP, LIV, (1957), 1-13.

²⁸ James, The Dream of Learning, pp. 15-16.

sponsoring.

As for the significance and influence of the general and the specific modes of induction, there can be no question that the specific is the less revolutionary, the less accurate in terms of predicting how science would in fact develop, the more "Aristotelian" and even "scholastic" in its insistence upon classification and tabulation. Bacon's oft-noted ignorance of mathematics is no doubt partly to blame.²⁹ Even the virtuosi of the Royal Society, loudly though they praised Bacon, did not make use of Book Two of the Novum Organum; and when later scientists, like Darwin, claimed to have followed Baconian methods, they did not mean the precise steps outlined therein. However, when other scientists, like Newton, have protested that they have not followed Bacon, they, it seems, have referred to the specific method. For in putting aside traditional authorities, observing and experimenting with nature itself, collecting data, deriving laws from facts, and eliminating hypotheses which fail to account for the facts, they have clearly proceeded according to Bacon's general concept of inductive reasoning, and have, to the extent of enabling technicians to make practical and beneficial applications of their findings, fulfilled Bacon's promise of new arts, endowments, and commodities.

Another important aspect of Bacon's concept of knowledge is his emphasis upon laws. Facts are basic in Bacon's epistemology and his method, and nothing is true (in philosophy)

²⁹Metz, "Bacon's Part in the Intellectual Movement of His Day," pp. 27-29.

which contradicts the observed facts. However, true philosophy aims not merely to enumerate facts (such a procedure Bacon decries as mindless empiricism) but to proceed deliberately and methodically from facts to laws, knowledge of which alone confers true mastery over nature. The inductive method begins with observation and tabulation but operates essentially by generalization. The "fruits" which Bacon promises will not come, he warns, without knowledge and application of natural laws. Bacon uses various terms for natural laws: axioms and forms are probably the most common. One of the most agitated critical discussions in Bacon studies centers on the notion of "forms," of which his clearest definition is perhaps the following: "For though in nature nothing really exists besides individual bodies, performing pure individual acts according to a fixed law, yet in philosophy this very law, and the investigation, discovery, and explanation of it, is the foundation as well of knowledge as of operation. And it is this law, with its clauses, that I mean when I speak of Forms . . ." (NO II:ii, BW, VIII, 168). I cannot discuss the matter fully here, but four things are clear: (1) the forms are not Platonic or spiritual but are operative principles inherent in and inseparable from matter, (2) the study of forms is the sine qua non of true philosophy, mere empiricism being inadequate, (3) Bacon himself did not formulate a single precise definition of forms, but left this task to future scientists with better information at their disposal, and (4) Bacon's emphasis upon laws as principles

controlling facts has enabled certain readers to consider him a realist or even a Platonist, who believes in the independent existence of immaterial forms.³⁰

The three main elements of the Baconian concept of philosophical knowledge which I have mentioned--reliance upon direct experience of facts, generalization from facts to laws, and insistence upon the utility of knowledge--are joined by a fourth, which I have to some extent already discussed, the concept of method. Bacon's skeptical view of human mental powers leads him to a conclusion similar to that reached by other Renaissance reformers such as Bodin and Descartes:³¹ the mind cannot interpret facts accurately nor derive laws from them without the aid of a method. Bacon's idea of method is more rigorous and mechanical than that of most other Renaissance methodologists and contributed to his distrust of such genuine scientists of his day as Galileo and Gilbert, who, he felt, were misled from facts into mental idolatry by their failure to follow a method like his own.

³⁰On Bacon's concept of forms, see Broad, "The Philosophy of Francis Bacon," pp. 128-134; William M. Dickie, "'Form' and 'Simple Nature' in Bacon's Philosophy," Monist, XXXIII (1923), 428-437; C. J. Ducasse, "Francis Bacon's Philosophy of Science," pp. 133-138; James, The Dream of Learning, pp. 11-13; Murray G. Murphey, "The Influence of Science upon Modern Culture: The Program," PAPS, CV (1961), 462; Taylor, Francis Bacon, pp. 11ff.; Virgil K. Whitaker, Francis Bacon's Intellectual Milieu (Los Angeles, 1962), pp. 18-20; Williams, Bacon, pp. 305-306.

³¹See Neal Ward Gilbert, Renaissance Concepts of Method (New York, 1960).

Bacon is convinced that non-systematic exploration of nature is valueless; the inductive method is an analogue on the individual level of the methodizing of science on the institutional level represented by Salomon's House in The New Atlantis. Prone to victimization by the idols, the mind must rely upon some mechanically applied system to extract truth from facts (BW, VIII, 32, 40-46). It must not trust wholly to its own inclinations, but must be supported by a structure of steps from facts to natural laws (or, in Bacon's terminology, from facts to axioms to higher axioms, back to lower axioms and new experiments and facts, back up to axioms and higher axioms again to a knowledge of forms and of the highest natural principles knowable by man). "I have provided the machine," Bacon writes, "but the stuff must be gathered from the facts of nature" (BW, VIII, 24). This method, Bacon believes, will, to a very great extent, place all intellects on a level in science by substituting mechanical process for personal "wit" and for intuitive or imaginative leaps from fact to law (NO I:1xi, BW, VIII, 89).³² While a hierarchy of scientific personnel will be necessary, with the best minds performing the most demanding work and directing the Instauration, still the method will insure the results by preventing the ascendancy of anyone's private abstract system. Even on the highest levels, the work will be guided by the method. Bacon envisions the method as the instrument (the

³²See Crowther, Francis Bacon, pp. 6-7.

organon) for repairing the damage done to man's intellect by the Fall. It will fasten man's eyes upon facts, produce knowledge of natural laws, dethrone the idols, and provide a certain path to new arts and commodities and to the enhanced estate of mankind.

To summarize Bacon's concept of human knowledge: man's mind is innately fallible but also capable of positive knowledge of truth. This knowledge can come through revelation, in the case of divinity, or induction, in the case of philosophy; both philosophy and divinity are rational knowledges involving the understanding by man of a reality external to him but of which he is a part. Imagination is irrational, producing knowledge which is not guaranteed nor ordered by God but representative only of a personal and arbitrary vision. Divinity is given to man; philosophy must be learned. The best kind of knowledge, in philosophy, is useful knowledge. Useful knowledge can be derived only by a complete subjection of the mind's rational processes to external facts. Nothing--no abstraction, no system, no word, no preconception of any kind--may be allowed to interfere with the mind's direct confrontation of natural facts. Method obviates all such interference, as experiments and instruments obviate the deficiencies of the senses. Also, the method guarantees that the mind will proceed to axioms or forms, the true aim of induction, and not rest in facts. Knowledge of general laws is true scientific knowledge and can be gained only by the union of empirical observation and rational logic (BW, VIII, 34). God knows all

and can do all. Man knows nothing and can do nothing, except as he learns from God's word and God's works. Insofar as man knows and can act, he is Godlike.

As many have commented, Bacon was not a speculative philosopher like Plato, Aristotle, and Spinoza but a man who was impatient with the (to him) fruitless ruminations of philosophers and who presumed to teach philosophers their proper responsibilities.³³ Bacon does not undertake a description of the universal order, but instead he concentrates upon encouraging others to study the universal order, in its details, and upon showing them how to do so. While The Advancement of Learning and the De Augmentis Scientiarum go furthest towards a comprehensive outline of Bacon's concept of the universe or of being, nevertheless these works are surveys not of being but of knowledge. Though Bacon insists that knowing and being are (or should become) mirror images of each other (NO I:cxx, BW, VIII, 151; VI, 125), he emphasizes knowing, and we must construct his ontology from the suggestion he gives in writings whose burden is epistemological. The question we must answer thereby is, In what kind of world can the Instauration happen?

The most obvious characteristic of the world Bacon believes in is its orderliness, an orderliness that can appropriately be termed "medieval." Bacon's yoking together of knowing and being applies here also, for though his thought

³³Cf. James, The Dream of Learning, pp. 1-2.

includes a large element of skepticism, Bacon is far from resting in uncertainty;³⁴ and the certitude of his outlook is based upon the certain order of his universe. The generally anti-Baconian bias of modern humanist writers such as Eliot, Basil Willey, and L. C. Knights, has probably been aggravated by Bacon's almost complete lack of critical self-consciousness and self-torment in the Donne manner. The doubts in which Bacon urges us to begin will-must--lead to certainties. It has been said that despite his polemical anti-Aristotelianism, Bacon shared, as Plato did not, the Stagirite's certainty about the accessibility of truth and about his own capacity for knowing it.³⁵ It would not have been possible, I believe, for Bacon so assuredly to promote a way of knowing if he had not had this medieval certainty about the divinely-chartered universe with its natural laws and its chains of causes. The human mind deserves less confidence than the universe because, in its idol-worship, the mind demands that the universal order be aesthetic, while it is in fact only rational, purposeful, and benevolent. The natural universe is not, in Bacon's view, the whole of reality, for God and the spiritual realm transcend the universe of nature and furnish, via revelation, man's moral and religious knowledge (BW, VI, 409-410). Bacon does

³⁴Gordon, "Francis Bacon and the Revival of English Humanism," p. 99.

³⁵Cf. Whitaker, Francis Bacon's Intellectual Milieu, p. 10.

not, however, speak of a "world" of spirit next door to the world of matter or imaging that of matter; I shall further discuss below the idea that God underlies and guarantees the order of nature but is not accessible through it. Bacon sometimes refers to the laws of nature as "signatures" or "footprints" of God in the world, not in the sense of symbols or correspondences or Platonic shadows (though, as we shall see, this is how he was later interpreted by Coleridge and others) but in the sense that the ordered workings of nature demonstrate the care that only God could bestow (NO I:xxiii, BW, VIII, 72). God, however, works in nature only by second causes, so that a divorce of philosophy and divine theology is imperative to avoid the fallacy, which pollutes both knowledges, of explaining a natural phenomenon by direct resort to the spiritual world.³⁶ As spirit and matter are distinct realms, so mind and matter are also distinct, though, as I have pointed out, mind can know nature's particulars and its laws. As God underlies the universe, so mind and nature are not irreconcilable but are partners in human progress.

And as the world in Bacon's view is ordered by God for man's benefit, so man too is part of the divine scheme. Some recent critics, such as Sidney Warhaft, have suggested that Bacon, perhaps unwittingly, fostered an amoral, dechristianized concept of man and encouraged a mechanized civilization whence

³⁶ Cf. William R. Elton, King Lear and the Gods (San Marino, Calif., 1966), pp. 32-33.

Christian values have disappeared.³⁷ Basil Willey, whose melancholy remarks on the demise of scholasticism have provided material for many recent anti-Baconians, suggests that Bacon's substitution of science for theology as mankind's chief pursuit reenacted Faust's compact with the Devil. "[A]nd has the Adversary, at any time since then," Willey ominously inquires, "actually reappeared and demanded payment of his bond?"³⁸ Willey says that Bacon had to show that nature is "divine instead of Satanic,"³⁹ and Willey implies, therefore, that Bacon believed that the study of nature would inculcate moral values. Bacon perpetrates the false doctrine of nature's goodness, Professor Warhaft adds; nature, Warhaft claims, is really "neutral," and the study of it has pandered to human vice, which Bacon does not "provide for," and has produced the atomic bomb, social Darwinism, and hence, implicitly, the Nazis.⁴⁰ Warhaft cites Willey's assertion that Bacon's separation of faith and science has had disastrous results. Bacon is therefore the "spiritual progenitor" not only of technology but also of everything destructive in modern thought and culture.⁴¹ Now, as to the faith-science

³⁷ Warhaft, "Science Against Man in Bacon," pp. 165-166. Cf. Judah Bierman, "Science and Society in the New Atlantis and Other Renaissance Utopias," PLMA, LXXVIII (1963), 497-500.

³⁸ The Seventeenth Century Background: Studies in the Thought of the Age in Relation to Poetry and Religion (Garden City, N. Y., n.d.), p. 15.

³⁹ Willey, p. 42.

⁴⁰ Warhaft, "Science Against Man," pp. 164, 159.

⁴¹ Warhaft, "Science Against Man," pp. 172-173.

issue, another recent writer has stated that Bacon's concept of the relation between faith and reason is precisely the same as that of St. Thomas Aquinas, whom Professor Willey clearly exempts from culpability in the generation of our modern dilemma.⁴² Thomist or not, Bacon is not guilty of beclouding the moral aspect of science or of learning.

Bacon's faith in the humane consequences of empirical study was founded, I believe, upon a largely traditional Christian view of man. Bacon cannot be accused of reneging on a promise of virtue as a result of science, for nowhere does he make such a promise. In his defense of learning, he does assert that ignorance fosters evil and knowledge of truth--any truth--fosters good, but this argument is hardly exclusively Baconian (BW, VI, 162-165). Professor Willey is correct in suggesting that science does not and cannot produce virtue, however, but Bacon fully accounts for this fact. In the first place, morality, Bacon says, is not experientially learned but is revealed in Scripture by God.⁴³ In the second place, science does not regulate virtue; virtue must regulate science and all other knowledge as well. Bacon is explicit and insistent on

⁴²H. A. Kelly, "The Deployment of Faith and Reason in Bacon's Approach to Knowledge," Modern Schoolman, XLII (1965), 265-285. The evolutions of scholarship are curious. One wonders what Basil Willey might say about this defense of Bacon as a Thomist in a neo-scholastic journal. See also Creeth, "Bacon's Humanism," p. 639.

⁴³Though moral philosophy, a branch of human philosophy, helps interpret revealed morality (BW, VI, 330).

this point. Just as political authority must be used wisely, in accord with moral principles taught elsewhere than in politics (BW, IX, 224-225), the fruits of science must be administered according to traditional values not implicit in science. Charity is the supreme social virtue, Bacon says, and charity, not science, teaches the uses of science ("Of Goodness and Goodness of Nature," BW, XII, 118-121; VI, 94; VIII, 35; IX, 227-228). Science increases human power, not human virtue, and great power, like any instrument, can be used for great evil or for great good. The burning of Savonarola was a great evil perpetrated without science, and the polio vaccine is a great good produced with science, and one who wishes to demonstrate the evils of scientific knowledge must show not that men who have scientific knowledge are bad but that men who do not are good. As for nature's goodness, this is, as Professor Willey admits Bacon believes,⁴⁴ a concomitant of God's goodness and is taught not by Bacon but by Scripture, for example Ecclesiastes ii.24: "There is nothing better for a man, than that he should eat and drink, and that he should make his soul enjoy good in his labour. This also I saw, that it was from the hand of God." Nature did not become neutral until the later nineteenth century, when the most influential writers had stopped believing in the Bible; before then nature was either good or bad (as a result of the Fall), but not neutral. Milton surely did not

⁴⁴Willey, pp. 37, 42.

believe that nature was neutral. It is uncritical, to say the least, to accuse Bacon of moral turpitude because he did not share, say, Stephen Crane's opinion of nature. Moreover, Bacon's vision comprehends much more than technology. He urges the study not only of "good" nature but also of society, which, his essays demonstrate, is as often bad as good, or is perhaps "neutral," like Professor Warhaft's nature.

Bacon did not foresee any new morality as a result of science or of learning. The notion of an evolution in moral values is another recent development. As an orthodox believer, Bacon considered Christian morality, revealed for all time in the Bible, as the last word on the subject (though it could, by study, be more effectively understood and practiced). Bacon could not have shown a new morality, good or bad, evolving out of scientific knowledge because such a thing was unthinkable; there could be nothing beyond Christianity (cf. BW, VI, 409-411; IX, 197). The morality of the New Atlantis, for instance, is the traditional Christian morality, based upon charity and truly lived. Bacon makes the Bensalemites good not as a cynical sop to readers concerned for religious values but because he wishes to illustrate the necessity of charity to regulate the effects of science. Charity is a traditional virtue, and despite Professor Willey's suggestion that we are now repaying Bacon's debt to Satan, Bacon's writings and all of modern technology do not now keep a single man from practicing charity, nor did anything prevent charity in Bacon's day or before. Bacon, far from encouraging a morality of expedience or sensualism, encourages Judaeo-Christian morality

and urges that it be practiced in the application of the fruits of learning. As for the supposed separation of learning and goodness, this is precisely what Bacon found wrong in the scholastics--their learning, however they might claim for it God's blessing, in fact contributed nothing to works of charity.⁴⁵

The moral values of Bacon's universe are those envisioned by most Christian humanists of the Renaissance. If modern society is vicious, either those values have failed or, more likely, men have failed in enacting them just as they failed in the Machiavellian world in which Bacon the Lord Chancellor lived, a world which he described in his essays and which, though innocent of technology, was as guilty of vice as our own.

One of the most typical Elizabethan (as well as medieval) concerns is mutability, the transience of earthly happiness, the revolutions of the Boethian wheel of fortune. A belief in man's subjection to fortune is a corollary of the medieval belief in God's immediate providence, the whim of fortuna a secularized version of the inscrutable will of God. The Renaissance began to concoct ways of beating out mutability, and though such treatments of the theme as Spenser's and Shakespeare's (sonnets) are more famous, Bacon too has commented upon the mutability concept and suggested the effect

⁴⁵ Benjamin Farrington, The Philosophy of Francis Bacon: An Essay on Its Development from 1603 to 1609 with New Translations of Fundamental Texts (Liverpool, 1964), pp. 19-20.

of the Instauration upon mutability. His ideas on the subject are an important component of his view of the universe and man's place in it. A comparison of Bacon's answer to the question of how man can overcome transience with Shakespeare's answer is instructive.

A typical notion of Shakespeare's concerning mutability appears in Sonnet CXXIII, which I give here in full.

No, Time, thou shalt not boast that I do change!
 Thy pyramids built up with newer might
 To me are nothing novel, nothing strange;
 They are but dressings of a former sight.
 Our dates are brief, and therefore we admire
 What thou dost foist upon us that is old,
 And rather make them born to our desire
 Than think that we before have heard them told.
 Thy registers and thee I both defy,
 Not wond'ring at the present nor the past;
 For thy records and what we see doth lie,
 Made more or less by thy continual haste.
 This I do vow, and this shall ever be--
 I will be true, despite thy scythe and thee.⁴⁶

Shakespeare sets up here a functional and even schematic opposition between "I" and "we": "I" dominates the first quatrain, "we" the second, "I" the first distich of the third quatrain, "we" the second distich, and "I" the conclusive couplet. "We" is man in the plural, as society or as human culture existing in time and serving as time's agents in the construction of the illusory "pyramids." "I" is man the observer, some human principle or the soul of man independent of time, not subject to mutability, and possessing a permanence

⁴⁶Text is that of George Lyman Kittredge (ed.), The Complete Works of Shakespeare (Boston, 1936), pp. 1513-14. Sonnet CXXIII may owe something both conceptual and phrasological to Ecclesiastes i. 9-11.

which is the usual attribute of spirit. The Ozymandian physical structures of the world, though they are built not by time but by man in society, are described as "Thy [time's] pyramid's"; thus is society made a function of time. The soul or spirit of man ("I"), however, can observe the decay of pyramids and can detect the repetition of events and so can transcend decay. "We"--men in time--live too briefly to perceive the illusory character of the apparently solid natural or physical world. "We" try to make ourselves masters of time--building pyramids in the belief that they are novel and express our own particular desires, and we do not see that we are actually time's servants. But "I" do not share "our" defect of vision: time's physical "registers" and "records" in truth record nothing, for all apparent change is merely repetition, and material things, subject to time's scythe, come and go in an endless and uncontrollable flux. But "I will be true": spirit or soul remains, untouched by mutability, undeluded by pyramids, its knowledge perfect and unchanging. If "what we see doth lie," then truth is what we do not see, a spiritual realm transcending the physical. (In the young-man sonnets, Shakespeare also offers to outwit mortality through love [progeny] and art [the permanence of the poem immortalizes the loved one]. "I will be true" in this sonnet reiterates the love theme.)

Bacon starts with some of the same premises as Shakespeare, but he reaches a different conclusion. In the essay, "Of the Vicissitude of Things" (BW, XII, 273-278), Bacon clearly makes

man the chief agent of change, as does Shakespeare. Man creates his own ages and cultural conditions and can advance or retard his knowledge, his power, and his way of life.⁴⁷ In this, Bacon and Shakespeare agree: man-as-society, man in the aggregate, can build pyramids and tear them down. Man is the agent of time; human culture enacts mutability. Likewise, as in Shakespeare human love, by ensuring perpetuation, outwits time and confers an awareness of permanence, so in Bacon human knowledge, imaging divine knowledge, confers a similar awareness; the individual mind can stand apart from the historical and cultural whirlpool and observe its movements from a vantage point of stasis and eternity. So "Of Truth" (quoting Lucretius): "no pleasure is comparable to the standing upon the vantage ground of Truth, . . . and to see the errors, and wanderings, and mists, and tempests, in the vale below . . ." (BW, XII, 83; cf. VI, 168). As Shakespeare sees the possibility of the awareness of permanence by the individual human mind, which expresses itself in poetry, Bacon sees the awareness of permanence as a function of the individual mind's operations in science or learning, especially natural philosophy:

God hath framed the mind of man as a mirror or glass capable of the image of the universal [i.e., natural] world, and joyful to receive the

⁴⁷Cf. "Of Fortune," BW, XII, 215: "the mould of a man's fortune is in his own hands"; Raymond C. Cochrane, "Francis Bacon and the Architect of Fortune," SRen, V (1958), 176-195; Ernest Lee Tuveson, Millenium and Utopia: A Study in the Backgrounds of the Idea of Progress (Berkeley, 1949), p. 67.

impression thereof, as the eye joyeth to receive light; and not only delighted in beholding the variety of things and vicissitude of times, but raised also to find out and discern the ordinances and decrees which throughout all those changes are infallibly observed. (BW, VI, 93)

For all things are admired, either because they are new, or because they are great. For novelty, no man that wadeth in learning or contemplation thoroughly, but will find that printed in his heart Nil novi super terram. . . . (BW, VI, 163)

The concepts of culture as time and mind or soul transcending time are shared by both writers, but beyond this point they diverge. Shakespeare asserts the transience of material things, proposing to locate permanence in abstract soul; but Bacon finds permanence in material things, or in the knowledge whose immediate or eventual goal is to produce material things (cf. NO I:lxvxi, BW, VIII, 113; VI, 134-135). In the first place, as I have said, Bacon encourages the knowledge of natural laws, which can be conceived of as permanent and immutable, relative to the passing phenomena they control; knowledge of laws or forms is therefore knowledge of permanence and permits man to perceive in the sublunary realm glimpses of superlunary immutability. Bacon goes so far as to call natural laws "the Ideas of the divine [mind]" (NO I:xxiii, BW, VIII, 72). In the second place, Bacon curiously anticipates Wallace Stevens on abstraction and concreteness ("Beauty is momentary in the mind-- / The fitful tracing of a portal; / But in the flesh it is immortal"). In Valerius Terminus, Bacon repeats his frequent claim that the modern ages should emulate

primitive man's esteem of inventors (BW, VI, 36). Politics, Bacon says, is transient, and though princes are not admired above inventors, the greatest contributions of the greatest princes are quickly made naught by the revolutions of society and history. But the contributions of inventors are infinitely more influential: the new arts, endowments, and commodities which they provide last through the ages (like agriculture, paper, printing, and navigation) to bring learning, prosperity, and comfort to all men. Of course, the greatest inventor is he who (like Bacon, as he hopes) provides a method of invention and so opens the gates to all future arts and commodities; but the method is not to be admired (unlike Shakespeare's poem) for itself or in the abstract, but as it issues in real benefits for man, inventions, which are "those real and effectual results with which Fortune itself cannot interfere." Fortune, mutability, is stymied by inventions, which have a perpetual usefulness for man's eternal generations; "the light of nature and experience . . . is eternal" (BW, VIII, 85). Where love, soul, and art outwit time for Shakespeare, knowledge and commodities outwit time for Bacon, and it is in the concrete, material fruits of knowledge that Bacon envisions man's triumph over transience.

I have suggested that, despite Bacon's sponsorship of physical science and the later accusations that science fosters irreligion and atheism, Bacon's Instauration, and the advancement of all learning, is founded upon a religious conviction. I do not mean a conviction held with religious zeal but a conviction that God not only approves of the Instauration but

desires it. The Instauration, Bacon declares, "having the character of good so strongly impressed upon it, appears manifestly to proceed from God, who is the author of good, and the Father of Lights" (NO I:xciii, BW, VIII, 130). Though he spurns theology (as a field already mostly cultivated), Bacon frequently discusses religion and invokes God's help in awakening interest in learning. To be sure, some critics have viewed Bacon's prayers as hypocritical, finding in their very phrasing the egotism and ruthlessness which, they say, deprived Bacon of genuine religious sentiment. Nor have critics been loath to cite Bacon's life--his political ambition, his obsequiousness to Elizabeth and James, his impeachment--as proof of his irreligion and insincerity.⁴⁸ These critics, it seems to me, are perhaps too much influenced by Hooker and Donne in their notion of proper religious faith in the Renaissance and its influence upon thought and literature. They demand a higher standard for Bacon than for someone like Robert Herrick; for if Herrick's love poems do not

⁴⁸E. g., Wright, "The Lights and Shadows Bacon Threw on Science in the *Novum Organum*," p. 34. Frederick Lange claims that Bacon's "moral degeneracy" prevented his adoption of complete materialism and caused him to compromise with decadent theism, The History of Materialism and Criticism of Its Present Importance, trans. Ernest Chester Thomas, 3rd ed. (New York, 1925), I, 241. Charles T. Harrison substitutes "expediency" for "moral degeneracy" and agrees, "Bacon, Hobbes, Boyle, and the Ancient Atomists," Harvard Stud. and Notes in Philol. and Lit., XV (1933), 193. Robertson's sentiment is similar, Pioneer Humanists, pp. 112-114.

cast doubt upon his faith, The Advancement of Learning should not cast doubt upon Bacon's. The point here is, I think, central to an accurate understanding of a larger cultural issue: why the Renaissance promoted science and why science (and all learning on a scientific model, such as anthropology, political science, and literary criticism) took so firm a grasp upon men's minds that, by the time of the Transcendentalists, it appeared to have swept away all spiritual concerns and itself to require reformation. The intellectual origins of science have been treated thoroughly by such writers as Richard Foster Jones, Abraham Wolf, and Alfred North Whitehead, and I do not propose to extend, amend, or question their efforts here.⁴⁹ Also, as I have pointed out, Bacon's influence extends beyond the borders of natural philosophy. But one point which has remained controversial in connection with Bacon's scientific propagandizing is the relation of his Instauration to religion. I believe that whatever science and learning have become, Bacon's writings demonstrate that the traditional Christian theology and morality helped to stimulate interest in science, not to impede it, and served to guarantee, in the eyes of the early reformers, that the results of science would benefit mankind. Among others, George V. Tovey has suggested the "possibility of a religious motivation

⁴⁹Jones, Ancients and Moderns; Abraham Wolf, A History of Science, Technology and Philosophy in the XVIth and XVIIth Centuries, 2nd ed. (London, 1950); Whitehead, Science and the Modern World. See also E. A. Burt, The Metaphysical Foundations of Modern Science (London, 1925).

underlying his [Bacon's] reform."⁵⁰ Tovey, analyzing Valerius Terminus, concludes that Bacon saw the Instauration as the fulfillment of God's will because (1) it enables man to emulate God's creativity and manipulative power, (2) it avoids Adam's sin of pride and strives for natural rather than moral knowledge, (3) it fulfills God's curse of labor upon man, (4) it provides man with knowledge of the laws of God's creation and thus brings man closer to God, and (5) it helps to restore in the natural realm what Christ helped restore in the spiritual: the status and dominion which man possessed before the Fall (cf. BW, VI, 136-144, 421-424).⁵¹ Genesis is Bacon's chief authority in these beliefs, though he frequently cites Ecclesiastes as well.⁵² The doctrine of God's benevolence is the fundamental rationale of the Instauration. Nature in a benevolently designed universe cannot be a trap. Indeed, the world, Bacon declares, is "a rich storehouse, for the glory of the Creator and the relief of man's estate" (BW, VI, 134). Man is made in God's image, and so his rational faculty cannot be meant to slumber or to engender upon itself, by aimless abstractions divorced from the facts of creation, useless and even heretical theologies. Man's

⁵⁰Tovey, "Toward a New Understanding of Francis Bacon's Reform of Philosophy," PhR, LXI (1952), 568-574.

⁵¹Tovey, "Toward a New Understanding," p. 571. Cf. Murphey, "The Influence of Science upon Modern Culture," p. 462.

⁵²Farrington, The Philosophy of Francis Bacon, pp. 21-26.

knowledge should emulate God's knowledge in its capacity to empower goodness. All nature, Bacon says, is a miracle (we will hear this again in Concord) and refutes atheism ("Of Atheism," BW, XII, 131-132). Hence the doctrine of God's providence also justifies the advancement of learning. Likewise, the doctrine of charity suggests that man without power to do good is less worthy in God's eyes. The doctrine of God's inscrutability and transcendence makes it imperative that men avoid unseemly and futile prying into the divine mysteries. What God wants us to know about them he has revealed to us in Scripture and in the inspirations of the saints, and man's task is to apply this knowledge to life instead of formulating anthropomorphic idols and calling them God. To be good, one must do good, Bacon believes ("good thoughts (though God accept them) yet towards men are little better than good dreams, except they be put in act" ["Of Great Place," BW, XII, 113]), and that knowledge of nature will enable man to do good--though not, as I have said, necessarily make man good--is guaranteed by the fact that nature is the creation of a benevolent God. The universe derives its very order from God's will, and so to study this order is as if one studied the "footprints" or "signatures" of God in the world. In terms of specific forms of worship, specific moral and theological doctrine, and specific ecclesiastical polity, Bacon is an orthodox Anglican influenced in some respects by Puritanism.⁵³ But his business is with God the Father rather

⁵³Cf. Broad, "The Philosophy of Francis Bacon," p. 124; Farrington, Francis Bacon, pp. 28-29.

than with the other members of the Trinity or with the structure of the Church. God cannot be known through learning, and in admitting this Bacon incurred the hostility of some theologians and also of writers of the present day who seek a medieval or Thomistic way out of the atomic age. Bacon insists, however, that learning can make man Godlike and so it has God's blessing, provided it is directed by revealed moral principles and used in the service of charity. Thus, while the scientific Instauration looks forward to the modern world, it derives at least part of its justification and its dynamic energy from the beliefs of past times.⁵⁴

Bacon's concept of imagination has been another controversial issue, especially since L. C. Knights accused Bacon of what T. S. Eliot called the "dissociation of sensibility," the divorce of reason and emotion and the destruction of poetry by the preference for linguistic precision over imagistic suggestion.⁵⁵ Thomas Jameson and others, in reply, have taken up Shelley's statement that Bacon is a poet and have

⁵⁴On Bacon's religion, see Creeth, "Bacon's Humanism," pp. 638-640; Church, Bacon, pp. 174-176; James, The Dream of Learning, p. 10; Farrington, Francis Bacon, pp. 146-151; Metz, "Bacon's Part in the Intellectual Movement of His Time," pp. 31-32. Tuveson, Millenium and Utopia, discusses the transfer of religious values to science in the Renaissance.

⁵⁵L. C. Knights, "Bacon and the Seventeenth-century Dissociation of Sensibility," Explorations: Essays in Criticism Mainly on the Literature of the Seventeenth Century (London, 1946), pp. 92-111. See Jeanne Andrews, "Bacon and the 'Dissociation of Sensibility'," N&Q, N.S. I (1954), 484-486, 530-532, for a reply.

argued persuasively that Bacon's concept of imagination is poetic.⁵⁶ This is another issue I cannot resolve or discuss in depth here; I can only offer a few suggestions to prepare the way for a discussion of the Transcendentalists' interest in the same topic.

Even some of Bacon's severest critics, while denying him any but a possibly harmful influence, have granted Bacon extraordinary skill as a literary artist, as one of the masters of English prose.⁵⁷ Stockton Axson, for instance, though he discerns in Bacon a "shriveled soul," allows that he is a great writer.⁵⁸ The claims of Knights as to Bacon's artistic villainy are therefore unjust and represent an attack upon a convenient scapegoat. Nevertheless, Bacon clearly does not trust the imagination, the poetic faculty, to perform man's necessary tasks but relegates it to an ancillary role in learning.⁵⁹ The imagination is to be carefully controlled, Bacon says, because, unlike reason, which (in both divinity and philosophy) bends the mind to the external nature of

⁵⁶Jameson, Criticism and the Modern World; James, The Dream of Learning, pp. 3, 30-32.

⁵⁷E.g., Anne Richter, "Francis Bacon," The English Mind: Studies in the English Moralists Presented to Basil Willey, ed. Hugh Sykes Davies and George Watson (Cambridge, 1964), pp. 7-29; Bowen, Francis Bacon, pp. 10-13; Morris R. Cohen, Studies in Philosophy and Science, p. 106. Richter and Bowen, however, are not severe; Cohen is.

⁵⁸"Francis Bacon as Man of Letters," Rice Institute Pamphlet, XIII (1926), 112. See George Philip Krapp, The Rise of English Literary Prose (New York, 1963), pp. 516-546.

⁵⁹Murray W. Bundy, "Bacon's True Opinion of Poetry," SP, XXVII (1930), 244-264.

things, the imagination places the mind above reality and generates anthropomorphic and arbitrary constructions which may correspond to no truth in the universe. The imagination, Bacon writes, is "not tied to the laws of matter" and "may at pleasure join that which nature hath severed and sever that which nature hath joined . . ." (BW, VI, 202). Bacon therefore concentrates upon how the imagination may be put to best use.

The imagination has two functions: duty and play. The play of the imagination is poesy; Bacon slights the other arts in his scheme of learning but uses many metaphors and illustrations from music and architecture. Poesy can be narrative, representative (both are "feigned history"), or allusive. Allusive, parabolical, or allegorical poesy is the most useful and beneficial kind, being able to convey a rational meaning, "some special purpose or conceit." Allegory can thus teach truth, though it can also be employed to obscure truth, as often in Scripture. Allegorical poesy can aid morality also, as in parables and fables (BW, VI, 202-206). The duty of the imagination is to serve reason and will (BW, VI, 258-259; IX, 61-62). It may do so by means of rhetoric, which applies "Reason to Imagination for the better moving of the will" (BW, VI, 297).⁶⁰ But because it joins reason

⁶⁰ For a thorough discussion of Bacon's rhetorical theory, see Karl R. Wallace, Francis Bacon on Communication and Rhetoric, or: The Art of Applying Reason to Imagination for the Better Moving of the Will (Chapel Hill, North Carolina, 1943).

and will (as faculties of the mind), Bacon places rhetoric not under imagination but under Philosophy--Human--Particular--Mind--Faculties--Understanding--Tradition. The word Bacon most often uses in connection with the imagination (especially poesy) is "feign" (e.g., BW, VI, 203). The imagination fakes truth and produces counterfeit reality, more ordered, more symmetrical, more retributive than the real world. Hence the imagination is, in its worst aspect, allied with the Idols of the Theater, those appealing but dangerous dogmatic systems and cosmologies which seduce the mind from facts, feed on human pride, and obstruct good works.

In contrast to the Renaissance courtier tradition of Castiglione and Lyly, which views artistic expertise as a valuable adornment of gentlemanly grace, Bacon insists that art must go beyond form and serve truth, since truth is more important than beauty (cf. "Of Building," BW, XII, 228). The Wisdom of the Ancients, in which Bacon explicates classical myths, illustrates the allegorical approach and shows how poesy serves truth.⁶¹ The New Atlantis, however, is not allegorical but descriptive; it is narrative "poesy" or "feigned history," representing Bacon's vision of the ideal society. It suggests that Bacon did not adhere in practice to the anti-aesthetic demands of his philosophical program. He seems to

⁶¹Charles Lemmi discusses the sources of Bacon's explanations in The Classic Deities in Bacon: A Study in Mythological Symbolism (Baltimore, 1933).

have recognized that an imaginative creation need not be unnatural and can convey truth--though it feign action--more effectively (as Sidney insisted) than philosophy and history. We can thus perceive some ambivalence in Bacon's attitude toward art; he claimed, on the one hand, that art is inferior to a direct experience of truth while he realized, on the other, that truth must often be got at by an imaginative vehicle.⁶²

Bacon's concept of history is similarly ambivalent. His promulgation of an empirical, methodical, and objective approach to knowledge makes him an obvious contributor, as in his History of the Reign of King Henry VII, to the reformist movement in historiography, begun in the sixteenth century by Jean Bodin and others who rejected the medieval notion that history illustrates moral principles and that therefore the historian may take whatever liberties are necessary to achieve his didactic purpose.⁶³ History, in Bacon's scheme of learning, is the function of memory, quite separate from ethics or religion (except, of course, in the case of church history); Bacon treats history in general as the recording and analysis

⁶² Warhaft, "The Anomaly of Bacon's Allegorizing," holds that the purpose of the "poetic" Wisdom of the Ancients is totally political and calculated.

⁶³ See Harry Elmer Barnes, A History of Historical Writing (Norman, Okla., 1937), e.g., p. 55; W. Cunningham, "Presidential Address," Transac. Royal Hist. Soc., 3rd Ser. IV (1910), 1-20; Julian Franklin, Jean Bodin and the Sixteenth-Century Revolution in the Methodology of Law and History (New York, 1963); Beatrice Reynolds, "Shifting Currents in Historical Criticism," JHI, XIV (1953), 471ff.

of facts (BW, VI, 183-202). But in another sense, Bacon looks back to an older tradition in this as in so many other areas, and his philosophy can be seen as essentially ahistorical. As a branch of learning, history, in Bacon's view, deserves the benefits of the inductive method and should be studied "scientifically"; but as a concept or principle of human existence, history is inadequate, for Bacon does not believe that human possibilities are circumscribed by history or that man is a product of natural or historical forces alone. A genuinely historical interpretation of human life is a recent development in thought. It requires a belief in the uniqueness of persons, periods, and places and the consequent importance of racial, political, and economic groups and of specific cultural and political events in determining man's estate. A truly historical orientation demands an empirical outlook, to whose development Bacon's contribution is incontestable. But Bacon's philosophy of history--as distinct from his methodology of learning--is not empirical but is based upon unchanging principles--learning and ignorance, truth and falsehood. Bacon sees history largely as the product of the human mind, struggling with and usually yielding to ignorance. For Bacon there is really only one event of any importance: a man looking at a fact. This, of course, can happen at any time, though some periods--the Periclean, for instance--are more conducive to it than others. While climate, geography, and other conditions outside human control can influence history, still the mind of man is the arena where the great events occur, and the greatest event,

the temporis partus maximus, the Instauration of the Sciences, can occur at any time, regardless of the special and unique features of the cultural and political environment. (This is not to deny Bacon's perception of the social influences upon and effects of science.)⁶⁴ Very little happens in the New Atlantis after Salomon starts the Instauration; forces, movements, and heroes play little part in Bacon's ideal society, which is fundamentally unchanging except for its technical and intellectual progress. Thus, while his inductive methodology focused attention upon historical facts and contributed to modern historiography, Bacon retained an ahistorical concern for internal intellectual reform regardless of specific circumstances.

A favorite metaphor of Bacon's is the two faces of Janus. Imagination, for example, has a face of truth and a face of goodness (BW, VI, 258). The metaphor describes Bacon himself; one face peers into the future while the other contemplates the past.⁶⁵ Perhaps this duality, rather than any specific influence, accounts for Bacon's unique place in the history of culture; more than any other Renaissance figure, Bacon serves as a barometer of intellectual change, standing as he does--and so willingly--between two worlds, one by no means dead, the other fully empowered to be born. Marjorie Hope

⁶⁴Crowther, Francis Bacon, p. 11; Mumford, "Science as Technology," p. 507.

⁶⁵Cf. Metz, "Bacon's Part in the Intellectual Movement of His Time," p. 29; Wilson, Elizabethan and Jacobean, pp. 3ff.; Lemmi, The Classic Deities in Bacon, pp. 149-150. Whitaker, Francis Bacon's Intellectual Milieu, pp. 2ff., discusses Bacon as an encyclopedist.

Nicolson, in her classic work, The Breaking of the Circle, describes the medieval-Renaissance intellectual tradition by a circular metaphor and traces the fortunes of the metaphor in seventeenth-century poetry.⁶⁶ But perhaps, if we are to seek an apt description of the old and the new systems using geometrical models, Professor Nicolson's circle may more accurately depict the limiting or circumscribing effect of the Renaissance world-view on men's minds than the world-view itself. The medieval and Renaissance concept of the universal order, I would suggest, is not circular but linear. If we inspect the superficially circular Ptolemaic heavens, for example, we note that, despite the emplacement of planets and stars in spheres, the arrangement of spheres is linear or hierarchical, so that a thing increases in value and perfection as it approaches the outer extremity of the system. Value is measured, that is, by position on a line extending from the center of the earth, hell, beyond the moon to the unchanging spheres of the stars and finally to the empyrean and to the highest perfection. The linear hierarchy of value characterizes most phases of the Renaissance outlook, as such scholars as Tillyard and Lovejoy have shown. The chain or scale of being ascends from nothingness through minerals, plants, and lower animals, through man (commonalty, clergy and aristocracy, Pope and King), through the orders of

⁶⁶Nicolson, p. 7.

angels to the throne of God. Value is conferred by rank on the scale, and each created thing rests in its preordained place. Badness consists in falling--usually metaphorically--on the scale, goodness in emulating the perfection at the top. Man is the microcosm, in whom higher and lower energies contend; man is good insofar as the higher energies rule within him. Any object in a higher rank is innately better than any in a lower rank, and the tales of Adam and Faust demonstrate the unfortunate consequences of an attempt to alter one's rank. Salvation is to be raised to the highest place, damnation to be cast into the lowest. Wherever one is placed on the scale, one realizes that God transcends one's own place but does not transcend the scale, of which He is the limit; thus are heaven and earth united. Puritan theology reduces the scale to three points: hell for the damned, heaven for the elect, and a virtuous middle position in this life. Robinson Crusoe extols the middle (socially) at the expense of the extremities, and the hierarchy is further obscured. Eventually, Emerson will shock the stern old war-gods by declaring that "'Line in nature is not found; / Unit and universe are round'"; and the scale will all but have evaporated.⁶⁷ The center that, for Yeats, will not hold is perhaps the center of Emerson's circular universe, whose historical longevity thus falls somewhat short of that of

⁶⁷Cf. Hugh H. Witemeyer, "'Line' and 'Round' in Emerson's 'Uriel'," PMLA, LXXXII (1967), 98-103.

the linear universe it replaced.

I will have more to say about the subject in the proper chapter, but to locate Bacon I will suggest that, whereas the Renaissance universe is linear, the Romantic universe of Emerson and the Transcendentalists is circular or radial. Coleridge, an admirer of such scientific theories as those of Goethe and Erasmus Darwin, once complained that biologists in search of evidences of evolution were incorrectly attempting to discover similarities between the highest forms of vegetable life and the lowest forms of animal life.⁶⁸ The old linear assumption that the category of animals is innately superior to that of plants suggested to them, presumably, that the lowest animal is still higher on the scale than the highest vegetable and would have to have evolved from it, if from anything. The biologists, Coleridge said, should compare the lowest animals and the lowest plants (an approach confirmed, of course, by science) to discover common origins; the highest forms in each kingdom have developed in diverse directions from the common center and hence are beyond comparison.⁶⁹ Each kingdom of creation obeys its own law; each genus evolves likewise; each species and, especially, each man also obeys his own law (so Blake rejected one law for the lion and ox). The source of being, in this radial

⁶⁸ Coleridge, The Friend: A Series of Essays, to Aid in the Formation of Fixed Principles in Politics, Morals, and Religion (Burlington, Vt., 1831), pp. 412-413.

⁶⁹ Coleridge, The Friend, p. 413.

view, is at the center; the central energies cause the individual to grow and expand, his formation modified and guided by environment and circumstance but dependent primarily on himself. The Cartesian consciousness finds itself not at a point on a line but at the center of a world which it half perceives and half creates. The ideal, perfection, the ultimate value in this scheme is the point, the still point of the turning world, perhaps, or the dimensionless and timeless intensity of experience sought by Keats. On a cosmic scale, the circular universe is not Ptolemaically spherical but infinite, with points (individuals) extending numberless in all directions. In the typical Romantic outlook, the universe is, to be sure, designed and created by God, who validates each point as He had been taken to validate the linear scale. He is not up but everywhere (with a center nowhere, or in each point). And any perceived or understood pattern or design of things takes shape only from the viewpoint of each individual, who is self-sufficient and is unlike every other individual and follows his own law. In this universe, knowledge is based upon perception, whose mechanics attract great interest. Value depends upon how fully one develops oneself, how true one is to one's inner being, one's law. God, finally, is as much in oneself as in any other thing and helps one create one's world. The only alternative to God's existence within oneself, since He is no longer at the high end of a line at whose middle is man, is that God is totally beyond reach. And later,

among the Victorians, God-in-oneself tends to disappear; man, having explored the line and the circle, has exhausted the geometrical possibilities.

Bacon, I have indicated, mediates between the two universes, in effect preparing for the new on the basis of the old. It has been suggested that the unpopularity of his specific inductive method is the result of its insistence upon a linear, mechanical progression from facts to axioms to higher axioms to a hidden perfection. The method, this is to say, rests upon the linear view of reality, like the doctrines of the alchemists; Bacon in fact speaks of "ladders" of axioms and clearly conceives of scientific discovery and of knowledge in general as a linear process from the "lowest" materials to the "highest" forms:

for in the entrance of philosophy, when the second causes, which are next unto the senses, do offer themselves to the mind of man, if it dwell and stay there, it may induce some oblivion of the highest cause; but when a man passeth on farther, and seeth the dependence of causes and the works of Providence, then . . . he will easily believe that the highest link of nature's chain must needs be tied to the foot of Jupiter's chair. (BW, VI, 96-97; cf. VI, 136ff.; NO I:xix, BW, VIII, 71; "Of Atheism," XII, 132)

From senses to second causes to providential or final causes to the highest cause--thus Bacon's concept of knowledge, despite its empiricism, images the Renaissance hierarchy of being. But simultaneously, Bacon initiates the formulation of the circular universe: he turns the mind to what Whitehead calls "Whitehead'sible and stubborn facts"⁷⁰ (facts are points,

⁷⁰Whitehead, Science and the Modern World, p. 3.

individuals, single events which follow their own law); and he stimulates interest in the mind itself, in the consciousness which helps create its perceived universe. Bacon in fact speaks of the three branches of philosophy as "radii" or spokes of a wheel, with the mind at the hub: human philosophy is the Radius Reflexus, mind studying itself; natural philosophy is the Radius Directus, mind empirically observing and rationally inducing the laws of matter; divine philosophy (natural theology) is the Radius Refractus, mind discovering the "broken" images of God in nature, an apter metaphor, perhaps, than Bacon intended (BW, VI, 235-236, 96). God's will, as Bacon sees it, is fulfilled not by the universal order alone, nor by the mere existence of the linear scale of being, but by the universe in conjunction with the human mind, knowing the universe and putting it to human use. The Transcendentalists, as we shall see, will find it necessary to attempt to recapture the Providential vision which inspired Bacon, and to recapture it on the basis not of the old hierarchies but of the new subjectivism and the irreducible facts.

II. Bacon and the Puritans

No one seriously questions the thesis--expounded most vigorously by Perry Miller--that Transcendentalism is no German import but that its roots extend back to Puritanism. In seeking a radical reintegration of man and nature, mind and God, the nineteenth-century Transcendentalists demonstrated their inheritance of the seventeenth-century Puritan outlook; the Puritans were among the last men in England and America to be able to envision life as a meaningful and ordered sequence by which man is united with God and to perceive directly in the created universe the outward signs of the divine providence whose workings were also felt within. For a long time the Puritans were thought of as preoccupied with other-worldly concerns, striving to deny the flesh in order to confirm the regeneration and salvation of their souls. But since the 1930's, especially under the impact of Max Weber's sociological study of Protestantism and capitalism, a large body of scholarship has exposed beyond doubt the seeds in Puritanism of scientific and technological progress, Enlightenment rationalistic and socialistic values, commercialism, and most of the other concepts that have influenced modern America.¹ Rather than

¹Jones, Ancients and Moderns, p. 271; Max Weber, "The Protestant Sects and the Spirit of Capitalism," Essays in Sociology, trans. Hans Gerth and C. Wright Mills (New York, 1946); Weber, The Protestant Ethic and the Spirit of Capitalism, trans. Talcott Parsons (New York, 1958). See also A. Whitney Griswold, "Three Puritans on Prosperity," NEQ, VII (1934), 475-493. For an evaluation of American historiography on the Puritans, see Richard Schlatter, "The Puritan Strain," in John Higham (ed.), The Reconstruction of American History (London, 1963), pp. 25-45.

deny or ignore worldly reality, the Puritans accepted it eagerly and endeavored to infuse it with religious meaning and to make it an efficient vehicle for the soul's journey to God. We might therefore expect that the Puritans would not in general be antipathetic to the program and vision of Francis Bacon, but it is nevertheless surprising to discover that in the seventeenth and eighteenth centuries and on into the period of the Transcendentalists, the Puritans and their Orthodox Congregational descendants were among the most energetic, convinced, and serious bearers of the Baconian torch. As Christopher Hill has noted, English recognition of Bacon began simultaneously with the Puritan ascendancy; more of Bacon's works were published in England in 1640-1641 than in the previous decade and a half.² Indeed, according to Richard Foster Jones, who is one of the two or three writers most responsible for the current recognition of the relationship of Puritanism and Baconianism, Bacon's writings "became almost a second Bible" for many Puritans.³ William Ames, a leading Puritan theorist, cited Bacon as an authority,⁴ as did

²Hill, Intellectual Origins, pp. 116-117. For general discussions of the congeniality of Bacon to Puritanism, see Jones, Ancients and Moderns, pp. 115-117; Dorothy Stimson, "Puritanism and the New Philosophy in 17th Century England," Bull. Inst. Hist. Med., III (1935), 323-325.

³Jones, Ancients and Moderns, pp. 293-294, n. 12.

⁴Perry Miller, The New England Mind: From Colony to Province (Cambridge, 1962), p. 13.

Increase Mather.⁵ Mather's library,⁶ as well as the libraries of John Harvard,⁷ Samuel Lee,⁸ Thomas Weld,⁹ and George Alcock,¹⁰ to name a few prominent American Puritans, contained one or more volumes of Bacon's works. The Boston bookseller John Usher included anthologies of Bacon's writings among the books he ordered from London between 1679 and 1685;¹¹ many of the pre-1700 volumes of Bacon in the library of Yale University were acquired in the early colonial period;¹² and the first scientific treatise used at Harvard was the Institutio Astronomica (1645) of the Baconian scientist Pierre Gassendi.¹³ In England,

⁵Miller, New England Mind: From Colony to Province, p. 438.

⁶Julius Herbert Tuttle, "The Libraries of the Mathers," PAAS, N.S. XX (1910), 289.

⁷Alfred C. Potter, "Catalogue of John Harvard's Library," Publ. Col. Soc. Mass., XXI (1919), 198, 212.

⁸Samuel Eliot Morison, The Puritan Pronaos: Studies in the Intellectual Life of New England in the Seventeenth Century (New York, 1936), pp. 140-141.

⁹Charles F. Robinson and Robin Robinson, "Three Early Massachusetts Libraries," Publ. Col. Soc. Mass., XXVIII (1931), 163.

¹⁰Morison, Puritan Pronaos, p. 133.

¹¹Morison, Puritan Pronaos, p. 128.

¹²Dorothy Flower Livingston and Mollie Marjorie Patton, "Contribution to a Bibliography of Francis Bacon: Editions before 1700 in Yale Libraries," Papers in Honor of Andrew Keogh (New Haven, 1938).

¹³Frederick E. Brasch, "The Royal Society of London and Its Influence upon Scientific Thought in the American Colonies," Sci. Monthly, XXXIII (1931), 339. See also Morison, Puritan Pronaos, pp. 29, 40-41.

as in America, Professor Jones maintains, the Puritans were largely responsible for making Bacon a cultural hero and for popularizing his ideas.¹⁴ In fact, the attitudes, philosophies, and values of Bacon and of the Puritans coincide in so many particulars that it is more difficult to locate differences than similarities.

The affinity between Bacon and the Puritans is, first, perceptible in their zealous reformism. Like Ramus, Bacon was adopted not only because his actual ideas were congenial to Puritanism but also because Bacon and the Puritans shared a roster of enemies. Church reform, of course, was the chief aim of the Puritans, and despite his philosophical aloofness from theological controversy, Bacon contributed something of value to the Puritans in the ecclesiastical area. In fact, Bacon himself was actively concerned with church politics even before he took government office.¹⁵ And at the height of the political upheaval in 1640 and 1641, the Puritans revived and reprinted in support of their position such early tracts of Bacon as A Wise and Moderate Discourse (originally An Advertisement Touching, 1589) and Certaine Considerations

¹⁴ Jones, Ancients and Moderns, p. 117. See Hill, Intellectual Origins, pp. 50-51, 117, for a discussion of the "Baconianism" of the popular almanacs after 1640. Herbert Schneider says that Bacon's American influence did not begin before 1700, but I believe he is mistaken; the Puritans brought Bacon with them. See Schneider, History of American Philosophy, 2nd ed. (New York, 1963), p. 10.

¹⁵ For a brief account of Bacon's role in the early Puritan controversy, see Don M. Wolfe (ed.), Complete Prose Works of John Milton (New Haven, 1953-1966), I, 23-28. See also Christopher Hill, Society and Puritanism in Pre-Revolutionary England (London, 1964), pp. 15-16, 21, et passim.

(originally published in 1604).¹⁶ In these pamphlets, Bacon had argued for ecclesiastical reform, for toleration of religious diversity, and for relative freedom of expression. Most of John Milton's citations of Bacon are drawn from these writings, especially Bacon's condemnation of censorship and violent repression, though Milton went beyond Bacon in his attacks upon the prelates, religious coercion, and ecclesiastical authoritarianism.¹⁷ Though he disliked the term "Puritan," decried Puritan extremists and theological hairsplitting, and unwaveringly upheld the authority of the Church of England,¹⁸ Bacon was the son of Puritans and interceded for them with Elizabeth and James. Bacon is cited in the antiprelacy campaign by such writers as Lord Brooke, who, in The Nature of Truth, applauds Bacon's empiricism and, in Bacon's name, attacks orthodox theologians and calls for religious toleration, freedom of conscience, and an end to state domination of ecclesiastical affairs.¹⁹ Thus, Bacon became a name to conjure with among the Puritan reformers of the seventeenth century, the most reformist of whom were likely to find themselves upon the shores of the new world; as I have noted, they brought Bacon with them. One commentator suggests that "Francis Bacon's philosophy and the Puritan's exodus sprang from a common soil, and it might be expected that New England

¹⁶ Wolfe, Complete Prose Works of Milton, I, 6, 23-28.

¹⁷ Wolfe, Complete Prose Works of Milton, I, 27-28.

¹⁸ Hill, Society and Puritanism, pp. 15-16, 21.

¹⁹ William Haller, The Rise of Puritanism (New York, 1938), pp. 334-335.

would become a testing ground for Baconian ideas, perhaps a 'New Atlantis'. . . ."20

As for those who remained in England, several recent writers, especially Christopher Hill, have granted Bacon an important place in the cultural processes leading to the English Revolution. Himself a monarchist and no admirer of democratic theories, Bacon nevertheless furnished political reformism with some of its weightiest arguments--the possibility of an earthly paradise, the futility of authority as opposed to practical experience, the precedence of law and order over monarchial whim, the need for practical rather than courtly education, the importance of social cooperation, the possibility that determined labors will effect radical change and produce an enhanced estate for all men.²¹ The values, the spirit, and some of the slogans of Baconian intellectual reformism found their way readily into the arenas of political and ecclesiastical affairs.

In educational reform, the leading figures in the attack upon the traditionalism of the schools were such Puritans as Samuel Hartlib, John Dury, and their Polish mentor, Jan Amos Comenius. All were ardent partisans of Bacon; their programs included plans for scientific colleges on the model of Bacon's

²⁰Dirk J. Struik, Yankee Science in the Making (Boston, 1948), p. 9; see also p. 21.

²¹Hill, Intellectual Origins, pp. 109-119, 96ff., 266-300; Hill, Puritanism and Revolution: Studies in Interpretation of the English Revolution of the 17th Century (London, 1958), p. 29.

Salomon's House, an encyclopedic and empirical approach to learning, education based upon experience and the study of things instead of words, the end of Aristotelian and scholastic dominance in education, the substitution of the Bible for scholastic theology, utilitarian, humanitarian, and progressive values, and a general desire for human progress.²² Comenius, who visited England at the request of Hartlib and Dury, suggested that Bacon's appeal to King James I in De Augmentis Scientiarum be updated and submitted to Charles I to persuade him to support a scientific academy and educational reforms.²³ Likewise, the educational program in Abraham Cowley's A Proposition for the Advancement of Experimental Philosophy (1661) includes such Baconianisms as the division of labor in scientific investigation and the use of the Bible alone, rather than theological texts, for religious education.²⁴ Milton, too, was indebted to Bacon for some of his ideas concerning reforms in education.²⁵

²² Jones, Ancients and Moderns, pp. 88-102, 308-309, n. 26; G. H. Turnbull, Hartlib, Dury and Comenius: Gleanings from Hartlib's Papers (London, 1947), p. 37; Robert Fitzgibbon Young, Comenius in England (London, 1932), pp. 4, 54-55; Wolfe, Complete Prose Works of Milton, I, 151-166; Hill, Intellectual Origins, pp. 100-109; Robert K. Merton, "Science, Technology and Society in Seventeenth-Century England," Osiris, IV (1938), 427-429, 475-478; Haller, Rise, pp. 299ff.

²³ Turnbull, Hartlib, p. 350.

²⁴ Jones, Ancients and Moderns, pp. 174-175.

²⁵ Complete Prose Works of Milton, I, 159-163, 246-247, 279, n. 49; II, 205, 369, 374, n. 37; IV, 138-139; Haller, Rise, pp. 299ff.

Educational reform, however, is only one aspect of the general intellectual reformism of both Bacon and his Puritan disciples, a reformism based upon the belief that practice, experience, and facts are superior to authority and to the ancients in acquiring knowledge and that utility rather than logical symmetry is to be valued in applying it. It is not accurate, of course, to claim that Puritan writers are unanimously on the side of the moderns or that they do not rely almost as heavily upon authorities as any other men of the seventeenth century. Such theorists as William Ames, for example, make extensive and admitted use of scholastic concepts and terminology,²⁶ and John Dillenberger has described as "Protestant scholasticism" a major segment of Protestant thought in this period.²⁷ Even the great Cotton Mather, a member of the Royal Society and as earnest a scientist as any of the day, was not immune to the blandishments of written authority. In The Christian Philosopher, for example, he claims that

Even the Paps in Men . . . sometimes contain Milk, as in a Danish Family mention'd by Bartholinus. A Man mentioned by Beccone, upon the Death of his Wife, suckled the Infant himself. He concludes, that since, according to Malpighius and others, the Paps of Men have the same Vessels with those of Women, 'tis intended that, if need requires, the Young should be suckled at them, who, upon a little pulling, soon fetch Milk into them.²⁸

²⁶ See Ames, Conscience with the Power and Cases Thereof ([London], 1639), I, 3-4.

²⁷ Protestant Thought and Natural Science: A Historical Interpretation (Garden City, N.Y., 1960), p. 50.

²⁸ London, 1721, pp. 224-225.

But, as Professor Haller asserts, Bacon's "attack on the old learning and his faith in the new were to receive no heartier support than that which . . . came from the Puritan classes."²⁹ "The reformers and Bacon alike," he goes on, "opposed tradition in . . . learning, sought as the ends of knowledge things they regarded as immediately and concretely useful, and exalted individual experience as the means of gaining and testing knowledge of the truth."³⁰ As they had adopted the logic of Ramus as a way of escaping the orthodox theological associations of Aristotelian methods, the Puritans likewise eagerly espoused Baconian empiricism.³¹ "Experiment," Professor Haller notes, was "a familiar word" in religion before it became so in science; the Puritan preacher must preach nothing he has not experienced, for only by self-observation can one's spiritual status be ascertained, and doctrine must be confirmed by practical experience and demonstrated by works.³² The "induction of particulars" was already a favorite technique in demonstrating the truth of doctrine;³³ although "induction" traditionally meant no more than "enumeration" and as such was attacked by Bacon in favor of his own empirical redefinition

²⁹Haller, Rise, p. 299.

³⁰Haller, Rise, p. 301.

³¹See Jones, Ancients and Moderns, p. 155; Dillenberger, Protestant Thought, p. 79.

³²Haller, Rise, pp. 298-299.

³³For example, see Urian Oakes, New-England Pleased With (Cambridge, 1673), p. 12.

(BW, VIII, 42; IX, 67), the transfer from enumeration of instances to derivation of generalizations from instances was made without difficulty. Regardless of how much or how little he took from Locke, Jonathan Edwards extended to new levels this experiential or perceptivist approach, utilizing the logical resources of Baconian science for spiritual ends.³⁴ Bacon and the Puritans, both English and American, share a vision of a New Jerusalem and a desire to facilitate its establishment by incapacitating or circumventing those who oppose it.³⁵

Besides their common reformism, Bacon and the Puritans share a kind of utilitarianism in their approach to knowledge and behavior. Richard Foster Jones has asserted that "our modern scientific utilitarianism is the offspring of Bacon begot upon Puritanism,"³⁶ but, as I have pointed out, whereas our utilitarianism is wholly secular, Bacon's was not, nor was that of his Puritan followers. It is therefore unjust to attribute Mill's type of utilitarianism to Bacon, as some have done, or to claim that the religious views of Bacon and the Puritans were a front for an essentially materialistic outlook.³⁷ The specific doctrine which most forcefully relates Puritan

³⁴See Perry Miller (ed.), Images or Shadows of Divine Things, by Jonathan Edwards (New Haven, 1948), pp. 18-20.

³⁵Cf. Hill, Intellectual Origins, pp. 93, 95.

³⁶Jones, Ancients and Moderns, p. 88.

³⁷Cf. Merton, "Science, Technology, and Society," p. 438.

utilitarianism to Bacon is that of charity. As we have seen, Bacon insisted that the end of knowledge is the welfare of man and that God has enjoined the duty of charity upon man to insure the benevolent uses of knowledge.³⁸ The Puritans also adopted this concept of charity, maintaining that good works are a concomitant of faith and of a state of grace, though the exact causal sequence is problematical. According to Ebenezer Pemberton, for example, a man should "serve his generation . . . study, and advance the good and prosperity, the happiness, glory, and truly valuable interests of the people he lives with."³⁹ Again, it should be noted that the Puritan concept of the public good is not the same as ours, because their notion of "the public" is different. Benjamin Colman, for instance, in advocating the establishment of a public market in Boston, maintains that "Vertue and good Morals" would thus be served and that the public good must take precedence over any private considerations. But if the poor complain that markets do not benefit them, they must be reminded that "They that are poorer in worldly state should and must give way to the Rich. . . . Providence means it for them. . . . GOD has given into their hand more abundantly."⁴⁰

³⁸See Jones, Ancients and Moderns, pp. x-xi; Hill, Intellectual Origins, p. 94.

³⁹Sermons and Discourses on Several Occasions (London, 1727), p. 209.

⁴⁰Some Reasons and Arguments Offered to the Good People of Boston (Boston, 1719), p. 12.

Thus, the Puritans (and Bacon) display many beliefs which look backward, toward the medieval hierarchies, as well as many which look forward toward secularism and democracy.

The concept of material progress--perhaps partly as an analogue of the pilgrim's progress, the journey of the Christian soul to God--also unites the Puritans and Bacon (though material prosperity, as in Job, is valued in the Old Testament as well as in Puritan doctrine). While some Puritan theorists upheld the traditional belief in the world's decay, others, following Bacon, believed that though nature was fallen, because of man's fall, it was nevertheless available as a reservoir of progressively exploitable helps for mankind.⁴¹ Samuel Hartlib, for example, begins an appeal for the employment of machines to do hard labor with "A Passage out of the Lord Verulam's Novum Organon, Translated out of Latine," in which Bacon applauds primitive man's esteem of inventors and affirms the permanence of inventions as against the transience of politics.⁴² Evidently, the Puritans' doctrine of human depravity does not keep them, any more than Bacon's gloomy opinion of human nature keeps him, from entertaining a vision of a society whose material prosperity enhances and confirms (but cannot cause) its spiritual well-being.

The doctrines of charity and social welfare logically necessitate an active, as opposed to a contemplative, life;

⁴¹ See Hill, Intellectual Origins, pp. 89-90.

⁴² An Invention of Engines of Motion Lately Brought to Perfection (London, 1651).

in this the Puritans follow Bacon. Ebenezer Pemberton echoes Bacon in asserting that "Life consists in action. . . . man has a work and business in this lower world allotted to him: That he was not designed to be an idle spectator, to walk in this respect in an empty shew, to take a turn or two upon this Theatre, and no part to act; . . . life was ordained a stage of action. . . ."⁴³ Francis Osborn also advocates a life of activity and social exchange. Osborn's history illuminates Puritan Baconianism. The son of Puritans, Osborn was a courtier who sided with Parliament during the Revolution and was rewarded with minor public office. His Advice to a Son, whose first part appeared in 1656, ran through five editions in two years; it was so eagerly read by Oxford students for its advice on what to study, how to succeed, and how best to combine pleasure and duty that university authorities threatened to burn the book for inculcating atheism.⁴⁴ Osborn is an avowed Baconian. He offers large amounts of practical advice, disparages tradition and the ancients in favor of the moderns and practical experience, praises Machiavelli, advocates learning in Baconian terms, and contributes such writings as histories, aphorisms, and essays. He cites Bacon's favorite Scriptural personage, Solomon, in demonstrating that "An universal inspection into sciences [is] most becoming a Gentleman,"⁴⁵ and he lavishes great praise on Bacon for

⁴³Sermons, pp. 34-35.

⁴⁴Chalmers, General Biographical Dictionary (1815).

⁴⁵Works, 9th ed. (London, 1689), p. 150.

his learning, wit, character and conversational skill.⁴⁶

As Professor Jones has noted, the Puritans clearly adopted Bacon's preference for action, and thought issuing in action, over pure speculation.⁴⁷

I cannot undertake here a study of Puritan aesthetic theory, but I should note that the Puritans shared Francis Bacon's ambivalence toward art. Like Bacon, as I have said, the Puritans held that knowledge valuable which is useful--physically or spiritually or both--and consequently maintained that literature must be useful as well.⁴⁸ As Bacon had taught, not beauty but truth is the supreme goal of human endeavor, and art must necessarily serve truth; where art seems to obstruct truth, as in the decor of churches, art must go. And the Puritans, whose unfortunate effect upon the history of "representative" or dramatic art is well-enough known, also seem to favor allegory because allegory provides a vehicle for doctrine. But Max Weber contends that the Puritans respected art as deeply as the Cavaliers--witness Milton--and felt it could serve the highest purposes.⁴⁹ Norman S. Grabo, similarly, has argued that the relatively large quantity of Puritan poetry and the consciously artistic efforts of Puritan sermon and history writers, in America as well as in England, suggest that in practice the Puritans, like Bacon,

⁴⁶Works, p. 151.

⁴⁷Ancients and Moderns, p. 108.

⁴⁸Miller, Images, p. 4.

⁴⁹Weber, Protestant Ethic, p. 169.

found imaginative literature not only congenial and instructive but even necessary to convey and to absorb the religious, intellectual, and emotional energies which consumed them.⁵⁰

Another area in which the Puritans follow Bacon's lead is that of learning. Some commentators have dwelt upon the more extreme Puritans in an attempt to divorce Puritanism from Renaissance humanism and the revival of classical learning, just as some others have done the same with Bacon; in this view, Baconian and Puritan values demand the subordination of humane learning to commercial and technical knowledge. Many Puritans did, of course, participate in the campaign against the English universities, a campaign which earned them the contempt of Thomas Sprat, who hoped that the universities would contribute to the new science.⁵¹ But educational reform was by no means restricted to extremists (again, witness Bacon and Milton), and much of the agitation was directed not at classical learning itself but at what the reformers took to be the exclusiveness, irreligion, and uselessness of traditional education.⁵² As Professor Jones points out, the Puritans transformed Bacon's "advancement of learning" into "the advancement of piety and learning" and attempted not to destroy the humanities but to balance them

⁵⁰"The Veiled Vision: The Role of Aesthetics in Early American Intellectual History," WMQ, 3rd. Ser. XIX (1962), 499-500.

⁵¹Jones, Ancients and Moderns, pp. 226-229.

⁵²Jones, Ancients and Moderns, p. 114.

with practical and experiential education.⁵³ Even the extremists were adept in the uses of classical culture as a rhetorical tool and a source of examples and arguments.⁵⁴ Perry Miller and Thomas Johnson place the Puritans in the humanist tradition; the Puritans believe that man is rationally capable of knowing truth and should be aided by a study of the classics. Essential Puritanism, they add, is not the same as eighteenth-century Evangelicalism.⁵⁵ The "utility" of knowledge, for the Puritans as for Bacon, does not mean technical, industrial, and vocational utility alone, but cultural, intellectual, and spiritual utility as well. William Ames is referring chiefly to religious knowledge when he says that "we ought to study for the knowledge of those things especially which are most necessary for us in our life. . . . [W]e ought to labour for a growth in knowledge, not contenting ourselves to be children in understanding. . . ." ⁵⁶ And Ebenezer Pemberton echoes Bacon on the value of learning:

To promote good literature among a people, is to serve them. . . . Greece and Rome are more renowned for the flourishing state of learning in them, than for their arms. . . . The flourishing state of learning is of unspeakable advantage to church and state. . . . All donations to cherish and advance

⁵³Jones, Ancients and Moderns, p. 115

⁵⁴Weber, Protestant Ethic, p. 168.

⁵⁵The Puritans (New York, 1938), pp. 19-20, 23.

⁵⁶Conscience with the Power, III (II), 49.

learning, are signal services to a generation: This is to rescue them from the bitter effects of ignorance and barbarity.⁵⁷

Bacon and the Puritans agree that humanistic learning is not the enemy but the foundation of scientific and social progress.

In my discussion of Bacon, I emphasized his characteristic tendency to relate the study of facts to religion and to provide for the Instauration of the Sciences and for the general advancement of learning a solid foundation in religious values and scriptural authority. The most significant and fundamental connection between Bacon and Puritanism is precisely this tendency. Perry Miller has suggested that "no one can accuse [Bacon] of being a Calvinist,"⁵⁸ but the fact is that Bacon's philosophy anticipates and parallels the Calvinism of the English and American Puritans, if not the authentic Geneva variety.⁵⁹ Cotton Mather, in the "scientific" sections of his The Christian Philosopher, does not mention Bacon, although he often cites such Church

⁵⁷Sermons, pp. 212-213. George Sandys, a temporary Virginian though no Puritan, also demonstrates the importation of Bacon into America; in his commentary upon Ovid, Sandys cites Bacon, calling him "the Crowne" of modern writers, Ovid's Metamorphosis Englished, Mythologiz'd, and Represented in Figures (Oxford, 1632), p. 18. See also Perry Miller, The New England Mind: The Seventeenth Century (New York, 1939), p. 220.

⁵⁸New England Mind: From Colony to Province, p. 13.

⁵⁹See Merton, "Science, Technology and Society," p. 416, on the essential unity of the Puritan sects in their basic "religious ethos." On Bacon's Calvinism, see Hill, Intellectual Origins, p. 91.

Fathers as Hugh of St. Victor, Chrysostom, and Lactantius; but he does cite Bacon in the final section, where Mather describes the soul's ascent to God: "The great Sir Francis Bacon has a notable Passage in his Confession of Faith," a passage stating that Christ was needed as a mediator between God and the world "'that so in the Person of the Mediator the true Ladder might be fixed, whereby God might descend to His Creatures, and His Creatures ascend to Him!'"⁶⁰ So, for a leading American Puritan, Bacon carries a religious message. We might therefore look for further congruence in the ways in which Bacon and the Puritans endowed the search for facts with spiritual significance.

I have discussed Bacon's view of man as a fallen creature possessing both weak faculties and great capabilities. Of course, this view is shared by the Puritans. Man, they believe, is "depraved," his senses, understanding, will, and passions vitiated by the Fall and rendered subject to error, vice, and the pressure of circumstances. As Cotton Mather puts it, "the natural Imbecillity of REASON, and the moral Depravations of it, by our Fall from God, and the Ascendant which a corrupt and vicious Will has obtain'd over it, . . . ought . . . to warn us against the Conduct of an unhumbled Understanding in things relating to the Kingdom of God. . . ."⁶¹ The Puritans take

⁶⁰Pp. 299-300.

⁶¹Christian Philosopher, p. 114.

up Bacon's critical assessment of human nature and unaided reason; this anti-rationalism, however, is, in both cases, partly a polemical weapon against political enemies--the schools, the theologians, the Aristotelians, and the neo-Platonists--and is not the equivalent of anti-intellectualism, of which neither Bacon nor his disciples were guilty. That human reason is prone to error does not necessitate the shutting-off of the mind, nor, certainly, does it justify mysticism or "enthusiasm," but instead it requires that the mind diligently apply itself to facts, which are external to it, are created directly by God, and keep the mind in a straight and narrow way to truth.

Man as a depraved yet powerful creature is the subject of John Downname's The Conflict between the Flesh and the Spirit (1618). The book is dedicated to Bacon, then Lord Keeper of the Great Seal. Downname may have been angling for a Church preferment, power over which he says is in Bacon's hands, and his praise of Bacon is profuse. Downname hopes Bacon will be "a strong Patron and Guardian" of the book, and declares that Bacon excels not only in civil abilities but primarily in "the vnvaluable riches of the minde in all kinds, especially in those chiefly precious Iewels learning and religion. . . ." ⁶² The "Epistle Dedicatorie" describes the furious battle between the Christian soldier and the Devil, who assails and tempts him from without and within. The Christian, victim of the Fall, is innately weak, must

⁶²London, 1618, }3v.

exercise "continual watchfulnesse," and must fight valiantly to rescue his soul from the temptations of the flesh.⁶³

This conflict, Downname says, goes on only in those who seek salvation; most men are content to allow the flesh to rule them, and in them no struggle rages--just as, in Bacon, the man (or society) who rests content with his current estate neither suffers mental turmoil nor achieves anything better.

What Downname means by "the flesh," however, is absolutely central to my analysis of his "Baconianism." He does not mean "the body." Indeed, he is at pains to refute explicitly the asceticism and self-mortification of the Catholic tradition. We are at war with ourselves but not with our bodies, Downname asserts. Our bodies, on the contrary, are temples of the Holy Ghost, "the workmanship of our onely good God"; our bodies are "good by creation" nor is there any Manichean dualism of good and evil principles in them (pp. 39-40). The body and the spirit are no enemies but "louing friends" (pp. 38-39). Asceticism and mortification of the body are Papistical dogmas which aim at subverting our salvation by distracting us from our true enemy, which is not the body and the senses but the flesh (p. 21). The flesh comprises those qualities, attributes, and motives within us that draw us away from God and toward the Devil. The flesh is "that part of a Christian [i.e., one who is regenerate] which is vnregenerate and continually fighteth and ~~strueth~~ against the spirit . . ." (p. 9).

The flesh is "the old man," "the naturall man," and "the old Adam" in us; it is "the law of death," "the rule of the naturall man's actions," and "the corruption of the whole man" (pp. 10, 33). Consequently, not only bodily attributes may war against the spirit but "soule, minde, and will" also. "Spirit" is not, as Downname says the Papists claim, intellect and reason as separate from body and senses, but a divine principle as different from mind as it is different from body. The reason or understanding, as well as the body and the will, can be corrupted and can obstruct grace. In fact, the body does not choose evil; the soul is responsible for this decision and is served, not ruled, by the body (pp. 48-49). Even the regenerate are tempted not only by bodily evils--lust, gluttony, etc.--but also by sins of understanding and will--blasphemy, heresy, impenitence, cruelty (p. 42). Downname declares that "no part or facultie of man is more infected and corrupted with the poyson of sinne then the minde and vnderstanding" (p. 45). The corruption of the understanding, as Downname describes it, is an obvious analogue of Bacon's critique of scholasticism in The Advancement of Learning: "carnall curiositie neglecting those things which are profitable necessary and reuealed to this ende that wee should knowe them, laboureth after nice and ydle speculations and curious questions, which . . . are vselesse and vaine . . ." (p. 199). But "sauing knowledge"--that which helps us to discover God's grace--enables us to leave God's mysteries alone and "aymeth more at the vse and fruite in practice, then at the theorie

and speculation, and to haue feeling and experience of a little rather than a bare conceipt and abilitie to discourse of much" (pp. 199-200). This true knowledge does not, however, ignore God but strives ceaselessly for understanding of God's will and for "spirituall growth." The utility of true knowledge means that we must use our regenerated faculties for the benefit of others: "Our knowledge must be then exercised in the holy practice of that wee know, our faith in good workes, . . . our zeale in aduancing all meanes of Gods glory . . ." (p. 383). Good works include working for "worldly prosperitie," but to say that prosperity is a sign of God's love or of justification is a corrupt and fleshly argument (p. 99). We cannot tell by "outward things" whether God loves us. Still, "earthly prosperitie" is a gift of God and should be enjoyed in moderation and temperance. An occasional fast may help the spirit, but more serious asceticism is mere superstition and "a bodily exercise" which promotes sin because it incapacitates our bodies for charitable duties; both our souls and our bodies must be strong in God's service (pp. 26-33, 339-340).

Downname's inclusion of the understanding in the corrupt "flesh" parallels Bacon's critique of the idols of the mind (the Novum Organum was not published until 1620, though the concept of idols had been adumbrated earlier), and his distinction between flesh and body parallels Bacon's own recognition of human sinfulness and simultaneous urging of material and cultural progress. The distinction enabled the Puritans,

as it had been done for Bacon, both to fight sin and to promote science, progress, prosperity, and the study of the facts of created nature. It also serves to reinforce the exceptions to the doctrine that nature is fallen and therefore off-limits, for if creation is good except for what man's inner corruption does to it, then, if man somehow purges himself of corruption, his dealings with nature will also be good.

Spiritual purgation is achieved, in Puritan doctrine, by the method of regeneration; intellectual purgation, in Bacon, is achieved by the new organon, the method of induction--method as a device for repairing or overcoming man's disabilities as a result of the Fall is another concept shared by Bacon and the Puritans.⁶⁴ The method of regeneration is described, with variations, in any number of Puritan texts; one good presentation is that of James Fitch in The First Principles of the Doctrine of Christ. The stages of faith are as follows: (1) contrition, the sense of sinfulness and hatred of sin; (2) humiliation, yielding oneself to God's will (cf. Bacon's contention that the inductive method "humbles" man's spirit before the facts of nature); (3) the infusion of faith, a disposition to believe in Christ; (4) justification, the absolution from sin and the imputation of Christ's righteousness to oneself; (5) adoption, becoming a child of God; (6) sanctification, becoming holy and sinless

⁶⁴ See Hill, Intellectual Origins, pp. 89-90.

through Christ; and (7) glorification, the final union with God at the Last Judgment.⁶⁵ Bacon's method (both the general and the specific methods) is a similar ascent, via a mechanically followed program of steps, from present experience and dissatisfaction with one's status to a law ordained directly by God and an enhanced status. To be sure, Bacon's method is voluntary while regeneration, in its last four stages, depends upon God's inscrutable will in the conferral of Grace. But the precise degree of helplessness on man's part in justification and succeeding steps was always controversial and a subject of accusations of heresy and infidelity.⁶⁶ And the two methods are analogous in this: that despite its "scientific" appearance, Bacon's method contains a large component of inscrutability and divine sanction. Bacon, as I have said, does not believe the method is wholly arbitrary and volitional (though one must will to perform it, just as one must want to be justified) but feels it to be all but dictated, like Scripture, by God. The method, unlike Aristotelian, Platonic, and scholastic theology and philosophy, is not the creation of men but follows the inherent, God-given order of nature--facts are governed by laws; the method studies facts and discovers laws. As the Puritan method of regeneration requires that

⁶⁵ Boston, 1679, pp. 44-52.

⁶⁶ William Ames, for example, declares that he is going to tell "what a man may do that he may be partaker of . . . grace," but goes on instead to describe how one achieves the "certainty" of grace; i.e., how one knows one has it, Conscience with the Power, III (II), 10-11.

one willingly proceed by rules one has not willingly established, so, precisely, does the Baconian method of induction. Both the Puritans and Bacon believe that they have drawn their methods out of divinely-ordered reality by means of a radical reinterpretation of reality and of Scripture, or of a return to primitive philosophy and the primitive Christian church. Both rely upon an essentially benevolent universal order and both attempt to enforce a method which enables the practitioner to discipline himself, to put down his impulses toward chaos and evil, to get in step with the universe, and to draw efficiently from it what is of most use to him and to his society. If the New Atlantis is Heaven and the Instauration is faith and good works, then the inductive method is Christ, man's salvation through grace, and the Novum Organum is the Gospel.

The Puritans also adopt Bacon's argument that science, the methodical study of facts, and the application of knowledge to the benefit of mankind glorify God.⁶⁷ William Ames describes how to make sure a good work will be good:

13. . . . First, it is absolutely necessary that it be done with respect to honesty, and in reference to the pleasing of God, and obeying his Will. . . .

14. Secondly, a secondary intention of profit, or pleasure doth in no sort take away the honesty of an action, but adorn it rather. . . .

15. Thirdly, it is also absolutely necessary, that there be a reference of the action to the glory of God. . . .⁶⁸

⁶⁷ See Merton, "Science, Technology and Society," pp. 442-446.

⁶⁸ Conscience with the Power, III(II), 84-85.

Thus, utility, morality, pleasure, and duty are combined with the glory of God as proper justifications for action. John Dillenberger notes also that many Puritans saw the Royal Society and the new science as working along with the Protestant church ad maiorem Dei gloriam, though, perhaps, they would have eschewed that particular formula.⁶⁹ Agreeing with Bacon that the mysteries of God's nature and of heaven are concealed from mortal men, the Puritans also concurred in Bacon's certainty that God's inscrutability does not preclude knowledge of His will, of His universe in both its facts and its immutable laws, and of the proper ways--suggested in nature and revealed in Scripture--of glorifying Him.⁷⁰

Likewise, as I have suggested, Bacon and the Puritans make the religious duty of charity and the public welfare the paramount justifications for learning, science, and prosperity. John Cotton, for instance, claims that faith helps a Christian "live in some warrantable calling," especially one which contributes to "the publicke good"; faith also enables a man to recognize and employ his God-given talents (cf. Milton's concern for "that one talent").⁷¹ And Benjamin Colman defends commerce by insisting that it can, and must, serve pious ends. An early apologist for colonialism, Colman declares that "the Knowledge of Christ has been propagated by Trade far and near," and that

⁶⁹Protestant Thought, p. 130.

⁷⁰Cf. Merton, "Science, Technology and Society," pp. 439-470.

⁷¹The Way of Life (London, 1641), pp. 437-439.

commerce, if conducted charitably and honestly, "enlarges Peoples Hearts to do generous Things. . . ." ⁷² If wealth is not acquired righteously, he adds, repentance and restitution are obligatory, and the best "commodity" a society can produce is holiness. ⁷³ For the Puritans as for Bacon, not speculation or doctrine but behavior is the chief beneficiary of knowledge and the primary concern of the Christian. In fact, the Puritans go somewhat beyond Bacon in claiming moral benefits from science and learning. I pointed out in my discussion of Bacon that he does not say that science and related pursuits make man good, but some Puritans do make such an assertion. Commerce, Benjamin Colman says, enlarges the heart, and Cotton Mather suggests that the student of natural philosophy "will . . . rise into that Superiour Way of Thinking and of Living, which the Wisest of Men will chuse to take. . . ." ⁷⁴ Of course, no one believed that moral living brought one God's grace or that good works or science could insure salvation. Indeed, Perry Miller maintains that one of Jonathan Edwards' great contributions is a reading of Newton which makes it ontologically impossible for good works or faith to bring salvation. Edwards, Miller says, sees that in Newton's mechanistic universe, man is a

⁷² The Merchandise of a People Holiness to the Lord (Boston, 1736), pp. 9, 11.

⁷³ P. 28.

⁷⁴ Christian Philosopher, p. 2.

product of uncontrollable natural laws and causes which are not abrogated even for the regenerate; man cannot effect any escape from nature, and only God's freely-given grace can lift man's soul above the rocks and trees.⁷⁵ Still, many Puritans feel that the study of nature makes the moral life which accompanies salvation, if not salvation itself, more easily attainable within the natural order; surely, nature will help man comprehend his creature-hood and will help him apply the moral laws revealed in Scripture.

The Puritans also followed Bacon in working toward the demise of both Biblical literalism and the authority of the Bible in natural philosophy and other disciplines founded on facts. This is part of the "separation-of-faith-and-reason" question, though, as I have suggested, it was not faith and reason that were separated but divinity and philosophy, to use Bacon's terminology. Like any authority in natural science, the Bible is to be trusted only so far as it confirms the observed facts--a position which, though some argued against it, was progressively adopted among the Puritans, especially those who were affiliated with the Royal Society or had other scientific interests.⁷⁶ S. F. Mason describes the role of the Puritans in ending Biblical literalism; he cites especially John Wilkins, a clergyman who, in such books as Discovery of a New World (1638) and A Discourse Concerning a New Planet

⁷⁵Jonathan Edwards (n.p., 1949), pp. 73-74, 78.

⁷⁶Dillenberger, Protestant Thought, p. 129.

(1640), rejects all Scriptural evidence in astronomy and upholds the exclusive relevance of the observed facts.⁷⁷ At the same time, of course, the Puritans concurred with Bacon in preferring the Bible to commentary or theology as the source and arbiter of purely religious and moral knowledge. In any case, the separation of inductive philosophy and religion in the seventeenth century was not the same thing as it became in the eighteenth and nineteenth. In Bacon's day, to deny the Bible's authority in determining matters of natural fact was neither to ignore religion nor to sever natural philosophy from its roots in God's inscrutable will.⁷⁸ Faith, as Bacon maintained, was still supreme; science and nature could not teach morality or the doctrines of man's sinfulness and salvation through Christ; and God still guaranteed all knowledge. As the medieval notion that business or profit is bad became (witness Benjamin Colman) "business is good" and finally, in the days of the Carnegies and the Babbitts, "business is business," so "science (or nature or facts) is bad" became "science is good" and then "science is science." Science, that is to say, came to contain its own rationale, to be its own judge, a process Bacon explicitly condemned, for every human pursuit, he said, must be justified on other grounds than its own (BW, VIII, 37).⁷⁹ In the case of Bacon and the Puritans,

⁷⁷"The Scientific Revolution and the Protestant Reformation," Annals of Science, IX (1953), 82-84.

⁷⁸Cf. Hill, Intellectual Origins, p. 93.

⁷⁹Cf. Dillenberger, Protestant Thought, p. 80.

the other grounds were God's revealed will and the doctrine of charity.

Whether or not Bacon was responsible, as some of its enthusiasts claimed, for the system of religious belief known as Natural Theology and beloved of the Deists, Bacon's Puritan⁸⁰ followers did much to elaborate and popularize it. What Bacon says is that the study of nature, when seen in its relation to religion and called divine philosophy or natural theology, suffices to refute atheism and to convince the student of the existence of God, as well as of such of His attributes as His benevolence, intelligence, power, and providence.⁸¹ Nature can teach God's existence and goodness because accurate (non-scholastic) knowledge of nature's laws proves that a Designer must have designed so intricate and wonderful a system. The study of final causes, which Bacon makes a branch of metaphysics, also reveals God's design. But nature cannot teach the positive precepts and doctrines of true religion, Bacon warned. Knowledge of God through nature, though real, is "broken," and is, like aphorisms in rhetoric, intended more to stimulate than to satisfy curiosity. From nature, one cannot learn of the Fall of man, of Christ's resurrection, of the Trinity and the Eucharist and the moral code of the Bible. Hence, natural theology is partial and unsatisfying unless it is complemented by revealed theology,

⁸⁰ See Hill, Intellectual Origins, pp. 91-92.

⁸¹ See above, p. 28.

or divinity, which is learned by revelation and "inspiration" and is expounded, but not originally learned, by theology and applied to practical behavior partly with the aid of inductive human philosophy.

The Puritans--increasingly so in the eighteenth century--adopted this analysis of religion with its balance of learned and inspired belief, natural evidences of God and revealed doctrines of faith. As Cotton Mather, who exemplifies the transition from Calvinism to Deism, puts it, the universe is like a "well-contriv'd Watch"; there could be no creation without a creator, no design without a designer, no motion without a mover, and so "The Works of Creation are enough to satisfy the Reason of any Man, in the Being of a GOD."⁸²

Facts reinforce faith because

The whole World is indeed a Temple of GOD, built and fitted by that Almighty Architect; and in this Temple, every . . . one, affecting himself with the Occasions for it, will speak of His Glory.⁸³

It is a good Thought, and well expressed of an honest Writer on the knowledge of God from the Works of Creation [Paley, with reference to Bacon?]. "It is true there are some Footsteps of a Deity in all the Works of Nature, but we should ascend by these Footsteps as by a Footstool to the God of the World, as Solomon by several Steps ascended to his Throne, and by the Scale of Nature ascend to the God of Nature."⁸⁴

⁸²Reasonable Religion: Or, the Truths of the Christian Religion Demonstrated (London, 1713), pp. 12-13. See Theodore Hornberger, "The Date, the Source, and the Significance of Cotton Mather's Interest in Science," AL, VI (1935), 413-420.

⁸³Christian Philosopher, p. 2.

⁸⁴Christian Philosopher, p. 293.

Mather betrays a hint of the feeling, already growing in his century, that it is no longer facts but revelation that needs defending. John Bulkley, an American contemporary of Mather, suggests the same feeling; he expounds the thesis "THAT reveal'd Religion is the great means to Preserve, Cultivate or Improve Natural Religion in the World."⁸⁵ Bulkley earnestly wishes to preserve the traditional compatibility of facts and faith by demonstrating that the truths of revelation are not prejudicial to the observed facts of nature and the extension of these facts into "natural religion."⁸⁶ Bulkley urges that the light of nature be employed not ignorantly but "under its utmost improvement by Contemplation or Study of the Works of GOD in Creation and Providence. . . ."⁸⁷ And Mather aspires to a religion that shall be at once "philosophical" and "evangelical."⁸⁸ From Bacon's defense of natural philosophy as refuting atheism to Mather's and Bulkley's defense of revelation as confirming fact is perhaps a long road but also, clearly, a direct one.

Another demonstration of the Puritans' desire to confirm the fundamental compatibility of facts and faith is the typical organizational pattern of early eighteenth-century American compendia of natural history and current scientific lore. Examples are Cotton Mather's The Christian Philosopher: A

⁸⁵The Usefulness of Reveal'd Religion, to Preserve and Improve That Which is Natural (New London, 1730), p. 4.

⁸⁶See p. 12.

⁸⁷p. 5.

⁸⁸Christian Philosopher, p. 2.

Collection of the Best Discoveries in Nature, with Religious Improvements, Isaac Greenwood's A Philosophical Discourse concerning the Mutability and Changes of the Material World,⁸⁹ and Benjamin Colman's The Glory of God in the Firmament of His Power.⁹⁰ All are intended to show how God is glorified by the providential interlocking of facts in His creation, and the authors arrange the facts according to the description of the creation in Genesis: first, light is discussed as a phenomenon which providentially serves the needs of life, then the heavens, the earth, plants, animals, man, and finally Christ, man's soul, and man's ascent to God. Mather concludes his book with a rhapsody on the Trinity. In this way, these Puritan writers extend the Baconian notions of nature as a hierarchy of facts governed by progressively higher laws which are ordained directly by God and of man the knower and manipulator of nature as an image and agent of God the Creator of nature.

A comment upon the concept of innate ideas, to become so important in the Orthodox-Unitarian-Transcendentalist controversy, might be preparatorily useful here. Like Bacon, the Puritans exclude from their epistemology neither innate knowledge of spiritual truth nor knowledge gained by experience.⁹¹ Bacon, it will be remembered, distinguishes between "philosophy,"

⁸⁹ Boston, 1731.

⁹⁰ Boston, 1743.

⁹¹ See Miller, New England Mind: The Seventeenth Century, p. 194.

in which knowledge is acquired by observation and induction, and "divinity," whose knowledge is "revealed," "inspired," or "original," and can be elaborated by deduction. Both are rational knowledges, unlike "poesy," which chiefly distorts or remakes nature, and history, which does not reason but tabulates and records. Both involve the assimilation of truths about a reality external to man; Bacon does not seem to answer the question of whether a person is born with knowledge of God, but he does call such knowledge "original." Therefore, while serving later writers such as Locke and Hume, who are, of course, more interested in philosophy than divinity, as an authority for the external and experiential origin of ideas, Bacon himself allowed for ideas implanted directly by God. Even here, however, he stresses the intermediacy of Scripture, so that, as we shall see, later Calvinists, embroiled in the liberalism controversies of the early nineteenth century, could cite Bacon in support of the thesis that even religious ideas are learned by experience of the Scriptures. The position of the earlier Puritans is similar to Bacon's. Cotton Mather, while moving well along towards Deism, handles the question in this fashion: "As there is in the Eye of Man, an innate Faculty of Seeing, by which it will acknowledge the Being of the Light, whenever 'tis open'd; even so, there is an innate Faculty in the Mind of Man, which is never in the least

open'd, but it acknowledges the Being of a GOD. . . . The Notion of a GOD, is Natural unto the Reason of a Man. . . ."92

Mather rides the fence; man has an innate "faculty" for religious knowledge, but yet the knowledge itself may or may not inhere in man's constitution. The notion of a God may be natural, but if it is a function of "the Reason," does it arise spontaneously (and, if so, by God's direction?) or is it the end product of a rational process utilizing observed data? As Perry Miller says, the Puritans tried to mediate between extremes of empiricism and antinomian intuitionism; their spiritual descendants--Calvinist, Unitarian, Transcendentalist--could choose whichever best suited.

I have said that Ecclesiastes is probably, with Genesis, Bacon's favorite book of Scripture, and Solomon, long reputed the author or speaker of Ecclesiastes, one of his great heroes; if Bacon had desired a patron saint and if Solomon had achieved canonization, a mutually agreeable understanding could no doubt have been arranged. As it was, Bacon had to make do with James I, at best a reluctant patron and a dubious saint. For some time, Bacon was considered something of an authority on Ecclesiastes; commentaries on this book by non-Puritans as well as Puritans often cited or echoed Bacon on one or more verses. Symon Patrick, the Anglican Dean of Peterburgh and later Bishop of Ely, for example, quotes Bacon at least fifteen times (e.g., on Ecclesiastes i. 9, nil novi super terram) in his A Paraphrase upon the Books of Ecclesiastes and the Song

⁹²Reasonable Religion, pp. 9-10.

of Solomon.⁹³ Patrick quotes Bacon on the crucial iii.11: man cannot know the "summary law of nature," opus quod operatur Deus, etc. (pp. 77-78). Puritan commentators on Ecclesiastes also cite Bacon or adopt his readings of this text, and it is instructive to examine several such commentaries as further examples of the fundamental concurrence in religious concepts and values between Bacon and the Puritans. Bacon read Ecclesiastes as proving, among other things, that man cannot know God's mysteries, that man can know the world, that the world was made for man's use and pleasure, and that worldly endeavors--such as learning and science--are therefore man's only proper pursuit and, if conducted with temperance, diligence, charity, and religious awareness, glorify God.⁹⁴

Thomas Granger's A Familiar Exposition or Commentarie on Ecclesiastes represents the right wing of Puritan thought on Ecclesiastes.⁹⁵ Ecclesiastes itself presents a dichotomy between man's works and man's mortality; Granger chooses to emphasize the mortality--all worldly prosperity is God's gift, man's works are totally vain, man alone cannot improve his

⁹³London, 1685.

⁹⁴John G. Hall compiled Thoughts on Holy Scripture (New York, 1862), a compendium of Bacon's Biblical commentary; all of his remarks involving Ecclesiastes can be found here. A quick check of the writings of the Church Fathers indicate that they had relatively little to say about Ecclesiastes, interest in which thus seems to date from the late Reformation.

⁹⁵London, 1621.

lot or his world. Nevertheless, Granger displays some Baconian interpretations. Man's works, he says, glorify God, and hence cannot be totally vain: "The labour of the husbandman, and tradesman: the honest care of every housholder, the worke of euery seruant pleaseth him" (p. 230). Likewise, the universe has been created for man's use, enjoyment, and edification: "The World is Gods Booke [a particularly Baconian conceit], euery thing that a man heareth or seeth, is a leafe, or a line, wherein hee may reade something to his owne instruction, and further edification" (p. 62, on ii.14); "all things are for the necessities and delights of the body" (p. 140, on vi.7); "eate with ioy, drinke with mirth, liue in comfort" (p. 230, on ix.7). Granger also stresses the value of society and the necessity for charity (pp. 103-104, on iv. 11-12; pp. 282-283, 292).⁹⁶

The Oxford don William Pemble's Salomon's Recantation and Repentance, or The Book of Ecclesiastes Briefly and Fully Explained,⁹⁷ though it relies, not unexpectedly, on Aristotle and uses scholastic categories of knowledge, sees in Ecclesiastes a rationale of scientific inquiry. According to Chalmers a "zealous Calvinist," Pemble joins Bacon in lauding Solomon as a man who has learned religious truth by experience (another

⁹⁶See Robinson and Robinson, "Three Early Massachusetts Libraries," p. 142.

⁹⁷Workes, [4th ed.] (Oxford, 1658-1659), II, 279-344. See Tuttle, "The Libraries of the Mathers," p. 284, and Robinson and Robinson, "Three Early Massachusetts Libraries," p. 123, for American copies.

reason for Solomon's popularity with Bacon and the Puritans). Solomon, Pemble says, wanted "to know all things within the compasse of Nature and Morality," for God has commanded men to seek knowledge "to prevent pride and idlenesse (p. 284). Solomon is "the wisest man that ever was or shall be," and is also a great sinner; hence, his example and his wisdom are doubly valuable. Solomon's fall was, indeed, a fortunate one, because if he had not "fallen and risen" through knowledge, we would not have the book of Ecclesiastes (pp. 279-280). Solomon's knowledge is impeccably Baconian; it "was not groundlesse, superficiall, woven out of roving and uncertaine imaginations and weake conclusions, but was experimentall [His Heart had seene] [sic] his understanding and judgement took exact observation of what his eyes had seene in all particulars of Nature . . ." (p. 285).

"True happinesse" is the expression commonly used by commentators on Ecclesiastes for man's chief end, his state of spiritual bliss and of sanctification or justification, though, as Downname showed, it may not manifest itself in ease, contentment, or inner equilibrium at all. Solomon has learned that "true happinesse" is not to be found in the things of this world, because they decay and men are mortal. But "true happinesse," though the highest, is not the only aim of man; "some comfort," Pemble notes, "is to be found in the use of earthly things . . ." (p. 291). Here, then, is the other pole of the Puritan, and Baconian, sensibility: the belief that though the world is mortal, it is good, for it comes from God.

"Contentation joyned with godlinesse, this only makes a man master of the utmost comfort worldly things can afford . . ." (p. 291). The world alone is not enough, but asceticism is no answer; godliness among earthly things is the answer, for godliness is their "very soule." "[I]n vaine," Pemble declares, "~~are~~ all our purposes, counsels, devices, plots . . . if we think ~~to~~ worke out our [true] happinesse by them, seeing when we have done all, all must depend on the determinate counsell of God. . . ." But earthly happiness is still desirable. "We must notwithstanding labour and busie our selves in all lawfull endeavours . . . by Gods commandment . . ." (p. 293). The Puritan attitude toward labor is suggested by Pemble; labor, he says, is no blessing but a curse, the result of the Fall. He who "doth . . . willingly travell and drudge, and thinkes that toil his [true] happinesse, which God hath laid on him as a vexation and punishment . . . is a foole" (p. 292). (Should we be mistaken to perceive in this attitude the germs of the chapter "Economy" in Thoreau's Walden?) Therefore, whatever enables man to labor less, or to get greater benefit from his labor, is good and should be sought; i.e., Baconian arts, inventions, and commodities. Though knowledge of nature cannot provide "true happinesse," it can glorify God and ease man's burdens (p. 284). God has revealed His goodness "in the Booke of the world," Pemble says, and (commenting on iii.11) while "there are many things above our reason and apprehension" (opus quod operatur Deus), nevertheless knowledge of the world for our benefit is possible. God has "given man a large desire"

for knowledge and "also in power a good measure to comprehend and understand the Historie of Nature, with the course of humane affaires: so that if men did but give themselves to the exact observation of things, they might in most of them perceive an admirable order in their wise and beautiful contrivance" (p. 294). Thus does the Baconian injunction to study facts for man's use find its way into Puritan theology. So do some echoes of "Of Friendship": Pemble says that "Society is better than privacie and solitarinesse . . . in spirituall as well as civill affaires," for two are better than one in business, on a journey, in cold weather (metaphorically, to be sure), in battle, and so on. And knowledge of nature should be used to serve the "common benefit" (pp. 298-299). Like many Puritan commentators, Pemble uses Ecclesiastes as a general handbook of social behavior, so that one less frivolous than an Oxford student could get advice like Francis Osborn's without risk. Pemble does not mention Bacon, but he hardly needs to; the Baconian spirit hovers over virtually his every word.

John Cotton's A Brief Exposition with Practical Observations upon the Whole Book of Ecclesiastes⁹⁸ is perhaps the

⁹⁸Edinburgh, 1868. The original date of publication is 1654, but Larzer Ziff, The Career of John Cotton: Puritanism and the American Experience (Princeton, 1962), p. 262, maintains that the book was written before 1632, when Cotton left England for America; his reasons, however, are not compelling. See S. F. Mason, "The Scientific Revolution," p. 67; Miller and Johnson, The Puritans, pp. 729-730; Dillenberger, Protestant Thought, p. 129 (Professor Dillenberger ignores the important distinction between worldly happiness and "true happinesse"); Tuttle, "The Libraries of the Mathers," p. 288; Theodore Hornberger, "Puritanism and Science: The Relationship Revealed in the Writings of John Cotton," NEQ, X (1937), 503-515.

major American commentary on the subject; no one goes further than Cotton in interpreting Ecclesiastes in terms of Baconian values. The purpose of Ecclesiastes, Cotton says, is to prove to men that "outward things" must be subordinated to Christ. Solomon, by "his own experience," found out the "true chief good" as the "vain and wicked" philosophers could not (p. 5).⁹⁹ Man must learn that physical things and human affairs are vain because they are made to serve us, not we for them, because they cannot serve the spirit, and because the Fall has corrupted nature (p. 8). The best teacher of the vanity of things, Cotton insists, is experience. The vanity of earthly things is no innate idea; it must be proved by experience, which is "a divine testimony, being taken from the work of God" (not even Bacon calls experience a "divine testimony"!) and is "of great authority with men, as being an argument more sensible, and less subject to ignorance or error" (p. 9). Fallen though he be, man can still trust his perception and his judgment.

Still, though nature is mutable and makes man restless, Ecclesiastes, Cotton says, exhorts us "to fruitfulness in good things whilst we here abide (p. 11). Cotton employs the standard distinction between "true happinesse," which does not reside in this world, and worldly happiness, which is imperfect

⁹⁹ Cotton displays considerable virtuosity in literary analysis by contriving to discern in 1:1-2 no fewer than eleven different rhetorical devices, such as hyperbole, polyptoton, and epizeuxis; plain style or no, Cotton knew his rhetoric. His purpose is to show that the rhetoric of Ecclesiastes is wholly suited to the book's "grave and holy" purpose.

but quite acceptable as a goal for imperfect man: "diligence in our calling hindereth not the happiness of the resting of our hearts in God" (p. 13).

On the issue of inventions and mutability, however, Cotton does disagree with Bacon. Though natural laws are immutable, "The artificial inventions of men, though they be new sometimes at first, yet for the kind many of them have been before; and generally none of them continue new long, but wax stale and old like other things. . . . Only God our happiness is always the same . . . and ever is new" (p. 14). Cotton mentions guns, printing, and the compass as instances. But lest we conclude that inventions are to be shunned, Cotton goes on, "To study the nature and course and use of all God's works, is a duty imposed upon all sorts of men, from the king that sitteth upon the throne to the artificer." Such study serves both God's glory and "Our own benefit; both of body for health . . . and of soul for instruction . . . and of the estate for gain, when we know the worth and use of each thing" (p. 15). And use is paramount: "Yea, scholars are not to be excused who study only . . . the principles of natural bodies . . . but neglect to apply their studies to the nature and use of all things under heaven" (p. 16). When we study nature and apply our knowledge to our benefit, we are fulfilling God's will: "Behold a world of creatures for thee to study upon."

Cotton also links scientific study with personal experience, which, like Solomon's, gives dimension and significance to one's study of nature. It is through personal experience, not from

authorities, that one learns the truth about mortality and God; ministers should "know by experience the power of the gospel and grace of God in themselves, and then teach it to others" (p. 16). Without direct personal contact with natural facts, one cannot conceive of nature's, and his own, mortality and vanity. Cotton claims that the study of nature cannot make a man good, but the force of this argument is somewhat diminished by his more strenuous insistence that the study of nature does teach morality and does therefore contribute to one's religious enlightenment, the enlightenment Cotton says one must have if one is to find "sweetness in the study and knowledge of the creatures." The argument is perhaps circular--the will of God causes man to study nature in order to discover the will of God--but Cotton must balance the physical and the spiritual as does his text; he can neither locate true happiness in physical things nor deny their spiritual significance as the work of God.

In the Puritan outlook, Baconian utility becomes a sign of God's providence. To recognize the utility of a thing, Cotton believes, is to acknowledge that God has made the thing:¹⁰⁰ "To look at anything as good in itself, without looking further what it is good for, is to put it in the place of God, which is flat atheism" (p. 19). Indeed, Cotton even chastises Solomon himself for forgetting this fact and becoming weary of life and labor; as long as one uses the fruits of labor properly

¹⁰⁰Cf. Merton, "Science, Technology and Society," p. 432.

and does not foolishly seek ultimate satisfaction in them, one will not weary of them and reject them, because they are gifts of God (p. 28).

On the crucial verse iii.11, which Bacon takes to mean that man's mortality ("the world") prevents his knowing the whole of God's providential plan, Cotton is somewhat unclear. God's putting the world in men's hearts signifies to Cotton that God makes men love the world and gives them the ability to study and to comprehend its order and laws (pp. 32-33). The opus quod operatur Deus is not Bacon's "summary law of nature," the ultimate providential plan of God which man cannot know, but the worldly order, which men would not be able to know if God had not put the world in their hearts. Cotton prefers to make providence more comprehensible to men than does Bacon, who tends to slight "final causes" as having been overworked by the scholastics. Cotton wishes to encourage the study of facts not only for material prosperity but also for the moral meaning they contain. We must "search out the work of God in all changes that befalls [sic] us"; providence reveals itself in the beauty and utility of "God's works" and in human and natural events, which, the Puritans universally believed, are ordered by God for man's instruction; "Fortune," Cotton writes, "is nothing but God's disposing of occasions and events . . ." (p. 103). In this way, the concept of providential or final causes comes to include material utility as well as God's control, or rather utility comes to symbolize God's will (pp. 32-36).

Like Downname, Cotton rejects all varieties of asceticism. Despite the fall of nature with man, we must not "disparage, or slight, or dislike any of God's works, but . . . magnify them. They are every one beautiful in his season . . ."

(p. 33). Ecclesiastes teaches diligence, labor, usefulness, but certainly not withdrawal from life (pp. 42-43). Solomon refutes, says Cotton, "the popish anchorites and hermits, who think solitary life a state of perfection; but Solomon judgeth it a woeful estate" (p. 45). "[A]ny good which they [men] enjoy from the creature is the gift of God" (p. 53). "The body," he adds, "may affect sensual objects, and the soul spiritual, and both without sin, in subordination of sensual things to spiritual, and of both to God." Nor should men expect to gain glorification in the next world by suffering in this world (pp. 81, 97).

Other Baconian elements in Cotton's analysis are a refutation of the golden age concept and a defense of wealth and power as socially useful. Commenting on vii.10, Cotton says that ancient times were not necessarily better than modern; this verse serves "To reprove the fond admiration of elder times. Though there be use of antiquity, and of the study of antiquity, yet not to approve all their sayings and doings as best." The verse also serves "To stir us up to a wise consideration of our present times, and the amendment thereof." As for literary authority, Cotton, like Bacon, holds that most books are tedious and vain, and that "we should seek to digest" the few worthwhile books "by sound judgment and

serious meditation" (pp. 65, 133). Analyzing vii.11-12, Cotton furnishes an interesting (though indirect) commentary on Bacon's political ambition and its relation to his Instauration. Wisdom, in the abstract, is preferable to wealth, Cotton says, but in practice, wisdom is not enough, because it "is not heard nor regarded" and "seldom getteth up to such places of authority where it may put forth itself. . . ." Therefore, power and wealth are necessary to make wisdom fruitful, provided, of course, that they are employed charitably. The best estate for man is a combination of wealth and wisdom (pp. 66-67). Finally, Cotton urges men to learn from Ecclesiastes that they are God's stewards or agents in the world, that they are to use their talents for good, and that they should "look at every day as a gift from God, . . . and therefore . . . employ it to his advantage" (pp. 101-102). In sum, then, Cotton's commentary on Ecclesiastes provides a detailed demonstration of the absorption of Baconian concepts and values into American Puritanism.

Underlying these values is an essentially similar concept of the universal order. I have described Bacon's ontological conception as consisting of a hierarchically ordered universe founded upon natural law and the principle of causation; God as the guarantor of the universe, transcendent and inscrutable yet operating providentially and beneficently by knowable second causes; a spiritual realm distinct from the physical and known only by Scriptural revelation and "original" knowledge; a basically benign natural world in which nature retains vitality

but promises to become mechanistic; history as the drama of the mind struggling against ignorance; and, most fundamentally, a universal order comprised of knowable facts governed by laws knowable only through the irreducible facts.¹⁰¹

Most of these beliefs were held by orthodox Anglicans of the seventeenth century, such as Symon Patrick and Seth Ward; but, whatever their theological disagreements may have been, the Puritans held them also. As John Dillenberger points out, the Puritans believed in an orderly nature--orderly in mechanics as well as in intent--long before Newton.¹⁰² Like Bacon, the Puritans were usually willing to trust nature; though lip-service is often paid to the notion of nature's corruption, nevertheless, as Benjamin Colman says, "we must devoutly consider GOD'S Firmament as the great MEDIUM and Instrument of his conveying to our World . . . his immense Benefits and Bounties of a temporal and earthly Kind. . . ."¹⁰³ God will play no nasty tricks on one who studies and uses nature with charitable intent. "Good order," says Ebenezer Pemberton, "is the form, beauty, and strength of the world. . . ."¹⁰⁴ And Jonathan Edwards, especially, elaborates the concept of causation into a doctrine of the absolute order and intelligible

¹⁰¹See above, p. 42.

¹⁰²Dillenberger, Protestant Thought, p. 131.

¹⁰³The Glory of God, p. 17.

¹⁰⁴Sermons, p. 49.

purpose of nature. Edwards believes, Professor Miller says, that Newton has shown that there is "no intelligible order apart from the actual."¹⁰⁵ If God is good and nature is beneficent and meaningful, then the facts of nature are not only interesting, beautiful, useful, and trustworthy but supremely important;¹⁰⁶ this is, like Bacon's empiricism without materialism. The Puritans, like Bacon, laud "reason" but not rationalism of the scholastic stripe; their "reason," says Robert K. Merton, is "a combination of rationalism and empiricism,"¹⁰⁷ which insists upon both the adherence to observed facts and the rational ascent to laws which are seen to be providentially ordained. In Perry Miller's view, Edwards, for example, exalts orderly nature "to a level of authority coequal with revelation" and feels that "nature [can] be slighted only at the peril of our life."¹⁰⁸ According to Professor Miller, Edwards is able to retain a sense of divinity in mechanical nature by making the "inner connection between cause and effect" mysterious and unknowable,¹⁰⁹ in this way, presumably, anticipating Hume. Thus, for Edwards, at least, causation--and hence rigid order--rules the universe but gears

¹⁰⁵Images, pp. 3-4; cf. Dillenberger, Protestant Thought, pp. 67-69; Miller, Jonathan Edwards, p. 74.

¹⁰⁶Cf. Merton, "Science, Technology and Society," p. 429.

¹⁰⁷"Science, Technology and Society," p. 426, n. 37.

¹⁰⁸Images, p. 28. Miller says Edwards almost deified nature, pp. 36-40. But all the Puritan typologists, and the Transcendentalists also, retained a strong sense of dualism and could never be made to agree that God is nature or nature is God.

¹⁰⁹Jonathan Edwards, p. 79.

and levers do not, just as the causal relation of faith and grace is mysterious, faith being a necessary precondition but not an obvious cause of justification.¹¹⁰ In this way, therefore, the Baconian insistence upon the authority of facts, the relation of facts to higher principles, and the primacy of experience have created in Edwards what Professor Miller, perhaps overenthusiastically, calls "the first American empiricist," who sees religious truth as contained in and not excluded by the cognitive experience of facts.¹¹¹

Part of the Puritans' belief in the providential and divine significance of facts can be attributed to the still-common notion--scotched, perhaps but not killed--of the vitality of matter. Bacon and also the early members of the Royal Society share this notion,¹¹² which John Dillenberger calls "a last stand against mechanism."¹¹³ It was possible for Bacon, that is, simultaneously to deny spiritual intervention in nature and to speak of the motions and principles of objects in the same terms, frequently, as alchemists and natural magicians, as if such principles were quasi-spiritual; Bacon accepts, for example, the influence of heavenly bodies such as comets on human affairs, though he urges a scientific

¹¹⁰ Jonathan Edwards, p. 79.

¹¹¹ Images, p. 20.

¹¹² See Jackson I. Cope and Harold Whitmore Jones (edd.), History of the Royal Society, by Thomas Sprat (St. Louis, 1958), pp. xxx-xxxi.

¹¹³ Protestant Thought, p. 132.

study of it. Hence, it is not difficult for the Puritans to believe that matter speaks spirit and that to ignore matter would be to tune out the voice of God. As Professor Jones points out, the germs of materialism, or at least of Enlightenment mechanism, were present in Bacon's philosophy, but the seventeenth century preferred to leave them largely undeveloped.¹¹⁴ Boyle, Pascal, Gilbert, even Newton, as we know, subordinated their physics to their theology. By the time of Cotton Mather, however, matter was losing vitality and acquiring mute solidity; Mather himself argues that though God controls everything, He needs no spiritual or quasi-spiritual causes to govern "the Machine."¹¹⁵

Bacon's favorite metaphor for the created universe in its religious aspect is the "book of God's works" or the "book of nature" as opposed (or complementary) to the "book of God's word" or "the book of Scripture." The metaphor is also favored by many Puritans and, later, Natural Theologians. Thomas Granger and William Pemble, as we have seen, both use it; Benjamin Colman says that the natural universe, interpreted providentially, is man's only way of knowing God's will in current circumstances: "we behold his eternal Power in his Works and read it in his Word. . . . We call in the Assistance of our Glasses, the wondrous Tellescope, and through mighty Distances espy new Worlds, which give us new Calls to ador and

¹¹⁴ Ancients and Moderns, p. 115.

¹¹⁵ Christian Philosopher, pp. 87-88.

lift of our Voices in new songs. . . ."116 Thomas Bradbury declares that Cotton Mather, in The Christian Philosopher, "lays open the two great Books of God, Nature and Scripture,"117 and Mather himself attributes to Chrysostom the conceit of the "Twofold Book of GOD; the Book of the Creatures, and the Book of the Scriptures: . . . his Works . . . [and] his Words."118 Some writers, however, caution against reading too much in the wrong book; Samuel Willard, for instance, warns that though in nature "there is indeed a great deal to be learnt, the Creature doth lead to the Creator," nevertheless nature cannot tell us how to be saved. "THE Book of nature, or of the works of Creation & Providence, is not a perfect Rule of Religion. The whole Rule of Physick is therein contained, but not so of Divinity," of which "neither print nor footstep" can be found in nature.119 Bacon, of course, expressed a similar caveat. James Fitch goes a bit further: "None can learn it [religion] by the book of nature, for there are some lessons in Religion which are not to be found in the book of Creation, (namely) mans Apostacy and Anastasio, how man at first did fall, and how he is recovered by Christ, and the book of nature is blurred by mans sin, the curse is fallen upon the works of

116 The Glory of God, pp. 2, 11.

117 Christian Philosopher, p. iv.

118 Christian Philosopher, p. 8.

119 A Compleat Body of Divinity (Boston, 1726), p. 28.

creation, and thus this book is darkened."¹²⁰ John Bulkley adds that revelation furnishes the truth while nature furnishes only the evidence.¹²¹

A movement parallel to Natural Theology takes another approach to the book of nature: typology, which reads natural facts as direct symbols of spiritual doctrines and as "a revelation of the divine order which had pre-existed in the mind of God before it was incarnated in matter. . . ."¹²² Perry Miller has had much to say about this subject, especially with reference to Edwards, and I shall not take it up in detail here.¹²³ Only one element is particularly "Baconian," and that is the assurance that whatever we need to know, the facts can tell us--a hyper-Baconian position, really; Bacon himself shared Willard's and Bulkley's reluctance to perceive doctrine in leaves and rocks. As Professor Miller explains, Edwards is attempting to rescue facts from materialism, and typology is his trump card. A version of Edwardian typology will appear, Swedenborgianized, among the Transcendentalists; they too will gallop out on horseback to rescue nature from spiritual undernourishment.

¹²⁰First Principles, p. 1. John Dillenberger attributes to Galileo a major influence in establishing that the book of nature is clearer than that of Scripture, Protestant Thought, p. 89; see also p. 67.

¹²¹Usefulness of Reveal'd Religion, passim.

¹²²Miller and Johnson, The Puritans, p. 730.

¹²³See Images, pp. 3ff.; Jonathan Edwards, p. 82. See also Clarence Faust, "Jonathan Edwards As a Scientist," AL, I (1930), 393-404.

Another Baconian feature of the Puritan ontology is the belief that even though God providentially controls every area of human experience, He works not by miracles but by scientifically comprehensible second causes. Even the semi-spiritual causes envisioned by the earlier scientists and occasionally by Bacon are considered to be scientifically knowable and secondary rather than representations of the direct action of God, the First Cause.¹²⁴ The Puritan belief in providence, of course, is very strong;¹²⁵ Bacon too, in The Advancement of Learning, discusses providential occurrences, though he says the study of them has, unlike natural science, not been neglected. William Pemble says that Solomon demonstrates in Ecclesiastes God's secret control of all events "by induction of many particulars."¹²⁶ Increase Mather wrote a Baconian history of Remarkable Providences, but Cotton Mather, moving closer to natural religion, vacillated between direct providence and pure mechanism.¹²⁷ In order to reconcile second causes with providence, a number of Puritans developed the concept of "concurrence," according to which God works only by second causes--no miracles--in the regular order of nature but the second causes exist and function only by God's will, which

¹²⁴ Miller and Johnson, The Puritans, pp. 8-9.

¹²⁵ For example, see Pemble, Salomon's Recantation, pp. 293ff.

¹²⁶ Salomon's Recantation, p. 293

¹²⁷ Hornberger, "The Date, the Source, and the Significance," pp. 419-420.

actively rather than at a chaste Deistic distance, sustains nature.¹²⁸ "God works now by men and meanes, not by miracles," wrote John Richardson in 1679.¹²⁹ The foundation was being laid both for post-Newtonian mechanism, in which God's control recedes and becomes totally inscrutable, if it exists at all, and for the Transcendentalists' denial of miracles on the ground that all of nature is miraculous, all mechanical causes revealing God's presence. The intervention of second causes, Bacon's forms or laws, between matter and divinity, then, could be taken either as isolating God from the world or, by Cotton Mather and others, as connecting God to the world; from a natural phenomenon, such as heat or planetary motion, God is but a short step away, Mather claims, for only a natural law intervenes.¹³⁰

Concerning the Puritan concept of history, another topic which I can discuss here only in passing, Christopher Hill points out that the Puritans shared Bacon's interest in second causes in human affairs as well as in nature and therefore contributed to the development of objective historiography.¹³¹ Nevertheless, the basis of Puritan theology is an ahistorical event, the conferral of grace, which, like Christ's incarnation

¹²⁸Dillenberger, Protestant Thought, p. 99.

¹²⁹Quoted by Miller and Johnson, The Puritans, p. 732; see also Dillenberger, Protestant Thought, p. 131.

¹³⁰Christian Philosopher, p. 8.

¹³¹Intellectual Origins, pp. 173-192.

of God in man, can take place in a historical process while essentially transcending history.¹³² So just as Bacon had to face--in The New Atlantis--the problem of what historical form would characterize a society based upon the observation of facts (which, like grace, does not depend on history), the Puritans had to cope with the dilemma of how to establish an ecclesiastical institution which could exist in time and which could also incorporate individual judgment and the direct granting of grace by the eternal God.¹³³ Emerson and Theodore Parker would have to face a similar problem.

Bacon's name is inextricably linked with the history of natural science, and a large body of research--principally dating from the 1930's--has shown that the seventeenth-century Puritans, with Bacon as their guide, were among the staunchest supporters of the Royal Society and technological progress. Likewise, some work has been done on the interest of the Transcendentalists in science, especially Thoreau. I will have more to say on this subject below. However, I do not want to explore Puritan science too extensively here, for two reasons: in the first place, the story has largely been told, especially by Richard Foster Jones, Robert K. Merton, Theodore Hornberger, Christopher Hill, Dorothy Stimson, John Dillenberger,

¹³²Cf. Herbert Wallace Schneider, The Puritan Mind (New York, 1930), p. 11.

¹³³Cf. Edmund S. Morgan, Visible Saints: The History of a Puritan Idea, p. 115.

and several historians of science.¹³⁴ One or two dissenting voices have very recently been raised,¹³⁵ but these have relied

¹³⁴Jones, Ancients and Moderns; Merton, "Science, Technology and Society" (on Bacon, see especially pp. 446-448); Hornberger, "The Date, the Source, and the Significance of Cotton Mather's Interest in Science"; Hornberger, "Puritanism and Science"; Hornberger, "The Science of Thomas Prince," NEQ, IX (1936), 26-42; Hill, Puritanism and Revolution; Hill, Society and Puritanism; Hill, Intellectual Origins, pp. 14-84 (especially p. 26, n. 2), 95-96, 125-130; Stimson, "Comenius and the Invisible College," Isis, XXIII (1935), 373-388; Stimson, "Puritanism and the New Philosophy"; Dillenberger, Protestant Thought, pp. 104-132. See also Otho T. Beall, Jr., and Richard H. Shyrock, "Cotton Mather: First Significant Figure in American Medicine," PAAS, LXIII (1953), 37-274; George Rosen, "Left-Wing Puritanism and Science," Bull. Hist. Med., XV (1944), 375-380; S. F. Mason, "The Scientific Revolution and the Protestant Reformation"; Paul H. Kocher, Science and Religion in Elizabethan England (San Marino, Calif., 1953); Brasch, "The Royal Society of London and Its Influence upon Scientific Thought in the American Colonies"; Struik, Yankee Science in the Making; Miller, Images, pp. 17-18; Richard S. Dunn, Puritans and Yankees: The Winthrop Dynasty of New England 1630-1717 (Princeton, 1962), pp. 129-131, 169-172; Miller and Johnson, The Puritans, pp. 729-737; Haller, Rise, pp. 301-302; Miller, The New England Mind: From Colony to Province, pp. 437-446; Schneider, History of American Philosophy, p. 11; Miller, The New England Mind: The Seventeenth Century, p. 217; Russell Blaine Nye, The Cultural Life of the New Nation, 1776-1830 (New York, 1960), pp. 54-96; Charles Edwin Clark, "Science, Reason, and an Angry God: The Literature of an Earthquake," NEQ, XXXVIII (1965), 340-362; Samuel Eliot Morison, "The Harvard School of Astronomy in the Seventeenth Century," NEQ, VII (1934), 3-24. For suggestions as to why Catholicism could not likewise support the new science, see Dillenberger, Protestant Thought, pp. 57-58, 61; Merton, "Science, Technology and Society," pp. 416, 432. For discussions of the continuity of Puritan-scientific values into the Enlightenment, see Jones, Ancients and Moderns, p. 203; Miller and Johnson, The Puritans, p. 733.

¹³⁵M[arshall] M. Knappen, Tudor Puritanism: A Chapter in the History of Idealism (Gloucester, Mass., 1963), pp. 478-479; see also Miller, The New England Mind: From Colony to Province, pp. 437-444.

rather upon idiosyncratic interpretations than upon new facts, and the consensus remains unshaken: modern science owes much to the Puritans, nor were the American Puritans backward in their support of science. In the second place, I am concerned with something other than science alone. I have said that Bacon's influence extends to cultural, philosophical, theological, literary, and historical areas; he himself was a typical Renaissance man, whose province, as he said, was all knowledge. Science was only one of his interests, though a major one. My analysis of Baconianism in Transcendentalism and its intellectual and religious antecedents deals basically with the concepts of the primacy of facts; of the real, physical world as it is found and not as it is desired to be; of the ultimate authority of experience in knowing the world; and of the possibility of integrating on the basis of experience the world of facts with traditional moral values and revealed religion. In the case of science, which is one result of this fact-observation orientation, the Puritans felt that such an integration was possible and, for the most part, did believe they had established it. It is said that Bacon and the Puritans, along with their Enlightenment descendants, because they rejected the scholastic synthesis, separated religion from science. But, in fact, they did not separate religion from science; they fused religion and science in a way they thought was more valid than the scholastics' way. Conservative opposition to this new synthesis was couched in the same terms as opposition to any cultural newness in Christendom

had always been couched--leads to atheism, immorality, pride, and so on--and was not informed by the same perception of things as informs Basil Willey and Sidney Warhaft, who tend to see the early conservatives as prototypes of themselves. The status of facts will reach a certain culmination in the intellectual progress I am describing when Thoreau, seeking a utopia, proposes to locate it not in a mythical, timeless Atlantis but by the shores of Walden Pond, in July, 1845, one mile from the stubbornly real streets and houses of Concord, Massachusetts, and to locate it simultaneously in himself, real, irreducible, a type or abstract of nothing but Henry Thoreau.

The descendants of the American Puritans took divergent paths; some retreated into Evangelism, some adopted Deism or left the church altogether, some pursued liberal Congregationalism and eventually Arian Unitarianism, whose adherents--the immediate progenitors and antagonists of the Transcendentalists--I shall discuss in a later chapter.¹³⁶ Those who remained Orthodox Calvinists retained not only the traditional theology of innate depravity, salvation of the elect, and regeneration but, like those who followed Benjamin Franklin in rejecting the theology, the traditional Puritan admiration of Francis Bacon. As he had been to the seventeenth-century Puritans, Bacon was a religious as well as a philosophical hero to the orthodox Congregationalists, for they saw in him

¹³⁶For a good discussion of the Unitarian-Orthodox background, see William R. Hutchison, The Transcendentalist Ministers (New Haven, 1959).

a supporter of Trinitarianism, the supremacy of the Bible in religious matters, and of those inscrutable mysteries of the Divine will which Chauncy, Buckminster, and Channing were proclaiming dispelled by the fresh winds of reason. Indeed, in the early nineteenth century, purely philosophical questions were likely to elicit identical answers from intelligent Calvinists and Unitarians; in their evaluation and application of Bacon, they differed mainly in whether they claimed him for the Trinity or for the God of reason. This similarity of philosophical outlook explains why Andrews Norton, the chief Unitarian spokesman in the 1830's, was willing to commandeer two Calvinist Princeton Review articles against Emersonianism, which they attacked as a kind of idealistic fatalism. Nevertheless, the early nineteenth-century Orthodox Congregationalists were a vigorously distinct party in the controversies of the day, and it is illuminating to analyze their use of Baconian principles.

A glance at the Orthodox periodical literature of the time reveals that Bacon was, in general, still eulogized as the father of all right thinking; a few voices, however, accused him of sponsoring the Deistic, utilitarian, liberal views which were challenging orthodox religion, both Protestant and Catholic. One writer in the Princeton Review (at that time the Biblical Repertory) laments that Bacon has not really had as great an influence as is claimed, for many supposed Baconians do not investigate facts but follow "false modes of investigation." The human mind, he says, is so disposed, even in

this enlightened age, as to prefer Aristotelian abstractions to Baconian facts. Only the light of God can reform the human mind.¹³⁷ Another writer, in the Quarterly Christian Spectator, criticizes the neglect of Bacon among biographers and editors, a neglect soon to be remedied by a spate of editions and biographies in the next quarter-century. The writer attributes the situation to Bacon's pervasive, and hence unnoticed, influence on modern culture.¹³⁸ "No one," he writes, "can be aware of what he owes to him [Bacon] who is not able . . . to trace all the unseen progress of his principles that have . . . found their way . . . into English science and literature."¹³⁹ The writer goes on to condemn Aristotelianism for all that was dark in the Dark Ages and to extol Bacon for destroying Aristotle's stranglehold, as, in a common analogy derived from Bacon himself, the Reformation broke the hold of benighted Papism.¹⁴⁰ Bacon taught men "to look at nature as she is," and to eschew the "vain and delusive vagaries" of scholasticism.¹⁴¹ Bacon's way is to approach "the works of creation as the Son of God directed his disciples to come to him, with the spirit of little children. . . ."¹⁴²

¹³⁷N.S. III (1831), 310-311.

¹³⁸Third Ser., IV (1832), 529-530.

¹³⁹P. 531.

¹⁴⁰P. 536.

¹⁴¹P. 539.

¹⁴²P. 539.

After an attack on ancient cultures, the medieval church, feudalism, and modern Roman Catholicism (which, the writer says, is still fettered by Aristotle), the writer calls Bacon a "comprehensive genius" who discarded these outmoded ways and laid the foundation for cultural progress by opening "for correct human investigation all the departments of the material and mental worlds."¹⁴³ Newton, Humphry Davy, and all other modern inventors and scientists, whether they acknowledge it or not, are in Bacon's debt.¹⁴⁴ Moving into religious areas, the writer declares that Bacon's Instauration fulfilled God's design, that induction is the true Christian philosophy, that induction and Christianity have been sent by God to civilize the world: "the scheme has the temporal approbation of God." No religion can gain such approbation if it does not liberate the mind and is not "connected with true science and the mechanic arts."¹⁴⁵ As for Bacon's character, in the light of the increasing volume of attacks on it since Alexander Pope called Bacon the "wisest, brightest, meanest of mankind," Bacon, like Newton and Boyle, was a truly religious man. Such atheists and Deists as Paine and Voltaire, in contrast, have contributed nothing to science and philosophy, for "religion natural and revealed, accords with the constitution and course of nature."¹⁴⁶

¹⁴³p. 548-549.

¹⁴⁴p. 550.

¹⁴⁵p. 551.

¹⁴⁶p. 556.

Another writer, Samuel M. Hopkins, in the Biblical Repository, explores "The Religious Character of Lord Bacon."¹⁴⁷ Although a dishonest courtier, Bacon was a great philosopher, Hopkins says, but what were his "relations to God"? Hopkins cites theological doctrine concerning regeneration: when a ~~sinner~~ is justified, he nevertheless retains his human and sinful nature; thus, Bacon's political faults are not inconsistent with "the idea of a genuine piety" (pp. 136-138). As a politician, Bacon shared the faults of his age, such as ambition and excessive servility toward kings; but he was also victimized by the reforming zeal of Parliament. After his fall in 1621, Hopkins says, Bacon did repent his sins and did accept God in the period of his greatest scientific labors; and Bacon's "theological remains" display charity, reformism, moderation, puritanism, and "practical religion" (pp. 139-140). Moreover, his devotional writings are most impressive; they evidence "profound knowledge of Christian experience; . . . deep humility; . . . justification of God in his judgements; . . . filial temper of soul; and . . . hearty reception of the whole Gospel system. . . ." Above all, says Hopkins, Bacon believed in charity (pp. 140, 142).

The religious significance of Bacon is explored also by John G. Hall, pastor of the Reformed Dutch Church in Fort Plain, New York, who compiled virtually every comment of Bacon's upon the Bible under the title, Thoughts on Holy Scripture.¹⁴⁸

¹⁴⁷Third Ser. III (1847), 127-142.

¹⁴⁸New York, 1862.

In his prefatory remarks, Hall claims Bacon for theology as well as science and philosophy and asserts that he, Hall, is fulfilling Bacon's call for a compilation of Scriptural commentaries in The Advancement of Learning (pp. iii-iv). Hall praises Bacon's religious character, claims that Bacon subscribed to orthodox Calvinist doctrines--the Trinity, the superiority of revelation, God's grace, man's depravity, and the resurrection of Christ--and, despite being the "great high priest of Reason," was a true believer and, in his public life, "played the Christian" (pp. xxii-xxvi). Bacon's birth, Hall goes so far as to say, occurred upon a signal from "the Divine Hand" (pp. ix-x).¹⁴⁹

Surely the most ardent defender of Baconian principles, or of his own version of them, among the Orthodox contemporaries of the Transcendentalists is Samuel Tyler. A lawyer from Maryland and one of the most prominent philosophers of the day, Tyler contributed a series of articles, couched, like most articles of the time, as reviews, to the Princeton Review between 1840 and 1843. These he then published in a single volume entitled A Discourse of the Baconian Philosophy (1844), which met with considerable success, meriting several editions before 1880. I will analyze the book; the separate articles have been discussed recently by George H. Daniels

¹⁴⁹For other Orthodox evaluations of Bacon, see New Englander, X (1852), 43-74, 341-373; XXI (1862), 37-50; XXXVIII (1879), 807-814.

as a commentary upon nineteenth-century science.¹⁵⁰ Professor Daniels also provides a valuable summary of American and European attacks upon and defenses of Bacon in these years.¹⁵¹

In A Discourse, Tyler proposes to cover no less ambitious a topic than "the grounds of human belief, and the origin of all knowledge" and to accomplish "a vindication of Induction" against its principal opponents:¹⁵² those who claim that Bacon's method is useless, those who claim that his method is obvious and derivative, and those who claim that it leads to atheism (I will discuss certain of these attacks in a later chapter); another, more ambiguous opponent is German transcendentalism with what Tyler considers its American section.¹⁵³ For Tyler, whose version of Bacon's philosophy is heavily laden with ideas from Brown, Reid, and Dugald Stewart, the Scotch "common sense" philosophers,¹⁵⁴ induction is the only method of knowing truth, even religious truth. Tyler apparently obliterates Bacon's epistemological distinction between the inductive knowledge of philosophy and the deductive or revealed knowledge of divinity, though he of course retains the ontological distinction between nature

¹⁵⁰"An American Defense of Bacon: A Study in the Relations of Scientific Thought, 1840-1845," HLQ, XXVIII (1965), 327-339.

¹⁵¹Pp. 324-325.

¹⁵²Second ed. enlarged (Frederick City, Md., 1846), p. 5.

¹⁵³Daniels, "An American Defense of Bacon," p. 325.

¹⁵⁴See Daniels, "An American Defense of Bacon," pp. 327, 336-337.

and spirit. We have seen that many earlier Puritans--especially those sympathetic to natural theology, such as Cotton Mather--were going beyond Bacon in applying observation and induction to religion, and Tyler moves further still; induction, he flatly declares, applies "in revelation as well as nature" and leads not to atheism but inexorably to God. And induction means experience: "experience is the only light to our path, and lamp to our feet in the pursuit of knowledge . . ." (p. 7).

Echoing the 1832 Biblical Repertory article (of which, in fact, he could well be the author), Tyler devotes a large number of pages to a condemnation of the ancients, Aristotle, the Middle Ages, the Catholic Church, the French Encyclopedists, the modern utilitarians, German literature (Goethe) and philosophy (Kant), English Romantic poetry, deductive reasoning ("the very Organon of Satan"), and innate ideas. He does not lag behind Andrews Norton in the scope of his adversaries.

What Tyler values is what he conceives to be the opposites of these evils. England is the principal beneficiary of his enthusiasm, and he attributes Bacon's greatness to England and England's greatness to Bacon (pp. 43-44). Bacon, he says, is the fountainhead of all good literature; Shakespeare displayed a Baconian grasp of human realities (did Delia Bacon read Tyler?) and Milton too followed Bacon in creating real people rather than wallowing in Coleridgean abstractions (Coleridge also extolled Bacon, as we shall see, but for rather different reasons) (pp. 117-128). Bacon has stimulated the loftiest

English philosophy, the most progressive political theory, the most advanced science and technology; "Greece," Tyler proclaims, "yields to England in philosophical renown!" (p. 82). The Baconian philosophy is at once "preeminently sublime" and also practical. It creates peace; it impels the wings of commerce and spreads Christianity (p. 88). Bacon, almost alone, saw that intellect and utility must be combined for man's welfare and progress. He laid the foundations for all the magnificent accomplishments of Jenner, Newton, Davy, Charles Bell, and other English scientists (pp. 47-79).

Tyler, in extending induction to revelation, must deal with Natural Theology's major dilemma: what if study of the facts of nature does not, in the mind of an intelligent man, inexorably lead to belief in a spiritual reality or confirm Christian doctrine, and if it does not, and if innate ideas are disallowed, whence comes the unshakeable faith of the Christian? Tyler deals with this problem by means of a curious argument in the course of placing Bacon at the crux of Christian theology. He says that, far from being an atheistic sensationalist like Condillac, Bacon recognized two sources of knowledge: sensation and consciousness (pp. 94, 129-130). Morality and the knowledge of spirit derive not from sensation--a despicable notion--but from consciousness. Yet Bacon denies "all innate moral principles." Then how do we know what is right? By a Baconian, objective, scientific, and inductive observation of human behavior; this study will

show, scientifically, that human beings possess such unselfish affects as love, pity, and an innate "power to distinguish moral good and evil," and these form the basis of faith and morality (pp. 94-95). Thus, innate ideas, or what closely resemble them, have slipped in the back door while Tyler is shooin' them out the front; his dilemma is the same, in general terms, as that we have seen in his Puritan ancestors: how to confirm man's need to study facts and at the same time avoid making man a materialistic creature of facts. One solution, that of Jonathan Edwards, is to make facts symbols of spirit. Another, Tyler's, and that of Natural Theology, is to make facts the products of providence, so that to take advantage of them fulfills a providential design. "God in his great benevolence," Tyler declares, "has so organized the system of things, as to make that which is right, useful in such a vast majority of instances, as to induce us in cases where it is doubtful what is right, to use the relative utilities of the acts as the standard of their rightness . . ." (p. 99). Bacon, of course, never suggested that utility is a test of morality; indeed, he often admits that expedience and morality conflict. Tyler seems forced to support a species of Christian utilitarianism just as he admits a version of innate ideas. No Transcendentalist ever put a stronger trust in the true-goodness and good-truthfulness of nature.

This trust in God's design also elevates nature, as in the Enlightenment tradition, to be the absolute standard of beauty

as well as of virtue and truth. As Bacon teaches, Tyler says, literature should take "nature for its model--the archetype which God has made," should repudiate "all that is speculative," and should not only imitate but enhance and exalt nature by "making her beauty more beautiful and her sublimity more sublime . . ." (p. 105). So imagination seems to slip back into the scheme also; Bacon and the early Puritans had had the same problem of reconciling the absolute authority of nature with man's frequent desire for something more ordered, symmetrical, or retributive than nature. Tyler buttresses the authority of nature by claiming that a "great pathological law" connects the heart and the facts of nature because natural objects provoke emotional responses which, Tyler believes, are moral (p. 105); thus another kind of "innate idea"--the pathological law--appears in Tyler's supposedly empirical epistemology. Bacon's role in all this is, for Tyler, unquestionable: "His [Bacon's] mind was a mirror held up to nature, which reflected it in all its vastness and all its minuteness, all its sublimity and all its beauty: revealing as much from the spiritual world as from the material--from the dark abysses of the human heart, as from the hidden depths of matter" (pp. 109-110). The heart's dark abysses, perhaps, are a concession to Calvin; another dilemma of the Orthodox position as it has evolved in the early nineteenth century is how to reconcile man's depravity with the "moral sense" or "reason" of the Scotch philosophers, according to whom (Tyler has, of course,

said this too) man can instinctively know the difference between good and evil.¹⁵⁵

Whatever man's condition, Tyler is sure that Bacon has given the world sufficient reason to believe that the study of nature will result in "harmonies of principle evolving themselves from the chaos of facts" and that utility and beauty are mysteriously but genuinely identical (pp. 111, 114). The "harmonies of principle" are those of the natural theology tradition, to most of whose doctrines Tyler heartily subscribes, and whose paternity he ascribes not to Lord Brougham, who has claimed it, but to Bacon (p. 323). Tyler continues in the same direction as Cotton Mather, toward the acceptance of facts and experience as the final authorities in all knowledge. Natural Theology, he says, acknowledges that we can know truth only by experience, which teaches us that nature is a complex of mechanical causes and that we can "resolve every mechanical cause ultimately into the direct agency of an intelligent being . . ." (p. 359). Bacon has provided us not with a new method of reasoning, for the only logic is that which moves from the class to the particular via a middle term, but with a new awareness of the need to establish the premises firmly on the basis of factual evidence; thus, he has taught us to comprehend the religious message of natural facts, a message which the Aristotelian, "a priori," or "transcendental"

¹⁵⁵ See Lyman Beecher, Sermons Delivered on Various Occasions (Boston, 1828), p. 17n. Beecher maintains that man knows good from evil but is predisposed to evil; man can do good, in fact must reform himself. Beecher claims that the Orthodox church had never taught that man cannot do good.

philosophy must ignore because it ignores facts (pp. 162ff). And if the principle of analogy (watch is to watchmaker as universe is to God) governs Natural Theology, this is also Baconian, for "analogy is true inductive evidence." However, Tyler rejects Bacon's concept of the philosophia prima--a body of laws or patterns common to all knowledges moral and material--as an unfortunate confusion of the moral and natural worlds, which are not the same except rhetorically or "fancifully" (pp. 178-199); the philosophia prima, with its analogies between human and natural systems, smacks sufficiently of Swedenborgian typology to repel Tyler (and to attract Emerson, who was much taken with the idea). All knowledge is learned, via sensation and consciousness; there is no room for direct inspiration in Tyler's *Natural Theology*. Tyler, indeed, calls the first aphorism of Book One of the Novum Organum--Homo, minister et interpres naturae--"The most profound and comprehensive remark ever uttered by man in the whole history of philosophy" (p. 228), for it limits man's knowledge to experience and seems to reject innate ideas.

What, then, is the place of revelation? Revelation, Tyler says, demonstrates once more that man has no innate ideas, for it represents God teaching man about religion (pp. 270-271, 370). We learn about religion just as we learn about nature, by "instruction" and not by "reason." Hence--and here, of course, Tyler moves far beyond anything in Bacon--even religious truth is learned by induction, and natural theology, an inductive science, is confirmed by Scripture, read inductively. Scripture

tells us to be aware of final causes, of providence, and in this way, too, it complements nature. And Scripture is the final authority on all questions of morality and doctrine.

If Scripture must be resorted to for solutions to moral issues, then utility cannot be the efficacious arbiter Tyler has claimed it is: Tyler, in spite of his seeming elevation of nature and use to supreme authority, retreats, toward the end of the book, in the direction of earlier Puritan doctrine. He admits that natural theology cannot teach the doctrines of sin and salvation. The retreat begins when Tyler confesses that Adam and Eve must have learned of God's existence and of His moral law by "direct revelation, and not inferences from the indications of nature." Philosophy--or natural theology--cannot, he further admits, originate the idea of God but can only prove God's existence once the idea is present (pp. 378-379). In fact, science, far from leading inexorably to God, leads ultimately to mechanism unless faith intercedes for God, "So that there may be a doubt, whether all the evidences of natural theology are not seen by a light imparted at some stage of man's history by direct revelation." This light, helped by a study of Scripture, enables the Christian to comprehend the "reasonableness" of such non-empirical doctrines as the Golden Rule, the Trinity, and the Resurrection (pp. 381-382). Nature cannot teach doctrine; we cannot know of the soul's immortality except by the illumination of that inner light which, Tyler's disavowals notwithstanding, is only with difficulty distinguishable from the Kant-inspired "Reason" of Coleridge and the Transcendentalists.

Tyler concludes with an enthusiastic endorsement of the mysteries of faith which somewhat diminishes the force of his earlier praise of induction. Revelation, he says, is supreme; to subordinate it to reason is to end in Unitarianism, which, to avoid the "infidelity" toward which it careens, has adopted Transcendental intuitionism, a version of the traditional Puritan demon, enthusiasm. The Unitarians at this time, of course, were themselves accusing the Transcendentalists of elevating experience--i.e., intuitive experience--over revelation. In an oblique reference to Orestes Brownson, who had become a Catholic about four years previously, Tyler warns that disillusioned Transcendentalists fall in despair into the "abyss of Roman Catholic credulity," denying as they plunge that human reason can know anything at all (pp. 392-397).

Tyler does return to Bacon, finally, with an assertion that only Bacon's philosophy is compatible with Christianity, for it alone upholds private judgment, accounts for the inward, experiential confirmation of faith which God's grace brings, admits the sole authority of revelation in religion and of experience in science, denies ecclesiastical hierarchies, sacraments, and rituals, and makes truth the supreme value (pp. 417-418, 425). And, of course, only Orthodox Evangelical Protestantism goes and does likewise. Tyler's Baconianism, then, comprises a confirmation of his own philosophy and theology, which differ surprisingly little from those of the targets of his polemic; they consist chiefly of a recognition

of the primacy of natural facts, a desire to reconcile the inescapable claims of fact with revealed religion (or, in the case of some of the Transcendentalists, with one's personal experience of God), and a final reliance upon a mysterious inner light which itself is rationalized as "observation," "experience," or "fact." Nevertheless, Tyler pulls back from facts and from the experience of nature; the Transcendentalists, despite the claims of the Oversoul, will be more reluctant to do so.

It is interesting to examine the Puritans in terms of the linear-circular metaphor that I described in the previous chapter. Like Bacon's, their world-picture is primarily linear and hierarchical, just as, at least in the seventeenth century, their science was traditional in its details if not in its slogans. As Cotton Mather puts it, "There is a Scale of Nature, wherein we pass regularly and proportionably from a Stone to a Man, . . . and yet MAN is . . . but the Equator of the Universe."¹⁵⁶ And James Fitch describes the hierarchy of man's attributes: "4. Man the Microcosmos. 1. A being, as the Elements. 2. A body as the Minerals. 3. A moving life as stars, a springing life as Plants. 4. A sensitive life as Beasts, and 5. A rational life as Angels, and ought to lead a Godlike life as God, acting his Image in imitation of him and for him."¹⁵⁷

¹⁵⁶ Christian Philosopher, pp. 292-293; cf. Miller and Johnson, The Puritans, p. 10.

¹⁵⁷ First Principles, p. 22; cf. Rufus Suter, "The Strange Universe of Jonathan Edwards," HTR, LIV (1961), 127.

The inherited universe was linear, and it was the Puritans' universe. But the Puritans also shared with Bacon those ideas and values which, while growing out of the old, linear view, tend to subvert it and to generate the circular, fact-, self-, and point-centered universe of the Romantics and Transcendentalists.¹⁵⁸ S. F. Mason, among others, sees the Puritans as in revolt against the linear hierarchy of values, basically because they short-circuited God's connection with the created universe; they ignored the ranks of angels and of complex causes just as they ignored the ranks of ecclesiastical authority, and saw God working directly upon their environment and their souls.¹⁵⁹ As William Ames said, "God onely knowes the inward workings of the Conscience; he therefore onely can prescribe a law unto it, or bind it by one."¹⁶⁰ Similarly, the Puritans adopted Bacon's levelling tendencies, measuring all things by one law--their adherence to observed reality--and accepting no distinctions on authority.¹⁶¹ Only practical results can determine whether a Christian has followed the path dictated by his inner law, his conscience, toward justification, precisely as only practical results, for Bacon, can demonstrate the "truth" of a scientific proposition.

¹⁵⁸Cf. Miller and Johnson, The Puritans, pp. 16-17.

¹⁵⁹"The Scientific Revolution," pp. 69-71.

¹⁶⁰Conscience with the Power, I, 6.

¹⁶¹Cf. Hill, Intellectual Origins, pp. 86-87; Jones, Ancients and Moderns, pp. x-xi, 108.

And like Bacon, the Puritans continued to focus upon the irreducible fact and the perceptive and cognitive mind, making the world more and more what it would become in the time of the Transcendentalists, "a symbolic extension of the knowing self."¹⁶²

¹⁶²Edward H. Davidson, "From Locke to Edwards," JHI, XXIV (1963), 355.

III. The Enlightenment, the Unitarians, and the Romantics

The place of Bacon in the Enlightenment, to whose materialistic rationalism the Transcendentalists felt themselves opposed, is well known and amply documented. Bacon, in short, was a charismatic figure for rationalists, progressives, and utilitarians--for most proponents of facts and enemies of dogmatic systems--from the mid-seventeenth century to the mid-nineteenth. As Raymond C. Cochrane has demonstrated, even where Bacon's influence was not acknowledged, it was nevertheless powerful.¹ The chief English proponents of Bacon's Instauration were the members of the Royal Society, in whose writings, according to Harold Fisch and Harold Whitmore Jones, Bacon's place is "comparable with that given to the ancient authorities in other kinds of writing"² (a situation which would no doubt have been most dismaying to Bacon himself; like Emerson two centuries later, he was a prophet who renounced slavish disciples). Abraham Cowley's encomiastic ode To the Royal Society, first published in Sprat's History of the Royal Society in 1667, documents the early beatification of Bacon among the scientists. In the ode, Cowley describes the frustration of Philosophy by medieval Authority. Those who fear truth have deprived Philosophy of the rewards

¹Francis Bacon in Early Eighteenth-Century English Literature," PQ, XXXVII (1958), 58-79.

²"Bacon's Influence on Sprat's History of the Royal Society," HLQ, XII (1951), 402.

which God intended for it. But a champion comes to the rescue:

Bacon at last, a mighty Man, arose
Whom a wise King and Nature chose
Lord Chancellor of both their Laws,
And boldly undertook the injur'd Pupils caus.³

The mighty Man vanquishes Authority, "that Monstrous God" who blasted mankind's hopes for a richer life, and thus ends the despotism of the dead over the living.

The Orchards open now, and free;
Bacon has broke that Scar-crow Deitie;
Come, enter, all that will,
Behold the rip'ned Fruit, come gather now your Fill.

Bacon taught men to use their senses and not to try to find nature's laws elsewhere than in objective facts:

For 'tis God only who can find
All Nature in his Mind.

Bacon also diverted men's attention from words to real things, "the Minds right Object." And so he set men on their proper path:

Bacon, like Moses, led us forth at last,
The barren Wilderness he past,
Did at the very Border stand
Of the blest promis'd land,
And from the Mountains Top of his Exalted Wit,
Saw it himself, and shew'd us it.

Benjamin Franklin, in the 1749 Poor Richard, notes the anniversary of Bacon's death by quoting other poetic treatments of Bacon: Pope's, in the Essay on Man, Epistle IV, ll. 281-282, and James Thomson's, in Summer, ll. 1534-1549. Franklin concludes that Bacon "is justly esteemed the father

³Sprat, History of the Royal Society, ed. Cope and Jones, [n.p.] .

⁴The Papers of Benjamin Franklin, III, ed. Leonard W. Labaree and Whitfield J. Bell (New Haven, 1961), p. 339.

of modern experimental philosophy."⁴ And an anonymous panegyrist in 1756 promises Franklin himself an "Electric seat" in heaven along with Bacon and Newton.⁵

Another poetic rationalist celebrated Bacon in America. Joel Barlow, in the course of demonstrating, in Book the Ninth of The Columbiad, that "all things in the phisical as well as the moral and intellectual world are progressive in manner,"⁶ contends that

Bacon, with every power of genius fraught,
Spreads over worlds his mantling wings of thought,
Draws in firm lines, and tells in nervous tone
All that is yet and all that shall be known,
Withes Proteus Matter in his arms of might,
And drags her tortuous secrets forth to light,
Bids men their unproved systems all forgo,
Informs them what to learn and how to know,
Waves the first flambeau thro the night that veils
Egyptian fables and Phenecian tales,
Strips from all-plundering Greece the cloak she wore,
And shows the plunders of her borrow'd lore.

Elsewhere, Barlow adopts the Baconian prophetic mode himself when he calls for the establishment of a national university or institution in Washington for "the advancement of knowledge." Lamenting the rudimentary status of such "sciences" as political economy, which should be developed so as to benefit the "useful arts of life, the true object of all labor and research," Barlow claims that "the genius of a Bacon" is needed to perceive the faults and direct the progress of American learning.⁸

⁵Papers of Franklin, VII, ed. Labaree and Ralph L. Ketcham (New Haven, 1963), p. 74.

⁶The Columbiad (London, 1809), p. 280.

⁷P. 307, ll. 617-628.

⁸Prospectus of a National Institution to be Established in the United States (Washington, 1806), pp. 4, 9-10.

"What to learn and how to know"--utility and empiricism are Bacon's chief lessons for the Enlightenment and nineteenth-century rationalists; a vast bibliography documents Bacon's authority among them. Bacon was generally seen as the forerunner and teacher of Locke (his writings were often published with Locke's in a single volume), as well as of Newton, Comte, and all other scientists and inductive philosophers.⁹ He was championed by rationalists from Addison and Steele and the French Encyclopedists to Benjamin Silliman

⁹ See Ernest Tuveson, "Locke and Sterne," Reason and the Imagination: Studies in the History of Ideas 1600-1800, ed. J[oseph] A[nthony] Mazzeo (New York, 1962), pp. 257-259; Merle Curti, "The Great Mr. Locke, America's Philosopher, 1783-1861," Huntington Lib. Bull., XI (1937), 133n.; Kuno Fischer, Francis Bacon of Verulam: Realistic Philosophy and Its Age, trans. John Oxenford (London, 1857), pp. 435-451; Richmond Laurin Hawkins, Auguste Comte and the United States (1816-1853) (Cambridge, 1936), pp. 42, 67ff.; anon., "Bacon's Philosophy," Eclectic Rev., CVIII (1858), 322. For a denial of Bacon's influence on Locke, see V[ictor] Cousin, Lectures on the True, the Beautiful, and the Good, trans. O.W. Wight (New York, 1854), p. 29. On Newton and Bacon, see David Brewster, The Life of Sir Isaac Newton (London, 1831), pp. 330-336.

and the influential William Whewell, who proposed to correct the errors of nineteenth-century science by a new application of the Novum Organum.¹⁰ The scientists and rationalists were most influenced by such Baconian doctrines as utopianism, utilitarianism (not necessarily in an ethical application), the reliance upon facts and the opposition to dogmas, the empirical epistemology, natural theology, the subordination of imagination and poetry to reason and scientific truth,

¹⁰ See Addison and Steele, Spectator, nos. 10, 19, 68, 160, 177, 389, 411, 447, 500, 554; Tatler, nos. 17, 108, 133, 149, 168, 213, 239, 267; Fischer, Francis Bacon of Verulam, pp. 451-453; [Silliman], "Introductory Remarks," American Jour. Sci., I (1818), 7-8; Whewell, Philosophy of the Inductive Sciences, Founded upon Their History, 2nd ed. (London, 1847), I, v. On Whewell, see Dillenberger, Protestant Thought, p. 208. For other Enlightenment and nineteenth-century treatments of Bacon, see U. S. Lit. Gazette, I (1824), 90-92; American Jour. Education, IV (1829), 3-8; American Library of Useful Knowledge, I (Boston, 1831), passim; Knickerbocker, VII (1836), 560-566; Justin Brenan, Old and New Logic; Being an Attempt to Elucidate, for Ordinary Comprehension, How Lord Bacon Delivered the Human Mind from Its 2000 Years' Enslavement under Aristotle (London, 1839); "Advertisement of American Publishers," The Works of Francis Bacon, ed. Basil Montagu (Philadelphia, 1841), iii-iv; Willis Hall, An Address Delivered August 14, 1844, before the Society of Phi Beta Kappa in Yale College (New Haven, 1844), pp. 16-17; Charles F. McCay, Inaugural Address (Columbia, S. C., 1855), p. 6-9, 21; Southern Lit. Messenger, XVI (1850), 30-36, 267-271, XXIX (1859), 177-183, 382-386; American Jour. Education, [N.S.] V (1858), 663-688, XIX (1870), 629ff., XXII (1871), 25-27; National Quar. Rev., II (1860), 1-31, VI (1862), 114-126, XV (1867), 316-333; Blackwood's Edinburgh Mag., American Ed., LVI (1863), 480-499; Atlantic Monthly, XXII (1868), 476-485, 573-584. See also Dillenberger, Protestant Thought, pp. 118-128, 133-189; Curti, The Growth of American Thought, 3rd ed. (New York, 1964), pp. 325-326; Jones, Ancients and Moderns, pp. 185-186; Arthur Alphonse Ekirch, Jr., The Idea of Progress in America, 1815-1860, Columbia Univ. Stud. in History, Economics and Public Law, No. 511 (New York, 1944), p. 106; Miller, The Life of the Mind in America: From the Revolution to the Civil War (New York, 1965), pp. 159, 320, 322.

the necessity of method, the orderly universe, the critique of sense perception and of the influences upon consciousness, and--in the case of the eighteenth century--the linear hierarchy of being. Thomas Jefferson considered Bacon, with Newton and Locke, one of the "three greatest men that ever lived, without any exception"; Jefferson used Bacon's division of the sciences as a basis for classifying his own library.¹¹ Some mid-nineteenth-century heirs of the Enlightenment go so far as to proclaim Bacon the sole prophet of right religion, the "apostle of a higher devotional life for the race."¹² Others, however, claim him for atheism and free thought.¹³ By the time of the Transcendentalists, then,

¹¹Letter to John Trumbull, February 15, 1789, Catalogue of the Library of Thomas Jefferson, ed. E. Millicent Sowerbery (Washington, 1955), IV, 28.

¹²"Bacon and Christianity," Universalist Quar., XVI (1859), 269. See also Thomas Smith Grimke, Reflections on the Character and Objects of All Science and Literature, and on the Relative Excellence and Value of Religious and Secular Education, and of Sacred and Classical Literature (New Haven, 1831); American Church Monthly, II (1857), 48-63, 63-66.

¹³See Fischer, Francis Bacon of Verulam, pp. 343-344; [Herbert Palmer], The Character of a Believing Christian in Paradoxes and Seeming Contradictions, by Francis Bacon (London, 1823), pp. 7-8 (a pro-atheistic pamphlet containing a defense of Christianity by the unnamed Herbert Palmer; the defense was promulgated by various hoaxers as an ironic attack and attributed to Bacon. A. B. Grosart exposed the hoax. See Gibson, Francis Bacon, p. 285.)

Bacon had become the hero of rationalism, materialism, progress, and science. Against this background, the adoption of Bacon and Baconian principles by the Romantic poets and critics, and by certain of the Transcendentalists in America, is all the more striking.

The American Unitarians, the immediate ancestors of Transcendentalism, adopt the generally adulatory opinion of Bacon maintained by the Puritans, the Enlightenment rationalists, and the Orthodox Congregationalists. Indeed, they regard him as a direct spiritual ancestor of Unitarianism. A curious sidelight of the Calvinist-Unitarian controversy in the earlier nineteenth century is the dispute over whether Locke and Newton, who are commonly seen by the disputants as philosophical heirs of Bacon, were Trinitarians or Unitarians.¹⁴ While Bacon was perhaps too remote to warrant such disagreement, nevertheless the Unitarians, like the Calvinists, claim Bacon as their own. The underlying motive for this adoption is the Unitarians' quest for what they call a "scientific theology," one which will finally reconcile facts and faith, will not collide with the findings of natural science and the demands of reason, and will produce results as firmly grounded, as fruitful, and as incontrovertible as those of scientific physics and scientific mechanics. William R. Hutchison points out that although the explicit issues in the

¹⁴See, for example, "Locke and Newton," Christian Disciple, VIII (1820), 52-53; and The Spirit of the Pilgrims, III (1830), 281-287, and IV (1831), 401-403.

Unitarian-Orthodox schism were technical--the question of the Trinity, for example--the controversy really turned upon the nature of man.¹⁵ The Unitarians wanted to liberate mankind from the Calvinistic fetters of the doctrine of innate depravity and so to resolve the conflict in Puritan thought between that doctrine and the doctrine of success in worldly enterprise for which Pemble, Cotton, and Colman had also argued. Likewise, Perry Miller states that the Unitarians opened the final door to Transcendentalism by achieving that very liberation, making possible an expanded confidence in those sensations of divinity and those inner impulses so central to the Romantic outlook.¹⁶ The "scientific theology" sought by the Unitarians, and by Theodore Parker and George Ripley as well, is a corollary of this desire to abolish depravity; what more appropriate name could be invoked in such an endeavor than that of Francis Bacon, who had provided a philosophical basis for optimism, progressivism, and the elevation of the human spirit? Of course, Bacon, as I have shown, was generally regarded as the hero and prophet of science, and therefore the Unitarians could expect that Bacon might prove equally congenial to their religion, provided they were careful to avoid Macaulayan or Benthamite utilitarianism and to concentrate upon the moral and spiritual contributions of Bacon to Unitarian belief.

¹⁵The Transcendentalist Ministers, p. 4.

¹⁶"From Edwards to Emerson," p. 195.

Probably the clearest definition of the "scientific theology" desired by the Unitarians and identified partly in the earlier years of the century with the Natural Theology of Paley, Butler, Cotton Mather, and the Bridgewater Treatises, is provided by Joseph Henry Allen in his history of Unitarianism, Our Liberal Movement in Theology, based upon lectures delivered in 1882. Allen describes a scientific theology as analogous to natural science. It builds carefully out of facts by observation, comparison, and inductive inference; it attempts to maintain a humble attitude and a "sober, constructive temper,"¹⁷ as opposed to what Allen sees as the Transcendentalists' outmoded deductive and dogmatic approach. A scientific theology restricts itself to facts, says Allen, and it sets aside questions of being, ultimate essences, and the like, because they are unanswerable by human minds. The facts theology uses, however, are not necessarily natural facts nor do they lead to scientific generalizations such as the laws of evolution. They are "facts of the religious consciousness, and facts of religious history. The laws it [scientific theology] has to investigate are the laws of life as they bear on character and conduct."¹⁸ Scientific theology interprets ethical and emotional phenomena, all the facts of morality, which are governed not by mechanical or natural necessity but by the human will and moral character. While

¹⁷3rd ed. (Boston, 1892), p. 126.

¹⁸Allen, p. 128.

physical science interprets things, which are governed by knowable laws, theological science deals with persons, whose souls are supernatural and therefore unknowable, and so theology seeks to understand what can be known--the "force" which underlies all life, the will of God and its expression in the will of man. As physical science seeks laws, theology seeks to know the will.¹⁹

Though Allen's statement of the aims and methods of Unitarian theology was subscribed to by the majority of Unitarians throughout the nineteenth century, a majority who held Bacon in esteem as the promulgator of the methods Allen describes, some dissension did develop as to Bacon's role in the progress toward the theology. Many of the arguments parallel those in the non-theological literature of the day regarding Bacon, but essentially the disagreement reflected a split inherent in Unitarian doctrine itself, a split between a belief in the possibility of rational and positive religious knowledge without supernatural aid²⁰ and a belief in the necessity of a supernatural confirmation of religious knowledge which Natural Theology could not supply.²¹ William Ellery Channing himself suggests the ambivalence of

¹⁹Allen, pp. 127-131.

²⁰See John Gorham Palfrey, The Theory and Uses of Natural Religion: Being the Dudleian Lecture, Read before the University of Cambridge, May 8th, 1839 (Boston, 1839), p. 3.

²¹See Hutchison, The Transcendentalist Ministers, pp. 18-20, for a discussion of the inconsistencies of Unitarian doctrine.

Unitarianism concerning science and religion. In a letter to George F. Simmons of February, 1839, Channing reveals the dichotomy between the social-moral-scientific and the spiritual concerns of Unitarianism; his earnest attempt to reconcile them without falling into "mysticism" is a far cry from Channing's confident rationalism in his sermons on Calvinism and Unitarian Christianity.

It is a fact, too, that science has not made nature as expressive of God in the first instance, or to the beginner in religion, as it was in earlier times. Science reveals a rigid, immutable order; and this to common minds looks much like self-subsistence, and does not manifest intelligence, which is full of life, variety, and progressive operation. Men in the days of their ignorance saw an immediate Divinity accomplishing an immediate purpose, or expressing an immediate feeling, in every sudden, striking change of nature,--in a storm, the flight of a bird, &c.,--and nature thus interpreted became the sign of a present, deeply interested Deity. Science undoubtedly brings vast aids, but to prepared minds, to those who have begun in another school. The greatest aid it yields consists in the revelation it makes of the Infinite. It aids us not so much by showing us marks of design in this or that particular thing as by showing the Infinite in the finite. In this I mean nothing mystical. God is the Infinite spirit. We know him only when we see and revere him as such. Nothing declares him but what is a sign, shadow, expression, of his infinity. Science does this office when it unfolds to us the unity of the universe, which thus becomes the sign, efflux, of one unbounded intelligence,--when it reveals to us in every work of nature infinite connections, the influences of all-pervading laws,--when it shows us in each thing unfathomable, unsearchable depths, to which our intelligence is altogether unequal. Thus nature explored by science is a witness of the Infinite. It is also a witness to the same truth by its beauty; for what is so undefined, mysterious, as beauty?²²

²²[William Henry Channing], Memoir of William Ellery Channing, with Extracts from His Correspondence and Manuscripts (Boston, 1851), II, 428-429.

Nature, however, is not enough, Channing adds. We must have a "higher revelation" to tie us to God. This higher revelation is "the moral principle within us," which gives us innate knowledge of good and evil and of God's laws. And the only way to approach God is "by faithfulness to the inward, everlasting law," by purifying ourselves so as to feel God "working within us." Then we can turn to nature free of sensuality and see God's spirit shining there. "We look on it as a phenomenon, and pierce beneath the surface to the deep, infinite power of which it is the sign and instrument. This is a mysterious change, which only experience can comprehend."²³ Little wonder that many of his contemporaries saw Channing as a Transcendentalist, and that Emerson, Parker, and Ripley looked to him for support in the early days.²⁴ But Channing did not follow them out of the church; his appeal for both rational scientific knowledge and supernatural confirmation of it expresses a dual tendency in Unitarianism for which Transcendentalism provided only a partial safety valve. Most Unitarians accepted such doctrines as those of Scotch common-sense philosophy and of Natural Theology as sufficient, and for the mainstream of Unitarianism, Bacon remained a hero. But a few felt Channing's need also, and, without invoking the Coleridgean reinterpretation of Bacon as a Platonist which was

²³Memoir of William Ellery Channing, II, 429-430.

²⁴For an account of Channing's thought, see Robert Leet Patterson, The Philosophy of William Ellery Channing (New York, 1952); Arthur W. Brown, William Ellery Channing, TUSAS, 7 (New York, 1961); Arthur I. Ladu, "Channing and Transcendentalism," AL, XI (1939), 129-137.

available to the Transcendentalists and which I shall discuss below, they treated Bacon as something of a villain.

William P. Lunt, for example, writing in the Christian Examiner in 1855, attacks what he sees as Bacon's materialism, which has led to "pernicious" results in morals and religion. Bacon has encouraged an excessively materialistic and positivistic approach to matters of faith, so that now, Lunt says, some theologians demand "evidence" for faith, though true evidence cannot be provided scientifically. We must, says Lunt, cling to the "intuitive convictions of [our] souls."²⁵ Thus, those among the Unitarians who chose to stress the intuitive in religion tended to see Bacon as supporting an excessively objective stance. As time went on, and the outlook for a mutually fulfilling relationship between science and religion became increasingly bleak, some Unitarians became even more disillusioned with Bacon; his promise to provide men with dominion over nature without upsetting their faith seemed to have been broken. Writing in 1890, Thomas R. Slicer, for example, has come completely around to the opposite of the more nearly typical Unitarian view of Bacon. Slicer cites Thomas Henry Huxley's indignation at the artificially high place Bacon has been granted in the history of science and condemns Bacon as a utilitarian, a "narrow, self-seeking man," concerned only with "fruit," inventions and mechanical contrivances. Huxleyan science, as opposed to Baconian science,

²⁵ "The Province and Functions of Faith," Christian Examiner, LIX (1855), 178-179.

Slicer maintains, displays an admirable and religious respect for knowledge for its own sake.²⁶

The typical Unitarian image of Bacon was, however, far more positive. Bacon was commonly seen as lending his vast philosophical authority to Unitarian doctrine, just as Samuel Tyler claimed his support for enlightened Calvinism. In general, the Unitarians, like Tyler, applauded the scientific and technological accomplishments of nineteenth-century America, feeling that these expressed God's will, just as Bacon and the Puritans had said that man's enhanced dominion over nature and his increased prosperity fulfilled the will of God. Man must only subject himself to the divine plan by conquering his metaphysical propensities and bending his mind to the natural order so as to understand it and master it. This is the common Unitarian position, and Bacon is cited frequently in support of it.

Of course, Bacon is one of the respectable writers whose works are anthologized in the literary textbooks compiled by Unitarian educators for use in the schools. An example is the text edited by Francis W. P. Greenwood and G. B. Emerson, The Classical Reader, intended for use in the upper classes of high schools. Despite their expressed desire to use mostly recent and American material, the editors include two essays of Bacon, "Of Discourse" and "Of Studies."²⁷ Likewise, John

²⁶"Unitarianism and Modern Scientific Thought," Unitarianism: Its Origin and History (Boston, 1890), p. 293.

²⁷Boston, 1828.

Pierpont's The American First Class Book of Exercises in Reading and Recitation contains an abridgement of a fictional Bacon-Shakespeare dialogue which had appeared in Blackwood's Magazine.²⁸ Like many other critics, in fact, Unitarian commentators often held up Bacon's writings as a model or a standard by which to condemn the effete, decadent, or vulgar literature of the eighteenth century or of the modern day. Jared Sparks, for example, quotes Bacon on poetry as a "dream of learning" and uses his definition in condemning the extravagance, looseness, impulsiveness, and eccentricity of modern poetry.²⁹ Similar use is made of Bacon's writings by T. Parsons, who sees Bacon as representative of England's literary greatness before the decline into the Augustan and Romantic periods.³⁰ And S. Willard cites Bacon on the need to study language so as to avoid philosophical uncertainty and arrive at a more accurate correspondence of words and things.³¹

Other Unitarian commentators find Bacon's philosophy and purposes congenial. Alexander Hill Everett and S. Gilman identify Bacon as the popularizer of the fruitful inductive method.³² Andrew Preston Peabody calls Bacon "the great legis-

²⁸Boston, 1825.

²⁹"Brainard's Poems," North American Rev., XXI (1825), 217.

³⁰North American Rev., X (1820), 23-24.

³¹"Lewis's Outlines of the English Language," North American Rev., XXIII (1826), 118.

³²"History of Intellectual Philosophy," North American Rev., XXIX (1829), 76-78; "Brown's Philosophy of Mind," North American Rev., XIX (1824), 3.

lator for the whole realm of human knowledge," whose influence has extended far beyond the boundaries of physical science;³³ and H. Giles, even more enthusiastically, refers to Bacon as "one of the sublimest of images of divinity."³⁴ Perhaps most rhapsodic of all is Edward Everett, Harvard professor, orator, teacher of Emerson and Thoreau, importer of German literature in the early 1820's, and one of the least intuitively inclined of the Unitarians. Everett cites Bacon frequently in praise of modern science. "What American," he asks, "does not feel proud, that he is descended from the countrymen of Bacon, of Newton, and of Locke?"³⁵ Everett quotes Bacon in proclaiming the benefits of the diffusion of knowledge, and exclaims,

[W]hen I consider how, from the great master-principle of the philosophy of Bacon,--the induction of truth from the observation of facts,--has flowed, as from a living fountain, the fresh and still swelling stream of modern science, I am almost oppressed with the idea of the probable connexion of the truths already known, with great principles which remain undiscovered; of the proximity in which we may unconsciously stand, to the most astonishing, though yet unrevealed, mysteries of the material and intellectual world.³⁶

Everett's mysteries are not to be confounded with those celebrated by Channing, perhaps, but both men display, in varying degrees, the prevailing optimism of the early

³³"Morell's History of Philosophy," North American Rev., LXVIII (1849), 402-405.

³⁴"Francis Bacon," North American Rev., LXXXIII (1861), 177.

³⁵Importance of Practical Education and Useful Knowledge: Being a Selection from His Orations and Other Discourses (Boxton, 1840), p. 64.

³⁶Everett, pp. 233-234.

nineteenth century about the possibilities of Baconian science, and if Everett's view is less spiritual than Channings's, it is nevertheless shared by the majority of Unitarians.

Surely the most devoted disciple of Bacon among the Unitarians in this period is Francis Bowen, a graduate of Harvard, editor of the North American Review from 1843 to 1853, professor of natural religion, moral philosophy, and civil polity at his alma mater, editor of De Tocqueville and Dugald Stewart, and a prominent opponent of Transcendentalism during the embattled 1830's and 1840's. Despite the somewhat schematic nature of my exposition of Bowen's thought, it should be remembered that America in the mid-century had not yet produced anything like a rigorous or systematic philosopher (except, perhaps, for Jonathan Edwards), no Kant, Spinoza, Hegel, or even Cousin. For philosophical thought in this period we must look to such men as Bowen, Brownson, and Parker, who were what might be called "philosophical personalities" and who produced incisive and partisan journalistic commentaries on the salient philosophies of the day. Hence, with his theological party outweighing his individual system, Bowen contradicts himself fairly regularly from one article in the Christian Examiner to the next, as the exigencies of the struggle against infidelity demand.

But one constant is Bowen's frequent reliance upon Bacon in support of his doctrines. The point at which Bowen starts, ideologically, is his faith in the Unitarian God and in the

Scriptural revelation; these are firm and unquestionable, the solid ground of all thought and behavior for Bowen. Bowen is "prepared," that is, in the way that Channing had suggested was necessary to forestall materialism as a result of science. Hence, regardless of all logics, arguments, and demonstrations, the existence of God, Bowen says, is an "irresistible . . . inference" from all human knowledge; men must believe in God, he suggests, because they almost invariably do. Likewise, the Christian scriptures are "the ultimate tribunal" in matters of faith (FC, 197, 257). Bowen wishes to demonstrate that matters of faith and matters of reason are fundamentally compatible, but now that Congregational orthodoxy has been shaken by the scientific rationalism of the Enlightenment, Bowen cannot assume that his reader will so easily accept the irresistibility of the religious inference. Bowen senses the fact of contemporary uncertainty about God and God's will, a condition exacerbated by the current Calvinist-Unitarian-Transcendentalist bickering, and he undertakes to show that it is a necessary element of certain religious faith and thus to put the uncertainty on certain grounds. He wishes, that is, to reconcile the seemingly infallible physical sciences with a seemingly fallible faith by transferring the certainty of science to faith and the uncertainty of faith to science. Bowen does this by dividing human knowledge into science and metaphysics, a division similar to Bacon's division of matters of philosophy and divinity. Bowen's "science," however, unlike Bacon's "philosophy," includes theology, or

knowledge of divinity; Bowen is an advocate of the doctrines of Natural Theology, and again unlike Bacon, refuses to admit fideistic belief into religion. According to Bowen, science includes all knowledge of facts, of the real world and of the mind as an object of investigation. Francis Bacon is the great lawgiver and prophet of science; that is, not only of physical science but of all knowledge which is based upon experience, which explores facts, and which proceeds by induction, or the discovery of general principles through the observation of particulars (FP, 13; FC, 30).³⁷ Thus, science deals with a universe of certain truths and real things; the area in which science operates, the object of its knowledge, is God's created universe, operating, as Bacon said, by fixed, certain, and knowable laws (FP, 5). But because induction can never be complete, for one can never observe all instances of a law, science is ultimately uncertain knowledge. The Enlightenment rationalists, such as the Encyclopedists, in championing Bacon, had made Baconian study of the natural world appear positive and certain, but Bowen condemns the Encyclopedists as atheists, sensualists, and utilitarians. Their blind faith in empirical knowledge led, he says, to the fruitless skepticism of Hume and Kant who demonstrated that men cannot know causes and that empirical knowledge is therefore futile (FC, xi, xvii, 33-65, 262; FP, 9-10). To Bowen,

³⁷ See also "Hallam's Introduction," North American Rev., LVI (1843), 69-81.

the eighteenth century was a "prolonged torpor of materialism and infidelity." Scientific knowledge, then, is imperfect knowledge, but it is the only knowledge man can have of the real world, as opposed to the world of the mind as consciousness. The mental world is the arena of "metaphysics" or "philosophy" (Bowen defines "philosophy" as "metaphysics"), which explores ideas, is based upon intuitions or abstractions unrelated to experience, and proceeds by deduction or "demonstration." Because in deduction, whose prophet and lawgiver is Aristotle, the conclusions must logically be contained in the premises, metaphysical or philosophical knowledge is absolute and certain. But it is also ultimately useless and even dangerous, because, though the knowledge is certain, the things known are totally abstract, subjective, imaginary, and unreal, furnishing materials for such philosophies as medieval scholasticism but drawing man away from the universe and from God. Bowen does allow that because science is uncertain knowledge of a certain reality and philosophy is certain knowledge of an arbitrary reality, both ways are "equally safe grounds of belief"; he says that metaphysics provides rules for the purely mental operations, such as the concept of cause and effect, involved in dealing with scientific facts. As an example, Bowen cites the discovery of the planet Neptune, in which a mathematical demonstration (deductive), based upon observed facts, showed that Neptune must exist, and further observations (inductive), guided by the abstract calculations, proved that Neptune does exist

(FP 5, 41, 7, 19). Bowen invokes Bacon here: according to Bacon, metaphysics or demonstration occupies the position in the pyramid of knowledge just beneath the apex (divinity) and gives the rules of study in physical science (FP, 26-27). Nevertheless, while condemning the extreme of sensualistic materialism to which science can run, Bowen clearly sees worse dangers in metaphysics, dangers such as the infidelity of Transcendentalism, "the wilds of a mystical philosophy, and a heated, vague, and unsettled faith" (FC, 262). The cooled and settled faith Bowen desires is to be found in the Natural Theology tradition. Theology is a science, Bowen maintains, quoting Lord Brougham on the inductive method taught by Bacon, practiced by Newton, and applied by Paley and Butler to the evidences of God's design in the natural world (FC, 200). "I have no fears," Bowen writes, "of any conflict between the truths of real science and those either of Natural or Revealed Religion." "[T]he fundamental doctrines of religion rest upon the same basis which supports all science . . ." (FP, v, vi). "If Natural Theology be placed on the same level with the other inductive sciences, the great truths which it involves are forever secured against the assaults of skepticism and atheistical philosophy." The way in which Natural Theology attests to the existence of God is by "the same . . . reasoning . . . used in the inductive sciences"; namely, "a great number of agents being found to work together by a complex and intricate yet orderly process,

towards the attainment of some end, there must exist an intelligent and active being, who had this end in view, and who made this disposition of the agents as means for its accomplishment" (FC, 247, 199, 197). This, of course, is Bowen's "irrestible inference," and it confers upon theology the same authority which all men ascribe to physics and chemistry. Theology is a science because religion is fact, not speculation: the existence of God, the immortality of the soul, the Christian moral code--these are all objective "facts," and are therefore materials for inductive science (which, however, cannot "prove" or "demonstrate" them, because inductive knowledge is not demonstrative or certain). Bowen invokes revelation to establish the certainty of religious doctrines but man's faith can be shored up by observation and experience as well, because nature also testifies, albeit partially and imperfectly, to the existence and benevolence of God (FP, 40-45).

As I have suggested, Bowen credits Francis Bacon with the spiritual paternity of Natural Theology and hence of modern Unitarianism and right reason. Perhaps in mind of Macaulay's 1837 essay, Bowen denies that Bacon's contribution is narrowly physical or mechanical and that mere "practical utility" is Bacon's sole end.³⁸ Seeing that the scholastics were useless and were therefore becoming disreputable, Bacon "commenced his task of legislating for science,--of governing

³⁸"Hallam's Introduction," p. 70.

a kingdom that existed as yet only in the far-reaching sagacity of his own mind." All later science (and science, for Bowen, includes theology) is an outgrowth of Bacon's Novum Organum, with its insistence upon experience and its refutation of metaphysical idols.³⁹ Bacon did not intend his method for "the region of pure mental conceptions," in which Bowen seems to place revealed religion and morality--at least for polemical purposes against Hobbes, Mandeville, and Bolingbroke, who, Bowen says, applied Bacon's method to morals with disastrous atheistic and sensationalistic results (FP, 14-15)⁴⁰--but still ethics are part of Bacon's total scheme, as physical science is another part.⁴¹ In support of this contention, Bowen asserts that Bacon valued knowledge for its own sake, and did not believe "steam-engines, spinning-jennies, rail-roads, and the like" to be "the greatest contribution of science to the well-being of mankind." Instead, Bacon was concerned with "ethical philosophy," which treats of man as a responsible agent subject to immutable moral laws, and with the philosophia prima, or "science of first principles," which is a metaphysical rather than a scientific area.⁴² Bacon's writings, says Bowen, inculcate a sense of humility in the

³⁹"Hallam's Introduction," pp. 70-71.

⁴⁰But cf. FP, 45-48, where Bowen says that morality is a "fact" made known by revelation.

⁴¹"Hallam's Introduction," p. 75.

⁴²"Hallam's Introduction," pp. 76-77, 79-81.

reader and strengthen the moral virtues. With those of Locke, Bacon's writings are

eminently sound and healthful. They remove prejudices and vindicate the right of free inquiry; they inculcate generous sentiments; they discourage the love of paradox^{and} fanciful systems; they show the compass of the human faculties, and while they animate the spirit of discovery, when directed to its proper objects, they tend to check its arrogant and hopeless endeavors; they inspire the liberal and catholic feeling, which would make philosophy the property of the multitude, rather than the exclusive heritage of a few. (FC, xix-xx)

The last statement here represents one of Bowen's favorite themes: the necessity of a "democratic" philosophy comprehensible by the average mind and compatible with "common sense." Bacon, of course, is the chief "democratic" philosopher, but the whole school of British philosophers--the main line of which, Bowen says, derives from Bacon--demonstrates the virtues of comprehensibility, clarity, democracy, resistance to dogmatism, and the reassuring union of the speculative and the practical. In contrast, the French display flashy superficiality and skeptical sensualism while the Germans, who are responsible for the excesses of American Transcendentalism, tend towards arrogant obscurity and elitist mysticism. Transcendentalism, Bowen declares, is an exclusive and anti-democratic movement which, like Calvinism, allows only an elite into the mysterious inner sanctum of the faith (FC, 33ff., 282, 44-45, 1ff.). The democracy of philosophy should extend to philosophical language, and Bowen is concerned with few topics so deeply as he is with language. Linguistic excesses

are one of the most serious sins Bowen ascribes to Kant and his American disciples. Though Locke is clear and simple, using the everyday language of common men and remaining careful to define his terms wherever confusion is likely, Kant and the Transcendentalists are wilfully obscure, warping language, redefining words in arbitrary and deliberately confusing ways, indulging in poetic caprice where strict clarity is essential, and thus displaying a reprehensible desire to foist fantastic and alien doctrines upon the gullible American reader under the guise of rigorous philosophy; Bowen cites Bacon in warning that confusions in language react upon thought, and create greater confusion there, and this has happened to Transcendentalist writers. Indeed, most of Bowen's essay on "Locke and the Transcendentalists" is a critique of the American's stylistic errors; Bowen likens the Transcendentalists to the medieval schoolmen whom Bacon ridiculed: both groups are ignorant of reality, deviously obscure, obsessed with abstractions, and useless. Bowen quotes Bacon's "Of Truth" on "the light of the sense" and "the light of reason" in answer to Transcendentalism's supposed claim that the light of day, common sense, makes the delicate truth disappear. Bowen attacks all "hyperbole" in philosophical and theological writing; his disdain for "imagination," "eloquence," "rhetoric," and "originality" is reminiscent of Bacon's own frequent suspicion of these qualities. Bowen continually cites Bacon in support of

his position; his favorite quotation, like Tyler's, is the all-purpose NO I:1: man knows and can know only what he receives from nature--and stylistic "originality," Bowen says, is unnatural (FC, 11-12, 20-21, 28-32).⁴³ In his essay on Emerson's Nature, Bowen is similarly critical of supposed stylistic distortions; Emerson affects simplicity, he says, but achieves only bathos or the ludicrous incomprehensibility of the "transparent eyeball" and the "corn and melons" passages.⁴⁴ Bowen lists a number of specific Germanisms in the Transcendental style: the use of adjectives as nouns ("the infinite"), the making of verbs from nouns ("materialize"), and the creation of barbarous compounds ("adolescent").⁴⁵ While Bacon serves as Bowen's model, Bowen is characteristically contradictory in his use of Bacon; though he usually refers to Bacon's clarity and simplicity, he also cites Bacon's "glowing imagination," "splendid imagery," and "brilliancy of wit," qualities which he prefers to condemn in Emerson (FC, 171, 34-35).⁴⁶

Other tendencies which Bowen condemns on Bacon's authority are skepticism and idealism. According to Bowen, Kant (the father, he says, of American Transcendentalism) has erected a canon of skepticism, a "dogmatism of unbelief." The Critique of Pure Reason, in Bowen's reading, not only fails to

⁴³ See also "Nature," Christian Examiner, XXI (1837), 379-380.

⁴⁴ "Nature," pp. 371-372.

⁴⁵ "Nature," pp. 378-379.

⁴⁶ See also "Hallam's Introduction," pp. 72-73.

establish that higher faculty of "Reason" which the Transcendentalists believe to be in touch with the spiritual world, but also undermines all knowledge. According to Bowen, Kant first denies the mind's capacity for positive knowledge of objective reality by making the interpretation of sense perceptions subject to the a priori categories of the understanding, such as causation. Then Kant destroys the possibility of even a priori knowledge of external reality through the categories by asserting that knowledge provided by them cannot be attributed to reality but exists only in the mind, and also by making the pure reason, whose ideas stimulate man to seek knowledge of the first cause by ascribing infinity and absoluteness to the conceptions of the understanding, incapable of such knowledge. Kant realized the skeptical implications of this argument, Bowen says, and tried futilely to undo the damage by demonstrating the existence of "things unseen and eternal" in the Critique of Practical Reason. Bowen thus sees Kant as closing the gates of knowledge which Bacon opened and as making everything that man thinks purely subjective and illusory. In Bowen's terms, Kant, like the scholastics, has turned all science into metaphysics and substituted the uncertainty of mind for the certainty of the objective universe, including God, who exists in and controls the universe. Kant thus illustrates the baleful effects of disregarding Bowen's warning that man is a limited creature who must be satisfied with partial knowledge; any endeavor to attain absolute certainty about the universe must end in skepticism, for induction

or observation is imperfect, and deduction or philosophical demonstration is out of touch with the universe it purports to explain (FC, XVI, 33-65; FP, 9-10).

Bowen's view of idealism is similarly bleak; the chief villain here is Emerson. Berkeley, however, Bowen interestingly considers a descendant of Bacon and therefore a clear, simple, and democratic philosopher. Bowen even admits that "to have been a convert to his theory at some period of one's life is regarded as a test of ability in abstruse speculations" (FC, 294). But Bowen's enthusiasm is directed not towards the solipsistic implications of Berkeley's idealism but towards Berkeley's early theory of vision, upon which his subjectivism was based and which Bowen considers the only "fruitful fact" discovered by metaphysicians since Bacon's time. Indeed, Bowen takes this theory of vision--that only colors are actually seen, all other attributes of perceptible objects, such as size and shape, being generated in the mind according to the education and experience of the perceiver--to be a "scientific principle" worthy of Bacon. The theory, Bowen says, is widely held as fact at the present time, having been confirmed by a variety of scientific observations. In contrast to his reading of Kant, Bowen's evaluation of Berkeley makes that philosopher into a neo-Baconian and a benign forebear of Unitarianism. While the "mongers of systems" have taken advantage of the idealistic implications of his work and blown them up into fantastic heresies of "spiritualism," the theories are fundamentally beneficent, affirming, Bowen says, the importance of experience in forming the mind, the ultimate precedence of mind over matter, the

futility of materialism, and the existence of God (FC, 274, 282, 297-300).

Bowen's chief criticism of Nature, however, is directed at the idealism-without-experience which he believes controls and perverts the essay.⁴⁷ Essentially, Bowen's analysis of Nature consists of three elements: a curt dismissal of the final two sections, "Spirit" and "Prospects," as unintelligible and unreadable (on the grounds of Bowen's preference for Baconian simplicity over the obscure language which he invariably ascribes to the Transcendentalists);⁴⁸ a mild and heavily qualified approbation of the sections "Commodity," "Beauty," "Language," and "Discipline," which strike Bowen, in their description of the spiritual uses of nature, as not inconsistent with Natural Theology;⁴⁹ and a vigorous condemnation of the section "Idealism" as a Kantian or ultra-Berkeleyan refutation of those very values of nature which Emerson had so earnestly touted in the earlier part of the essay.⁵⁰ The third element is partly a result of the first. By ignoring "Spirit," Bowen fails to note Emerson's significant withdrawal from idealism--if, indeed, Emerson had ever gone so far at all--in that section. Emerson says that

⁴⁷ This essay is excerpted by Perry Miller in The Transcendentalists: An Anthology (Cambridge, 1950), pp. 173-176.

⁴⁸ "Nature," pp. 377-382.

⁴⁹ "Nature," pp. 372-375.

⁵⁰ "Nature," p. 372.

idealism "makes nature foreign to me," that "the heart resists" idealism, and that idealism, finally, is only "a useful introductory hypothesis" which "culture" imbues in man's mind as insurance against materialism, the "vulgar view" (EW, I, 63-59). Bowen, however, is not listening, and so he takes idealism to be Emerson's main theme and exclaims that Emerson places man "alone in the vast inane with his God."⁵¹

Not surprisingly, Bowen mobilizes Bacon for the assault on the vast inane. Bowen has already identified Bacon with the sensible Unitarian position and with morality, democracy in philosophy, simplicity of language, the destruction of scholastic metaphysics, and the establishment of knowledge based upon induction, experience of the real world, facts, and observation. He has made Bacon a precursor if not a founder of Natural Theology, as opposed to Aristotelian and Kantian metaphysical philosophy. Bowen has called Bacon a prophet of that knowledge which is of most value to men: science, which, though ultimately uncertain, knows a certain and absolute reality--God and nature as an expression of God's will. In Bowen's view, as in Samuel Tyler's, the main stream of British philosophy, on which are founded Natural Theology, the common-sense realism of Stewart, Brown, and Reid, and the Unitarian (Orthodox, for Tyler) canon of religious doctrine, derives directly from Bacon, through Locke and Berkeley. It is some-

⁵¹"Nature," p. 376.

thing of a commonplace among Unitarian writers of this period that no one has been able to carry on the philosophical tradition beyond the Scotch realists and the founders of Natural Theology; those who have taken up where Brown and Stewart left off in psychology and where Butler and Paley left off in Natural Theology are pygmies, and those who have gone much beyond them, such as the Germans and the Transcendentalists, are infidels.⁵² In the typical Unitarian view, the tradition of healthy philosophy came to a stop at the point of the founding of Unitarianism. Any further progress, Bowen believes, is impossible; those who, like Theodore Parker, call for a new theology or an improved religion are involved in a dangerous contradiction. Progress, to be sure, is God's will, but only social, physical, and internal moral progress. Man cannot improve religious truths, however; these are eternal and unchanging, revealed in scripture and in the miracles and symbolized in the intelligent design of the natural universe. Men can come to a better knowledge of reality and of religious truth, but there can be no new reality, no such new truth as the Transcendentalists seem to desire. A more accurate epistemology is attainable, Bowen believes, a better understanding of the process by which men know of reality; but there can be no valid individual or

⁵²Andrews Norton is especially firm on this point; see, for example, his Discourse on the Latest Form of Infidelity (Boston, 1839), *passim*.

original vision beyond what God has given to all men. Francis Bacon, in Bowen's system, is the prophet of the God-given vision. Therefore, Bacon also serves Bowen as the scourge of the Transcendentalists, who proclaim an inner world for which Bacon, Bowen thinks, did not provide.

In his review of Nature, for example, where, as I have pointed out, Bowen accuses Emerson of a thorough-going idealism, he charges the Transcendentalists with a revival of discredited Platonism, with its aristocratic disdain for terrestrial reality. The "old Platonic school," he says, rejects "observation" and "experiment."

The Baconian mode of discovery is regarded as obsolete; induction is a slow and tedious process and the results are uncertain and imperfect. General truths are to be obtained without the previous examination of particulars, and by the aid of a higher power than the understanding. The "hand-lamp of logic" is to be broken, for the truths which are felt are more satisfactory and certain than those which are proved. The sphere of intuition is enlarged. . . . Pure intelligence usurps the place of humble research. Hidden meanings, glimpses of spiritual and everlasting truth are found, where former observers sought only for natural facts. The observation of sensible phenomena can lead only to the discovery of insulated, partial, and relative laws; but the consideration of the same phenomena, in a typical view, may lead us to infinite and absolute truth,--to a knowledge of the reality of things.⁵³

So Bowen accuses Emerson, with the other disciples of an alien system of metaphysics, of rejecting the epistemology of Locke,

⁵³"Nature," p. 377.

Berkeley, and the Scotch realists, and with it the whole Baconian method and science, which, for Bowen, includes all valid knowledge. Bowen also cites Bacon in reference to Emerson's Transcendental style. "Nonsense," he writes, "cannot be contained in plan and sober prose." "It would avail but little, perhaps, with some Transcendentalists to assert, that the deepest minds have ever been the clearest, and to quote the example of Locke and Bacon. . . ."54 The Transcendentalists cultivate an anti-Baconian style, which maintains deliberate obscurity in order to shield its secrets from the coarse gaze of the masses.

Bowen also invokes Bacon in accusing the Transcendentalists of a factitious distinction between the Reason and the Understanding, which, he (accurately) says, they have got from Kant by way of Coleridge. The distinction makes the Kantian Understanding a "lower" faculty, limited to sense data and therefore earthbound, and the Kantian (Pure) Reason a transcendent faculty of spiritual vision and special revelation. But religion needs no such "higher" faculty, Bowen asserts. Any religious proposition can be tested by the same mental faculty which tests geometrical propositions. As Bowen has said, mathematical reasoning is "metaphysical," and metaphysical reasoning, in contrast to the Transcendental Reason, does not put the mind in touch with currents of the universal

⁵⁴"Nature," p. 378.

being, but instead is restricted to the internal operations of the mind itself, where it perceives the relations between facts observed in the natural world. Consequently, reason in Bowen's sense is arbitrary, cut off from reality, and, if denied a supply of sense data, capable of erecting such fanciful systems of thought as Bacon decried in the Novum Organum. If the Transcendentalists want to bolster the position of what they call "intuition" as opposed to experience by means of their false distinction between Reason and Understanding, they must fail, says Bowen, because "demonstration itself proceeds by intuition."⁵⁵ Bowen's "intuition," unlike Coleridge's, is the equivalent, apparently, of Kant's "understanding," which provides no glimpses of God but simply interprets what the eye sees in ways assimilable by the human mind, contributing what cannot be sensed. This is the sole valid role of intuition for Bowen; it is a "given" or "innate" faculty, but its innateness does not confer divine or superhuman status upon it nor put it in touch with Emerson's "spiritual laws." Bowen further claims that the Transcendentalists aspire to a realm beyond facts; they want to proceed directly to principles without the help of facts. This, notion he says, is merely a dressing-up of Plato's ancient concept of forms, "on the consideration of which all science is founded"--including Baconian science, which does not deny forms but only their grounding in spirit rather than in matter. Likewise, Bowen maintains that the Transcendentalists' vaunted "innate ideas" are also recognized by Bacon; Bacon does not make them spiritual

⁵⁵Nature, p. 384.

faculties, however, but directs them to their proper end, the interpretation of nature.⁵⁶ In general, despite the controversy over Locke and innate ideas, the Unitarians clearly did believe in faculties transcending sense; the ability to reason abstractly is one example, and the "moral sense" or "common sense" of the Scottish philosophers is another, by which man knows God's moral law and can distinguish good from evil. But, believing also that the moral sense, like Bowen's "intuition," must operate upon experience and not cast about in realms above and that Bacon has alerted men to this need for experience, Bowen accuses the Transcendentalists of circumventing Bacon altogether, undoing Bacon's work, and trotting foolishly back to the whimsical and pagan ancients. "The New School has abandoned Bacon, only to go back and wander in the groves of the Academy. . . ." ⁵⁷ Perhaps it is admirable, Bowen admits, to seek truth without facts, but it is also fruitless and useless.

What distinguishes the main-line Unitarians from the Transcendentalist rebels, I believe, is a temperamental element rather than a doctrinal argument. This element is dissatisfaction with the cultural (including material, spiritual, intellectual, moral, and artistic) status quo. Notwithstanding Bowen's scorn of their supposed anti-Baconianism, the Transcendentalists share with Francis Bacon this dissatisfaction;

⁵⁶"Nature," p. 384.

⁵⁷"Nature," p. 384.

it stimulates such critiques of society as Thoreau's Civil Disobedience and Brownson's article on the laboring classes. The acrimony of the debate in this period is due not so much to logical or conceptual disagreement as to the inability of Emerson, Parker, William Henry Channing, and the others to concur with Bowen when he writes, "Granted that we are imprisoned in matter, why beat against the bars in a fruitless attempt to escape, when a little labor might convert the prison to a palace, or at least render the confinement more endurable." As far as Bowen is concerned, there is no reason to want anything beyond the palace of this world, and to reach for spiritual enlightenment above what is given is to indulge in "mystic and unprofitable dreams."⁵⁸ In this small way--their dissatisfaction--the Transcendentalists may have retained some of the old Puritan sense of human imperfection which the Unitarians sought to abolish.

Bowen concludes his review of Nature with a suggestion that must certainly have rankled his antagonists: Benjamin Franklin is perhaps, on some ultimate scale of value, a lesser light than Plato, Bowen concedes, but most men would do better to emulate Franklin.⁵⁹ Franklin, of course, is one of the "Lockists" and "dull men" whom Emerson, in the course of his remarks on Bacon, contemns in English Traits (EW, V, 238-239).

⁵⁸"Nature," pp. 384-385.

⁵⁹"Nature," p. 385.

Transcendentalist rhetoric also elicits an invocation of Bacon in Bowen's attack. Like Bacon, Bowen declares his opposition to the elevation of rhetoric over reality. The "artifices of rhetoric" obscure the truth in the most "brilliant" passages of Transcendentalist writing, where apothegms parade as sound reasoning. A "brilliant play upon words" characterizes the Transcendentalists' literary method, which, Bowen says, deviates from the proper "modes of inquiry and instruction" promulgated by Bacon and Locke. Bowen once again links together a valid epistemology, or way of knowing, with a valid mode of expressing knowledge. Locke and Bacon stand for the "experimental philosophy" or observation of facts, and they are opposed by "[t]hose who question the possibility of experience. . . ." While Bacon holds out for the primacy of facts--and, to Bowen, religious doctrines such as God's existence, the soul's immortality, the necessity of Christian morality, and the truth of Scriptural revelation are "facts"--the Transcendentalists pursue "'anticipated cognitions a priori'" (FC, 28-30). "Anticipation" is Bacon's own term for the error of hasty generalizations without due regard for facts, as opposed to "interpretation," which relies on facts (NO, I:xxvi, BW, VIII, 73).

Probably the most striking and significant instance of Bowen's adaptation of Bacon is his quotation of Bacon's statement in Book II of The Advancement of Learning that "to seek divinity in philosophy is to seek the living amongst the dead" (FC, 263). In its original context, the statement is

puzzling and controversial; Bacon's intent is to deny that man can know God by studying nature, but even so, how can Bacon sincerely have called philosophy, by which he means scientific knowledge, as opposed to divine knowledge, and to which he has devoted his life, a study of the "dead"?⁶⁰ In any case, Bowen uses the quotation to conclude an essay on the dire consequences of the German-Transcendental union of theology with metaphysics; for Bowen, theology is science, but "philosophy," as I have noted, does not mean "science" for Bowen but "metaphysics" or abstract reasoning, and therefore he completely alters Bacon's meaning. To seek God in the reasoning processes of man's mind, with which Bowen has identified "philosophy," is to pursue the living amongst the dead; "science," as opposed to "philosophy," is not dead, for it can and does strengthen man's faith by providing detailed evidence of God's design in a living universe. But abstract ideas, in which the Transcendentalists seem to locate God, are "dead," because they do not in themselves partake of or reveal God's design but operate almost independently of it and must be consciously tied to nature by Bacon's inductive method. For Bowen and the Unitarians, God is primarily outside man, evidenced in nature and revealed in Scripture, and even the innate "moral sense" looks outward. To seek divinity amongst the dead is to seek it not outwardly in nature, as Bacon meant, but inwardly, as Bowen believes Parker and

⁶⁰On this point, see Willey, Seventeenth Century Background, p. 36.

Emerson advocate.

So for the Unitarians, as represented especially by Bowen, Francis Bacon provides a philosophical foundation for their theology. He teaches not only the kind of truth to be sought--the laws of God as they are embodied in the natural world and in man's mind as an object of study, for the purpose of ameliorating the limited human condition--but also the way to learn the truth--through humble and patient observation of the natural world, inductive method, avoidance of original or personal distortions of the common vision, and clear and simple language in expressing knowledge so acquired. Bacon thus supports both the "internal" and the "external" aspects of Unitarian doctrine: his qualified exaltation of the human reason in coping with and mastering a limited range of study encourages the Unitarians' belief in a limited "moral" or "common" or "religious" sense--given by God but not conferring actual divinity--which looks not upward but outward, giving divine guidance in matters moral and behavioral in the social world. Likewise, Bacon's "realism," his insistence that the universe is not atomistic or chaotic but designed by God according to fixed and knowable principles, supports the Unitarians' disdain for skepticism and their enthusiasm for Natural Theology, which similarly ascribes to nature an intelligent and intelligible design. And, as with the moral sense, Bacon helps the Unitarians set limits to Natural Theology: that God controls the universe does not mean that God is the

universe; they remain distinct, the universe providing "evidences" of God but no direct passage out of facts into essences. Only miracles and revelations can bridge that gap, but the realm from which such things are sent is beyond the ken of mortals. Bacon helps the Unitarians both exalt the human reason and simultaneously externalize God and base theological knowledge of Him upon the same Baconian inductive epistemology that has proved incontrovertibly fruitful in physical science. Should anyone raise the objection that even a thoroughly scientific theology leaves an area of religious uncertainty (and attempt to erase the uncertainty by eliminating, like the materialists, the spiritual dimension, or by locating it, like the Transcendentalists, within man), the Unitarians can reply, citing Bacon, that while induction and observation are uncertain, nature and Scripture are not, and man can be satisfied with imperfect knowledge of a reality he irresistibly infers is perfect.

The Unitarian-approved texts in use at Harvard in the years between Emerson's and Thoreau's attendance there in general confirm Francis Bowen's analysis. They not only take a positive view of Bacon but also associate him with the expansive capabilities of the human mind in a way that could not fail to impress a developing Transcendentalist.⁶¹ In Elements

⁶¹See Edgeley Woodman Todd, "Philosophical Ideas at Harvard College, 1817-1837," NEQ, XVI (1943), 63-90; Joseph J. Kwiatt, "Thoreau's Philosophical Apprenticeship," NEQ, XVIII (1945), 51-69; Cameron, "Thoreau's Harvard Textbooks," ESQ, no. 23 (1961), pp. 19ff. The last item is reprinted in Cameron, Thoreau's Harvard Years: Materials Introductory to New Explorations, Record of Fact and Background (Hartford, 1966), Part Two, pp. 19-21.

of Logick, for example, Levi Hedge asserts that Bacon furnished the philosophical grounds for the advances made by Hedge's mentors Locke, Reid, and Stewart: "The *Novum Organum* of Lord Bacon contains in a small compass those rules of inductive logick, which have been followed with the happiest success both in physical researches, and in the philosophy of the mind."⁶² Richard Whately's Elements of Logic, adopted in 1833, applauds Bacon's censure of the scholastics for their "waste of ingenuity and frivolous subtlety of disputation." Whately rightly points out that Bacon did not censure logic itself but only the perversion of logic.⁶³ Whately, later the Archbishop of Dublin, published in 1856 a highly popular edition of Bacon's essays with "annotations" which themselves comprise an equally voluminous series of essays. It is ironic that in the Preface to his edition, Whately quotes, anonymously, sections of Emerson's Divinity School Address as examples of what he calls the "magic-lantern" or unintelligible school of prose writers, who employ the "foggy forms" of German philosophy and who produce, in contrast to Bacon's clarity and simplicity, "a mere mass of unsubstantial

⁶²Cambridge, 1816, p. 200; see also pp. 95-96, 100n. On Reid's praise of Bacon, see Howell, "The Plough and the Flail," pp. 74-76.

⁶³Boston, 1848, pp. 30-31.

vapours."⁶⁴ Natural Theology was imparted at Harvard by Bishop Butler's Analogy of Religion; though unwilling, probably for "moral" reasons, to cite Bacon, Butler owed much to The Advancement of Learning in philosophical and theological outlook, as Professor Cochrane has shown.⁶⁵

In science, John Mason Good's The Book of Nature cites Bacon in establishing that "'all our knowledge . . . is derived from experience'" and that all experience is sensual⁶⁶ (neither proposition, of course, would have elicited Bacon's complete assent). In moral philosophy, Thomas Brown attributes to Bacon the founding of modern "common-sense" realism, which affirms the innate ability of every man to perceive moral laws; Bacon's critique of false modes of thinking, Brown claims, "purified" the "temple of the mind" and his inductive method abolished the "gross mistakes" of "the Scotists and Aquinists."⁶⁷ Brown insists that Bacon's chief interest and influence lie in psychology rather than in natural science; hence, like Coleridge and some others at this

⁶⁴ Bacon's Essays, with Annotations, 2nd ed. rev. (London, 1857), pp. vii-x. See "Bacon's Essays, Edited by Whately," [Colburn's] New Monthly Mag., CVIII (1856), 58-61; "Bacon's Essays," British Quar. Rev., XXXVIII (1863), 67-81; same title, Eclectic Rev., CIV (1856), 257-264; "Lord Bacon and the Inductive Philosophy," Christian Remembrancer, XXXIX (1860), 239-263; "Bacon," Dublin Univ. Mag., XLVIII (1856), 391-408.

⁶⁵ Cochrane, "Francis Bacon in Early Eighteenth-Century English Literature," p. 79.

⁶⁶ New York, 1828, p. 383; cf. pp. 393ff.

⁶⁷ Treatise on the Philosophy of the Human Mind, ed. Levi Hedge (Cambridge, 1827), I, 8-11.

time, Brown sees Bacon's inductive philosophy, with its intellectualism and its emphasis upon "axioms," as reinforcing the ascendancy of mind over matter and as confirming the efficacy of the innate moral sense.⁶⁸ According to Brown, Bacon encourages not atheism or materialism but a religious recognition of God's benevolence in granting to the human race so potent a force as the mind.⁶⁹ Brown's evaluation of Bacon owes something, no doubt, to that of Dugald Stewart in another Harvard text, Elements of the Philosophy of the Human Mind. According to Stewart, probably Bacon's most enthusiastic partisan among the Scottish philosophers, Bacon opened the way to the great scientific advances of the modern age. Newton's example, however, has had greater direct influence than Bacon's theories, and Bacon's chief importance is a prophet of the human mind. Bacon, more than any other philosopher, "seems to have formulated enlightened views with respect to possible attainments of mankind; and [his] fame cannot fail to increase as the world grows older, by being attached, not to a particular system of variable opinions, but to the general and infallible progress of human reason."⁷⁰

⁶⁸Brown, Treatise, I, 8-9, II, 193-194.

⁶⁹Brown, I, 23, 28-29.

⁷⁰Second ed. corrected (London, 1802), pp. 53-54, 248. For an attack on Stewart's view of Bacon, see "Stewart's Dissertation," Quar. Rev. (London), XVII (1817), 39-72. See also "Stewart's Introduction to the Encyclopedia," Edinburgh Rev., XXVII (1816), 180-243, XXXVI (1821), 220-267. On the relations between Scottish realism and Transcendentalism, see William Girard, "Du transcendantalisme considéré essentiellement dans sa définition et ses origines françaises," UCPMP, IV (1916), 444-447; Merrell R. Davis, "Emerson's 'Reason' and the Scottish Philosophers," NEQ, XVII (1944), 209-228.

What Emerson, Ripley, Parker, Thoreau, and some of the others, as Harvard undergraduates, read about Bacon, then, was uniformly laudatory. More significantly, it placed Bacon not, like Boyle and even Newton, among scientists narrowly concerned with physics or mechanics but in the vanguard of philosophers of the mind. Bacon, in this view, teaches the unity of all knowledge, the relation of reason and imagination, the assimilatory and creative power of the mind, the importance of both experience and inspiration, facts and laws, nature and intellect. It is not surprising that under this influence Emerson would be encouraged to see Bacon not as a scientific theorizer alone but also as a quasi-Platonic visionary of the human race's collective mind, which enacts all history and writes all great books.⁷¹

Also contributing to Emerson's interpretation of Bacon is the curious but highly significant "Platonizing" of Bacon among the European Romantics. The Scottish common-sense school, as I noted, perceive their master Locke's unacknowledged debt to Bacon and are less reluctant than was Locke to credit Bacon with generating interest in the study of mind and with laying the foundations for it. Some of the Romantic critics and poets go a step further, making Bacon a direct heir of Plato. As I pointed out in my discussion of his philosophy, Bacon stresses both the necessity of facts and experience and the importance of laws in achieving positive knowledge of

⁷¹See EW, V, 238ff.

nature. The Romantics tend to ignore Bacon's distinction between philosophy and divinity--of which knowledge is revealed or inspired rather than learned by induction and observation--and to unite inductive knowledge with knowledge of the divine. The principal feature of this union is that the inductive method comes to support, to confirm, or even to imitate the operation of intuition or of the Romantic "imagination" so that the facts of nature, directly sensed or methodically observed (depending upon the spiritual state of the self), may stimulate the mind to spiritual enlightenment. This notion, as we shall see, largely constitutes the "Baconianism" of Emerson, Parker, and especially Thoreau.

The British and continental background against which the Romantic Platonization of Bacon takes place is one of vigorous controversy concerning the nature and importance of Bacon's life and teachings. The scientists' and rationalists' glorification of Bacon, for instance, evoked a depreciation of him by anti-rationalists. William Blake, virtually alone among Romantic poets, condemns Bacon as an avatar of Ulro, single vision and Newton's sleep. "Nature," Blake says, "is a Vision of the Science of Elohim,"⁷² but Bacon's science destroys the vision. Milton, in Blake's poem, says he comes

"To bathe in the Waters of Life, to wash off the
Not Human,

.

⁷² Milton, Book the First, Poetry and Prose of William Blake, p. 414.

To cast off Rational Demonstration by Faith
 in the Saviour,
 To cast off the rotten rags of Memory by
 Inspiration,
 To cast off Bacon, Locke, & Newton. . . ."⁷³

But the most virulent anti-rationalistic attacks on Bacon came not from poets but from Catholic conservatives, such as Comte Joseph de Maistre and Bishop A.-F. Ozanam.⁷⁴ De Maistre is especially acerbic. Bacon's imagination, he says, is "malade d'orgueil," and Bacon's "theories fausses, viles, corruptrices, . . . ont perverti . . . toute l'Europe."⁷⁵ With such other "ennemis du genre humain" as Locke and

⁷³Poetry and Prose, p. 430. See M[eyer] H[oward] Abrams, The Mirror and the Lamp: Romantic Theory and the Critical Tradition (New York, 1958), p. 216. Hoxie Neale Fairchild, The Romantic Quest (New York, 1965), pp. 115-116, sees Blake's condemnation of Bacon as a symptom of "Romantic anti-intellectualism." However, Blake saw Bacon not as an intellectual but as the hero of scientific rationalism, which is not the same as intellectualism. In America, Edgar Allen Poe takes up the attack on Bacon as a petty empiricist blind to the spirit; see Eureka, Complete Works, ed. James A. Harrison (New York, 1902), XVI, 189-191. Interestingly, Herman Melville demurs, citing Bacon's Wisdom of the Ancients as an example of the universality of truth and its independence of particular cultural forms; Clarel, Works, Standard ed. (London, 1922-24), XV, 106.

⁷⁴De Maistre, Examen de la philosophie de Bacon . . . , 2 vols. (Paris, 1836); Ozanam, Deux chanceliers d'Angleterre: Bacon de Verulam et S. Thomas de Cantorbery, Oeuvres complètes, Quatrième éd. (Paris, 1872), VII, 411-597 (originally published in 1836). See "Ozanam's English Chancellors," Dublin Rev., III (1837), 305-325.

⁷⁵I, 6, 99.

Condillac, Bacon wished to "chasser Dieu de partout."⁷⁶

As Benthamite utilitarians applauded Bacon, so did anti-utilitarians condemn him. Bentham himself saw in Bacon support for the principle of utility and for a rationalistic and encyclopedic approach to knowledge.⁷⁷ An anonymous reviewer, hostile to utilitarianism, suggests that the principle of utility leads to knowledge of "melting vat[s] and . . . moulds" but ignores the "moral improvement of the soul." In so far as Baconianism means careful and objective study of

⁷⁶ II, 338, 13. For defenses of Bacon on rationalistic grounds, see Macvey Napier, "Remarks, Illustrative of the Scope and Influence of the Philosophical Writings of Lord Bacon," Transac. Roy. Soc. Edinburgh, VIII (1818), 373-425; anon., "Bacon's Novum Organum," Retrospective Rev., III (1821), 141-167, IV (1822), 280-316; "Lord Bacon," Penny Mag., II (1833), 23-24; "Local Memories of Great Men: Bacon," Penny Mag., X (1841), 60-63; [John Hoppus], An Account of Lord Bacon's Novum Organon Scientiarum . . . [London, 1827]; Thomas Martin, Character of Lord Bacon: His Life and Works (London, 1835); Whewell, History of the Inductive Sciences, From the Earliest to the Present Times (London, 1837), I, viii, xv-xvi, II, 127-129, 173; Joseph Devey (ed.), The Moral and Historical Works of Lord Bacon (London, 1854), xi-xxxiv; anon., "Lord Bacon," Eclectic Rev., C (1854), 672-689; M. Patru, "Esprit et méthode de Bacon en philosophie," Bull. de l'Académie Delphinale, Sér. 1, IV (1856), 330-446; [Whewell?], "Spedding's Complete Edition of the Works of Bacon," Edinburgh Rev., CVI (1857), 287-322; Fischer, Francis Bacon of Verulam, e.g., pp. ix-xv (Fischer attempts to synthesize Kant and Bacon); Charles de Remusat, Bacon: sa vie, son temps, sa philosophie, et son influence jusqu'à nos jours, Troisième éd. (Paris, 1877) (first ed., 1857). For reviews of Remusat and Fischer, see "Bacon's Philosophy," Eclectic Rev., CVIII (1858), 321-332; "Sir Charles de Remusat . . .," [Colburn's] New Monthly Mag., CXI (1857), 34-41. See also "Remarks on Mr [.] Macvey Napier's Essay on the Scope and Influence of Lord Bacon's Writings, etc.," Blackwood's Edinburgh Mag., Edinburgh ed. III (1818), 657-661.

⁷⁷ See Bentham, Chrestomathia, Part II, Containing Appendix No. V., Being an Essay on Nomenclature and Classification, Including a Critical Examination of the Encyclopedical Table of Lord Bacon, As Improved by D'Alembert, and the First Lines of a New One, Grounded on the Application of the Logical Principle of Exhaustively Bifurcate Analysis to the Moral Principle of General Utility (London, 1817). See Abrams, Mirror and the Lamp, p. 300.

truth, the reviewer says, it is praiseworthy, but in its technological aspect it is monstrous.⁷⁸

Of course, many anti-Baconians transferred the supposed moral reprehensibility of Bacon's philosophy to his life (or vice versa) and condemned Bacon on biographical grounds as a sycophant to tyranny, a corrupt magistrate, a Machiavellian courtier, or an anti-democratic time-server. Pro-Baconians, like Basil Montagu, William Hepworth Dixon, and James Spedding, countered, in the mid-century, with biographical revaluations of Bacon which exonerated him of the most damaging charges.⁷⁹

One critic, the most widely read, controversial, and influential of all, had his cake and ate it too, by disparaging Bacon as a man, denigrating him as a philosopher, and then perversely exalting him in the highest terms as a towering wit and a patriarch of utility and progress. Thomas Babington

⁷⁸"Plato, Bacon, and Bentham," Quar. Rev. (London), LXI (1838), 500-505.

⁷⁹Montagu, The Life of Bacon [Bacon, Works, ed. Montagu, XVI] (London, 1834); Dixon, Personal History of Lord Bacon: From Unpublished Papers (London, 1861); Spedding, The Letters and the Life of Francis Bacon, 7 vols. (London, 1861-74). See "Dixon's Personal History of Lord Bacon," British Quar. Rev., XXXIII (1861), 391-418; same title, Edinburgh Rev., CXIII (1861), 309-344; "Bacon and His New Apologist," Dublin Univ. Mag., LVII (1861), 321-338; see also LXIV (1864), 361-374; Temple Bar, I (1860), 22-33; Samuel Rawson Gardiner, "On Four Letters from Lord Bacon to Christian IV. King of Denmark, etc." Archaeologia, XLI (1867), 219-269.

Macaulay's essay, couched as a review of Montagu's edition of Bacon, first appeared in the Edinburgh Review in 1837.⁸⁰ Macaulay's arguments were not new, but his stylistic elegance and polemical brilliance made it impossible to ignore them. Essentially, Macaulay puts forth three theses: that as a man Bacon was "the most obstinate champion of the foulest abuses"; that as a philosopher and a scientist he was totally derivative, trivial, and without consequence; but that nevertheless he was "the boldest and most useful of innovators" because he popularized the concept of utility.⁸¹ Bacon, in short, showed that "respectable"--i.e., Platonic and Aristotelian--learning was useless and he made truly useful learning respectable, thus paving the way to technological, scientific, economic, and social progress. Seneca, Macaulay relates, scoffed at the notion that philosophy should be useful, for if it were, a shoemaker must be a philosopher. "For our part," Macaulay retorts, "if we are forced to make our choice between the first shoemaker, and the author of the three books 'On Anger', we pronounce for the shoemaker. It may be worse to be angry than to be wet. But shoes have kept millions from being wet; and we doubt whether Seneca ever kept any body from

⁸⁰"Lord Bacon," Edinburgh Rev., LXV (July 1837), 1-104. The essay was partially reprinted in the Southern Lit. Messenger, IV (1838), 9-21, 73-79, 190-196, and appears in Macaulay's Works, Albany ed. (London, 1898), VIII, 496-647. Macaulay's essay is quoted, attacked, or otherwise cited in almost every subsequent book and article on Bacon in the nineteenth century.

⁸¹"Lord Bacon," pp. 39, 64-65.

being angry."⁸² Macaulay expressly denigrates one of the Romantics' favorite Baconianisms, the concept of the philosophia prima, which, he says, is a fanciful product of Bacon's overdeveloped "wit," or analogy-making faculty, and not the key to the unity of truth that de Gérando and others think it is.⁸³ Here, then, is the diametric opposite of the Romantic Platonic Bacon: it stresses not the mind's ascent to "light" but the descent to "fruit," not spiritual illumination but philanthropic technology.

Bacon as the illuminator of realms intellectual and spiritual, however, was acknowledged by those English and Continental writers most in vogue among the American Transcendentalists. Madame de Staël, for example, asserts that Bacon "knows how to generalize facts by philosophy" and, far from advocating sensationalism, admits the efficacy of "inspiration" in both spiritual matters and the general interpretation of nature. In his own day, she says, Bacon had to establish an empirical outlook to counter alchemists and other quacks, but if he had lived in the present age, "he would have felt the necessity of reanimating the internal source of moral beauty, and of incessantly reminding man that he exists in

⁸²P. 66.

⁸³Pp. 97-98.

himself, in his sentiment, and in his will."⁸⁴ De Gérando, similarly, stresses the philosophia prima as representing the potent unifying and progressive force of the human mind. The philosophia prima, he says, is a function not of nature but of mind;⁸⁵ thus, by Bacon's doctrine, mind creatively unifies all perceived objects. Bacon's inductive or "comparative" method, applied to the history of philosophy, will, as Madame de Staël suggested, generalize the facts and illuminate "la marche de l'esprit humain." Even Victor Cousin, advocate of "modern spiritualism" and "eclecticism," absolves Bacon himself, but not his influence, from the charge of sensualism. Cousin maintains that although Bacon's disciples (like Hobbes) extended his ideas into purely materialistic sensationalism, Bacon actually defended intellect and exalted innate human reason.⁸⁶ But Cousin associates Bacon rather with the senses as a humanizing influence, a "rich and varied instrument." This instrument confirms, by experience, those "universal and necessary principles" which, pace Locke, are "given" to

⁸⁴Germany, quoted in Cameron, The Transcendental Climate: New Resources for the Study of Emerson, Thoreau and Their Contemporaries (Hartford, 1963), I, 140. On Madame de Staël and Transcendentalism, see Girard, "Du transcendentalisme," pp. 413-419; Marjorie Hope Nicolson, "James Marsh and the Vermont Transcendentalists," PhR, XXXIV (1925), 29. On Goethe and Bacon, see Fischer, Francis Bacon of Verulam, pp. 505-508.

⁸⁵Histoire comparée des systèmes de philosophie . . . (Paris, 1822), I, xx. On de Gérando and Transcendentalism, see Girard, "Du transcendentalisme," pp. 447-456.

⁸⁶Course of the History of Modern Philosophy, trans. O.W. Wight, [2nd ed.] (New York, 1852), II, 80ff. See also I, 331ff., on Bacon's interest in method.

the mind as innate ideas.⁸⁷ The notion that the senses, by a Bacon-endorsed attention to facts, confirm innate knowledge will play a significant role in Transcendental thought.

Meyer Abrams points out that Bacon's Advancement of Learning played a major part in the formulation of the concept of the imagination among Romantic critics such as Hazlitt; they, like Emerson, seized upon Bacon's definition of poetry as an idealization of reality and upon his connection of poetry with the desires of the mind.⁸⁸ Among the Romantic poets themselves, the concept of Bacon as a Platonist is most in evidence. Shelley's remark that Bacon was a poet is well known, but William O. Scott has studied the matter further and concludes that while to the early materialistic Shelley, Bacon was the spokesman of revolutionary atheism, the later Shelley saw Bacon as a Platonist who eradicated intellectual error, perceived the unity of all knowledge, and advocated the study of "forms."⁸⁹

⁸⁷ Lectures on the True, the Beautiful, and the Good, trans. O. W. Wight (New York, 1854), pp. 34-35. Cousin contradicts himself on the question of whether Locke is a philosophical descendant of Bacon. In Course of the History, I, 83, Cousin says he is; but in Lectures, p. 29, Cousin claims that Locke owes more to Descartes than to Bacon. On Cousin's influence on the Transcendentalists, see Girard, "Du transcendentalisme," pp. 456-483.

⁸⁸ Abrams, Mirror, pp. 139, 142, 156.

⁸⁹ "Shelley's Admiration for Bacon," PMLA, LXXIII (1958), 228-236. Cf. Abrams, Mirror, p. 127. Bernhard Fehr links Keats and Bacon in "Keats' dichterische Glosse zu Francis Bacon," Englische Studien, LIV (1920), 326-328. Wordsworth occasionally mentions Bacon; see, for example, Poetical Works, ed. Ernest de Selincourt and Helen Darbishire (Oxford, 1940-49), III, 283. On Wordsworth's view of the relations of poetry and science, see II, 396-397.

However, the most elaborate and influential reading of Bacon among English Romantics is that of Samuel Taylor Coleridge. Coleridge's popularity among Transcendentalists and other liberal Protestants in the 1830's and 1840's has long been recognized;⁹⁰ it was not his poetry but his philosophical theology that most appealed to American minds at this time. Coleridge is the main Platonizer of Francis Bacon. In his desire to animate the "inanimate cold world" with intellectual and spiritual meaning, Coleridge stresses Bacon's interest in the mind as percipient, interpreter, and cooperative re-creator of the laws of nature and the ideas of God. Coleridge transfers Bacon's concept of man as creator of "new natures" in the physical world (i.e., in technology, "arts and commodities") to the intellectual world, wherein the mind actively studies external nature and, by an empathic and imaginative process, attributes spiritual meaning to nature. The attributive process Coleridge conceives of as method, and he invokes Bacon's recommendation of method in support of his own. In his *Metropolitana* essay on method, Coleridge asserts that "All things in us, and about us, are a Chaos, without Method: and so long as the mind is entirely passive, so long as there is an habitual submission of the Understanding to mere events and images, as such, without any attempt to classify and arrange them, so long the Chaos must continue."⁹¹ Coleridge defines method as

⁹⁰ See Girard, "Du transcendentalisme," pp. 404-411.

⁹¹ S. T. Coleridge's Treatise on Method as Published in the Encyclopædia Metropolitana, ed. Alice D. Snyder (London, 1934), p. 3.

"unity with progression" under the guidance of the mind. He identifies Bacon's idea of the lumen siccum, the dry light of the intellect, with Plato's nous, the "one universal form of GOOD and FAIR," thus making the Baconian intellect, when supported by method, capable of penetrating to the divine principle of spiritual unity underlying the apparent chaos of actuality.⁹² The study of phenomena, Coleridge insists, must progress to knowledge of laws; as Bacon said, experiments lead to axioms, to "light" as opposed to technological "fruit."⁹³ Proceeding with his reconciliation of Plato and Bacon, Coleridge points out that, far from teaching petty empiricism or mechanics, Bacon, like Plato, wanted to "concentrate" particulars "into universals," and thus Bacon's and Plato's methods are fundamentally identical. The role of the senses, Coleridge claims Bacon says, is to arrange and carry out the experiment, while the mind judges the results of the experiment.⁹⁴ Bacon's achievement, Coleridge concludes, "was, in truth, the completion of the Ideal System, by applying the same Method to external Nature which Plato had before applied to intellectual existence."⁹⁵

⁹²Pp. 9, 45.

⁹³Pp. 17, 20.

⁹⁴Pp. 40, 41, 43. This distorts Bacon's meaning, which is that because the senses are too fallible to judge facts accurately, the experiment intervenes; the experiment judges the facts while the senses judge the experiment. See BW, VIII, 44.

⁹⁵p. 51.

Most of this discussion, with other material, appears also in two of the volumes of Coleridge's theological and philosophical writings published in America about 1830 by James Marsh, his foremost American disciple, president of the University of Vermont, and an important influence on some early Transcendentalists.⁹⁶ The books, Aids to Reflection and The Friend, were so popular, especially among young divines, that the Harvard bookshop is said to have been unable to keep them in stock. By the time the Transcendental Club or Hedge's Club--it had as many names as members-- met in 1836, all of the participants had read Coleridge; Emerson had visited him as well.⁹⁷ Coleridge is, like Marsh, a theological conservative, a High Church Anglican. But, also like Marsh, he wishes to reinterpret traditional doctrine so as to purge it of its acquired deistic, Lockean, and mechanistic elements and to reaffirm its spiritual origin and import. It was Coleridge's emphasis upon the intuitive, the inward realization of faith, and the vision of nature as being made spiritually meaningful by a cooperative effort of the mind and

⁹⁶ See Nicolson, "James Marsh and the Vermont Transcendentalists"; John Dewey, "James Marsh and American Philosophy," JHI, II (1941), 131-150; Ronald Vale Wells, Three Christian Transcendentalists: James Marsh, Caleb Sprague Henry, Frederick Henry Hedge (New York, 1943). Marsh, though he adopted German "liberal" theologians such as Schelling and Jacobi and fought the influence of Locke, was himself a Congregationalist conservative, trained at Andover and Dartmouth; he was not receptive to the Emersonian brand of liberalism. On Coleridge's theological position, see Dillenberger, Protestant Thought, pp. 206-207.

⁹⁷ Nicolson, "James Marsh," pp. 29-30.

God that most attracted the American Transcendentalists, though they were really more interested in aids to action than to reflection; his establishmentarianism and dogmatism they could and did ignore.

"WE (that is, the human race) LIVE BY FAITH," Coleridge announces;⁹⁸ and he finds that faith is not (as de Maistre and others would claim) weakened but is fortified and rationalized by the philosophy of Bacon. Bacon himself saw that dogmatic theologians might choose to reinforce their position at his expense by interpreting as spiritual entities what he called forms, axioms, or laws of nature, to comprehend which is the aim of true science. He tried to close the loophole by explicitly denying that because the forms are providential they have existence separate from that of the matter which manifests them and that they are in any way spiritual or divine or cognates of the unknowable laws of the divine realm.⁹⁹ Coleridge, however, ignores this disclaimer and abstracts from Bacon's writings the following line of thought: Man seeks knowledge not of facts alone, which are chaotic and atomistic, but of laws. Only knowledge

⁹⁸Aids to Reflection, in the Formation of a Manly Character . . ., ed. James Marsh (Burlington, 1829), p. 313. The following discussion of Coleridge's concept of Bacon is based primarily upon Aids, p. 315-316, and upon The Friend: A Series of Essays, to Aid in the Formation of Fixed Principles in Politics, Morals, and Religion, [ed. Marsh] (Burlington, 1831), pp. 410-438. On Coleridge's concept of reason and understanding, see Aids, pp. 137ff., 306-321; Friend, pp. 130ff., 150n.

⁹⁹E.g., NO II:xviii, BW, VIII, 205-206; VI, 219-220.

of the laws governing facts can give man ease and power. Now laws are to nature what ideas are to the mind; ideas are mental correlatives of laws. Bacon, says Coleridge, defines an ideas as an "intuitio, sive inventio, quae in perceptione sensus non est, . . . idearum divinae mentis, prout in creaturis per signaturas suas sese patefaciant."¹⁰⁰ Thus, ideas in the mind can be stimulated by the study of natural laws because both are essentially spiritual: God implants laws in nature and ideas, as "signatures," in the mind. One knows laws of nature by induction, but here Coleridge takes a major step and apparently equates Baconian induction with intuition, so that one "inductively" learns a law (i.e., acquires an idea) by a leap from fact to principle (one perceives the fact and intuits or inducts the principle).¹⁰¹ Inductive reasoning does not require that a law be derived from phenomena but, because the law is constitutive rather than merely regulative of the phenomena, that the law be perceived in or suggested by the phenomena. The fact does not control the law but exists only as a consequence of the law's existence. Induction is therefore a quasi-intuitive process beyond mere enumerating and generalizing; it enables the mind to perceive the connection between the actual and the ideal. Instead of the linear concept of a hierarchical reality, with

¹⁰⁰Cf. S. T. Coleridge's Treatise, p. 46. My ellipsis; Coleridge's italics.

¹⁰¹Cf. A. Robert Caponigri, "Brownson and Emerson: Nature and History," NEQ, XVIII (1945), 372-373.

nothingness at the bottom, God at the top, and man in the middle, Coleridge uses Bacon's philosophy to support a Romantic organic concept of reality as patterned radially around a common center--the knowing mind. The mind organizes and "half-creates" reality by acts of perception which, by induction-intuition, lead to the implanting of an idea in the mind and so to a radical union of subject and object. As man conducts his "scientific," Baconian study of nature, he constructs his world within and around him; without this active discovery of laws, man can believe only that he lives amid atomistic chaos. Coleridge introduces here the concept of method from the *Metropolitana*: in seeking the unity of laws and ideas and the consciousness of eternity, man must have a method. As Bacon said, only a method can insure the fruitful union of mind and nature. Method is a "principle of unity with progression"; the progression is from facts to ideas, from sense to spirit, and the unity is, as Plato said, that of nature and "the Eternal Essence." Though the inductive method operates initially upon objective facts perceived by the senses, it does not rest in them. The Enlightenment materialists were entirely right: man is a rational creature, Coleridge says. However, the faculty of reason which renders him such is not the same as the materialists' version of reason: their "reason" is in fact the much inferior faculty of understanding, subject to the senses, open to error, and limited to the natural world. The understanding can know only material things, but the reason can know laws and ideas;

therefore, because man is rational, his reason, which Coleridge calls the "scientific" faculty, links him with God by perceiving eternal truth. The understanding alone does not confer free will upon man, because it depends upon what the physical world gives it; only reason makes man free, able to judge truth and to formulate plans for the future. The only difference between Plato and Bacon on this matter is that Plato concentrates on truths known through the intellectual world while Bacon concentrates on those known through the sensible world.¹⁰² Both advocate the use of reason. Science, if it employs the reason instead of the understanding, a distinction Coleridge claims Bacon himself made,¹⁰³ produces knowledge of final causes, though it does not directly study final causes. This is true because the nexus effectivus, the unifying and motivating power of an object, also originates or exists in the mind as a unifying faculty, and is not, as Coleridge says Locke contended, an abstraction derived solely from the object alone or from a combination or comparison of objects. So a unified concept of a natural object is generated in the mind by the use of a "scientific" or "inductive" method which is a reenactment of God's purpose in

¹⁰²Cf. S. T. Coleridge's Treatise, pp. 41-47, 51. The linking of the names of Bacon and Plato, as Professor Cochrane points out ("Bacon in Early Eighteenth-Century English Literature," pp. 72-78) began as early as 1672. But it was not until the early nineteenth century that their philosophies were seriously compared.

¹⁰³Aids, p. 136.

creating the object. Nature, therefore, symbolizes eternity, and to study nature is ultimately to discover final causes, God's eternal purposes. And man's philosophy, to conform to this scheme, must be objective, taking account of the true nature of reality and studying it as it is, carefully and without hasty abstraction and scholastic web-spinning. The objective world so approached actualizes man's spiritual potentialities and yields knowledge of man's highest spiritual relations. Coleridge insists upon the Platonic or "realistic" notion that the laws of nature have supernatural origins,¹⁰⁴ but without denying any other of Bacon's premises--that man is rational but misguided, that method is necessary, that facts and not words are to be contemplated, that nature is divinely ordered, that science is a pursuit of truth according to God's will and reinforces faith, that objectivity is preferable to anthropomorphism--Coleridge has turned Bacon to religious purposes, making him an authentic Christian Platonist, one of the very few in history, Coleridge declares, and establishing on grounds rather different from those of Natural Theology that one need not cast off Bacon in seeking inspiration and faith.

¹⁰⁴ Strictly speaking, Bacon is neither a "nominalist" nor a "realist." He believes neither that general categories, forms, or laws have an independent existence in this or in the next world, nor that the forms and categories are mental principles. Instead, he believes that the forms are objectively real but are inseparable from the objects that manifest them. Bacon differs from previous philosophers partly because he does not separate objective facts from "causes." The cause exists, but it exists in the fact and nowhere else. It is this location of cause or form within the experienced object that will encourage Thoreau, for one, to believe that experience of natural objects puts one in touch with the divine cause.

IV. The Instauration of Spirit, 1:
 "The Sphinx": Bacon, Emerson,
 and Thoreau on Knowledge.

William Girard has called Transcendentalism a kind of Puritan Romanticism.¹ If the Transcendentalists' Romanticism lies in their individualistic, anti-dogmatic quest for a spiritual reality, their Puritanism may perhaps coincide with their desire for a spiritually fruitful mode of living in the material world, a way of obeying the laws of man and nature without forfeiting allegiance to a higher realm. Such writings as the "Higher Laws" chapter in Walden could give the impression that the conflict is between body and spirit, so that the higher allegiance necessitates asceticism. But a more truly "Puritan" outlook is that described by Bacon's friend John Downname, who, as we have seen, insisted that the enemy of man's soul is not his body but his "flesh." The body, Downname said, is created good by God, but the flesh, corrupted by the Fall, is evil; the flesh consists of all those impulses, intellectual, moral, and emotional as well as sensual, which obstruct the spirit and cooperate with the Devil. Downname claimed Bacon's patronage in the reclamation of the body, and hence of nature, which supports the body, from the curse of the Fall. Indeed, the concept of the flesh is particularly congenial to Bacon, especially in its secular corollary, which Downname made explicit: those elements in the human constitution which produce the idols of the mind and seduce the mind

¹"Du transcendentalisme," p. 353.

from truth, from the higher axioms and the laws which God has ordained to regulate nature, are, to Bacon, the flesh.

The Transcendentalists, almost to a man, also accept this flesh-body distinction, and therein lies a significant feature of their Baconianism. They do not want to give up the world but to purify it. They, too, believe that the body is good by creation and that physical actuality alone does not becloud man's vision of the divine but rather a combination of physical and intellectual errors. As George Ripley writes,

It is a most pernicious mistake, which leads men to suppose, that they must give up the interests of this world in order to prepare for another, instead of making their preparation for another, to consist in a faithful discharge of all the claims and trusts of this. . . . Our Maker . . . has surrounded us with objects, addressed to the senses, on a proper use of which, the religious improvement of life essentially depends. It is our duty, as immortal beings, not to neglect the present. It is our duty to obtain a wise acquaintance with its necessities . . . and not to become so absorbed in the contemplation of the Invisible as to lose sight of the important realities before [our] eyes.²

It is, once again, the voice of Ecclesiastes.

Thoreau especially illustrates this desire to accept and exalt the body and the senses as the temple of God. To be sure, Thoreau frequently finds the idealistic or Platonic hypothesis described by Emerson in Nature most attractive, but his most typical stance is one of disparaging not nature

²Discourses on the Philosophy of Religion, Addressed to Doubters Who Wish to Believe (Boston, 1836), p. 12.

but an exclusive concern with that use of nature which Emerson called "commodity." How Thoreau can at once condemn affluent materialism and exalt the body is a question perhaps best answered by E. M. Forster, who speaks of "the old, old trouble that eats the heart out of every civilization: snobbery, the desire for possessions, creditable appendages; and it is to escape this, rather than the lusts of the flesh that saints retreat to the Himalayas."³ Or, it may be, to Walden, Fruitlands, and Brook Farm. For Bacon, orthodox religion provided a secure haven; he could accept the physical world without fear of losing the eternal. But the ecclesiastical haven is obliterated for the Transcendentalists, and so, as they seek a new religious outlook, there is a tension between the body and the flesh as well as between the flesh and the spirit. The Transcendentalists never completely resolve the apparent tension between the downward and the upward tendencies in the world of the body; they are not always sure whether to go to heaven or a-fishing, though they hope to go a-fishing and discover heaven on the way.

In Emerson and Thoreau, this tension often takes the form of a concern with kinds of knowledge and the problem of whether physical or sensational experience can lead to knowledge of the higher reality. This problem is, as we have seen, one of the fundamental issues in the Unitarian-Transcendentalist controversy. One element common to Bacon, Emerson, and

³ A Passage to India, ch. xxvi.

and Thoreau is an interest in the myth of the Sphinx as a metaphor of the relationship of man and knowledge. A comparative analysis of their treatments of the Sphinx--Bacon's allegory, Emerson's poem, and Thoreau's explication of Emerson's poem--will shed substantial light upon the debt of the Transcendentalists to Francis Bacon and upon the modes of Baconianism characteristic of them.

Bacon's treatment of the Sphinx myth appears in The Wisdom of the Ancients, in company with some thirty other brief allegorical explications of classical myths. Charles Lemmi, in his exhaustive study of contemporary sources and analogues of Bacon's allegories, concludes that Bacon owed much to traditional interpretations of the myths and contributed little of his own.⁴ However, in his handling of "Sphinx, sive Scientia," Bacon has clearly appropriated Oedipus' feat for the Instauration of the Sciences.

The story Bacon tells consists of the monstrous Sphinx' terrorizing Thebes and Oedipus' answering the Sphinx' riddle (what is it that goes first on all fours, then on two feet, then three, finally four--again?--the answer is "man"), slaying the Sphinx, and receiving sovereignty over the rescued city (BW, XIII, 159-162). Bacon interprets it thus: the Sphinx is science, or knowledge, "especially in its application to practical life." Science is monstrous (i.e., marvelous) in the eyes of the ignorant; many-shaped in the

⁴The Classic Deities in Bacon, pp. 146-147, 210-211. Lemmi discusses "Sphinx" on pp. 141-145.

variety of learning it encompasses; womanly in its beauty and "facility of utterance"; winged in its rapidity of diffusion; and sharp-clawed in the hold it takes upon the mind. As the Sphinx inhabits a mountain, so knowledge claims a lofty vantage-point above ignorance; as the Sphinx torments passers-by, so knowledge makes constant demands on men's minds. The Sphinx' riddles come from the Muses but, while with the Muses, are not cruel and dangerous; likewise, philosophical questions are benign and harmless when they are restricted to abstract speculation. But, as the riddles become lethal when asked by the Sphinx, so do questions of truth, when applied to actual practice and the conduct of life, torture the mind and threaten destruction. As the Sphinx offers "laceration of mind" for failure to answer her riddle and "a kingdom" for success, so "he who understands his subject is master of his end. . . ." The Sphinx asks two kinds of questions (says Bacon, though he does not give an example of the first kind): concerning things, and concerning man, the answer to each kind conferring mastery over its subject. Unlike scholastic philosophy (Bacon misses no opportunity to lambaste the School), which ignores "realities and works," the aim of "true natural philosophy" is "command over things natural." Oedipus' riddle, however, is about man and involves understanding of human nature; Oedipus becomes a king in the way that anyone who knows human nature gains authority over men and "may shape his fortune almost as he will." Bacon cites Augustus

Caesar as an example; Augustus, "happily," used a sphinx on his seal. As the dead Sphinx is carried off on the back of an ass, so may any branch of learning, once it has been explored and taught, be understood by "even a dull wit." ~ And as for Oedipus' lameness, this illustrates the necessity of deliberateness and caution in learning, for haste turns men's minds away from "works and effects" and toward fruitless disputations.

For Bacon, then, the Sphinx is knowledge, conceived of as outside man's mind, waiting to be conquered and assimilated. In truly mythic fashion, to defeat the Sphinx is to acquire her attributes, and to master knowledge is to gain that mastery over things, affairs, and men which ignorance denies. As in his discussion of mutability, Bacon sees fate or fortune as a function of ignorance, free will or choice as a function of knowledge. If man is ignorant, the world rules him, but if he acquires knowledge, he can create his own world out of the materials provided by God. In the fearful chaos of things perceived by the ignorant, the knowing mind can discover a real meaning, and the knowledge of meaning makes things comprehensible, manageable, and whole. Placed in a world of seemingly uncontrollable particulars, man is able by an effort of intellect and will to gain control by discovering the laws governing things and governing himself. And such knowledge is practical knowledge; the control is useful control, which, in Bacon's scale of values, transcends merely abstract, speculative, and metaphysical understanding and confers real benefits in the

living of life. The fable tells Bacon that freedom of will and ease of mind are products of knowledge of truth, which integrates humanity into a divinely planned, rationally designed universe. Though Bacon here speaks of worldly rather than divine wisdom and elsewhere amply elucidates his disbelief in the possibility of ultimate knowledge of God's essence (e.g., BW, VI, 207-214), yet within the limits of Bacon's Sphinx allegory, man's search for knowledge is successful in a way that does make him sovereign and hence god-like. If man is a god in ruins, the ruins are reparable by man himself.

Emerson's poem, "The Sphinx," first appeared in the Dial of January, 1841, in a slightly different version from the standard one preserved in the volumes of collected poems.⁵ It was enigmatic from the start, thus differing from most of the lucidly affirmative Transcendental poetry which appeared in the Dial at this time.⁶ Emerson does not seem to have consulted The Wisdom of the Ancients in writing the poem, though he was certainly familiar with it before 1841. But there is some reason to believe that Emerson's brief and perplexing explication of "The Sphinx" which he wrote in his notebook in 1859 and which Edward Emerson quoted in his notes to his father's poetry (EW, IX, 412), does owe something to Bacon's

⁵Dial, I, 348-350. See EW, IX, 20-25, 411-413.

⁶See Helen Hennessy, "The Dial: Its Poetry and Poetic Criticism," NEQ, XXXI (1958), 66-87.

"Sphinx." As Kenneth Walter Cameron notes, Emerson had before made extensive use of The Wisdom of the Ancients. For example, in his 1835 lecture on "The Age of Fable," Emerson inserted almost verbatim Bacon's allegory on Prometheus from a translation in an 1802-1803 edition of Bacon's works edited by Peter Shaw; Emerson's own 1824 edition did not contain a translation but only the Latin original, which Emerson could, of course, read but does not quote.⁷ In 1857, Cameron records also, Emerson withdrew from the Boston Athenaeum one volume, not containing Wisdom, of the new Spedding, Ellis, and Heath edition of Bacon's writings.⁸ It is surely possible that he perused the other volumes of the Spedding edition at this time and saw in Bacon's "Sphinx" a suggestion or two concerning what he had intended in his poem on that subject. A number of verbal similarities suggest that a brief look at the allegory in the Spedding translation may have stimulated Emerson to comment upon the old poem which had given everyone so much trouble. As Bacon writes,

⁷Cameron, A Commentary on Emerson's Early Lectures (1833-1836) with an Index-Concordance (Hartford, 1961), pp. 86-89; EL, I, 253-268; Vivian C. Hopkins, "Emerson and Bacon," AL, XXIX (1958), 410. In 1834, Emerson wrote that Bacon had done the most "to read the riddle of the ancient mythology"; see EM, IV, 375.

⁸Seven vols., London, 1856-57. See Cameron, Ralph Waldo Emerson's Reading: A Corrected Edition (Hartford, 1962), pp. 30, 55.

[Science] is represented as many-shaped, in allusion to the immense variety of matter with which it deals. It is said to have the face and voice of a woman, in respect of its beauty and facility of utterance. . . . Sphinx proposes to men a variety of hard questions. . . . unless they be solved and disposed of, they strangely torment and worry the mind, pulling it first this way and then that, and fairly tearing it to pieces. . . .distraction and laceration if you fail to solve them. . . . (BW, XIII, 160-161; my italics)

And Emerson,

I have often been asked the meaning of the "Sphinx." It is this, --The perception of identity unites all things and explains one by another, and the most rare and strange is equally facile as the most common. But if the mind live only in particulars, and see only differences (wanting the power to see the whole--all in each), then the world addresses to this mind a question it cannot answer, and each new fact tears it in pieces, and it is vanquished by the distracting variety. (EW, IX, 412; my italics)

Bacon's Sphinx is "science" while Emerson's seems to be "the world," at least in this hasty comment. But, as we shall see, the Sphinx in the poem itself is not the world but is much closer to Bacon's "science." In any case, whether or not this newly-translated version of Bacon's allegory was actually in Emerson's hands, Emerson's thesis in the comment is quite similar to Bacon's: for both, man is unwillingly tormented by a lack of knowledge, denied both free will and integration with the underlying scheme of things by ignorance or a defect in vision. Both Bacon and Emerson seek, as a solution, knowledge of the laws governing particulars; like Emerson, Bacon too is after a "perception of identity," a unifying generalization which will explain the chaotic variety

of experience and subdue it to the mind, rendering easy to comprehend and to master, seemingly "rare and strange" natural, social, and moral phenomena.

Emerson's "Baconian" concern with knowledge (though in Emerson's case it is perfect knowledge or knowledge of the supreme truth) characterizes not only the 1859 comment but also the 1841 poem. "The Sphinx" has been one of Emerson's most enigmatic poems, but most critical analyses have fallen into one of two general categories: those which interpret the Poet's answer as satisfactory to the Sphinx and demonstrating therefore Emerson's optimism about the harmony of man, nature, and God; and those which see the poet's answer as somehow incorrect, demonstrating an Emersonian version of Manichaean pessimism about the possibility of man's knowing supreme truth. Among the critics in the former category is Emerson's biographer Ralph L. Rusk, who equates the Sphinx with "man's inquiring spirit" which, in the Sphinx' transformations at the end of the poem, is shown to be identical with physical reality. The poet, through love, supplies what Emerson calls the "perception of identity" which frees man from illusion and affirms the universal harmony man can see in nature.⁹ Leading the opposition is Thomas R. Whitaker, who points out that Professor Rusk has ignored the Sphinx' negative response to the Poet's assertions.¹⁰ The Sphinx wins, the Poet, unlike Oedipus,

⁹Rusk, The Life of Ralph Waldo Emerson (New York, 1949), pp. 312-314.

¹⁰"The Riddle of Emerson's 'Sphinx'," AL, XXVII (1955), 179-195.

loses. The Sphinx is not man's inquiring spirit but "the One," the Infinite, the perfect truth which man seeks. The poem, Whitaker says, "dramatizes, not a superficial Emersonian optimism, but an ultimate skepticism concerning man's ability to comprehend the Infinite."¹¹ Still, despite this skepticism, the poem leads "paradoxically to an infinite affirmation," in the typical Emersonian pattern of conceptual movement from skepticism to an ambiguous but real affirmation.¹² The ambiguity, as Emerson elsewhere explains, is a function of the nature of man's mind: the Reason, the faculty that knows spiritual truth, operates symbolically, as the Sphinx' transformations are symbolic of the unity of all things.¹³ But if divine truth is to be brought down to the level of the mundane, sense-oriented Understanding, it will have to be stated explicitly, without symbolism, and will therefore appear paradoxical, as in the Sphinx' direct utterances.¹⁴ Though the universe is whole, man is divided, and it is the internal dichotomy which occasions the Poet's error and allows the Sphinx to escape.

Whitaker's analysis, I believe, is basically accurate, especially in its emphasis upon the Poet's inability to satisfy the Sphinx and in its discussion of Emersonian

¹¹ Whitaker, p. 182.

¹² Whitaker, p. 186.

¹³ Whitaker, p. 192.

¹⁴ Whitaker, p. 192.

ambiguity-within-certainty. Yet a further dimension may appear in the poem if we apply to it the Baconian concepts of practical knowledge and free will which Emerson suggested in his 1859 note. If the Sphinx is the One, perfect truth, it is also perfect knowledge: as Bacon said, in one of Emerson's favorite metaphors, knowing is the image of being as the globe of crystal duplicates the globe of matter (BW, VI, 125; cf. EW, V, 117, 122), and to master perfect truth is to obtain supreme knowledge. The kind of truth Bacon treats in his allegory, as I have said, is not ultimate or religious truth but partial, practical truth, and so his concept of knowledge (in this instance) is partial knowledge. Emerson is also concerned with practical truth--how to live so as to integrate actions and principles--which, to him, is an aspect or corollary of ultimate or perfect truth,¹⁵ and so, in his poem, he

¹⁵Letters from Ralph Waldo Emerson to a Friend [Samuel G. Ward], 1838-1853, ed. Charles Eliot Norton (Boston, 1899), p. 36: Emerson calls for an awareness of the "angle of practice" to unite thought and will. See also EW, I, 348 ("The Transcendentalist"): "Genius is the power to labor better. . . ."

treats perfect knowledge as the Sphinx and inquires whether such knowledge is available to man in the world of time and nature.¹⁶

Like Bacon's "science," Emerson's Sphinx awaits someone to master her and put her to human use. The perfect knowledge the Sphinx represents would answer the question of the "meaning of man" and resolve the contraries and alternations (sleeping and waking, life and death) that characterize human existence. As in Bacon, man is the central figure in Emerson's

¹⁶ Elsewhere in his writings, Emerson is not consistent in his use of the Sphinx as a symbol. In Nature (EW, I, 34), for example, he asserts that nature is a language which speaks "higher laws" and is understood by such men as Plato, Pythagoras, Bacon, and Swedenborg: "There sits the Sphinx at the road-side, and from age to age, as each prophet comes by, he tries his fortune at reading her riddle." The Sphinx here symbolizes nature. But in "History" (EW, II, 4), Emerson uses the Sphinx to symbolize the universal human mind of which all individual minds are expressions: "This mind wrote history, and this must read it. The Sphinx must solve her own riddle." It is consequently difficult to assign a meaning to the Sphinx in the poem on the basis of Emerson's statements outside the poem. Perhaps, in the 1859 note, "the world" is not the Sphinx but is the "great mother" of line 57, and the Sphinx is instead the "perception of identity" which, of course, is essentially the same as perfect knowledge. That the Sphinx in the poem is not nature or the world is suggested by line 4: "She broods on the world"; for to assert that the world broods on the world is perhaps too ineffable for even Emersonian paradox. In addition, the Sphinx, in her transformations, passes into nature. Emerson's "principle of identity," perhaps, carried to its limit, means that everything can be seen to be everything else, but the application of this doctrine in this form to the poem might create more obscurity than it would clarify. It is interesting to note that Emerson's "universal mind" is similar to Bacon's prima philosophia, a concept Emerson much admired. See EM, V, 50; Cameron, Emerson the Essayist (Raleigh, N. C., 1945), I, 191-194; Hopkins, "Emerson and Bacon," p. 413.

scheme; man is "known" but, like all creation, is a product of "the unknown," of that ultimate reality of which the Sphinx is the "secret" or perfect knowledge. "The meaning of man" is the Sphinx' secret; to discover this meaning is to thread the Dædelian labyrinth, to unite the known and the unknown. Bacon said that inductive knowledge is that which proceeds from the known, facts, to the unknown, laws (NO I:c-cvii, BW, VIII, 135-139);¹⁷ Emerson apparently wishes to move in the same direction. Except for man, all of creation "knows" the meaning of its existence. Nature is internally perfect, unconsciously yet purposefully fulfilling its part. The animals are "undaunted," "calm," "beautiful"; the waves and trees are "erect" and "unashamed." The atoms move confidently as the Newtonian universe rolls on serenely, totally integrated and perfectly assured, "enchanted" by "one music" and guided by "one deity," each part serving and "adorning" the others. Even the human infant, not yet conscious of contrarities and mysteries, is content and perfectly "knowing"; the infant, the "sum of the world," is thus beyond time and space while existing in them, counting no hours and measuring no dimensions..

Only adult man is out of step. He lacks the infant's perfect knowledge, wants consciousness of his role in the

¹⁷ See Wilson O. Clough, The Necessary Earth: Nature and Solitude in American Literature (Austin, Texas, 1964), pp. 102-105, for a discussion of Nature as advocating a Lockean progression from sense-data to laws.

divine scheme; and this ignorance makes him an "oaf," guilty of moral evil. Man moves badly, unlike the palm, the thrush, and the atoms ("crouches," "infirm," "creepeth"; cf. the lame Oedipus); suffers from unpleasant affections, unlike the elephant and the waves ("blushes," "melancholy," "jealous") and from cloudy vision, unlike the baby ("conceals," "peepeth," "glancing around"); and perpetrates crimes ("absconds," "palters," "steals," "accomplice," "poisons the ground"). He sees no peace, hears no music. The Sphinx transmits nature's outcry: man is at war with himself and with all creation. Nature is "the great mother"; man is the "fruit of the unknown," and therefore his "great mother," nature, is also "the unknown." That is, the unknown, to man, is nature's and his own divine aspect, knowledge of which (the Sphinx) would free him from his present torment (as, in Bacon's allegory, knowledge sets man free) but now eludes him. Man's head is turned; he does not perceive the divine meaning of creation.

The Poet's answer, like that of Oedipus, is "man"--the nature of man conditions his access to universal truth; the only knowledge available to man, he says, is the knowledge that man cannot have perfect knowledge, and the search for truth is the only accessible truth. Man is self-contained and limited, the Poet insists, and is cut off from the heavenly knowledge he seeks; therefore his creeping and peeping are not reprehensible but inevitable and even "pleasant." The Poet, it seems, is both an idealist and a dualist. Man, he says, loves not the world around him but "the Best."

If man falls into a pit, it is only because he has been lured there by rays from Heaven. Man's "soul sees" but cannot reach "the perfect," a spiritual reality for which he eternally searches. This spiritual reality transcends the phenomenal world in which man is confined; spirit, the Poet believes, is utterly beyond man's grasp. Man's eyes, his senses, "seek in vain" for the Best. Nature is only an imprisoning illusion, a "Lethe" which threatens to "trance" the man who fails to acknowledge the higher and inaccessible reality. For the searching man, there is "no goal" to be attained; he chases an ever-receding heaven which teases and taunts his "vision profounder." Therefore, man's highest morality is to admit his inadequacy. "Shame" and "remorse" are man's best affections; and love must be directed not at earthly but at distant heavenly objects. The "strong pulses" of this Platonic love-of-the-ideal spur man ceaselessly on to an ever-withdrawing horizon. The Poet is something like the Platonic-Idealist version of Emerson promulgated by J. G. Harrison and others, affirming intelligible, if inaccessible, realities beyond illusory sensible ones.¹⁸

¹⁸See John S. Harrison, The Teachers of Emerson (New York, 1910); Stuart Gerry Brown, "Emerson's Platonism," NEQ, XVIII (1945), 325-345; Walter Blair and Clarence Faust, "Emerson's Literary Method," MP, XLII (1944), 79-95; Joel Porte, "Nature as Symbol: Emerson's Noble Doubt," NEQ, XXXVII (1964), 453-476. Porte is the latest in a long line of Emerson-baiters, beginning, perhaps, with Melville in The Confidence Man, who see Emerson as a cold fish. For an early view of Transcendentalism as "utilitarian" rather than Platonist see Harold C. Goddard, Studies in New England Transcendentalism (New York, 1908), esp. pp. 187-190.

The Poet's version of man, then, is a compromised one. The Poet sees a dual reality whose poles are magnetically drawn to one another but are actually irreconcilable. On the one hand, there is material nature, the world of the "five wits," of "eyes," of pain and pleasure, of Lethe. Man is confined to nature but yearns for the perfect, which is not to be found in nature. Any seeming perfection man does find in nature, once discovered, immediately reveals its inadequacy and sends man again on his way. The Poet is also a species of optimistic Manichæan; he both affirms a spiritual reality transcending the natural and denies man's capacity for knowing it. Implicitly, the Poet's answer is that man can find perfect knowledge only in death, for only death can free him from nature and time. Hence, the Poet's answer is "man" in the sense that he envisions the human situation as limiting and enveloping, as the ultimate reality of which man can have any knowledge. Man knows only man. Man's humanness is the answer to the question of whether perfect knowledge is obtainable, and man must be content--indeed, happy--with his imperfection and his yearning. To the Poet, the known and the unknown are forever separate. That the Poet is an idealist is further suggested by his accusing the Sphinx of being a materialist or a sensualist. She presents, he claims, "pictures of time," not of eternity; she is limited to "five wits," the five senses; her "sight is growing blear," thus compounding the inherent blindness of "eyes" to spiritual truth. The Poet does not recognize the Sphinx; he does

not know who she is. She urges a goal, whereas he envisions "no goal"; therefore, to him she represents attainable knowledge. But the only attainable knowledge being, as he says, the illusory trance of nature's Lethe, with this he identifies her. So he accuses her of foisting partial and worldly knowledge upon man, who must endlessly reject all such obtainable ends and carry on with the quest for the ideal. In a striking inversion of the myth, Emerson's Oedipus not only fails to master his Sphinx but rejects her outright as an imposter. He wants to master nothing masterable, to rule no local Thebes.

The Sphinx, in response, herself accuses the Poet of what he has accused her of, a total commitment to time. "Time," she says, "is the false reply" to her question. Her point is reminiscent, though she stands on different grounds, of Francis Bowen's critique of Kant's supposed idealism as "infidelity":¹⁹ The Platonist Poet, in asserting that heaven is to be seen but not touched, that perfect knowledge is unavailable except in a sphere denied to mortal man, makes man, in effect, material, cuts him off from the highest reality, which (here Bowen and the Sphinx diverge), far from being remote and abstract, informs and animates all actuality (designs, not animates, Bowen would say). A form of perfect knowledge is attainable by man, the Sphinx suggests, for the

¹⁹ See above, p. 172.

spiritual and the phenomenal worlds are one, united both by the divine-in-nature--the Sphinx' transformations--and by man himself, the "clothed eternity": the infinite is not remote but is the very core of man's existence. Perfect knowledge, and not merely the love of a remote knowledge, is man's motivating principle.

I am thy spirit, yoke-fellow,
Of thine eye I am eyebeam.

Spiritualistic dualism is inadequate because it denies that God can be in man, whereas it is God-in-man that makes man seek God. That is why the Poet's search is endless, because he has failed to realize that man carries the answer within him--"Thou art the unanswered question"--and if he looks for truth, even in divinely-animated nature, without being conscious of the divine truth within, "each answer" will be "a lie." The Poet has insisted that man the seeker is not at fault but lives in an impossibly disintegrated universe where his goal is beyond reach. But the Sphinx replies that man and perfect knowledge are one, yoke-fellows in an integrated universe maintained at every point by the divine spirit.²⁰ Man unites flesh and spirit instead of being divorced from spirit and from the knowledge thereof. Her answer, too, is "man," not man chained in an ever-rolling orbit but man liberated by knowledge of his essential identity (Emerson's "all in each")

²⁰Cf. Caponigri, "Brownson and Emerson" pp. 374-375.

with nature and with spirit. The poet has complained that nature--the cloud, the flame, the wave, Monadnoc--is illusory; but the Sphinx, perfect knowledge, reveals herself totally in each phenomenon. And so nature is not appearance but reality and to understand any part is to master the whole (hence Emerson's impatience with the Baconian notion of method, which requires many particulars where Emerson believes one, by "analogy," will do; EW, V, 239).

The point of the poem, then, is that knowledge of supreme truth is possible to man in and through nature, including his own nature, because man joins matter and spirit, time and eternity. In view of the treatment accorded the Poet, the poem might almost be termed Emerson's critique of Platonism, or perhaps of neo-Platonism, if one accept Ray Benoit's suggestion that both Plato and Emerson believed neither in matter alone nor in spirit alone but in some third realm or substance which harmonizes the two.²¹ Certainly, Emerson denies dualism--spirit and matter are not irreconcilable principles--but he espouses neither a spiritualistic monism nor a materialistic monism. Emerson, the poem demonstrates, could not reject the claims of material nature any more than those of divine spirit. The "ultimate ambiguity" in Emerson's art, however he may have rationalized it in terms of a Coleridgean reason-understanding or a symbolism-exposition

²¹"Emerson and Plato: The Fire's Center," AL, XXXIV (1963), 487-498.

dichotomy, is precisely this area in which matter and spirit jostle and strive for a pre-eminence which Emerson was unable to grant to either. The prophet of the Oversoul and the Baconian naturalist withdrawing from pure idealism, as in the last sections of Nature--both are characteristic postures for Emerson, as they were, in varying degrees, for all of the Transcendentalists. We are brought back here to Bacon's vision of the human race, in a divinely-ordered universe of things and laws, liberated from ignorant necessity and appointed God's agent by knowledge intellectual, moral, and spiritual; knowledge of man himself and, guided by experience, of nature;²² knowledge brought down from orbits of abstraction into the "useful" and "practical" world of tangible realities--the cloud, the mountain, and the flame. It is the acknowledgement of the inescapable claims of these tangible realities that unites Bacon and Emerson. Emerson adopts Bacon's enthusiasm for the study of objective reality but goes a step beyond Bacon. Whereas Bacon reserved spiritual knowledge for revelation and "divinity," Emerson, taking his cue from Coleridge (and, to be sure, from the Orientals as well), transfers such knowledge to the realm of nature and makes it available in ordinary human experience. He thus affirms that the knowledge advocated by Bacon--knowledge of the created universe--is perfect knowledge and affords man

²²See Ralph L. Rusk, "Emerson and the Stream of Experience," CE, XIV (1953), 373-379.

a vision of the infinite.

Despite a sincere effort not to do so, Thoreau, as we shall see, arrives at much the same conclusion as Emerson concerning the riddle of the Sphinx. Hardly a month after the appearance of the January, 1841, Dial, Thoreau had studied Emerson's poem carefully and had entered an extensive analysis of it in his journal, where the Sphinx myth and its Baconian affiliation with the problem of human knowledge underwent further Transcendental permutations. At the end of the entry (for March 7-10, 1841), Thoreau appends a comment with which it may be profitable to begin this discussion of his explication: "You may find this as enigmatical as the Sphinx' riddle. Indeed, I doubt if she could solve it herself" (TJ, I, 237). Thoreau's disclaimer is accurate; his explication, as Byron might put it, is in need of explication, for instead of attempting to provide a consistent overall or summary interpretation of the poem's theme supported by detailed analysis, Thoreau proceeds stanza by stanza to deliver what amounts to his own version of the materials Emerson has graciously supplied: Sphinx, poet, nature. Hence, Thoreau's self-indulgent criticism is less useful as a gloss on Emerson than as a revelation of Thoreau himself, of his attitudes and concerns in this early period of his life. Moreover, because his interpretation is sequential rather than cumulative or summary, it encourages in Thoreau a certain lack of consistency and provides a free field for contradictory notions which various parts of the poem have stimulated or called forth in his mind.

I have contended that Emerson's Poet is an idealist. Thoreau also sees the Poet as an idealist; furthermore, he identifies himself with the Poet and thus takes the opportunity to express his own idealistic and spiritualistic concepts. In fact, in this early journal, Thoreau very seldom takes an idealistic or Platonic position; his essay on "The Sphinx" is actually the first extended and significant expression of idealism to appear in the journal. Thus, Emerson seems to have given Thoreau, in this poem, a "safety-valve" for certain spiritualistic pressures which may have been present in Thoreau's mind at this time.²³ The contradictions of which I spoke occur chiefly in the striking juxtaposition of an assertive idealism, reminiscent of the section "Idealism" in Emerson's Nature, which denies the value or reality of the natural world, and of a more characteristically Thoreauvian "naturalism" (but not materialism) which locates all value, including divine truth and knowledge, in nature rather than in a supernatural or an ideal realm.

The distribution of commentary based upon each of these conflicting views is very clear, if lop-sided: stanzas 1-2 and 9-17 of Emerson's poem elicit idealism while stanzas 3-8 elicit Thoreau's characteristic version of naturalism. The "idealistic" Thoreau is not entirely absent from the journal

²³See Sherman Paul, The Shores of America: Thoreau's Inward Exploration (Urbana, Ill., 1958), pp. 90-138.

in this period, but appears in such statements as these:

"If we see the reality in things, of what moment is the superficial and apparent? Take the earth and all the interests it has known,--what are they beside one deep surmise that pierces and scatters them? . . . not worth a tinker's damn" (TJ, I, 78). "The unconsciousness of man is the consciousness of God, the end of the world" (TJ, I, 119). As Sherman Paul has noted, sounds, both natural and human, often serve Thoreau as a stimulus to such reflections, and silence is a frequent metaphor for awareness of infinity and the extinction of the physical: music "warns me of a reality and substance, of which the best that I see is but the phantom and shadow" (TJ, I, 219).²⁴ "The thunder is only our signal gun, that we may know what communion awaits us. Not its dull sound, but the infinite expansion of our being which ensues, we praise and unanimously name sublime" (TJ, I, 65). "If the soul attend for a moment to its own infinity, then and there is silence" (TJ, I, 64). This "anti-Baconian" negation of the world of nature underlies most of what Thoreau says about "The Sphinx." Thoreau identifies the Sphinx as "man's insatiable and questioning spirit" which asks the "riddle of life" of every passer-by.²⁵

²⁴See Paul, Shores of America, pp. 64-68, and "The Wise Silence: Sound as an Agency of Correspondence in Thoreau," NEQ, XXII (1949), 511-527.

²⁵TJ, I, 229. The essay on "The Sphinx" appears on pp. 229-237, from which all quotations on pp. 231-243 of my text are taken, except as noted.

He thus diverges from the myth, from Bacon, and from what I believe is Emerson's version by making the confrontation of man and Sphinx a wholly internal one--man confronting himself, "devoured by doubt" rather than by some body of knowledge conceived of as existing outside man and as inviting mastery. Thoreau's conclusion--that the poem illustrates the inability of man, as the Poet says, to escape his endless pursuit of a mystery--is to some extent preconditioned or necessitated by his locating the encounter within man, for if the Sphinx is man's questioning spirit, it clearly cannot be, nor would any Transcendentalist argue that it should be, mastered, defeated, or subdued. Whatever the Poet's answer, the outcome is certain: man questioning his own faculties can arrive at no sure knowledge of his relations with external reality, with nature or with God.²⁶ He will simply be forced to acquiesce in his own constitution and proceed on the same problematic basis as before. As Thoreau admits in his comment on stanza 2, man cannot "get out of his humanity," and so, unless he confronts nature directly, which alternative Thoreau in fact suggests in his "naturalistic" comments on stanzas 3-8, he is left with an insoluble riddle and is forced to a "complete uncertainty and renunciation of knowledge." And Thoreau says of the last

²⁶This is one of the basic complaints voiced by anti-Transcendentalists and anti-Kantians, like Francis Bowen; Transcendentalism, they said, was too introspective and subjective and could make no credible statements about external reality.

stanzas that they demonstrate precisely the same point, that "God's meanings" are forever unintelligible to us and that no Oedipus will ever solve the Sphinx' riddle. But "complete uncertainty and renunciation of knowledge" are unacceptable to those who, like Emerson and Thoreau, devote their total energies to a lifelong pursuit of certainty, and though it is the theme of most of Thoreau's interpretation of Emerson's poem it is challenged, as we shall see, by a more positive and optimistic hypothesis in the analysis of stanzas 3-8.

Thoreau's spiritualistic posture is established by his remarks on stanza 1. The Sphinx' drowsiness symbolizes the condition necessary for spiritual insight; namely, deadness to the natural world. We must contemplate the world of time gingerly and not eagerly, says Thoreau (a latter-day Isidore of Seville), because "When we are awake to the real world [of spirit], we are asleep to the actual [i.e., natural]." Here is the dualism of Emerson's Poet: irreconcilable realms of matter and spirit. As Thoreau says, the ideal poet "speaks without reference to time and space" (TJ, I, 75). Thoreau cites Menu, one of his favorite Orientals:²⁷ "supreme intelligence can be conceived only by 'a mind slumbering' Wisdom and holiness always slumber. . . ." As a corollary, nature's sleep liberates the infinite: "in the annihilation

²⁷ See Cameron, The Transcendentalists and Minerva (Hartford, 1958), I, 310-327.

of ages alone is it revealed. . . . Time waits for its solution to become eternity." Thus, in stanza 2, Thoreau perceives the consequences of this spirit-matter, eternity-time, reality-actuality schism; if a man is to strive for deadness to the world, he must virtually die--"he would have got out of nature"--and because such a course is inconceivable, the spirit-world remains behind a curtain and man in the time-world must resign himself to "complete uncertainty and renunciation of knowledge."

Thoreau resumes this line of thought for stanza 9, where he encounters Emerson's Poet, for whom the solution to all riddles is "his faith." Thoreau here equates faith with poetry which, he says, "is the only solution time can offer." Although Helen Hennessy has written that the Transcendentalists viewed poetry as a mode of knowing divine truth and the poet as the priest of supreme knowledge and of the Kantian ding-an-sich,²⁸ Thoreau in this early period evidently has a less exalted opinion, for he ascribes to the Poet in "The Sphinx" only faith and bravery but denies him wisdom. The Poet's "soul" somehow does perceive the truth, but "still does it remain to be solved by the intellect." At the utmost, the Poet can only express what he feels and where he stands but can "render no account of truth to herself"

²⁸Hennessy, "The Dial," p. 68; Laurence Stapleton, H. D. Thoreau: A Writer's Journal (New York, 1960), pp. xii-xvii.

(Thoreau's idea of the symbolism of the Sphinx shifts briefly here from "man's questioning spirit" to "truth"). The Poet can only exclaim, "Believe, and ask not. . . . Nothing is plain but love." Just what the Transcendentalists, who used the word prodigally, meant by "love" has not to my knowledge been studied extensively. Perry Miller has suggested that "love" among the Transcendentalists was a way in which they could avoid each other, relating their feelings to heaven via Dante while preserving a kind of social virginity in the temporal sphere.²⁹ I can make no conclusive definitions here, but in Emerson's "Sphinx"; as I have said, love is Platonic "love of the Best"; it is this definition which Thoreau adopts in his analysis. Taking up the Poet's cry, Thoreau too asserts that man fails only "because he seeks perfection. He adorns no world, while he is seeking to adorn a better. His best actions have no reference to their actual scenery." Man's highest acts--moral acts, those involving shame, remorse, and so on--transcend natural values and fit into a higher, spiritual reality. "Let us expect no finite satisfaction," Thoreau warns, for any goodness in this world is not of this world, and the world of which it is is inaccessible to mortals. Despite earthly mutability, perfection is the "centre" of man's life. Hence, as the Poet declares,

²⁹ Miller (ed.), Consciousness in Concord: The Text of Thoreau's Hitherto "Lost" Journal Together with Notes and a Commentary (Boston, 1958), pp. 80-103.

all earthly answers to spiritual questions are lies:

To rest in a reply, as a response of the oracle, that is error; but to suspect time's reply, because we would not degrade one of God's meanings to be intelligible to us, that is wisdom. We shall never arrive at his meaning, but it will ceaselessly arrive to us. . . . We career toward her [truth] eternally. A truth rested in stands for all the vice of an age, and revolution comes kindly to restore health.

Man's bridges--those he can tread securely--are thus burned for him. The bridge to God is a one-way affair, closed to travel at man's will (a Puritan sense of things, to be sure); the bridge to nature disintegrates in the burning heat of man's love for the infinite and the eternal. It was Emerson's purpose, as I have shown, to repair these bridges by making infinite truth available to man in and through nature, but Thoreau, in this section of his journal commentary on Emerson, reestablishes the discontinuities. As Thoreau sees it here, man's incongruity with nature is radical. Whatever perfection nature does display is on a relatively low, even subhuman level, unworthy of the idealist's concern and potentially dangerous in the confusions and falsehoods it may perpetrate on man (this is one of the arguments against learning which Bacon refutes in The Advancement of Learning; BW, VI, 91-97). Man seeks a higher perfection than nature can offer, and so, like the Poet, he is consigned to a cosmic isolation ward where, in response to his cry for answers to the enigmas and conundrums which afflict him, he hears only unintelligible whispers from the outside. The roots of the Victorian "disappearance of God" reveal themselves here in more than

rudimentary form among the Romantic children of American Puritanism.

But Thoreau does not, perhaps cannot, sustain the idealistic vision. His remarks on stanzas 3-8, those stanzas in which Emerson describes the beauty and integrity of nature, seem to rest upon an altogether different basis of concepts and values. The theme of this section is that, far from being subhuman, insubstantial, illusory, and worthy of neglect, nature contains and expresses for the benefit of all men the perfect truth of the infinite and offers satisfying knowledge thereof. Rather than being asleep to nature, man must sharpen his senses and strive for total wakefulness to the world of matter, in order to catch its divine message. This group of ideas is, of course, far more characteristic than is idealism not only of Thoreau in general but also of the early journals and of such early writings as "A Natural History of Massachusetts," a review (or non-review, considering its aloofness from the text under discussion) in the Dial of July, 1842, of a state report on local flora and fauna (TW, IX, 127-162). In this view, as Thoreau says, "No part of the earth is so low and withdrawn that the heavens cannot be seen from it, but every part supports the sky" (TJ, I, 214). "Every part" of nature contains within itself the whole story, the whole divine plan, and the surest way to know the truth is to give oneself to experience of nature at the present moment. Instead of philosophical realism, belief in the

actual existence of ideal truths or forms, Thoreau wants "to expand the actual into the ideal" (TJ, I, 23), to move from the facts and experiences of nature to the spirit which he believes resides in nature or is accessible through it, and is not abstracted from it. Hence, the journal contains such non-idealistic observations as these:

Every needle of the white pine trembles distinctly in the breeze, which on the sunny side gives the whole tree a shimmering seething aspect.³⁰

Now the king of day plays at bo-peep round the world's corner, and every cottage window smiles a golden smile,--a very picture of glee. I see the water glistening in the eye. The smothered breathings of awakening day strike the ear with an undulating motion; over hill and dale, pasture and woodland, come they to me, and I am at home in the world. (TJ, I, 11)

To be at home in the world is what Thoreau most characteristically desires, not because physical weal suffices but because he, like Emerson, believes that nature is the source of spiritual weal besides.³¹ The laws of spirit can be known only in and through the phenomena which express and embody them; nature's divine organization insures that every

³⁰Miller, Consciousness, p. 206: a very Gerard Manley Hopkinsian passage. See Stapleton, H. D. Thoreau, p. xvii, for a comparison of Thoreau and Hopkins.

³¹The question inevitably arises, Is this pantheism? I cannot undertake a discussion of this point here, but in general, nature-worship among the Romantics--both British and American--contains so large a component of subjectivism (mind-creates-reality) as to preclude any real philosophical pantheism or animism.

leaf and flower, known directly and for itself, will benefit humanity--a scarcely altered image of the Baconian vision. Thoreau wants everything, therefore, to imitate nature (i.e., leafy green nature, not the remote and formal system of Pope and the Deists), which is the standard of all behavior and all knowledge. Nature is impartial, impersonal, inexorable, beautiful, helpful, self-reliant, serene, confident, and systematic. All values for human betterment are present in nature, not as a system of forms, categories, or doctrines but as a presence real, physical, felt, heard, and tasted here and now.³²

The same ideas function in Thoreau's analysis of stanzas 3-8 of "The Sphinx." "Each natural object," he writes, "is an end to itself"; the elephant, the palm, the atom--each is a "partner of God." Each contains all. Each is "content to be a part of the mystery which is God. . . ." Each is perfect and "correct," is totally self-sufficient, behaves as if nothing else existed; (Thoreau at this time had not yet developed his ideas about ecological relationships among living things). Even the atoms "have the integrity of worlds." All seeming variety and difference in nature, when seen from the point of view of each object, is really a great

³²Cf. Charles C. Walcutt, "Thoreau in the Twentieth Century," SAQ, XXXIX (1940), 168-184; Lewis Mumford, The Golden Day: A Study in American Experience and Culture (New York, 1926), pp. 107-120; Miller, "Thoreau in the Context of International Romanticism," NEQ, XXXIV (1961), 150.

design, in which every natural object "adorns" every other. "Night veileth the morning for the morning's sake. . . . Nature looks like a conspiracy for the advantage of all her parts. . . ." The whole is perfect and confers its perfection upon each part and any combination of parts. The baby too is part of nature--a sum and a miniature, like all things a macrocosm and a microcosm--and therefore it is perfect.

It is evident that, unlike nature elsewhere in Thoreau's commentary, nature here is no realm of shadowy illusions waiting to entrap man in unworthy pursuits, but a benign and integrated whole into which all creatures except man fit perfectly. As I pointed out, in the "idealistic" sections of his analysis, Thoreau explains man's isolation from nature as a result of a radical dichotomy, man-the-seeker-of-perfection versus nature-the-imperfect. But here, though man is still at odds with the world, Thoreau offers a completely different reason: instead of trying to fulfill his desire for perfection, man allows his imperfections to rule him and thus he fails to emulate nature's perfection. "It is the actual man, not the actual nature, that hurts the romance of the landscape." Man "becomes unnatural, without being as yet quite supernatural." To emulate each natural object, man would have to maintain a "universal consistency," that total inward integrity which characterizes the elephant and the palm. But instead, man scatters himself, divides his concerns, lets nature and society rule him, and so lives by

"conformity," as opposed to "consistency, which would make all things conform to it." That is, man's free will and integrity depend upon how closely he imitates in self-sufficiency the phenomena of nature; if he were completely true to himself, he would be completely free while fitting completely into the great design. By being a part of nature in this way, he would find that all external things would arrange themselves around him and "adorn" him as he would "adorn" them. But man "conforms," yields to pressures of society, perhaps, or attempts to become "natural" by imitating bestial behavior instead of striving for perfect self-sufficiency as the true imitatio naturae. By conforming, man surrenders his integrity, dissociates himself from nature, and blinds himself to the divine truth. Whereas in the idealistic view man is cut off from nature because he must and should be, in Thoreau's "naturalistic" view man is cut off, as in Bacon, by error and ignorance; the error is corrigible, and man should seek to align himself with nature: "His actions do not adorn Nature nor one another, nor does she exist in harmony but in contrast with them," but the harmony can be established (cf. TJ, I, 202).

The solution, which Thoreau could but does not offer in direct answer to the Sphinx, is to act, practically and in accordance with nature; that is, in accordance with one's inner self. This "true action" would be assisted by nature and would enable man to rediscover the harmony; like Bacon, Thoreau envisions a return via human effort to a kind of prelapsarian

condition. Human behavior must be proportioned to nature: "Man's works must lie in the bosom of Nature, cottages be buried in trees . . . that they may not outrage the landscape." The rewards for such actions are great; art is one of them, for, having made nature instead of an abstract spiritual realm the model of virtue, Thoreau can say, "If men were not idealists, no sonnets to beautiful persons nor eulogies on worthy ones would ever be written." An "idealist" here is one whose ideal is nature; man still loves perfection (and only perfection; Transcendental love is nothing if not rigorous), but Thoreau has transferred perfection from unintelligible spirit to present, tangible, and intelligible nature, which contains and teaches all patterns of virtue and beauty. Likewise, action proportioned to nature stimulates a "sympathy" between man and nature; nature "repairs his hurts" and, like Emerson's "great mother," patiently and without prejudice awaits the end of man's truancy.

Thus, like Emerson, in this instance, Thoreau adopts the Baconian position that beneficial and liberating knowledge is available to man in nature and by experience of nature. Knowledge of nature frees man from a futile search for inaccessible abstractions, arms him for practical living, integrates him into an intelligently designed and purposeful universe, and restores his self-respect, moral integrity, and capacity for controlling his own destiny. Indeed, as we shall see, the thrust of Thoreau's discussion of Emerson's poem carries him into even more recognizably Baconian attitudes. The "true

action" he demands is represented most obviously by the Walden experiment four years later, an experiment designed to explore, under controlled conditions and by careful method, the phenomena of time and nature as they serve man's physical and spiritual needs and help him step to the music of eternity. Thoreau's belief that the creatures and events of nature serve such a purpose and contain within themselves whole systems of divine being leads him to pursue with the greatest diligence the "scientific" studies in botany, zoology, and ecology for which alone he is in some circles remembered. Moreover, Thoreau, like Emerson, adopts and elaborates Bacon's humanism, envisioning the fulfillment of God's design in the total realization of the expansive and progressive capacities of humanity. And Thoreau takes up the struggle begun by Bacon for the recognition of the primacy of facts; be he Lockean or intuitionist, Thoreau is quite unable to sustain a bias against facts and experience in what he calls the "actual" world. Emerson's poem had affirmed the possibility of supreme knowledge to man in nature, but in the essay Nature had warned that it "cometh not with observation" (EW, I, 77). Thoreau takes the quest deep into nature and fully expects to gain the prize by "observation." Thoreau will enact Bacon's most famous aphorism: Man, the servant and interpreter of nature, can do and know only what he has observed in nature; knowledge and power beyond experience are denied to him,

however unlimited are his spiritual pretensions. Thoreau's answer to the riddle of the Sphinx, like Emerson's, is "experience."³³

³³Norman Foerster, in Nature and American Literature: Studies in the Modern View of Nature (New York, 1923), pp. 69-142, says Thoreau deserted Plato for nature.

V. The Instauration of Spirit, ii:
Other Versions of Bacon

Vivian Hopkins has discussed most of Emerson's significant remarks on Bacon, other than those concerning "The Sphinx," in a more or less chronological order and has described some of the specific ways in which Bacon seems to have influenced Emerson or been used by him.¹ Emerson's principal treatments of Bacon are his 1835 lecture on Bacon (EL, I, 32-336) and his remarks in English Traits in 1856 (EW, V, 238ff.). In addition, Bacon is one of the authors

¹"Bacon and Emerson," pp. 408-430. On Emerson's interest in and use of Bacon, see also William Magee Wyncoop, "Three Children of the Universe: Emerson's View of Shakespeare, Bacon, and Milton," unpubl. Ph.D. diss., Columbia, 1962; Cameron, Emerson the Essayist, I, passim; Cameron, Ralph Waldo Emerson's Reading, p. 55; Harry H[ayden] Clark, "Emerson and Science," PQ, X (1931), 227n., 240-241, 241n.; Philip L. Nicoloff, Emerson on Race and History: An Examination of English Traits (New York, 1961), pp. 48-49, 66, 226-228, 231; Joseph Warren Beach, The Concept of Nature in Nineteenth-Century English Poetry (New York, 1936), pp. 322, 326; F. O. Matthiessen, American Renaissance: Art and Expression in the Age of Emerson and Whitman (New York, 1941), p. 103; Cameron, Emerson, Thoreau and Concord in Early Newspapers (Hartford, 1958), pp. 271, 329; Harrison, The Teachers of Emerson, pp. 23, 48-52; Rusk (ed.), Letters of Ralph Waldo Emerson (New York, 1939), I, lvi; Hopkins, Spires of Form: A Study of Emerson's Aesthetic Theory (Cambridge, 1951), pp. 70-72; Sherman Paul, Emerson's Angle of Vision: Man and Nature in American Experience (Cambridge, 1952), pp. 48-50.

Emerson most frequently quotes or cites in his journals and other writings.² Professor Hopkins concludes that Emerson adopts Bacon's reformism and opposition to institution and authority in his struggle with the Unitarians, Bacon's preference for nature over books, his concept of nature as a repository of truth (for Emerson it is chiefly moral truth), his disbelief in miracles, and his rejection of outmoded tradition, in Emerson's case religious tradition. Moreover, Emerson admires Bacon's union of the contemplative and the active life, though he condemns Bacon's supposed moral weakness and servility.³ Emerson also is indebted to Bacon for such ideas as (via de G rando) the philosophia prima, which Emerson takes to be a body of innate ideas unifying all knowledge and justifying the process of analogy, and for reinforcement of the Romantic concept of poetry as idealization or mental construct rather than mimesis. Also attractive to Emerson are Bacon's insistence upon ascending from facts to laws or forms, his idea of knowledge as uniting

²For example, see Cameron, An Emerson Index (Hartford, 1958), s.v. Bacon.

³Professor Hopkins ("Emerson and Bacon," p. 423) asserts that Emerson's distaste for Bacon's servility to King James represents the confrontation of the American democrat with the English monarchist. However, Bacon's servility, as well as numerous other faults, had been for many years a commonplace among anti-Baconians both British and French as well as American and monarchist as well as democrat. Emerson's references to the Essex affair, moreover, show that Bacon's politics may not have figured as heavily in Bacon's biographical embarrassment as his commission of one of the worst of Romantic sins--the betrayal of a friend. See EL, I, 324.

mind and matter, his doctrine of the idols or the obstacles to knowledge, and his supposed anticipation of Kant's reason-understanding distinction.⁴ However, Emerson criticizes Bacon's failure to unify his brilliant insights and produce an organic work like Hamlet; he also makes light of Bacon's scientific experiments. Professor Cameron adds that Emerson adopts Coleridge's identification of Bacon with Plato.⁵ Because the relations of Emerson and Bacon have thus been extensively discussed, I will restrict my comments to a more general view of the subject. I have already analyzed "The Sphinx" as an expression of Emerson's version of Baconian knowledge, and in this chapter I shall deal with the perhaps unanswered question of why the idealistic and moralistic Emerson was interested in the reputedly materialistic Bacon at all.

Emerson envisions his worldly task as awakening men to their spiritual potentialities and overthrowing what he calls "the despotism of sense."⁶ But pure idealism, the dissolution of the sensible world in an all-absorbing atmosphere of spirit, is, as I suggested in the previous chapter, not the

⁴See Coleridge, Aids to Reflection, p. 136.

⁵Emerson the Essayist, I, 218-219; see also II, 78-79; Cameron, A Commentary on Emerson's Early Lectures, pp. 26-27 et passim; Frank T. Thompson, "Emerson's Indebtedness to Coleridge," SP, XXIII (1926), 55-76; Beach, Concept of Nature, pp. 319-326.

⁶Dial, II (1842), 378.

answer.⁷ Emerson wishes to transcend commodity but not experience. He hopes not to desert nature and the knowledge thereof but to purify them, to demonstrate how nature is perfect so as to warrant the love man seems constrained to possess for it, and how knowledge of nature need not rest in meaningless empiricism but can ascend to awareness of the infinite and the eternal. As Professor Rusk says, "his most characteristic ideas were deeply rooted in experience and were the fruits of the empirical method. . . ."⁸ Like virtually all of his Transcendentalist colleagues, Emerson can withdraw neither from nature nor from spirit, neither from the finite nor from the infinite, but must strive to balance and ultimately to merge the two in some yet higher reality. To naturalize spirit and to spiritualize nature is Emerson's primary undertaking. The proposed synthesis, however, is constantly coming undone, with one or the other component needing buttressing and reaffirmation; hence Emerson's renunciation of consistency. Emerson's comments upon Bacon and his use of Baconian ideas seem to suggest that, as is more or less the case with all the Transcendentalists, when the spiritual element is in danger of succumbing to materialism, Bacon is downgraded; but when the material, this-worldly element requires fortification or a restatement

⁷ See above, p. 227.

⁸ "Emerson and the Stream of Experience," p. 373. Cf. Loren Baritz, City on a Hill: A History of Ideas and Myths in America (New York, 1964), p. 268.

of its valid claims, Bacon is rehabilitated and his usefulness is rediscovered. This up and down process can occur in a single essay; I do not refer to a chronological metamorphosis such as we shall find in Alcott and Brownson. Published critical expositions of Emerson's intellectual development are somewhat contradictory and inconclusive, especially because so much material is only now being published--Emerson's notebooks and early lectures, for example. Frank Thompson claims that in the 1820's Emerson was "frankly a Platonist" and by 1836 had become a "Romantic" under Coleridge's influence.⁹ But we find Emerson equally Platonic in 1856, when he revives the Coleridgean notion of Bacon as the avatar of English Platonic idealism. Likewise, while conceding the indefiniteness of the periods, Stephen E. Whicher describes the 1830's as Emerson's period of challenge, when he was endeavoring to resolve the conflict between freedom and fate, will and circumstance, and the years after 1841 as the period of Emerson's acquiescence to circumstance and fate.¹⁰ Nevertheless, Emerson's remarks on Bacon in 1856 are in reality quite similar to those of 1835, suggesting that a synchronic analysis of the topic may be more enlightening than an attempt to correlate Emerson's opinion of Bacon

⁹"Emerson's Indebtedness," p. 55.

¹⁰Freedom and Fate, p. xvi.

with a dubious version of his intellectual development; as I said, this will not be the case with Alcott and Brownson. I do not question the possibility of determining the course of this development, but at the present time I prefer to discuss what I feel is a consistent Emersonian problem. Emerson's synthesis of nature and spirit is, in any case, broader, more elastic, and so more durable than some of his other syntheses, of power and law, life and moral perfection, etc. By uniting fact and law, nature and providence, knowledge and the thing known, Bacon helps Emerson maintain the precarious balance.

A. Robert Caponigri, in a well-known and important article, describes Emerson's problem as typical of the dilemma of American Protestantism: that of establishing a viable form of religious practice or an ecclesiastical institution on the basis of the essentially anti-formal and non-institutional doctrine of private judgment.¹¹ Emerson, he says, represents the anti-historical stage in the struggle, the effort to deny history, the contingencies and particularities of the traditional Church, as the basis of man's religious awareness, as Emerson does in the Divinity School Address, and to transfer religious authority to nature, as defined by "absolute principles" rather than as contingent particulars. Emerson, Caponigri says, must demonstrate that history is not a "principle of Being" and that nature is the legitimate manifestation of "ultimate reality." Emerson

¹¹"Brownson and Emerson: Nature and History," p. 378.

does so on three levels--truth, goodness, and being--by means of the correlative concepts of intuition, spiritual laws, and direct spiritual causation.¹²

It is interesting that, as Caponigri describes the three elements in this process, we would expect Emerson to reject Bacon as uncongenial or hostile. Judging by some of Bacon's own remarks, his reputation in the pro-science literature, and his notoriety among anti-rationalists, Emerson should have shunned Bacon. In the case of the doctrine of intuition, Caponigri says that Emerson makes man capable of intuiting immediately and without historical preparation or institutional mediation the divine laws which constitute reality.¹³ Bacon, of course, describes philosophical knowledge as non-intuitive, the product rather of patient, careful, methodical observation and experience. In the second instance, according to Caponigri, spiritual laws constitute, in Emerson's view, the nature of man, man's moral being; not human or historical laws but spiritual laws are the ground of man's existence. Again Bacon is in apparent conflict with Emerson. Spirit, he believes, does not directly affect nature; the laws governing nature are not spiritual, nor do they have a moral dimension--except through the philosophia prima, perhaps, but, as Professor Hopkins points out, Bacon conceives of the philosophia prima

¹²Caponigri, p. 371.

¹³Pp. 372-373.

as operating on a lower level than Emerson believes it operates.¹⁴ In the third instance, Emerson must divorce nature and history by denying the doctrine of secondary causes, but he must do so without dispensing with the individual, "the epitome of contingency."¹⁵ This Emerson accomplishes by affirming that each individual exists not by second causes but by "the full influx of the first cause."¹⁶ Secondary causes do exist, but they do not constitute man's moral nature and are relatively unimportant; they do not obstruct the identity of the individual with "the whole economy of Being." Bacon, of course, is an advocate of the study of those very second causes which Emerson has dismissed. Man, Bacon says, cannot know the first cause but must be content with the study of natural laws, the intermediate causes by which God works His will and structures mankind's existence.

However, Emerson does not reject Bacon on these points; he instead finds, in his own reading of Bacon or in the interpretations of Bacon promulgated by de Gérando, Coleridge, and others, support and confirmation for each one. I believe his integration of Baconian concepts and terminology--even with some distortion--into his scheme helps to demonstrate his eagerness to retain a full awareness of the world of facts with which Bacon is associated and to learn what the master

¹⁴"Bacon and Emerson," p. 414.

¹⁵Caponigri, p. 376.

¹⁶p. 377.

of the induction of facts has to teach. To be sure, Bacon's personal conduct must be condemned; a man's intellectual life and active life are, in Emerson's view, to be equally moral and mutually shaping. But because Bacon's life was not impeccable, and because his faults are not readily attributable to Transcendentally-approved excesses, Bacon cannot enter the pantheon of "representative men." He must be kept in an antechamber reserved for the regrettably indispensable, like Byron.¹⁷ Therefore, though Emerson attacks Macaulay for making Bacon a utilitarian (EW, V, 246; cf. EJ, VIII, 483-484, 491), he actually agrees with Macaulay that Bacon's life is valueless and only his thought and influence worthwhile. Nevertheless, Emerson finds room for Bacon's doctrines or the Romantic versions thereof. It is necessary to remember that although Theodore Parker sneers at it, Bacon's theology, or "divinity," as he calls it, is not unacceptable to latter-day Christian liberals. Bacon, as I pointed out, energetically declares his faith in God and His providence, in the heavenly realm, in the immortality of the soul, in the pre-eminence of Christianity. Such other articles of Bacon's creed as the Trinity, the divinity of Jesus, and the authority of the Church are not offensive to Edward Everett and Francis Bowen, so there is no reason why Emerson should take exception to them either. The most important

¹⁷ See Miller, Consciousness in Concord, pp. 50-54.

item in Bacon's divinity, perhaps, is his assertion that the highest truth, the doctrines of faith and the moral law, are available only by "revelation" or "inspiration" and not by empirical means.¹⁸ Such knowledge, he says, is "original." Now Bacon does not suggest that, therefore, every man is privy, through an inner light, to God's secrets, but as a Protestant, the son of Puritans, he does not deny such a possibility, and nothing stands in the way of a Transcendentalist's reading such a concept into Bacon. Moreover, especially since the way has been prepared by the Puritans, the Natural Theologians, the Unitarians, and the Romantics, nothing prevents Emerson from combining the precepts and values of Bacon's "philosophy"--knowledge of man and nature by experience--with Bacon's "divinity"--knowledge by "inspiration."¹⁹

On the question of intuition, for instance, Emerson appears to accept Coleridge's identification of Baconian induction with intuition and to apply the inductive process Bacon assigned to philosophy to the "inspired" knowledge reserved for divinity. In The Conduct of Life, Emerson asserts that the original motive of science "was the extension of man, on all sides, into Nature, till his hands should touch the stars, his eyes see through the earth, his ears understand the language of beast and bird, and the sense of the wind; and,

¹⁸See above, p. 28.

¹⁹Cf. Hopkins, "Bacon and Emerson," pp. 409-410.

through his sympathy, heaven and earth should talk with him" (EW, VI, 284). To study nature is to be put in touch with the infinities beyond nature. Bacon, Emerson says, saw them too: "He saw what all saw and also what few see and what none understand" (EL, I, 326). "To him was given a sight like that of an archangel . . ." (EL, I, 187). And Baconian induction, the discovery of laws through the observation of facts, stimulates the mind to its spiritual flight beyond experience, because "Nature is the symbol of spirit" (EW, I, 25). "Every fact that is disclosed to us in natural history," Emerson declares, "removes one scale more from the eye . . ." (EL, I, 15). Scientific study "is a sort of unlocking the spiritual sight" and reveals the "spiritual presence which awes us in the phenomena of life . . ." (EL, II, 23). As Sherman Paul says, the facts of nature supplied Emerson "the terrestrial map for his spiritual explorations."²⁰ If the mind is purged of its idols, if it can escape the "lords of life," then at some point in the study of nature will come the flash of discovery, and the finite will disappear in an intuitive recognition of the infinite.

The second level is spiritual laws. Here, Coleridge's Platonic Bacon again serves Emerson well. Bacon, Emerson says, is more than a dull "Lockist" because he insists that the study of facts rest not in facts but ascend to forms, which Bacon called the signatures or footprints of God and

²⁰ Emerson's Angle of Vision, pp. 208-209.

which are the true goal of inductive philosophy. Coleridge, of course, has identified Bacon's forms with Plato's and with the ideas of the divine mind and in this way enables Emerson to see Bacon as an idealist who believes that the actual world is grounded on spiritual laws. Bacon "marks the influx of idealism into England." In "the structure of his mind" he is a Platonic idealist. He believes in the universal unity of all knowledge and in the grounding of the temporal in the eternal. "He held this [higher] element essential . . . believing that no perfect discovery can be made in a flat or level, but you must ascend to a higher science" (EW, V, 238-240). Bacon, moreover, is an "analogist," who can perceive spiritual laws in single facts and who does not require the "heaps of facts" which have become so indispensable to his modern naturalistic disciples (EW, V, 239). And the laws he recognizes constitute human as well as natural existence; Emerson quotes Goethe on man's divinity and claims that Bacon subscribes to it also: "None ever hoped more highly of what man could do" (EL, I, 326). In this fashion, Emerson reconciles Bacon with his affirmation of the spiritual laws.²¹

On the third point, that each individual's existence is caused directly by the Over-Soul, Emerson again assimilates

²¹Cf. Frederick William Conner, Cosmic Optimism: A Study of the Interpretation of Evolution by American Poets from Emerson to Robinson (Gainesville, Fla., 1949), p. 38.

rather than discards Bacon. In this case, the ground is prepared by Natural Theology: facts are dependent upon natural laws; the natural laws are marvellously interlocked so as to serve perfectly their physical functions; the natural laws are therefore evidence of divine design; they are providential, ordained directly by God, who is but a "short step" away from the natural law. Emerson takes the final leap to God's presence in His providential laws and, in so doing, short-circuits the secondary causes.

I am not impressed by solitary marks of designing wisdom; I am thrilled with delight by the choral harmony of the whole. Design! It is all design. It is all beauty. It is all astonishment. (EL, I, 49)

It was every the present aim of Newton, of Linnaeus, of Davy, of Cuvier, to ascend from nomenclature to classification; from arbitrary to natural classes [here, "nominalism" is transmuted to "realism"]; from natural classes, to primary laws [and nature becomes spirit]; from these, in an ever narrowing circle, to approach the elemental law, the causa causans, the super-natural force [and secondary causes disappear before the first cause]. (EL, I, 80)

Emerson thus transmutes Bacon's concept of God's providential ordering of nature into the Transcendental concept of nature's direct dependence upon God.²²

²²I regard this analysis as tentative. Caponigri's argument depends upon the distinction between nature and history and upon the belief that Emerson perceived their radical incompatibility. Neither proposition, however, may

Perhaps the most telling sign of Emerson's willingness to assimilate the supposedly materialistic and sensationalistic teachings of Bacon into his own thought is that even

in fact be completely true. In Caponigri's view, "history" is a series of contingent and nonrepeating events, a collection of unique particulars. "Nature," on the other hand, is taken to be an ontology, a structure of laws, the whole of God's creation in its formal aspect, as the ancients and the English Deists took it. But history is in fact no less formal and no more contingent than nature; as Bacon said, all that we can be sure exists in nature is real objects performing real motions according to a fixed law which is in no way perceptible but only inducible from the particulars. Nature, that is, is comprised of particular objects and particular events--facts, unrelated except by an unseen law and the mind of man. An observer who is ignorant of the law will believe that events are chaotic or totally contingent. There is no reason to believe that history is describable in any other way. History is comprised of real persons performing real acts (an act is also an event) according to behavioral and physical laws which are identical to natural laws in that they are not recognized except by the intelligent observer. The crucial distinction is between historical analysis, which assumes contingency, and scientific analysis, which assumes predictability and regularity, not between historical contingency and natural regularity in the world itself. There is no necessary distinction between natural and historical phenomena; both nature and history are composed of real, irreducible, unique events. In nature as in history, events are non-repeatable; no two events--even so-called "scientific" events--are ever completely identical, but time and chance happeneth to them all. The relationships among these events may, if the observer so desires, be expressed as "laws." Bacon believed that the laws are real (though not independently so); science has not quite succeeded in demonstrating their reality. Now, the question is whether Emerson was aware of the essential identity of nature and history. If so, even though he attacked authority, institutions, and traditions, he may not have been denying history itself as a principle of being. There is, I believe, some evidence that Emerson identified nature and history. In accepting Bacon, he accepted, or was forced to accept, the irreducibility and real existence of facts.

in the early 1830's when his interest in science is at its peak, he treats Bacon not as a scientist but as a man of letters, even as a poet. In English Traits, the discussion of Bacon appears in the chapter on "Literature," and the 1835 lecture is part of the series on literary men rather than that on science. Clearly, Emerson, like Shelley, considers Bacon a poet; he repeatedly cites and alludes to Bacon's definition of poetry as accommodating the shows of things to the desires of the mind and claims that Bacon is "a mouth for the soul of the World" (EL, I, 188).²³ The poet is he who perceives and expresses in symbolic words the intimate correspondence of nature and spirit; he "converts the solid globe, the land, the sea, the sun, the animals into

However, he preferred to emphasize the observer with his demand for cognizance of laws. (Thoreau tried to operate through the atomistic facts.) Nature, as Caponigri says, Emerson saw as constituted by spiritual laws. But Emerson saw history (especially, as Professor Nicoloff says, in his later years) as the expression of the universal human mind. And if the mind knows laws, then laws characterize history as well as nature. The conflict is not between nature and history so much as between a mode of observing events which ignores laws and a mode which acknowledges them.

²³In preparing his lecture on Bacon, Emerson consulted, among other books, Francis Osborn's banned-at-Oxford Advice to a Son. See EL, I, 322; see above, p. 84.

symbols of thought" and "utter[s] the oracles of the mind in appropriate images from nature" (EL, I, 224-225). This Bacon does: "But let Bacon speak, & wise men would rather listen though the revolution of kingdoms was going on" (EM, III, 194; cf. V, 37). He "possessed an imagination as despotic as Shakespear's . . ." (EL, I, 321). Indeed, many of Emerson's favorite Baconian ideas are those which Bacon expressed in a particularly vivid metaphor, such as the image of the seal and the print to represent the relation of truth and goodness, and the image of the globe of crystal and the globe of matter by which Bacon referred to mind and nature.

There are numerous other reasons for Bacon's attractiveness to Emerson: they are both to some degree skeptics;²⁴ they share a desire to apply knowledge to the real needs of men, to change the actual day-to-day quality of men's lives; they both favor the sententious in literature; they revere classical and humanistic learning; they are both prophets of a new order to be achieved by a new way of thinking;²⁵ they exalt mankind in its limitless possibilities. But the fundamental attraction is the similarity of their visions of a newly reintegrated universe in which the barriers between

²⁴On Bacon and Emerson as skeptics, see Margaret L. Wiley, Creative Sceptics (London, 1966), pp. 47-94, esp. pp. 93-94, and pp. 219-232. Professor Wiley sees Emerson, in fact, as the more authentic skeptic.

²⁵Cf. Mildred Silver, "Emerson and the Idea of Progress," AL, XII (1940), 2-3.

nature and man, man and man, man and God, are broken down and the race of men is restored to its Edenic dominion.

Henry Steele Commager has analyzed Theodore Parker's effort to confirm by facts and statistics the "higher laws" which Parker, like the other Transcendentalists, insists are not derived from experience but intuited and beyond the sphere of experience.²⁶ As exemplified by the anti-Mexican War and anti-slavery speeches in which Parker first declares the war or slavery wrong on intuitive moral grounds but then adduces an elaborate roster of details on costs, material hardships, historical factors, and the like, Parker's method is described by Professor Commager as a contradiction, a "confusion of intuition and experience," a burial of the intuitive premise "under an avalanche of facts."²⁷ I believe, however, that Parker's "dilemma" is characteristic of the Transcendentalists in general and represents not so much a regrettable logical lapse as one of the most typical Transcendental assumptions, which we have seen in operation in Emerson and Thoreau; namely, that experience must and will confirm what the reason perceives as "innate ideas." Professor Commager asks whether, if the facts were unexpectedly to demonstrate that slavery is right, Transcendentalism would

²⁶"The Dilemma of Theodore Parker," NEQ, VI (1933), 257-277. Perry Miller takes the psychoanalytic approach. See "Theodore Parker: Apostasy within Liberalism," HTR, LIV (1961), 294.

²⁷Commager, pp. 275, 268.

change its mind.²⁸ Logical consistency, of course, is not a Transcendental value, as it was for most of the philosophers (Kant, Cousin, Coleridge, etc.) in whom the Transcendentalists read about such ideas as experience and intuition; nor should we ignore the fact that Parker and the others were perhaps the last men to believe that though intuitions are primary, experience ultimately does not contradict them and that nature and history symbolize the laws of the divine mind operating through the human will. Parker's attitude toward Francis Bacon and Parker's position on Bacon's principal ideas illustrate this Transcendental assumption. We will find that, on the one hand, Parker disparages Bacon as a materialist while, on the other, he praises Bacon for turning men's minds from authority to experience and adopts many Baconian concepts, just as Emerson does.

Like those of George Ripley and Orestes Brownson, Parker's views on Bacon appear to owe something to Victor Cousin.²⁹ Cousin divides modern philosophy into spiritualism and materialism and makes Bacon the sponsor of the latter, though he admits that Bacon himself was not a materialist or sensualist and states that even the right-thinking spiritualist, like himself, must be a Baconian to the extent of recognizing sense experience as corroboration of the divine truths known by intuition.³⁰ Parker adopts Cousin's analysis. He

²⁸Commager, p. 269.

²⁹On Parker and Bacon, see John Edward Dirks, The Critical Theology of Theodore Parker, Columbia Stud. in American Culture, No. 19 (New York, 1948), pp. 89-90; see also p. 102.

³⁰Cousin, Course of the History of Modern Philosophy, II, 80ff.

³⁰Cousin

stresses Bacon's affiliation with sensualism and condemns Bacon on this ground;³¹ but almost simultaneously Parker exonerates Bacon and espouses Bacon's doctrines. Sensationalism, Parker says, is the belief that all ideas in the mind were originally perceptions of the senses, that an idea is nothing but "a transformed sensation" (PW, VI, 7). The various injurious consequences of sensationalism are as follows: in science, it makes our knowledge uncertain, prevents ascent to laws and causes, and renders everything material; in politics it makes history rather than truth the criterion of virtue; in morals it substitutes expediency for conscience; and in religion it leads to Natural Theology and deism, which makes God finite, inaccessible, and imperfect, it denies immortality and free will, and it establishes the authority of tradition over intuition (PW, VI, 7-20). Bacon, Parker says, is the father of sensationalism; he helped establish the English preoccupation with empirical and mechanical sciences and, with Locke, discouraged the study of intellectual subjects such as mathematics and philosophy (PW, VI, 9). Bacon is far overshadowed as a philosopher, Parker claims, by Immanuel Kant.³²

The greater number of Parker's comments on Bacon, however, are positive, reflecting Parker's concurrence with Cousin's

³¹As well as on biographical grounds, like Emerson. See PW, VI, 174-175; VII, 345, 370, 376.

³²"German Literature," Dial, I (1841), 324-325.

observation that Bacon turned the mind to facts, where it may discover confirmation of its innate knowledge of the spirit, and away from authority and institutions (in spite of the supposed consequences of materialism). Bacon, in fact, is one of "the five greatest Englishmen" (with Roger Bacon, Shakespeare, Newton, and Cromwell--a curious consort) (PW, V, 68; cf. 72-75; VIII, 175-176). He is a man of true genius, rather than mere talent (PW, V, 81). He is a reformer who, with Luther and Descartes, was the first to disable medieval authoritarianism and affirm the primacy of "common-sense and reason." Bacon demonstrates that the human mind itself transcends mere facts and that all things are products of ideas (PW, VI, 1). Echoing Madame de Staël, Parker asserts that if Bacon were alive now, he would not be satisfied with the sensualism of his Hobbesian disciples but would become a spiritualist (PW, VI, 36). The school of spiritualism or transcendentalism is described by Parker as holding that the mind is no tabula rasa but "a living principle which of itself originates ideas when the senses present the occasion . . ." (PW, VI, 23). It is significant that the transcendental school, nevertheless, does not shun experience. Transcendentalism has established scientifically, Parker says, "by the inductive method," that consciousness is not determined by sensation but knows certain truths innately. "Facts of observation, sensational experience, it [transcendentalism] has in common with the other school" (PW, VI, 23). Hence it is necessary for Parker to rescue

Bacon from the limbo of materialism, just as Coleridge and Emerson have done, for if transcendentalism establishes the primacy of intuition by inductive method (a noteworthy operation indeed!) then Bacon has much to tell us. Parker believes that "the world of observation within us" contains the idea of God (PW, VI, 124); faith in God is thus a "fact" given to the mind--so easily does a thing pass back and forth between idea and fact in the fashion suggested by Francis Bowen.

"[C]onsciousness of the infinite," Parker writes, "is the condition of consciousness of the finite," because the mind is aware of its incompleteness and dependence and hence infers automatically that an infinite being must exist for it to depend upon (PW, VI, 33). This inference, he says, is deductive, but it is evidently insufficient, for the transcendentalist immediately proceeds to inductive confirmation, finds "signs and proofs," "evidence of God's existence in the limits of sensational observation; the thing refers to its maker . . ." (PW, VI, 33). "[A]t the end of my arms," he continues, "are two major prophets, ten minor prophets, each of them pointing the transcendental philosopher to the infinite God, of which he has consciousness without the logical process of induction. . . . God is immanent in matter, . . . immanent in spirit. . . . [L]aws of matter or of spirit are modes of God's acting, being. . . . But though God is immanent in matter and in spirit, he yet transcends both matter and spirit, has no limitations" (PW, VI, 33-34). Parker, despite

his disavowals of it, clearly owes something to the Natural Theology tradition, which, some of its proponents claimed, goes back to Bacon's statement that the study of nature's laws, God's "signatures" in the world, confirms God's existence. But, like Samuel Tyler and Francis Bowen, as well as Bacon himself, Parker feels the need to supplement the argument from design with an ontological argument and with an argument based on the "facts of consciousness," such as "the longing after immortality" and "the idea of immortality" (PW, VI, 34-35). Despite his preference for the "transcendental" approach, however, Parker warns against complete spiritualism. Sensationalism "has done the world great service." Bacon, Locke, and Newton have "stood up for the body, for common sense, protested against the spiritualism of the middle ages which thought the senses wicked and the material world profane" (PW, VI, 36). Here again is the Puritan-Baconian flesh-body distinction; Parker maintains that the body is no enemy but a friend of the spirit, and only the "flesh," in the form of excessive or total reliance upon the senses and wrong reason, obstructs man's advance to holiness.³³

In a disquisition upon "God in the World of Matter," Parker enunciates several clearly Baconian doctrines concerning

³³ Elsewhere, Parker cautions against the traditional nemesis of orthodox Protestantism: enthusiasm; true prophets and saints, he says, do not attempt to transcend their human limitations but instead employ to best advantage their natural faculties of reason and conscience (PW, VI, 36).

the relations of matter, law, and spirit. The three principles of creation, he says, are "power," "law," and "mind."³⁴ "Power" is the principle of matter, matter's constitutive energy. The power of natural objects, Parker says (and therein agrees with Bacon), resides in the objects and is inseparable from them. It is an "immanent power," which parallels God's immanence in the creation. "There is no power of motion except in things movable. . . . Matter is the nest of power. . . ." Matter also contains law and purpose or "mind." "Power" and perhaps "law" correspond to Bacon's material and efficient causes, which are the province of "physic," and "mind," and perhaps "law," correspond to the final causes Bacon assigns to "metaphysic." God's presence in nature, Parker asserts, is necessitated by His infinity, for if God is unlimited and omnipresent, He must reside in nature (the deductive proof). God's immanence also insures the benevolence of the creation, so that, as Bacon said, nature can be studied without fear and used for human benefit. Science reveals power, law, and, hopefully, mind in matter, and these in turn reveal God's presence (the inductive proof). Parker concludes with an encomium of the creation which could have come from the pen or pulpit of Bishop Butler or Cotton Mather: "The whole universe is a great mundane psalm to celebrate the reign of power, law,

³⁴The material in this paragraph is from PW, VI, 250-266.

mind."

In a sermon on the problem of evil, Parker carries the argument for the importance of matter and facts a step further, making man a creature of actualities, as did Jonathan Edwards, and thus a forced student of experience. At first, Parker states that "inductive" means will not suffice to solve the problem of evil, "studying the details, and thereby learning their law and showing how each form of evil turns into good.

. . ."³⁵ Instead, we must reason from God's attributes, in which we instinctively trust. But once again, Parker re-opens the door to induction and perceives no contradiction in confirming his intuitions by empirical observation: "Still, it is both pleasant and satisfactory to learn the use and function of things by themselves, by an inductive study of the facts and not be constrained to deduce the conclusion merely [!] from the idea of God." Then Parker proceeds to offer a multitude of "phenomena of physical evil," facts of nature from the realm of animal life, to show how pain serves good ends. Rabbit, lobster, dog, crab--each has its own type of pain which warns it "against ruin." In this kind of argument, Parker is once again very close indeed to the Natural Theology tradition of Cotton Mather, which demonstrates by an exposition of just such facts how nature evidence's God's benevolent design. Parker's next point is that, unlike

³⁵Except as noted, the material in this paragraph is from PW, II, 307-345.

animals, man progresses and develops by learning. Each individual, each nation, the whole race all display continuous self-correction, improvement, and sophistication. "Mankind is not content to stand still. . . ." Furthermore, all "this development of the individual and the race is by experiment. . . ." Experience and inductive learning are the condition of man's progress. Unlike man, animals do not progress or learn by induction. Therefore, they are completely happy (cf. "The Sphinx"), for experience involves freedom, freedom is meaningful only if one is free to err, and error causes pain--how reminiscent of Bacon's belief that man's downtrodden estate is a consequence of human ignorance! Therefore, human pain is necessitated by human progress and human freedom. A perfect man would not be a man; a painless existence would be unworthy a free creature of God and devoid of such human values as striving, restraint, and labor. Note that, like Bacon, Parker, while he makes pain a condition of human life, also promises increasing amelioration as mankind educates itself. Now, if men would progress, they must study nature, for the laws of nature are the absolute and inalterable circumstances of their existence (Jonathan Edwards surfaces here), never abrogated for miraculous confirmations of God's power, as Orthodox and Unitarian "supernaturalists" say they are. If a boy wants to fly his kite, he must "learn the laws of nature." Nature's laws (here again is Bacon's concept of the permanence of natural laws as manifested in objects) are providential and therefore cannot be altered. "For answer to

our special prayers comes the eternal action of the universal law. Thus we learn by the elements. . . . Yea, all nature is a 'schoolmaster to bring us to Christ'." If we suffer apparent evil, then, it is because "we live unwisely yet," and we must make a "continual effort to live wiser, better, longer. . . ." Evil, therefore, is "disciplinary, preparing us for the ultimate and absolute good." Nature works perfectly and harmoniously, but human knowledge is still minuscule: "It is but a single page in nature's book we have learned to read." Only when we know "the whole" will God's providence become clear. "Bacon," Parker says, "devised his New Instrument for human thought, the *Novum Organum* of physical science," enabling us to see "a world of harmonious beauty." Someday a still greater genius will "devise the New Instrument of a higher science" by which the mind will be enabled to operate purely inductively, and "by the study of facts and history" to prove what is now only a postulate, "the perfect workmanship of God." This is what Bacon calls the summary metaphysical law of nature, the work which God worketh from the beginning to the end. Bacon doubts man's capacity to know it; Parker, like his Transcendentalist colleagues, does not; but that is perhaps the only major difference between them on this crucial question of the necessity of studying nature by induction in order to advance the human race and fulfill the will of God amid the inescapable worldly conditions of the providential and knowable natural law. Far from rejecting Bacon, Parker clearly demonstrates that Baconian principles are a necessary function of human existence.

Elsewhere, Parker chides Bacon for his ecclesiastical conformism. Bacon, Parker claims, did not really believe in the anthropomorphic deity promulgated by the theological tradition, any more than he believed in the traditional anthropomorphic science, but he nevertheless upheld fideism; "thereby he lost his scientific character, but kept his ecclesiastical reputation" (PW, VI, 123). But in fact Parker seems to adopt an essentially Baconian theology: man is made in God's image but is limited by his creature-hood; his knowledge of God is mainly "original," inspired, or revelational; his knowledge of the world is entirely experiential; and his suffering is a result of his ignorance; if man knew everything, he would be able to see God. Parker goes a step or two further: man can know the summary law; induction can take man to the divine throne; induction and inspiration are fraternal twins, rational and humane knowledges.

Parker's distinction between the "ecclesiastical" and the "philosophical" God also employs Baconian categories, particularly in the paradoxical way in which the natural order of facts and contingencies is reconciled with the immutable and the infinite. According to Parker, the growth of inductive science since the Reformation has made us aware of historical facts and of the conditions in which the writers of the Bible lived. But his understanding of their finite existence allows us to realize their inability to teach us about the infinite. We now know that they were real men

with real limitations. They had, for one thing, "no concept of science" nor of the regularity of God's natural laws; therefore, the deity they portray is a fictional creation made in their own image.³⁶ The Biblical God is anthropomorphic; He is man-like in His jealousy, His tribal partisanship, His absence from all but sacred places, and His whimsical decisions to perform odd miracles here and there. This deity does cruel things, condemns unborn generations, consigns infants to perdition, turns His back on man when most needed. He is personalized and localized. He "loves Jacob and hates Esau." The Biblical concept of God, that is, is the product of ignorant men in a barbaric age, and is not fit for enlightened Christians who should conceive of God in terms not of Jerusalem and Sinai but of infinity, eternity, and Boston. The ecclesiastical God is inimical to science, Parker continues, because He is not constant, regular, and reliable but irregular and miraculous. Science needs a God who acts "by a constant mode of operation." "The actual facts of the universe," Parker proclaims, "are not reconcilable with what the ecclesiastical theology teaches about God. This has become apparent, step by step, in the last three centuries." But still the Church insists that "the words of a Hebrew writer whom nobody knows"

³⁶The material on the ecclesiastical God is from PW, VI, 121-143, and on the philosophical God from PW, VI, 144-166. It is curious that a Transcendentalist like Parker chooses to employ his newly discovered tool of historical criticism to point out the differences rather than the similarities among times and men.

take precedence over "the actual testimony of things." Scientists have therefore been forced into atheism, for "the great obstacle to the advancement of science, nay to the diffusion of knowledge, . . . is the ecclesiastical conception of God," in which no self-respecting scientist could have faith. What religion, as well as science, needs is "a deity who acts now, and . . . who desires the best of possible things for each man, . . . and . . . for all persons." The angry God is "against nature" and stifles man's creativity. We must abolish Him and recognize that "Under us is the earth, every particle of it immanent with God; over us are the heavens, where every star sparkles with deity; within us are the heavens and the earth of human consciousness, a grander revelation of deity in yet higher form."

The true God, in contrast, is the "natural and philosophical" God, a concept which, like the false God, is the product of a particular age--the modern age, to whose enlightened wisdom men have progressed through the endless struggle of history. "Progress is the law of God," and the true idea of God will replace the false "just as the iron axe displaced the tomahawk of stone." But now, the Church still obstructs progress. "Which shall yield," Parker demands, "the fact of science, or the fiction of theology?" To win the contest, the proponents of the philosophical God must employ "the right method," which is to formulate one's idea of God by studying the facts--"the facts of instinctive and reflective consciousness within him, and the facts of observation

without. . . ." For example, "Read the book of Genesis, then read Newton's Principia . . . and then ask if the theologic God is cause adequate to the chemic composition of a single flower!" In nature, "There is law always, . . . never a miracle. . . ." To recognize this truth is to believe in the philosophical God, who teaches us to study nature and history "without hindrance, asking only for facts, for the law of the facts, and the human meaning of the law."

The Baconian content of Parker's discourse is great and unmistakable: observation of facts leading to laws, laws put to human use, regularity in nature, man's natural life conditioned by facts, subordination of mind to actualities, and so on. Furthermore, the intellectual atmosphere here is that of Baconian reformism and utopianism: repressive institutions and authorities with their false dogmas and logics must be overthrown; the universal acceptance of the philosophical God will "work . . . a revolution. . . . God everywhere, infinite wisdom, justice, love, and integrity, religion in all life, over the anvil, in the pulpit, beside the cradle, on the throne--what a new world that shall make. . . ." Thus will a new mode of thinking issue in real benefits for the body and soul of men. The paradox of history is also Baconian. We must study the historical facts, the actual conditions of history, to learn the truth, which is that men are conditioned by historical facts. But there is

a higher reality than history, working in and through history-- the regular, providential, eternal laws of God. It is these, and not history, which constitute the basis of our existence. Thus do we study facts in order to transcend facts, history in order to escape history, to attain what Bacon called "those real, and effectual results with which Fortune herself cannot interfere."³⁷

Parker's Dial essay, "Thoughts on Theology," is most revelatory of his ambivalence toward Bacon and his effort to demonstrate by Baconian induction the primacy of intuition.³⁸ The second part of the essay is devoted to a review of a Christological tract by J. A. Dorner. The first part is a critique of the current low estate of modern American theology. In the second half of this section, Parker reiterates his attack on Bacon as a sensationalist; but in the first half, Parker himself once again adopts Bacon's concepts and terminology in advocating the reform of religious knowledge.

Parker describes the two philosophies, spiritualism and materialism. Bacon he says, is a materialist who neglects the spiritual side of man. Bacon intended his method for "experimental science," where it has worked brilliantly. He "burst the trammels of Aristotle and the School-men, [and] emancipated philosophy . . . from the theological method. . . ." But Bacon's philosophy is too non-theological, even

³⁷ See above, p. 54.

³⁸ Dial, II (1842), 485-528. The material in this and the next three paragraphs is from this article.

anti-theological; it "lives in the senses, not the soul." Even for science, it has begun to prove too "outward," and scientists are now seeking "a better instrument than the *Novum Organum*, wherewith to arm the hand of science." And the most thorough-going modern Baconian, Auguste Comte, has extended Bacon's philosophy to atheism, materialism, and selfishness. Bacon's doctrines deny innate ideas, "Infinity, Eternity, and the like." Thus, "no skill . . . can counter-act the defects of the *Novum Organum*," when applied to morals, metaphysics, or theology. "Never did a new broom sweep so clean as this new instrument in the various departments of metaphysics, theology, and ethics. Love, God, and the Soul, were swept clean out of doors." Bacon's method, Parker concludes, has led to "materialism, selfishness, and scepticism" and has been "disastrous to theological pursuits." Only "a different method," a "more spiritual philosophy," can remedy the situation.

As we have seen, however, the "different" and "more spiritual" method which Parker recommends is in reality quite similar to the supposedly fatal Baconian. We may once again refer to the distinction I suggested between the specific and the general Baconian methods; Parker's ire is apparently directed at the complex and technical specific method described in Book Two of the *Novum Organum*; the general method adumbrated in Book One and in the *Advancement of Learning* is more congenial to Transcendental sensibilities. In the first pages of the *Dial* essay, where Parker is not

forced to address himself to Bacon by name, he displays the Baconian influence. Parker laments that only in Germany is theology pursued by the best minds in the modern scientific spirit; in America, on the other hand,

while each other science goes forward, passing through all the three stages requisite for its growth and perfection; while it makes new observations, or combines facts more judiciously, or from these infers and induces general laws, hitherto unnoticed, and so developes [sic] itself, becoming yearly wider, deeper, and more certain, its numerous phenomena being referred back to elementary principles, and universal laws,--theology remains in its old position.

"[T]here is no science of theology with us," Parker declares. Progress has ceased in theology. For Parker, progress is "to separate religion from the existing forms, churches, or records"; thus, again, a Baconian value, progress, is transferred to a supposedly anti-Baconian element in the Transcendental program, religious individualism.

To get theology moving again, Parker urges that "The theologian of our day, like the astronomer of Galileo's time, . . . cast his idols of the tribe, the den, the market-place, and the school, to the moles and the bats," and so extend "the empire of Reason." Theology must be "studied in a philosophical spirit, and [with] the method of a science." The method consists of asking "what are the facts of observation whence we shall start?" and "what is the true and natural order, explanation, and meaning of these facts?" In this method, myths, speculations, prophecies, and superstitions have no part; like the Trinity, they are "no-facts."

The method will help discover the currently obscured "true end" and "true path" of religion by abolishing the primitive hypotheses and occult assumptions now prevalent. A theologian can work in two ways, Parker says, by the philosophical or scientific method and by the historical method. The latter studies all previous theology and eclectically arrives at religious doctrines; this method is popular but ultimately futile--so much for Cousin. The scientific method requires first an epistemology, "the NOVUM ORGANUM of theology" and then an objective and systematic study of the phenomena of the inner world of self and the outer world of nature. This is the method (advocated by Bacon and) used in "the other sciences," and it insures that the resultant theology will achieve the true "theory of God, of man, of the relation between God and man, and the duties that grow out of this relation." These are, of course, the kinds of things Bacon said could not be learned inductively, but Parker cites Bacon nevertheless in stating that, in his task, the theologian must eschew overhasty generalizations and conjectures, which are all too often these days taught at universities (Bacon cited again) as dogma guaranteed by the now-discredited authorities, who "spin cobwebs of learning."

Parker, then, displays a more or less typically Transcendental attitude toward Bacon. Believing, with all of his colleagues, that a man's life and his thought should be imbued with identical moral values, Parker finds it difficult to admire Bacon as a man. As a philosophical and moral in-

fluence, Bacon fares little better; Parker, following Cousin, considers him the father of English materialism. But Parker also finds it impossible to avoid adopting most of Bacon's program, much of his terminology, and many of his values. However firmly and sincerely Parker advocates the spiritual, transcendental, intuitive approach to problems of life and faith, he invariably returns to the rhetoric of factual and empirical knowledge, to the realm of phenomenal and experiential actuality. He emulates Bacon's critical attitude toward man's current estate and speaks as the prophet of an enhanced human grandeur. He adopts Bacon's utopian reformism. Like Bacon, he advocates the replacement of authority by experience, abstract speculation by observation of the facts, dogmatic systems by real service to man's needs. He insists that the study of facts be undertaken methodically, that it lead to the discovery of laws, that the laws be applied to human life. He adopts Bacon's belief in the regularity of nature and affirms that special miracles are unnecessary because all nature is miraculous. Unlike Emerson, who favors Edwards' typological analysis of the relation between facts and spirit (facts are symbols of God's laws), Parker, despite his distaste for the absentee God of Deism, leans toward Cotton Mather's Natural Theology (facts are providential and demonstrate God's benevolence). In sum, Parker does not reject Bacon; if anything, he goes beyond Bacon in the same direction, like the Puritans, by transferring the concepts of Bacon's philosophy to Bacon's divinity

and making philosophical positivism a corollary of theological certainty.

Parker's demand for a revitalized and "scientific" theology was not, of course, original with him but, as I noted, was a standard doctrine of the Unitarians in their conflict with Congregational orthodoxy. The Unitarians used the slogan to refer to a non-Calvinistic theology, while those Transcendentalists who adopted it used it to refer to a non-Unitarian theology, but on all sides there was agreement on Francis Bacon's general relevance to the concept. The lament for theology may ultimately go back to Bacon's lament for science; but the Transcendentalists were more directly influenced, perhaps, by Kant's call for a rejuvenated metaphysics, in which he employs Bacon's language: science has advanced since Bacon but metaphysics languishes, etc.³⁹ George Ripley's invocation of Bacon in support of scientific theology appeared in the Christian Examiner in 1836, thus predating Parker's "Thoughts on Theology" by several years. In his review of James Martineau's The Rationale of Religious Enquiry, Ripley quotes Martineau to the effect that Bacon has systematized science, but no one has yet provided an "'organon of theology'."⁴⁰ Ripley goes on to decry the "present degraded state of theological science in England." He continues,

³⁹ See Frederick Henry Hedge, "Coleridge's Literary Character--German Metaphysics," in Cameron, Emerson the Essayist, II, 66 (originally appeared in Christian Examiner, 1833).

⁴⁰ Christian Examiner, XXI (1836), 225.

it has been the fate of that master science, which the author of the "Novum Organum" designates as "sacred and inspired theology, the sabbath and port of men's wanderings and labors," to languish in utter neglect, or to be left in the hands of religious artisans, who had neither the taste to perceive its richness and beauty, nor the skill to further its progress. It seems to have been taken for granted, that this was a sphere of thought, on which no new light could fall, which was absolved from the great law of advancement that binds all other human affairs . . . so that theology alone, in the midst of scientific progress, nay, of revolution, retains the⁴¹ withered form and rigid features of the past.

Theology should be studied by "scientific minds" and "with the precision and depth of true science." This precision, moreover, requires "a rigid method," which will unify "the science of Divinity" and enable it to "gather around itself all that is attractive, beautiful, and glorious, in the whole compass of creation."⁴² In demanding a new theology, Ripley, like Kant, adopts some of the same terms Bacon used in calling for a new science: we need a "new organ of theology," one that will avoid obscurities, abstractions, and dogmatic technicalities and will unite scientific precision with a passionate regard for man's religious needs. Above all, Ripley says, religious doctrine must be reasonable; no fideism can be allowed: "It seems to me more consonant with the spirit of genuine science, after we have detected the unsoundness of a received theory, to establish a

⁴¹p. 225.

⁴²pp. 226-227.

better one in its place, than to deny the facts upon which the discarded notions were sustained."⁴³ Among Ripley's "facts," as among Parker's, are some of what elsewhere they call innate ideas, "the intuitive perceptions on which all moral and religious truth is founded . . . the signatures of universal and everlasting authority." These are "independent of experience" but are facts all the same. An example of the scientific recourse to facts in disproving a theory is Ripley's denial of the necessity of the Scriptural miracles as a warrant of God's power. The "testimony of consciousness and experience . . . in accordance with facts" demonstrates, Ripley says, that one can believe in Christ without believing in the miracles. Therefore, the miracles are secondary. They are no more miraculous than the latest discoveries of science in electricity and magnetism, which look, at first, like miracles but which, like the loaves that fed the multitude, cater to bodily needs and are thus subordinate to the spirit, which does not need them.⁴⁴

Elsewhere, Ripley adheres closely to the opinions of Cousin on Bacon. Ripley asserts, in the Introduction to his anthology, Specimens of Foreign Standard Literature, that in Bacon's day a "spiritual philosophy" did reign but was superstitious and incomplete, "destitute of the support of scientific observation which [it has] since received from the

⁴³p. 243.

⁴⁴pp. 249, 245, 252-253.

profound and accurate researches of modern times." Bacon demolished the "subtile speculations" of the scholastics and substituted "the substantial results of outward experience and observation." Like Cousin, whose writings are included in the anthology, Ripley ascribes the paternity of modern sensationalism to Bacon, but, also like Cousin, absolves him of this error in his own thought; Bacon, Ripley says, "advances principles which are in direct opposition to sensual procedures and results."⁴⁵

Thus, like Parker, Ripley enacts the characteristic Transcendental pattern of expressing dismay at the materialism of modern thought, ascribing the materialism to Bacon, conceding that Bacon "himself" was no materialist, and finally moving on to adopt Bacon's terminology and concepts in arguing for a theological renaissance.

Orestes Brownson, a temporary Transcendentalist, also adopts Cousin's view of Bacon. However, unlike Emerson's, Parker's, and Ripley's, Brownson's opinion of Bacon undergoes a significant change which is related to the temporary nature of his commitment to Transcendentalism and which sheds light on the movement's relations with Bacon. Brownson became a Catholic in 1844; before his conversion, he takes Parker's and Ripley's position on Bacon and Baconianism, but after his conversion, he adopts the virulent anti-Baconianism of de Maistre and Ozanam. Naturally, the change is far from

⁴⁵ Boston, 1838, I, 12-13.

fortuitous; it is only one representative aspect of Brownson's general intellectual development, his long and complex journey to Rome. But it is interesting that Brownson confirms what I have suggested is true of Emerson, Parker, and Ripley: that their apparent hostility to Bacon is overcome by their basic, if usually unacknowledged, approval and adaptation of his doctrines and ideals. For Brownson echoes Ripley and Parker in the 1830's; but when he turns his back on them and on liberal Protestantism, he turns his back on Francis Bacon also.

In 1836, the Transcendental annus mirabilis, Brownson is claiming that the "great mission of our age is to unite the infinite and the finite."⁴⁶ Under the spell of Cousin,⁴⁷ he insists, in New Views of Christianity, Society, and the Church, that we must allow neither pure spiritualism nor pure materialism to gain the ascendancy, as each has done at various times in the past. Instead, we must unite matter and spirit, reconcile them "in a mystic and holy union."⁴⁸ To achieve this union, which will take account of the fact that both matter and spirit are good as creations of God, we must overthrow repressive institutions. "We are creatures of growth," Brownson writes; "it is, therefore, impossible that all our institutions should not be mutable and transitory. We are

⁴⁶ Christian Examiner, XXI (1836), 61.

⁴⁷ See Arthur M. Schlesinger, Jr., Orestes A. Brownson: A Pilgrim's Progress (Boston, 1939), pp. 54-55, 124-128.

⁴⁸ Boston, 1836, pp. 12-13.

forever discovering new fields of truth, and every new discovery requires a new institution, or the modification of an old one."⁴⁹ Therefore, "unlimited freedom of thought and conscience" is imperative. The Renaissance and the Reformation furthered man's progress toward the holy synthesis by ending the despotic sway of total spiritualism, with its repression of progress and its concomitant political form, tyranny, and by advancing the cause of matter and its political corollary, democracy. Bacon was instrumental in this revolution, Brownson says, though his influence has now led to complete materialism.⁵⁰ So a new revolution is necessary, not back to spirit again, but onward to the final reconciliation of spirit and matter, God and man.⁵¹ Bacon will not be forgotten, however, because Baconian science, by discovering the providential laws of the natural order, "also keeps alive the spiritual, and gives us a check against the absolute ascendancy of Materialism."⁵² Not only is science on the march, but other conditions are now suitable for the coming of the "new order of things." One is the presence of Unitarianism, which, though materialistic, is the final stage of Protestantism and so, amid the ashes, contains the germ of "universal reconciliation"; another is America, whose citizens best unite the "man of thought" and

⁴⁹ p. 3.

⁵⁰ Pp. 34, 39, 41.

⁵¹ Pp. 53-55.

⁵² p. 63.

the "man of action."⁵³ Furthermore, merely by enunciating the prophetic vision, Brownson is helping to bring on the new world, for "ideas, if they are true, are omnipotent," and once men are gripped by the idea of "the holiness of all things" they will "reduce it to practice" and "become personally holy."⁵⁴

Brownson thus sees Bacon as limited but praiseworthy, a necessary force in the progress of mankind. Especially attractive to Brownson are Bacon's rehabilitation of matter (so long as interest in matter is not carried to excess), his establishment of a scientific method that insures ascent to "spiritual" laws, his anti-institutionalism and anti-authoritarianism, his prophetic reformism and utopianism, and his demand for action and the application of knowledge to real behavior. Elsewhere, Brownson praises Bacon's "experimentalism."⁵⁵ Brownson, like Bronson Alcott, also adopts Bacon's educational reformism, asserting in 1840 that "Induction is the foundation of all practical [but not religious] knowledge" and that a child learns by "experience," by his senses, and by immediate "intuitions" of truth (again the easy identification of induction and intuition). In order to help children learn, we must reform the stifling educational system, abolish dogmatism, authority, and book-learning, and substitute the discovery of truth, actively, in

⁵³Pp. 79, 92.

⁵⁴P. 103.

⁵⁵Boston Quar. Rev., I (1838), 87-88; II (1839), 28.

the "book of nature" which is "vernacular to all men."⁵⁶

Things begin to change, however, in the early 1840's. Brownson's remarks on Bacon begin to take on a hostility beyond that of the relatively perfunctory Cousin-influenced strictures against excessive materialism. Bacon, Brownson asserts, may have been "an idealist in relation to progress in the material order," but he has no "faith in the progress of man's inherent capabilities, humanity, human nature itself" (this is actually a rather accurate appraisal; Bacon did not believe that human nature was susceptible of improvement).⁵⁷ In his 1843 Dartmouth address, Brownson appeals not so strongly for democracy and free inquiry as for an intellectual elite; "science is for the few," he says. He credits Bacon with membership in this elite, but it is in company with "Abelard and St. Thomas."⁵⁸ One fears that Bacon's reputation as the prophet of free inquiry will not stand him in good stead in this particular elite; and, indeed, his expulsion is not long in coming. Bacon, Brownson claims elsewhere, "did not invent induction," which is, as Macaulay has said, the standard mode in which any human mind invariably functions (OW, I, 37-38). Bacon is no original genius, founded no philosophy, is content with mere probability instead of seeking the metaphysical certainty the mind demands.

⁵⁶ Boston Quar. Rev., III (1840), 145-152.

⁵⁷ Boston Quar. Rev., V (1842), 279-280.

⁵⁸ An Oration on the Scholar's Mission (Boston, 1843), pp. 17-19.

Campanella was a much greater man. Bacon, in contrast, stands for the mob and against the Church.⁵⁹ He tells us only about particulars, nothing about principles or causes. If Bacon has had any influence on modern science, then it has been a debilitating one, for "what pass with us for sciences" are all but worthless, mere catalogues of statistics. Bacon's method, moreover, is fatal to religious knowledge, as Bacon saw it would be, because it encourages sensualism, though he was not a sensualist himself. "Yet, in point of fact, though it is the fashion to attribute every thing to him that is good in the modern intellectual world, we do not believe his influence has been great, and we are sure that it has been almost wholly overrated. He has left no school; he has had no disciple."⁶⁰ It is noteworthy that in his growing dislike for Bacon, Brownson has recourse to the rationalist Macaulay in the denial of Bacon's originality and influence. In 1851, Brownson reiterates his dismay at the "fatal" consequences of Baconianism in religion, where intuition and reason, as well as experience, must be guided by the doctrines of authority (OW, III, 141). In 1863, "Bacon ruined the sciences" by divorcing them from theology, revelation, and philosophical ideas (OW, IX, 265). By 1875, Bacon has become nothing more than an "English humbug" (OW, IX, 563).

⁵⁹Brownson's Quar. Rev., I (1844), 165-170, 159.

⁶⁰Brownson's Quar. Rev., I, 170.

The crucial feature of Brownson's Catholicism in the devaluation of Bacon is authority.⁶¹ As a Transcendentalist, Brownson can reconcile Bacon with liberty, reform, and free inquiry, as well as with truth's independence of institutions. But as a Catholic--even though Bacon's actual theology and philosophy are in some ways more congenial to traditional than to liberal views--Brownson cannot accept Bacon's individualism. Of course, it was common at that time for conservative Catholics to condemn Bacon, but in Brownson's case there is added the convert's revulsion against the mentors of his youth.

I have discussed Thoreau's comments on the Sphinx myth as expressing his version of Baconian knowledge of nature. However, Thoreau does not seem to have been as intimately acquainted with Bacon's writings as was Emerson, nor was he "influenced" by them in the same way as by the classics and the Orientals. "Lord Bacon" appears on a reading list Thoreau wrote into his copy of Phelps and Squire's Travelers' Guide in 1838,⁶² and according to Max Cosman, he read Bacon during his Staten Island visit in 1843.⁶³ Walter Harding

⁶¹Cf. Caponigri, "Brownson and Emerson," pp. 381, 385, 389. George Daniels has also found that anti-Baconianism in the nineteenth-century was principally a Catholic phenomenon; see "An American Defense of Bacon," pp. 337-339.

⁶²Cameron, The Transcendentalists and Minerva, II, 362.

⁶³Thoreau and Staten Island," Staten Island Historian, VI (1943), 1-2, 7-8; reprinted in Cameron, Over Thoreau's Desk: New Correspondence 1838-1861 (Hartford, 1965), pp. 7-11. Bacon does not appear in the list of Thoreau's book borrowings; see Cameron, Emerson the Essayist, II, 191ff. See also Matthiessen, American Renaissance, p. 82.

has discovered that Thoreau owned a volume of Bacon's essays.⁶⁴ But perhaps most of his contact with Bacon was indirect, through the Harvard texts already mentioned and other similar works, such as Coleridge's Aids to Reflection, Cousin's Introduction to the History of Philosophy, Brewster's biography of Newton, and the Spectator.⁶⁵ In 1838 he read and outlined de Gérando's Histoire Comparée, noting that "Bacon commences a fundamental reform" by initiating the age of mind.⁶⁶ William Howitt, whose Book of the Seasons, or the Calendar of Nature is said to have been influential upon Thoreau's view of science,⁶⁷ places Bacon with Newton and Locke

⁶⁴Thoreau's Library, Thoreau Society Booklet, 11 (Charlottesville, Va., 1957), p. 31.

⁶⁵See Cameron, Transcendentalists and Minerva, II, 368; I, 233; Harding, Thoreau's Library, pp. 35, 89.

⁶⁶Cameron, Transcendentalists and Minerva, I, 250.

⁶⁷Nina Baym, "Thoreau's View of Science," JHI, XXXVI (1965), 225. On Thoreau and science there is a substantial bibliography and an energetic controversy, for which Professor Baym gives the reader some background. See also Horace Taylor, "Thoreau's Scientific Interests As Seen in His Journal," McNR, XIV (1963), 45-59; Henry Seidel Canby, "Thoreau and the Machine Age," YR, N.S. XX (1930-31), 525-526; Paul, Shores of America, p. 113. Despite Professor Baym's claim, however, Howitt's book represents precisely the kind of gushy nature-writing in the Natural Theology tradition which Thoreau ridicules as "the mealy-mouthed enthusiasm of the lover of nature" (TJ, I, 235). Thoreau cautions that in reading such books, "we have to skip the author's moral reflections, and the words 'Providence' and 'He' scattered along the page, to come at the profitable level of what he has to say . . ." (TW, I, 79; cf. TJ, I, 243).

as great philosophers who have "turned us for wisdom to the great book of Nature."⁶⁸

When Thoreau himself mentions Bacon, however, he seems to identify Bacon and Baconian science with an abstract, mechanical, mathematical, and bloodless approach to nature.⁶⁹ In a famous journal entry, Thoreau declares that

The true man of science will have a rare Indian wisdom--and will know nature better by his finer organization. He will smell, taste, see, hear, feel, better than other men. His will be a deeper and finer experience. We do not learn by inference and deduction, and the application of mathematics to philosophy but by direct intercourse. It is with science as with ethics--we cannot know truth by method and contrivance--the Baconian is as false as any other method. The most scientific should be the healthiest man.⁷⁰

However, there is more to be said about Thoreau's critique. In his insistence on "direct intercourse" as opposed to "inference and deduction," Thoreau is in fact not denying but emulating Bacon. The abstract, speculative naturalist whom Thoreau describes recalls Bacon's picture of the scholastic web-spinner, and the "Indian," with his finer sense, is closer to Bacon's ideal scientist, whose eye is constantly on the natural fact. Thoreau's abstract scientist, in fact, is much like Dr. Obed Battius in James Fenimore Cooper's The Prairie. Battius is the cataloguing, classifying and self-deluded scientific bumbler whose knowledge of nature is

⁶⁸London, 1831, pp. xxiv-xxv.

⁶⁹See Taylor, "Thoreau's Scientific Interests," p. 49.

⁷⁰Miller, Consciousness in Concord, p. 171.

derived from books, in contrast to that of Natty Bumppo, who learns by observation and experience, who perceives God's will in nature, and who is therefore the more truly "Baconian" man.⁷¹ Indeed, in spite of his relatively meager contact with Bacon and his criticism of science, Thoreau is in many ways the most "Baconian" of all the Transcendentalists--so much so, in fact, that one suspects that his familiarity with the Novum Organum may have been more intimate than the written records indicate. Thoreau, in any case, appears to have "reduced to practice"--as described in his writings--the Baconian principles enunciated by Emerson and the others.

Thoreau's disavowal of method, for example, must be taken skeptically. While, as I have shown, most of the Transcendentalists rejected pure idealism or spiritualism in favor of a union of spirit and fact, none is more completely convinced than Thoreau that philosophical abstractions and dogmatic systems--including those of Coleridge and Kant--must bow before the concrete actualities of immediate experience. None more ardently seeks the infinite in the finite; none is so certain that if we would have the primrose be more than a primrose, we must accept it first as a primrose. Indeed, he sometimes goes so far as to say that the physical fact suffices: "We need pray for no higher heaven," he declares, "than the

⁷¹ See Harry Hayden Clark, "Fenimore Cooper and Science, I," TWA, XLVIII (1959), 179-204.

senses can furnish, a purely sensuous life. Our present senses are but the rudiments of what they are destined to become" (TW, I, 408). This statement is strikingly reminiscent of a most characteristic notion of Keats, assuredly no idealist, that "we shall enjoy ourselves here after, by having what we called happiness on Earth repeated in a finer tone and so repeated."⁷² Nevertheless, Thoreau seldom lets us forget that it is not the fact alone that is of final value but the moral or spiritual meaning of the fact--just as Bacon too insisted upon ascent from facts to higher principles and upon the application of knowledge to man's intellectual, physical, and moral needs. "The fact," Thoreau declares, "will one day flower out into a truth. The season [not the Reason] will mature and fructify what the understanding had cultivated" (TJ, I, 18; cf. III, 99). As we will see, however, the season will require the help of Baconian method to achieve its ends.

Thoreau's interest in Baconian "fruit" is paralleled by his adoption of another doctrine of Bacon's: that mutability is cheated by the permanence of natural facts. What is valuable in historical and scientific literature, Thoreau says, is "not the annals of the country, but the natural facts, or perennials, which are ever without date. When out of history the truth shall be extracted, it will have shed its dates like withered leaves" (TW, I, 231). Worthy of note also is that

⁷²Letter to Benjamin Bailey, November 22, 1817, Selected Letters, ed. Lionel Trilling (Garden City, N. Y., 1956), p. 99.

Thoreau shares Bacon's ambivalence toward history; on the one hand, he suggests that historical truth is arrived at by a study of facts, as he himself studied early American history;⁷³ but, on the other hand, what is most needful for men to know transcends the particulars of time and place and resides in the immutable laws governing the particulars. Like Bacon, Thoreau wishes to learn from the past, not to worship it or study it for its own sake. Early historians, Thoreau writes, wanted not "to preserve, but to learn the fact. . . . Critical acumen is exerted in vain to uncover the past; the past cannot be presented. . . . it is the province of the historian to find out, not what was, but what is" (TW, I, 162). Neither Bacon nor Thoreau believes that vicarious experience, however exalted as authority, is any substitute for present experience in learning the truth.

How to bring forth the "fruit" from the fact? First, by confronting the fact, pinning it down, studying it from all angles, overcoming its elusiveness and the mind's tendency to evade the discipline of facts:

The frontiers are not east or west, north or south; but wherever a man fronts a fact, though that fact be his neighbor, there is an unsettled wilderness between him and Canada, between him and the setting sun, or, farther still, between him and it. Let him build himself a log house with the bark on where he is, fronting IT, and wage there an Old French war for seven or seventy years, with Indians and Rangers, or whatever else may come between him and the reality, and save himself if he can. (TW, I, 323-324)

⁷³See Norman Foerster, "The Intellectual Heritage of Thoreau," Texas Rev., II (1917), 204-205.

A heroic endeavor indeed, comparable to the mind's struggle against the Baconian idols; it is a struggle which calls for a truly Baconian faith in the totally educative power of fact.

But confrontation alone will not invariably elicit the fact's fruit, and here Thoreau takes the next and most clearly Baconian step of all: to the concept of method. Thoreau's "method" is calculated to stand in for unexpected mystical illumination--suddenly finding oneself a transparent eyeball--and so, as in Bacon, to repair the breach created by the Fall of Man.

The process of discovery is very simple. An unwearied and systematic application of known laws to nature causes the unknown to reveal themselves. Almost any mode of observation will be successful at last, for what is most wanted is method. Only let something be determined around which observation may rally. Now many new relations a foot-rule alone will reveal, and to how many things still this has not been applied! What wonderful discoveries have been and may still be made with plumb-line, a level, a surveyor's compass, a thermometer, or a barometer! Where there is an observatory and a telescope, we expect that any eyes will see new worlds at once. (TW, I, 387-388).

This remarkable passage is a virtual distillation of much of the Novum Organum: as in Bacon, place and time are irrelevant to the study of the eternal operations of nature; the mind progresses from facts to laws and from the known to the unknown; the method is "simple," so that, with the proper tools, "any eyes" will discover the truth; the senses must be aided by instruments; the discoveries will issue finally in "new worlds." Of course, as his critique of the Etzler book illustrates, Thoreau does not share Bacon's desire to

employ inductive knowledge in the production of "new natures" or scientific wonders (NO II:1, BW, VIII, 167). But the underlying concept of the utility of knowledge, its subservience to the needs of man, is common to both writers; in Bacon the fruit is often technological while in Thoreau it is moral or spiritual.⁷⁴ Still, Thoreau is very far from denying the claims of material utility. Like Emerson and Parker, he too accepts the distinction between the body and the flesh and is at pains to demonstrate, in Walden, how the spiritually fruitful life is also eminently efficient, economical, and satisfying to the body.⁷⁵

Thoreau's call for a log cabin in the woods was, of course, made while he was living in just such a place; and a perfect instance of his method in action is provided in the chapter "The Pond in Winter" in Walden. Most commentators agree that in the mythic and metaphorical pattern of Walden, winter represents the loss of inspiration, a dry and slumbrous period for the soul, as well as for nature, when the soul can expect no rays from nature but must ferret out for itself indications of a spiritual presence.⁷⁶ The metaphoric correlation of the seasons with psychological or

⁷⁴See above, p. 17.

⁷⁵On Thoreau's Baconian utilitarianism, see Stanley Edgar Hyman, "Henry Thoreau in Our Time," Thoreau: A Century of Criticism (Dallas, 1954), p. 178. Loren Eiseley links Bacon and Thoreau, Francis Bacon and the Modern Dilemma, pp. 88-91.

⁷⁶Paul, "Introduction" to Walden (Boston, 1957), pp. xxxiv-xxxv; Paul, Shores of America, p. 171; William Drake, "Walden," Thoreau: A Collection of Critical Essays, p. 89; Lauriat Lane, Jr., "On the Organic Structure of Walden," CE, XXI (1960), 202.

spiritual states is a traditional one, of course; nowhere is it more explicitly delineated than in a sermon by a seventeenth-century American Puritan cited anonymously by Perry Miller:

[As trees] have their spring, wherein they in their glorious hue are comparable to Salomon in his royalty, so haue they their winter, wherein their sap retireth to the root, the branches seeme to be withered, as if they were not the same, no life in them: so is it with the graces of God in mans soule, they have their spring and summer seasons, they have also their winter, wherein they seeme cleane blasted and decayed, as if there were no seeds of grace in their hearts; and as we must not call in question the vegetative power and life that is in plants and hearbs, by reason of the little appearance thereof in the dead time of the yeere; no more must wee make question of the truth of grace in our hearts.

Winter in Walden is that time when God's graces seem to have disappeared, when nature cannot be counted upon--as it often can in greener seasons--to thrust its divine message upon the receptive soul. Winter is the Transcendental version of the dark night of the soul; it holds no real terrors, but it must be won through anyway, if the soul is to achieve its rebirth in "Spring." In winter, a more circuitous approach to truth

⁷⁷ The New England Mind: The Seventeenth Century, p. 54. On Thoreau's reading in the Puritans, see Lawrence Willson, "Another View of the Pilgrims," NEQ, XXXIV (1961), 160-177; Goddard, Studies in New England Transcendentalism, pp. 188-189. On the influence of Puritanism on American literature, see Larzer Ziff, The Career of John Cotton, p. 161n.; Ziff, "The Literary Consequences of Puritanism," ELH, XXX (1963), 293-305; A. W. Plumstead, "Puritanism and Nineteenth Century American Literature," QQ, LXX (1963), 209-222.

than the directly sensual is required.⁷⁸ Winter is a time of intellectual routine and numbness, though never without glimpses or traces of "heaven's own blue" (TW, II, 410). A corollary of winter's numb routine is the superficial and fruitless behavior of the Battius-like naturalist, whom Thoreau describes as handling a fallen tree delicately, lifting "the moss and bark gently with his knife in search of insects. . . ." In contrast, the rude woodsman "lays open logs to their core with his axe, and moss and bark fly far and wide." Because of the woodsman's direct and utilitarian approach, his "life itself passes deeper in Nature than the studies of the naturalist penetrate . . ." (TW, II, 438-439). So Thoreau himself attempts to get to the "core" of nature by cutting through the ice on the pond and observing the seemingly timeless and other-worldly beauty of the "quiet parlor of the fishes" (TW, II, 437).

But, to penetrate still farther into the pond--which "was made deep and pure for a symbol" (TW, II, 442)--a symbol at once of the self and of external reality, in both of which resides a core of divine energy--Thoreau must

⁷⁸Winter in Walden thus seems to constitute an exception to Joel Porte's statement (Emerson and Thoreau, pp. 191-192, 138-140) that the basis of Thoreau's art is "momentary ecstasy and epiphany reached through the senses." Momentary ecstasy is what Thoreau would have us believe his art is based on; Thoreau's art is really based on careful planning and fully controlled arrangement of seemingly inchoate materials.

"recover the long lost bottom" (TW, II, 441).⁷⁹ This recovery is a process requiring a scientific method, though Thoreau clearly believes his method, because it will lead to spiritual "fruit," is more akin to the techniques of the woodsman than to those of the superficial naturalist. Men say the pond is bottomless, Thoreau reports; he finds it "remarkable how long men will believe in the bottomlessness of a pond without taking the trouble to sound it" (TW, II, 441). Men are deluded; they must be shown the facts. Thoreau undertakes the characteristically Baconian task of testing a hypothesis by experimentation, direct observation of the physical reality or indirect observation by means of instruments--"compass and chain and sounding line"--so that, as Bacon taught, the experiment judges the fact and the observer the experiment (BW, VIII, 44). With his instruments, Thoreau conscientiously sounds the pond and measures its length and breadth. Elsewhere he records its temperature, the dates upon which it freezes and thaws, and other "scientific" data, just as he notes, to the half-penny, his income and expenditures at the pond. These measurements are no easy task, but Thoreau, a competent surveyor, does not skimp on them. He finds, for example, that "on a line arbitrarily chosen, the depth did not vary more than one foot in thirty

⁷⁹ See Paul, "Introduction," pp. xxxii-xxxiii; Willard H. Bonner, "Mariners and Terreners: Some Aspects of Nautical Imagery in Thoreau," AL, XXXIV (1963), 512ff.

rods; and generally, near the middle, I could calculate the variation for each one hundred feet in any direction beforehand within three or four inches" (TW, II, 445). Nor does he ignore the several coves which indent and complicate the shoreline of the pond. It is this actual attention to physical detail that distinguishes Thoreau's Baconianism from that of the other Transcendentalists. One is reminded of Bacon's fatal experiment in refrigeration, when he packed a chicken in snow and contracted his last illness; but one cannot imagine Emerson or Parker on his stomach on the ice of Walden, peering through a hole at pickerel. Baconian also is Thoreau's preference for observation over "imagination" in knowing the truth about the pond; realities must dominate, he says, because, just as Bacon pointed out, "the imagination, give it the least license, dives deeper and soars higher than Nature goes" (TW, II, 444; cf. BW, VIII, 53).

Experiments, of course, must lead to conclusions, or, in Baconian terms, "axioms."⁸⁰ On the level closest to the facts, Thoreau discovers that "Walden has a reasonably tight bottom at a not unreasonable, though at an unusual, depth" (TW, II, 442). But lowest axioms must yield higher axioms, and so Thoreau goes on to find that "the line of greatest length intersected the line of greatest breadth exactly at the point of greatest depth," and that the variations in the bottom correspond to the hills and valleys in the neighboring landscape

⁸⁰ See Paul, "Introduction, pp. xxxv-xxxvi."

(TW, II, 447). Like a true Baconian scientist, Thoreau does not fail to check his results and descends once more to facts to test the axiom: he measures White Pond, and the results corroborate his Walden findings--length, breadth, and depth are concentric. Only the moral and spiritual "law," the highest axiom, which will issue in practical fruit for the conduct of life, remains to be inducted:

What I have observed of the pond is no less true in ethics. It is the law of average. Such a rule of the two diameters not only guides us toward the sun in the system and the heart in man, but draw lines through the length and breadth of the aggregate of a man's particular daily behaviors and waves of life into his coves and inlets, and where they intersect will be the height or depth of his character. (TW, II, 448)

Actually, this last observation is closer to the philosophia prima than to the results of a particular experiment.

Like Bacon, Thoreau maintains that the painstaking discipline of inductive method is necessitated not by nature's imperfection but by man's ignorance and inferior intellect:

If we knew all the laws of Nature, we should need only one fact, or the description of one actual phenomenon, to infer all the particular results at that point. Now we know only a few laws, and our result is vitiated, not, of course, by any confusion or irregularity in Nature, but by our ignorance of essential elements in the calculation. Our notions of law and harmony are commonly confined to those instances which we detect; but the harmony which results from a far greater number of seemingly conflicting, but really concurring, laws, which we have not detected, is still more wonderful. (TW, II, 447-448)

Emerson, as I pointed out, is impatient with a multiplicity of details; one, by "analogy" is enough to point the way to the higher law.⁸¹ And Emerson said of Thoreau that he, too, "swiftly inferred the universal law from the single fact" (EW, X, 474). But Thoreau, like Bacon, sees that repetition is sometimes necessary because of the flaws in human vision; to judge by one fact alone is to risk falling victim to an idol of the cave, a faulty conclusion based upon one's personal prejudices and limited point of view. But, with study and careful, idol-free observation of nature, man can learn more and more of nature's laws, until he is able to perceive the "harmony" which underlies apparent phenomenal chaos.⁸² Like Emerson, Thoreau is much less dubious than Bacon about man's ability to know this ultimate harmony, "all the laws of Nature," or, as Bacon put it, the "summary law of nature,"

⁸¹Cf. Miller, "Thoreau in the Context of International Romanticism," p. 147; John Brooks Moore, "Thoreau Rejects Emerson," AL, IV (1932), 241-256. I believe Professor Miller is at least partly in error when he ascribes to Thoreau the attitude of "passive receptivity" which Miller says is typical of Romanticism in general. But Prometheanism is a dominant element in many versions of Romanticism, including Thoreau's. Such acts (as described in Walden) as the building of the hut, the cultivation of the bean-field, and the exploration of the pond are assertions of the artist's energy and demonstrate the artist's need to seek actively rather than wait passively. This self-assertive labor and use of muscle and brain are, of course, sanctioned by Bacon. Then too there is the more subtle question of the role of the artistic imagination in transmuting fact into truth; if the imagination acts upon the fact so as to force meaning into or out of it, how can the artist be said to be passive? As I have noted, Thoreau echoes Bacon on the creative power of imagination.

⁸²Cf. Walcutt, "Thoreau in the Twentieth Century," p. 174.

opus quod operatur Deus, the vertical point of the pyramid of philosophy (and, for the Transcendentalists, of divinity also).

Thoreau concludes the chapter with a description of the ice-cutters, who treat the pond as commodity alone and who, like the dainty naturalist, do not get beneath the surface of things. Instead of discovering the pond's laws, they are intent upon the immediate "fruit," and they elicit Thoreau's scorn as the technological emulators of Atalanta elicited Bacon's (BW, VIII, 48). In terms of the symbolism of Walden, the ice-cutters fail to penetrate to the core of reality or to their inmost selves; they carry off nothing of more value than the ice--the very barrier to be pierced through--and they do not even get all of that. They are creatures of a superficial ethic; they live "mean and sneaking lives"; they do not master nature and put it to their best use but, as is shown when one of them falls into the pond, are mastered by it. They visit the pond but do not know the pond, and they are completely ignorant of the harmony which it symbolizes. If the abstract, Linnaean naturalist corresponds among Thoreau's enemies to the abstract scholastics among Bacon's, the ice-cutters represent the opposite pole and correspond to the greedy mechanics whom Bacon derides for accepting present gain in place of true knowledge. As the ice-cutters return to Cambridge, Thoreau stays where he is and travels internally to "Atlantis and the Hesperides, . . . Ternate and Tidore and . . . ports of which Alexander only heard the names" (TW, II, 459-460).

The concept of method as a way of deriving truth from facts is only one of the many significant parallels between Bacon and Thoreau. Among those which could be elaborated further are utopianism (like The New Atlantis, Walden is a description of an ideal moral and material existence based upon man's integration with nature), reverence for classical learning combined with a certain disdain of the moderns, a preference for the active rather than the contemplative life, a belief that labor is a curse which should and can be alleviated or circumvented by a rational approach to nature, a critique of human society and intellect as sources of evil (Bacon's attack upon the idols is paralleled by Thoreau's upon intellectual, moral, and social aberrations in "Economy" and Civil Disobedience), resistance to dogma and authority, a belief in the essential unity of all knowledge and the interdependence of the branches of learning, a vision of an orderly universe, a habit of casting oneself in an annunciatory or prophetic role, a belief in inspired rather than expedient morality (on an ultimate level; even Thoreau, in Civil Disobedience, allows expediency to rule in matters of mere expediency), and a desire to subordinate art to perception of the truth. There can be little doubt that Thoreau's extreme attention to natural phenomena, which became so acute in his later years as to make him fearful of losing contact with the spirit altogether, is a consequence of his belief that, as Bacon had promised and as the early Puritans had preached, man's highest fulfillment is assured by his physical

and intellectual integration with the actualities of the creation. Where Thoreau differs from Bacon, it is first in his refusal to work in society, second in his greater emphasis upon spiritual experience, and third in that typical Transcendental habit of combining philosophy and divinity and, like Parker, Emerson, and the others, seeking the path to God among the facts of nature. The Coleridgean identification of induction and intuition, of science and innate ideas of the divine, finds its most radical acceptance in Thoreau.⁸³

There is probably no more extraordinary chapter in the history of Transcendental Baconianism than that concerning Delia Bacon. Delia was one of the principal instigators of the Shakespeare authorship controversy. She maintained that Bacon was one of a group of Elizabethan geniuses, led by Sir Walter Raleigh, who wrote the plays which they produced under Shakespeare's name in order to promulgate without fear of reprisal the revolutionary philosophical, political, and ethical doctrines contained in Bacon's writings. Delia was not actually one of the Transcendentalists, but she garnered the friendship of several of them, especially Elizabeth Peabody, William Henry Channing, Caroline Dall, and Emerson.⁸⁴ Without committing himself on the authorship issue, Emerson took up Delia's

⁸³And, if Perry Miller be correct, its most devastating failure. See "Thoreau in the Context," p. 151. Cf. Leo Stoller, After Walden: Thoreau's Changing Views on Economic Man (Stanford, 1957), pp. 45-47.

⁸⁴Vivian Hopkins, Prodigal Puritan: A Life of Delia Bacon (Cambridge, 1959), pp. 139-141. See also Hopkins, "Emerson and Bacon," p. 426.

cause in the early 1850's and seriously endeavored to persuade reputable publishers to accept her articles and her book, if not her hypothesis. He also wrote numerous letters of introduction for her--to Carlyle, Hallam, and others--and had Edward Everett do the same, when Delia went to England in 1853 to disinter (literally, as it happened) new evidence for Bacon's authorship.⁸⁵ However, Emerson's interest soon flagged, and when several manuscript chapters Delia had left in his care were permanently lost, she transferred her attention to Hawthorne. He, with the encouragement of his wife, agreed to replace Emerson as Delia's "patron" and wrote a preface for her book, published finally in London in 1857 as The Philosophy of the Plays of Shakspeare Unfolded.⁸⁶ Hawthorne, in the preface, succeeds in commending Delia's energy, brilliance, and devotion without appearing to concur in her authorship theory; it is, however, a hard row to hoe, and one can almost hear Hawthorne straining to find the laudatory but non-committal word.⁸⁷

As her recent biographer, Vivian Hopkins, points out, Emerson took up Delia Bacon for several reasons. First, she served, in some measure, to replace Margaret Fuller, the

⁸⁵Hopkins, Prodigal Puritan, pp. 170-171.

⁸⁶Hopkins, Prodigal Puritan, pp. 200ff.

⁸⁷Delia Bacon, The Philosophy of the Plays of Shakspeare Unfolded, p. ix.

impossible and irreplaceable Transcendental feminist who had died in a shipwreck in 1850.⁸⁸ Moreover, Emerson was attracted by the novelty, if not the truth, of Delia's theory and relished the adventure of sponsoring it. He wrote to Elizabeth Peabody that it would lend "éclat" to any magazine that published it.⁸⁹ There may have been, in addition, an amour courtoise or damsel-in-distress element in the relationship as well; we would not expect a man who had written that nature's felicities attain their height in woman to be insensible to the appeals of one of the sex in literary trouble, despite the perhaps meager felicities involved in this particular instance.

But the most interesting aspect of Delia's appeal to Emerson is that her version of Baconianism seems to have corroborated his--indeed, to have been even more profound and elaborate in its exposition of Bacon's ideas, and even a bit more faithful (in the way of the nineteenth century) to them. Delia's analysis of Bacon is the foundation of her explications of Shakespeare, and, as Professor Hopkins suggests, these probably rank with those of the German and English Romantic critics as the most searching of the century.⁹⁰ Delia studies Bacon and then discerns his ideas in Shakespeare's plays; except for the biographical fallacy, that men who share ideas

⁸⁸Hopkins, Prodigal Puritan, pp. 139-141.

⁸⁹Hopkins, Prodigal Puritan, pp. 150-151.

⁹⁰Hopkins, Prodigal Puritan, pp. 270-274.

must share a pen, her method is sound and her analyses uniquely enlightening. They are based upon her description of Bacon's theory of rhetoric, which necessitates structural, metaphoric, and conceptual consistency in the plays, a feature not always recognized by some Romantic critics who see the plays as galleries of interesting characters.

What concerns me here, however, is not Delia's Shakespeare but her Bacon. Her exposition of Baconianism, as I have suggested, is an extension of the Transcendentalists' Bacon, and their interest in her confirms, I believe, the essential congeniality of Bacon's thought with Transcendentalism. Of course, what the Transcendentalists do not share with Delia is her total devotion to Bacon; the intellectual energy which they lavished upon a vast number of artists and philosophers she expended upon only a few. But they do find in her analysis of Bacon confirmation of their belief that Bacon stands for many of the ideas they stand for: the primacy of life and practice over abstract speculation, the exaltation of man, the unity of all knowledge, the necessity of facts and experience, the conception of nature as standard and teacher, the progress of mankind, and even the value of democracy.

As Professor Hopkins says, Delia believes that the program Bacon puts forth in his writings, of which she had read all, is so far ahead of its time and so closely in touch with the core of universal reality that it serves as a "panacea . . .

for nineteenth-century sickness."⁹¹ Delia's humanism is complete; the only acceptable philosophy is for her one which acknowledges the power and greatness of man. But it is not an atheistic philosophy nor a deistic one; instead it is, as Professor Hopkins puts it, a new "presentation of the Christian ideals of mercy and kindness."⁹² The philosophy is that of "observation and practice" as promulgated by Bacon.⁹³ It has two branches, scientific and artistic. The artistic branch is based upon Bacon's concept of rhetoric or "illustrated tradition," which Delia, who was alone in her interest in this subject until well into this century, expounds as a rigorous method of embodying philosophical profundities in allegorical and symbolic form.⁹⁴ The Elizabethan wits who wrote Shakespeare's plays, she says, were forced to allegorize their philosophy, as well as to encode in ciphers their acknowledgements of authorship, in forms of vulgar entertainment both because the philosophy was subversive of the current anti-humanistic despotism and because only thus could they hope to educate the people in the ways of the new world.⁹⁵ The wits sponsored "a science which

⁹¹Hopkins, Prodigal Puritan, p. 281.

⁹²Hopkins, Prodigal Puritan, p. 266.

⁹³Delia Bacon, Philosophy, p. xviii.

⁹⁴Delia Bacon, pp. xviii, 65-91.

⁹⁵Delia Bacon, pp. xx, xxiv, xxvi, xl.

begins in fact and returns to it again, which begins in observation and experiment, and returns in scientific practice, in scientific re-formation. . . ."⁹⁶ The Novum Organum is not intended merely "to examine the legs of spiders with," but rather to guide men in the practice of "going, deliberately, and on principle, out of the human nature for knowledge; . . . that they might re-return [sic] with better axioms for the culture, and nobility, and sway . . . of MAN. . . ."⁹⁷ The Novum Organum, especially as embodied in the entertaining plays, will enable any man to recognize in "that great book of nature" a mirror of his own experience, a source of helps for his life, a guide to his own conduct. But most important, the new philosophy recognizes that human history is not an abstraction or the embodiment of some rational design unrelated to real men, but that "will, sense, and passion," as manifested in actual behavior, are the true forces behind human life and progress. They constitute, therefore, a new "historical principle," a "motivity which is not reason" and which had been ignored by the scholastic "abstractionists" and their despotic political cronies.⁹⁸ Man goes to nature and finds himself. Thus, the plays of Shakespeare, embodying the Baconian philosophy of actualities, are the primary forces in a historical drama of oppression and liberation. Political,

⁹⁶ Delia Bacon, p. lxix.

⁹⁷ Delia Bacon, pp. 76-77.

⁹⁸ Delia Bacon, pp. xxxvi-xl.

religious, and intellectual tyranny repressed the human race, and Bacon held the key to the race's total freedom. Delia's concept of history as the product of forces within each man must have been quite attractive to Emerson, from whom, indeed, she probably got part of it; Emerson writes that history is not directly providential but is enacted according to the "genius" in every man, in whom are embodied the spiritual laws. Thus, he says, God acts in history only through the actions of man, actions which issue from man's "experience." "The student," therefore, "is to read history actively and not passively; to esteem his own life the text . . ." (EW, II, 2-7). Delia, then, seems to unite Emersonian and Baconian concepts of life and experience, or to demonstrate that they are fundamentally compatible.

Also attractive to Emerson and the other must have been Delia's description of symbolism and allegory as employing the facts of nature and experience to communicate the new philosophy. The Elizabethan wits, she says, "know that men are already prepared by nature's own instruction, to feel in a fact . . . truths which would startle them in the abstract. . . ." ⁹⁹ (How close this is to the Emersonian/Coleridgean concept of the necessity of representing spiritual truths in symbols for the benefit of the Reason because the truths would

⁹⁹ Delia Bacon, p. 75.

appear nonsensical if stated explicitly for the Understanding.)¹⁰⁰
 The symbolic mode, Delia contends, is nature's own mode, and operates upon the common experience of all mankind. Her description of the Baconian teacher is similar to Emerson's of the poet:

The scientific interpreter of nature will select, and unite, and teach continuously, and pointedly, in grand, ideal, representative fact, in "prerogative instances," that which nature has but faintly and unconsciously impressed with her method; for he has a scientific organum. . . . His soul is a Novum Organum--his mind . . . sifts the historic masses, and brings out the instances that are to his purpose, the bright, bold instances that flame forth the doubtful truth, that tell their own story and need no interpreter, the high ideal instances that talk in verse because it is their native tongue and they can do no other. He has found,--or rather nature lent it to him, the universal historic solvent, and the dull, formless, miscellaneous facts of the common human experience, spring up in magic orders, in beautiful, transparent, scientific continuities, as they arrange themselves by the law of his thinking.¹⁰¹

I do not, of course, claim that Delia "influenced" Emerson; far from it--the reverse is clearly the case and there are also influences common to both.¹⁰² But it is noteworthy that Emerson's "Transcendental" program is paralleled so closely by Delia's "Baconian."

¹⁰⁰See above, p. 217.

¹⁰¹Delia Bacon, p. 76.

¹⁰²Such as August von Schlegel; see Hopkins, Prodigal Puritan, p. 269.

From Francis Bacon himself, then, the Transcendentalists learned that mankind must seek its material and intellectual advancement, its cultural perfection, in the world of phenomena and by means of experience. From the Puritans and the Unitarians, who extended the religious implications of Bacon's message, they learned that if the phenomenal world is conceived of as either imbued with God's spirit or ordered by God's design, mankind may discover its spiritual fulfillment therein as well. Coleridge and the Romantics taught Transcendentalism the Platonic Bacon, whose empirical methods may lead to divine enlightenment in the world of nature. And Delia Bacon's Emersonian Baconianism demonstrates what the Transcendentalists felt but did not or could not acknowledge: that Francis Bacon was a patron of their vision as of the most of the visions of nineteenth-century progressives, not only of the Samuel Tylers and Edward Everetts who counseled technological and industrial advancement but also of those who stressed the inner life and prophesied moral and spiritual utopias.

Appendix: Amos Bronson Alcott

Bronson Alcott offers an important example of the incidence of Baconian doctrines among the Transcendentalists. Most of Alcott's remarks on Bacon appear in unpublished journals, however, especially those from the years between 1831 and 1838. Alcott's unpublished commonplace book also contains excerpts from Bacon's writings. At the present time, I am unable to make use of this material, which could afford, I am sure, an opportunity for an extended analysis of Alcott's Baconianism. I hope to be able to investigate the unpublished writings at some time in the future and to report on the information they contain. I can offer here only a tentative evaluation of Alcott's opinion and use of Bacon, based upon the published journals and writings (most of Alcott's published writings date from his later years, long after his interest in Bacon had ended), Alcott's letters (edited by Richard Lawrence Herrnstadt in an unpublished dissertation, Maryland, 1960), and the brief suggestions of critics and biographers.

Alcott is usually seen as one of the most spiritually and Platonically oriented of the Transcendentalists. Indeed, even his Concord colleagues considered him totally other-worldly; Thoreau said Alcott had "no venture in the present" (TW, II, 415). Alcott is remembered by many chiefly for the series of "Orphic Sayings" which appeared--to some ridicule, it seems, even by the other contributors--in the Dial: "He

who is tempted has sinned; temptation is impossible to the holy."¹ "Choice implies apostasy. The pure, unfallen soul is above choice. . . . Sinners choose; saints act from instinct and intuition. . . ."²

But Alcott was not all intuition and abstraction. In the late 1820's and early 1830's, Alcott read extensively in Bacon; as he puts it, "I was then a disciple of Experience, trying to bring my theories within the Baconian method of induction. . . ."³ Dorothy McCuskey, who did study the unpublished journal, reports that, under the potent influence of Coleridge, Alcott read Bacon's works, "strongly approved of Bacon's inductive methods, and felt that Bacon relied on the spiritual principle, though there was nowhere a definite statement of it. 'He beheld all things in the concrete'."⁴ Alcott was especially taken, as was Emerson, with Coleridge's reconciliation of Plato and Bacon and of empiricism and spiritualism.⁵

¹Orphic Sayings (Mount Vernon, N. Y., 1939), p. 7 (no. xii).

²Orphic Sayings, p. 7 (no. xiii).

³Journals, ed. Odell Shepard (Boston, 1938), p. 66.

⁴Bronson Alcott, Teacher (New York, 1940), pp. 71-72. See also Journals, pp. 26, 71n. Bacon's Novum Organum and Wisdom of the Ancients were in the Fruitlands library; see T[horeau], "The Library at Fruitlands," Dial, III (1843), 545-548; Clara Endicott Sears, Bronson Alcott's Fruitlands (Boston, 1915), p. 183; Cameron, Transcendentalists and Minerva, III, 803-807.

⁵McCuskey, pp. 74-75; cf. Journals, p. 67.

Alcott's first published work confirms this Baconian concern for "the concrete." Alcott's lecture "On the Nature and Means of Early Intellectual Education, as Deduced from Experience" appeared in 1832 and is an important document of Alcott's long crusade for reforms in the American educational system.⁶ On the title page of the lecture appears the following: "'Man, the servant and interpreter of nature, understands and reduces to practice just so much as he has actually experienced of natural laws; more he can neither know nor achieve'.--Bacon." That Alcott should quote the first aphorism of the Novum Organum--the aphorism of which Samuel Tyler and Francis Bowen are so fond--is not surprising when we investigate the educational principles Alcott sets forth in his lecture. Briefly, they are that a child learns by observing the "outward world," whose objects correspond to latent ideas in the child's mind; that such observation of facts leads to knowledge of causes and finally of "ideality" and "verity"; that society should enable the child to perceive "the sacred analogies of nature and the deep truths of experience"; that

⁶The lecture appears in The Introductory Discourse and the Lectures Delivered before the American Institute . . . in Boston, August, 1832 (Boston, 1832), pp. 127-163; reprinted in Cameron, Transcendentalists and Minerva, II, 438-456. My page citations are to the original. On the sources, characteristics, and influence of Alcott's educational theories, see McCuskey, *passim*; Odell Shepard, Pedlar's Progress: The Life of Bronson Alcott (Boston, 1937), pp. 210-213. See also [Elizabeth Palmer Peabody], Record of a School: Exemplifying the General Principles of Spiritual Culture, 2nd ed. rev. (Boston, 1836); this is Miss Peabody's somewhat bowdlerized account of Alcott's Temple School.

formality, authority, vicarious experience, and memorization are futile; that textbooks must be "drawn directly from nature"; that traditional education offers "no obvious and useful fruits"; and that education, in short, should help a child understand his environment and himself so that he can make best use of nature and can fully develop his own creative and spiritual faculties: "By applying the inductive method of investigation, to which the young mind inclines, it might be led upward through sensitive, palpable, conscious nature, to the unseen, and spiritual Creator; deriving through the medium of experience, an intuitive knowledge of his attributes, and a confiding faith in his providence, and government."⁷ Alcott's "inductive method," to be sure, owes a great deal to Plato, directly and via Coleridge; but his critique of traditional education is quite similar to Bacon's, and Alcott's urging of direct experience of nature is Baconian as well.

But, as Alcott said, the "young mind" is more inclined than the older one to Baconian induction, and, by 1834, Alcott was already expressing doubts about Bacon's spiritual value. In that year, Alcott says he has become "dissatisfied" with Bacon (along with Kant, Aristotle, and Locke): "They narrowed the range of the human faculties, retarded the progress of discovery by insisting on the supremacy of the senses, and shut the soul up in the cave of understanding."⁸ Alcott

⁷ P. 152.

⁸ Journals, p. 39.

credits Coleridge with assisting in his disavowal of sense experience; Jesus took over from Bacon, and "I was led deeper, to seek the ground even of experience, and found the elements of human consciousness not in the impressions of external nature but in the spontaneous life of Spirit itself, independent of experience in space and time. Thus was I released from the philosophy of sense."⁹ Bacon, Alcott claims in 1835, is in contact with truth, but "He never touches the heart. . . . He methodizes Life and spirit all away."¹⁰ By 1847, Alcott is categorizing Bacon with Edmund Burke as writers "whose qualities are rhetorical chiefly."¹¹

Thus Alcott moves from Baconianism to pure spiritualism--or so he thinks. Perhaps the story is not all told, any more than it is told when Theodore Parker attacks Bacon's materialism or when Thoreau derides Baconian empiricism. In the latter two cases, the writers go on to reaffirm fundamentally Baconian positions on many issues, and the same may well turn out to be true of Alcott also. In discarding Bacon, Alcott may not be discarding Bacon's ideas, for we find him, in one of his "spiritualist" Orphic Sayings, calling for "a novum organon, where by nature shall be divined in the soul, the

⁹Journals, p. 67.

¹⁰Journals, p. 71.

¹¹Journals, p. 192; cf. Alcott, Tablets, New ed. (Boston, 1879), p. 130.

soul in God, matter in spirit, polarity resolved into unity. . . ."¹² Whenever a Transcendentalist resolves his polarities into unity, the world of facts is never far away nor are its insistent voices ever fully stilled. The unity demands intuitive comprehension; intuition must be recognized as an inner experience; soon "outward" experience makes its claim; until the actual world is once more distinct, demanding that it be accounted for by observation and method and induction, and Francis Bacon resumes his unheralded tutelage of the Transcendental synthesis.

¹²Orphic Sayings, p. 14 (no. xxxi). Charles Lane connected Alcott's educational philosophy with Francis Bacon in "A. Bronson Alcott's Works," Dial, III (1843), 428.

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