Although Roger Bacon’s life spanned most of the Thirteenth century, his philosophy of science carried his thought into what has been loosely dubbed the “Modern period”. And although often credited with heralding this Modern period of philosophy, Francis Bacon’s emphasis on experiment is itself anticipated by his cousin’s empiricism. Living three centuries earlier than his more celebrated scion, Roger Bacon’s view of the scientific method is more fittingly regarded as the harbinger of the empirical tradition. Anticipating the Renaissance and Enlightenment interest in the melioration of the human condition, Bacon awards utility, observation, and “experience” the central place in his philosophy of science and knowledge. Reacting against much of the scholastic emphasis on the deductive method, he abandons the quest for deductive certainty in science. In so doing he avoids the Cartesian dilemma: certitude about relations of ideas, as in mathematics, but skepticism in knowledge of the empirical. Roger Bacon’s partial but illuminating analysis of scientific procedure and theory ushers in the so-called Modern period of philosophic and scientific speculation. It is from him and not Francis that the Twentieth century derives the “scientific critical attitude.”

I. Idolatry

Early in the Opus Majus, Bacon enumerates four “obstacles” to the acquisition of truth: the submission to unwarranted authority; the influence of custom and the popular; and conceit or desire for esteem. While respecting the authority of the church fathers and Aristotle, Bacon rejects their judgments as conclusive. “The principles laid down by such authorities must be tested by experience before they can be finally accepted.”¹ Thus does Roger anticipate Francis Bacon’s

warning about the Idols of the Theatre. As astute a scholar as Lewis White Beck stresses Francis’ articulation of this danger and neglects Roger’s:

In the first half of the seventeenth century, scholasticism, the philosophy of the Church, was challenged from two sides. [Francis] Bacon... objected to its Idols of the Theatre, to what he regarded as its slavish acceptance of ideas based on authority, and against it he insisted upon the importance of new observations of nature and man. In this respect, [Francis] Bacon was an empiricist, objecting to the authoritarianism and the empty logic by which many of his opponents believed they could demonstrate scientific and philosophical truths, a priori.2

What most who place Francis Bacon as the forerunner of the empiricist tradition fail to realize is that he is still actually fighting in the Seventeenth century the battle begun by Roger in the Thirteenth century.

The rejection of authority opens the door to reliance upon evidence and observation. New evidence can discredit old hypotheses. The theories of the authorities are subject to the test of experience. "...elle [authority] ne fait rien comprendre, elle fait seulement croire,..." 3 Authority can only provide belief in an idea, suggest an hypothesis, but can not give the verification which experience confers. This emphasis upon experience, in fact, yields a new notion of authority and credibility. Because of our confidence in the scientific inquiry of others, their reports, and the continued openness of hypotheses to further testing, we can rely more upon the findings and claims of other inquirers: “Things that do not belong in our part of the world we know through other scientists who have had experience of them” (my italics).4

While habitual ways of thinking are more powerful than authority in subverting the quest for knowledge, popular prejudice and custom are the strongest of the three main forces. “For authority merely entices, habit binds, popular opinion makes men obstinate and confirms them in their obstinacy.” 5 Like Francis’ Idols of the Cave, customary beliefs serve Roger as a foil for the truth. Compare the cousins on this head: