

## Francis Bacon's "Four Idols"

by Phil Arant, Schaeffer Academy

In viewing the original frontispiece from Francis Bacon's 1620 work *Novum Organum* ("New Method"), the observer is intended to notice ships leaving the familiar waters of the Mediterranean and venturing out into the vast Atlantic. The analogy implies that Bacon's new empirical (experimental) approach for explaining reality was intended to replace Aristotle's former deductive approach of logic endorsed in his *Organon*. In other words, an old limiting method needed to be replaced with a new limitless method.

Before providing an explanation of what would become an early version of the Scientific Method in Book II, Bacon first turns his guns upon some of these limiting mindsets and warns in Book I of four precommitments or "idols" that could jeopardize the objectivity intended within experimentation. Here's how Bacon named them.

Four species of idols beset the human mind, to which for distinction's sake we have assigned names, calling the first Idols of the Tribe, the second Idols of the Den, the third Idols of the Market, the fourth Idols of the Theatre.<sup>1</sup>

Though I could spend some time here stressing how individuals can never completely avoid these "idols," I still find Bacon's breakdown quite enlightening for my science students. Let's consider each of the four issues and see how they can indeed do harm to the scientific enterprise.

First the *Idols of the Tribe*

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represents inherent tendencies of humanity that are fostered by the consensus of my surrounding community. The preferences of



Frontispiece from Francis Bacon's *Novum Organum*

my "tribe" weigh heavily upon my conception of truth. If everyone says it is true, then in order to fit in I feel obliged to concur. Bacon analogously compared such an ill-fated persuasion to an uneven mirror that tends to distort incident light.

The idols of the tribe are inherent in human nature and the very tribe or race of man; for man's sense is falsely asserted to be the standard of things; on the contrary, all the perceptions both of the senses and the mind bear reference to man and not to the universe, and the human mind resembles

those uneven mirrors which impart their own properties to different objects, from which rays are emitted and distort and disfigure them.<sup>2</sup>

Because of such an attachment to "the very tribe or race of man," we might consider the problematic issue to be one of *ethnocentrism*. If the human "tribe" is "falsely asserted to be the standard of things," then the scientist could be persuaded away from an interpretation that is consistent with his data. This faulty precommitment is sometimes referred to as an *argumentum ad populum*, which means "an argument from the populous." Thus, if many believe so, it is so. Perhaps you have noticed how the *Idols of the Tribe* have been influential in the current debate on global warming. "Tribe" consensus could distort (as with an uneven mirror) an objective attempt to interpret global temperature trends. John Locke also pointed at the same fallible tendency of trusting the group instead of embracing truth for its own sake.

I mean the giving up our assent to the common received opinions, either of our friends or party, neighborhood or country . . . Other men have been and are of the same opinion, and therefore it is reasonable for me to embrace it.<sup>3</sup>

Secondly, the *Idols of the Market* represent errors arising from the false confidence bestowed upon word usage. In Bacon's day, the marketplace was a locus for verbal intercourse. Language could be handled carelessly to the point of creating a confusion of meaning. Let's again look at Bacon's wording.

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There are also idols formed by the reciprocal intercourse and society of man with man, which we call idols of the market, from the commerce and association of men with each other; for men converse by means of language, but words are formed at the will of the generality, and there arises from a bad and unapt formation of words a wonderful obstruction to the mind.<sup>4</sup>

Placing too much faith upon language can produce difficulties referred to as fallacies of ambiguity. One such problem would be found in *equivocation*. Words can often have more than one meaning. For example, the word “evolution” can lead to a commonly abused misunderstanding whether the speaker is referring to the phenomena of microevolution or macroevolution. Another problematic example is the postmodern emphasis that all words mean what the reader thinks regardless of what the writer intends.

Thirdly, the *Idols of the Den* represent errors that arise within the “cavern” of each unique individual rather than the entire “tribe” of humanity. Personal desires can lead to a type of egocentrism that could derail one’s thinking.

The idols of the den are those of each individual; for everybody in addition to the errors common to the race of man has his own individual den or cavern, which intercepts and corrupts the light of nature, either from his own peculiar and singular disposition, or from his education and intercourse with others, or from his reading . . .<sup>5</sup>

Through a life of personal accumulations, the individual has erected a particular habit or “taste” for data that accommodates his own delights. John Locke pointed at the same tendency with the phrase “*Quod volumus, facile credimus*,” which can be translated “What suits our wishes, is forwardly believed.”<sup>6</sup> Ancients as well played upon the supposed friendship that Aristotle enjoyed with his mentor Plato with the phrase, “*Amicus Plato, sed magis amica veritas*,” which reads “Plato is my friend, but truth is a better friend. “Delights in maintaining a friendship could hinder our commitment to truth. Immanuel Kant also noted the danger of allowing a personal benefit to influence how we draw conclusions.

Now to this one might indeed reply that no inquisitiveness is more detrimental to the expansion of our cognition than the inquisitiveness that always wants to know the benefit in advance.<sup>7</sup>

A derivative notion of this third precommitment might be found in the fallacy termed *argumentum ad baculum*, which means “the argument to the stick.” Here the “stick” refers to taking a beating. In other words, the particular statement had better be endorsed or else some undesirable consequence will impact me. Because I don’t want my “den” shaken, I will hold it as true.

Lastly the *Idols of the Theater* represents the theories that have been “played out,” as on the “stage” by the renowned performers of our culture. I, the lowly spectator, become moved by the eloquence of the “experts” of the past. These are

the sacred truths that have been passed down to our generation. The theater could thus impose a rigid dogmatism upon a culture.

Lastly, there are idols which have crept into men’s minds from the various dogmas of peculiar systems of philosophy, and also from the perverted rules of demonstration, and these we denominate idols of the theatre: for we regard all the systems of philosophy hitherto received or imagined, as so many plays brought out and performed, creating fictitious and theatrical worlds . . . but also to many elements and axioms of sciences which have become inveterate by tradition, implicit credence, and neglect.<sup>8</sup>

Aristotle, by means of his works such as *Organon*, *Physics*, and *Metaphysics*, would be considered a noteworthy “player” in Western civilization. For hundreds of years, the conclusions attributed to Aristotle were not questioned. Such a problematic precommitment could be targeted by the reasoning fallacy termed *ipse dixit* (“he said it himself”) or more pointedly *magister dixit* (“the teacher has said it”). Here an unproven statement is dogmatically accepted on faith in the speaker. Questioning is set aside.

I would thus summarize Bacon’s four presumptive dangers to the scientific process as the ethnocentrism of the tribe, the equivocation within the marketplace, the egocentrism of our den, and the dogmatism of the theater.

Yet what of the Scriptures? Could the unbeliever complain that God’s supposed speaking

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jeopardizes objectivity as an Idol of the Theater? Our students must understand that for even Bacon's experimentalism to stand, it must also hold presuppositions. The inductive attempt to derive objective conclusions from numerous observations can never be completely "free" (as Bacon's ships in the Atlantic) of some non-empirical precommitment. For example, our scientific efforts must not only assume a uniformity (hence repeatability) of phenomena, but also assume that our senses are trustworthy in observing such uniformity. Experimental consistency cannot find justification apart from an imposed intentionality for the particulars of life. One must get outside the pieces of a jigsaw puzzle in order to realize that it is indeed a puzzle intending to be assembled. Some "meta-player" that stands above the process of existence must be assumed every time we conduct an experiment. God as transcendent can alone occupy such a stage. As C. S. Lewis famously stated,

I believe in Christianity as I believe that the sun has risen: not only because I see it, but because by it I see everything else.<sup>9</sup>

With ultimate reliance upon a human *magister dixit*, questioning is jeopardized. With the Divine *magister dixit*, questioning is enabled.

Notes:

1. Francis Bacon, *Novum Organum*, Aphorism 39 (New York: P. F. Collier & Son, 1902), 19-20.
2. Ibid., Aphorism 41, 20.
3. John Locke, *An Essay Concerning Human Understanding*, Book Two, Chapter 11, Section 9 (New York: Barnes & Noble, 2004), 617.
4. Francis Bacon, *Novum Organum*, Aphorism 43 (New York: P. F. Collier & Son, 1902), 41
5. Ibid., Aphorism 42, 21.
6. John Locke, *An Essay Concerning Human Understanding*, Book Two, Chapter 11, Section 9 (New York: Barnes & Noble, 2004), 614.
7. Immanuel Kant, *Critique of Pure Reason*, trans. Werner S. Pluhar, (Indianapolis: Hackett Publishing Co. Inc., 1996) 304-305.
8. Francis Bacon, *Novum Organum*, Aphorism 44 (New York: P. F. Collier & Son, 1902), 21-22.
9. C. S. Lewis, *The Weight of Glory*, (New York: Harper Collins, 1980) 140.

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[http://upload.wikimedia.org/wikipedia/commons/b/b2/Novum Organum 1650 crop.jpg](http://upload.wikimedia.org/wikipedia/commons/b/b2/Novum_Organum_1650_crop.jpg).

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