Occam's razor

"*Pluralitas non est ponenda sine neccesitate*" or "plurality should not be posited without necessity." The words are those of the medieval English philosopher and Franciscan monk William of Ockham (ca. 1285-1349). Like many Franciscans, William was a minimalist in this life, idealizing a life of poverty, and like St. Francis himself, battling with the Pope over the issue. William was excommunicated by Pope John XXII. He responded by writing a treatise demonstrating that Pope John was a heretic.

What is known as Occam's razor was a common principle in medieval philosophy and was not originated by William, but because of his frequent usage of the principle, his name has become indelibly attached to it. It is unlikely that William would appreciate what some of us have done in his name. For example, atheists often apply Occam's razor in arguing against the existence of God on the grounds that God is an unnecessary hypothesis. We can explain everything without assuming the extra metaphysical baggage of a Divine Being. William's use of the *principle of unnecessary plurality* occurs in debates over the medieval equivalent of psi. For example, in Book II of his *Commentary on the Sentences* of Peter Abelard, he is deep in thought about the question of "Whether a Higher Angel Knows Through Fewer Species than a Lower." Using the principle that "plurality should not be posited without necessity" he argues that the answer to the question is in the affirmative. He also cites Aristotle's notion that "the more perfect a nature is the fewer means it requires for its operation." This principle has been used by atheists to reject the God-the-Creator hypothesis in favor of natural evolution: if a Perfect God had created the Universe, both the Universe and its components would be much simpler. William would not have approved.

He did argue, however, that natural theology is impossible. Natural theology uses reason alone to understand God, as contrasted with revealed theology which is founded upon scriptural revelations. According to Occam, the idea of God is not established by evident experience or evident reasoning. All we know about God we know from revelation. The foundation of all theology, therefore, is faith. It should be noted that while others might apply the razor to eliminate the entire spiritual world, Ockham did not apply the principle of parsimony to the articles of faith. Had he done so, he might have become a Socinian like John Toland (*Christianity not Mysterious*, 1696) and pared down the Trinity to a Unity and the dual nature of Christ to a single nature. William was somewhat of a minimalist in philosophy, advocating nominalism against the more popular view of realism. That is, he argued that universals have no existence outside of the mind; universals are just names we use to refer to groups of individuals and the properties of individuals. Realists claim that not only are there individual objects and our concepts of those objects, there are also *universals.* Ockham thought that this was one too many pluralities. We don't need universals to explain anything. To nominalists and realists there exist Socrates the individual and our concept of Socrates. To the realist there also exist such realities as the *humanity* of Socrates, the *animality* of Socrates, etc. That is, every quality which may be attributed to Socrates has a corresponding "reality", a "universal" or *eidos*, as Plato called them. William might be said to have been skeptical of this realm of plurality called the realm of universals. It is not needed for logic, epistemology or metaphysics, so why assume this unnecessary plurality? Plato and the realists could be right. Perhaps there is a realm of *eidos*, of universal realities which are eternal, immutable models for individual objects. But we don't need to posit such a realm in order to explain individuals, our concepts or our knowledge. Plato's *Eidos* (Forms) are excess and unnecessary metaphysical and epistemological baggage.

It might well be argued that Bishop George Berkeley applied Occam's razor to eliminate material substance as an unnecessary plurality. According to Berkeley, we need only minds and their ideas to explain everything. Berkeley was a bit selective in his use of the razor, however. He needed to posit God as the Mind who could hear the tree fall in the forest when nobody is present. Subjective Idealists might use the razor to get rid of God. All can be explained with just minds and their ideas. Of course this leads to solisism, the view that I and my ideas alone exist, or at least they are all I know exist. Materialists, on the other hand, might be said to use the razor to eliminate minds altogether. We don't need to posit a plurality of minds as well as a plurality of brains.

Occam's razor is also called the *principle of parsimony*. These days it is usually interpreted to mean something like "the simpler the explanation, the better" or "don't multiply hypotheses unnecessarily." In any case, Occam's razor is a principle which is frequently used outside of ontology, e.g., by philosophers of science in an effort to establish criteria for choosing from among theories with equal explanatory power. When giving explanatory reasons for something, don't posit more than is necessary. Von Däniken could be right: maybe extraterrestrials did teach ancient people art and engineering, but we don't need to posit alien visitations in order to explain the feats of ancient people. Why posit pluralities unnecessarily? Or, as most would put it today, don't make any more assumptions than you have to. We can posit the ether to explain action at a distance, but we don't need ether to explain it, so why assume an ethereal ether?

Oliver W. Holmes and Jerome Frank might be said to have applied Occam's razor in arguing that there is no such thing as "the Law." There are only judicial decisions; individual judgments and the sum of them make up the

law. To confuse matters, these eminent jurists called their view *legal realism*, instead of *legal nominalism*. So much for simplifying matters.

Because Occam's razor is sometimes called *the principle of simplicity* some creationists have argued that Occam's razor can be used to support creationism over evolution. After all, having God create everything is much simpler than evolution, which is a very complex mechanism. But Occam's razor does not say that the more simple a hypothesis, the better. If it did, Occam's would be dull razor for a dim populace indeed.

Some have even found a use for Occam's razor to justify budget cuts, arguing that "what can be done with less is done in vain with more." This approach seems to apply Occam's razor to the principle itself, eliminating the word "assumptions." It also confuses matters by confusing "less" with "fewer." Occam was concerned with fewer assumptions, not less money.

The original principle seems to have been invoked within the context of a belief in the notion that perfection is simplicity itself. This seems to be a metaphysical bias which we share with the medievals and the ancient Greeks. For, like them, most of our disputes are not about this principle but about what counts as necessary. To the materialist, dualists multiply pluralities unnecessarily. To the dualist, positing a mind as well as a body, is necessary. To atheists, positing God and a supernatural realm is to posit pluralities unnecessarily. To the theist, positing God is necessary. And so on. To von Daniken, perhaps, the facts make it necessary to posit extraterrestrials. To others, these aliens are unnecessary pluralities. In the end, maybe Occam's razor says little more than that for atheists God is unnecessary but for theists that is not true. If so, the principle is not very useful. On the other hand, if Occam's razor means that when confronted with two explanations, an implausible one and a probable one, a rational person should select the probable one, then the principle seems unnecessary because so obvious. But if the principle is truly a minimalist principle, then it seems to imply the more reductionism the better. If so, then the principle of parsimony might better have been called Occam's Chainsaw, for its main use seems to be for clear-cutting ontology.