

# GOULD'S SEPARATE 'MAGISTERIA': *TWO VIEWS, TWO BOOK REVIEWS*

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**MARK W. DURM**

*We present two independent and contrasting reviews of Stephen Jay Gould's latest book *Rocks of Ages*. - The Editor*

## **1. MARK W. DURM**

The quotation in the inset is an excellent description of this fascinating book by Stephen Jay Gould. Gould proposes "an eminently sensible solution to the nonproblem of supposed conflict between science and religion." I think not only that all scientists and religious leaders should read it but also lay people, school teachers, Sunday school teachers, and counselors to name just a few. Gould writes that even though his "sensible solution" is supported by most major thinkers in both science and religion, it is usually resisted and poorly comprehended. Gould, in his lucid and lively manner, explains why.

To begin with, Gould believes this supposed conflict exists in people's minds and social practices, not in the logic or

functioning of these "entirely different, and, equally vital, subjects." He proffers that people of good will want to see religion and science at peace together and for both to enrich, enliven, and enhance people's existence. Gould offers the analogy of the human body that requires both food and sleep, "the proper care of any whole must call upon disparate contributions from independent parts."

The proper care of the whole is NOMA, or Non-Overlapping Magisteria. Gould carefully explains that the term magisteria is not akin to majesty or majestic but instead is defined as a "domain where one form of teaching holds appropriate tools for meaningful discourse and resolution." That is, people debate and exchange dialogue under a magisterium. Even though the magisteria of science and religion do not overlap, even though one studies the age of rocks while the other proclaims the rock of ages, even though one pursues knowledge of how the heavens go while the other of how to go to heaven (paraphrasing Gould here); both can be independent, can be NOMA, and yet still contribute to the essence of life of the whole person. Is not the whole worth more than the sum of its parts?

In the first section titled "The Problem Stated," Gould passionately writes of Charles Darwin and presents a picture of this man that few know. He writes of Darwin's despair at the death of his young daughter Annie. And even though he permanently lost a personal belief in a caring God, he did not become hostile toward religion nor did he try to impose his belief upon others. Why? Because Gould argues that Darwin "understood the difference between factual questions with universal answers under the magisterium of science [as compared to] moral issues that each person must resolve for himself." That is, the magisteria do not overlap, the "causes of life's history could not resolve the riddles of life's meaning." Darwin knew this, accepted it, and went on to live a happy life.

In the second section, "The Problem Resolved in Principle," Gould defines and defends NOMA. He writes that since the two realms of science and religion cannot fuse, each of us must integrate them into a coherent view of life with the result of something "more precious than rubies" - wisdom. This integration into a coherent whole requires equal status for each, but the religion described here need not be formal, but may instead be a magisterium of moral ethics and meaning.

Further in chapter two, Gould summarizes the first commandment for NOMA: "Thou shalt not mix the magisteria by claiming that God directly ordains important events in the history of nature by special interference knowable only through revelation and not accessible to science" - that is, a miracle. Writes Gould:

NOMA is no wimpish, wallpapering, superficial device ... NOMA is a proper and principled solution - based on sound philosophy.... NOMA is tough-minded. NOMA forces dialogue and respectful discourse about different primary commitments. NOMA does not say "I'm OK, you're OK - so let's just avoid any talk about science and religion."

Section three describes "Historical Reasons for Conflict" and its content is enlightening. Gould documents that prior to Columbus most scholars, even Christian scholars, believed that Earth was round. Why then the flat Earth problem? Well, according to Gould, there was not a fiat Earth problem prior to 1870 in America, but after 1880 almost all history texts featured the problem! It was this time, roughly between 1870 to 1880, that warfare between science and religion started in America and became a guiding theme for Western history. That is, science was gaining and religion (particularly Catholicism) was retreating. According to Gould, two nineteenth-century authors, John William Draper and Andrew Dickson White, started the war - Draper with his *History of the Conflict Between Religion and Science* published in 1874 and White with his 1896 publication *A History of the Warfare of Science with Theology*

in Christendom. Draper's text was strongly anti-Catholic, anti-Rome. What better way, thought Draper, to weaken the Vatican's hold than to say the Catholic church believed in a flat world, and science had proved them wrong.

A more recent historic struggle for NOMA is modern creationism. Creationism provides an "example of the principle that all apparent struggles between science and religion really arise from violations of NOMA, when a small group allied to one magisterium tries to impose its irrelevant and illegitimate will upon the other's domain." This affront to NOMA is, however, purely American. Gould reveals that in most parts of the world the belief in evolution and the belief in religion do not preclude each other. Furthermore, even in America, "creation science" has only come to the forefront in the latter half of the twentieth-century. For example, Gould's own high school textbook, *Modern Biology*, published in 1956, had as its frontispiece a picture of a bunch of beavers. The 1921 edition of the same text had Charles Darwin as its frontispiece.

The last section is titled "Psychological Reasons for Conflict," and examines mankind's longing for a caretaker, for an explainer, for reason. Gould writes "... we live in a vale of tears, and we therefore clutch at any proffered comfort of an encompassing sort, however dubious the logic and however contrary the evidence."

People strive for a God that provides warm, fuzzy feelings but, Gould explains, mankind may have to settle for a cold bath. Where is the warm feeling for the ichneumonid wasp that paralyzes a caterpillar, injects her eggs inside it, and whose larvae from the hatched eggs slowly eat the living, paralyzed caterpillar from the inside? Where is the warm feeling for children who die needlessly? Gould responds that nature is not immoral, it is amoral; it's better to be in a cold bath than no bath at all.

Gould concludes by discussing two false paths to irenics (irenic comes from the Greek word for "peace"). Gould firmly believes that two current attempts at bridging science and religion are misfits. The first is the syncretic school of thought, that science and religion can fuse as one big, happy family. The syncretic school believes the findings of science support and "validate the precepts of religion, and where God shows his hand (and mind) in the workings of nature." Gould believes the syncretic path will eventually lead to the same country where the Sun revolves around the Earth.

The second false irenic path is the "politically correct" one, that is, conflict will never generate between science and religion because the two should not talk to each other. Gould admits there can be no conflict where there is no discussion - but then, nothing is ever resolved either!

In ending, it is Gould's hope that all people of good will, who hold science, religion, or both, clear will recognize the logically sound, humanely sensible, and civil manner of NOMA. He writes in the last paragraph of the book:

The non-overlapping magisteria of science and religion must greet each other with respect and interest on the most distinctively human field of talk. To close with a rationale from each magisterium, scientists generally argue that language represents the most special and transforming feature of human distinctiveness - and only a dolt would fail to lead with his best weapon. As for religion, this book began with [a story from] John's gospel.... I do know, of course, that the phrase bears another meaning in its original context, but John also acknowledged the same precious uniqueness - the key to resolving our conflicts, and the positive force behind NOMA - - in starting his gospel with a true guide to salvation: In the beginning was the Word.

## 2. MASSIMO PIGLIUCCI

Let me make two things clear at the outset, before I get accused of being a Gould-basher or a rabid atheist. I am neither. Stephen J. Gould is a colleague whom I admire, agree with, disagree with, and who sometimes just overdoes it. An atheist I am, but not a rabid one. I don't wish to start holy wars against religion and I have an active distaste only for the fundamentalist-in-your-face-I-have-to-legislate-your-life kind. However, that does not mean that I will refrain from engaging in a frank discussion of the topic.

Gould's latest book, *Rocks of Ages*, is extremely disappointing. Simply put, and with the exception of one chapter to which I will later return, it's a badly written, condescending, and misleading book. That *Rocks of Ages* is badly written is recognizable by many symptoms, chief among them are the numerous parenthetical statements that take several sentences, in many cases starting in the middle of a page and continuing all the way into the following one (e.g., pp. 7-8), and the equally obnoxiously long footnotes (e.g., p. 55-57). As if that were not enough, two sections of the book are reprints not from previously published essays, but from previously published chapters of books that were in turn collections of essays! As for condescension, I cannot find another word to describe an atheist who keeps using the locution "Lord knows" (e.g., p. 163) or uses self-effacing sentences like "I present nothing original ... while perhaps claiming some inventiveness in choice of illustrations" (p. 3).

But the misleading argument central to the book represents the real problem. It is that science and religion are not in conflict, and the reason is purported to be NOMA, or Non-Overlapping Magisteria. This is an old idea that Gould has repackaged with a fancy label. It basically says that "Science covers the empirical realm ... religion extends over questions of ultimate meaning and moral value" (p. 6). Since the two areas of inquiry are so

neatly separated, argues Gould, why all the fuss about a "supposed conflict" (p. 3)?

Well, for one thing, because such conflict can be traced throughout the history of science, including burning at the stake scores of "heretics" whose empirical findings or philosophical theories trod on ground already claimed by religious dogma. But Gould seems to be reading history in a very original way. For example, he thinks that Galileo is really to blame for his misfortunes, because he was not politically savvy enough to know how much he could push Pope Urban VII (pp. 71-74). Gould calls this "one defining historical accident," as if it were an exception to an otherwise reasonable history of conduct on the part of the Catholic Church. Assuming that Galileo did miscalculate his own influence on the religious authorities, this is an argument in favor of scientists hiring lobbyists and lawyers, not a gem in science-religion relationships.

One of Gould's reasons for supporting NOMA is his uncritical application of Aristotle's "golden mean." The idea, of course, is that sometimes the truth can be found in the middle between two extreme views. Gould calls as his witness the English essayist G.K. Chesterton, well known for such nonsensical phrases as "art is limitation; the essence of every picture is the frame" (I wonder what would happen if suddenly art museums would decide to overcome their limitations, hang frames, and get rid of pictures). While I have a hard time following Gould's logic here and seeing the connection with the science-religion debate, sometimes (as Richard Dawkins recently remarked) the truth simply cannot be found in the middle. While the golden mean surely appeals to contemporary political correctness, Gould himself repeatedly opposes such Solomonic solutions in the case of creationism: he certainly does not want creationism and evolution taught side by side in public schools (pp. 123-150).

One of Gould's most maddening logical fallacies in this book is the recurrent citation of individual scientists who espoused one

version or another of NOMA. Chief among them, of course, was Charles Darwin (pp. 191-207). In a famous passage concerning the perceived atheistic implications of natural selection he wrote: "I feel most deeply that the whole subject is too profound for the human intellect. A dog might as well speculate on the mind of Newton." Perhaps this is a great example of Darwin's humility (perhaps not, since the historical record clearly shows that he was much more canny and politically savvy than most people think - see E. Caudill, *Darwinian Myths*, 1997). Regardless, it is equally easy to round up very respectable scientists who dare to make a direct connection between science and unbelief (about 95 percent of the "great scientists" interviewed in a 1998 survey - see E. J. Larson and L. Witham, *Leading scientists still reject God*, *Nature* 394:313 - and also their article in the September 1999 *Scientific American*). The logical validity of a position simply cannot be decided by majority rule, which - once again - is exactly why we don't teach creationism in American public schools.

There are several intrinsic reasons why NOMA does not hold water. First, it is not true that (most) religions do not make claims about the natural world. Besides the tens of millions of people who believe the Earth is 6,000 years old, the Bible was never meant as a book of metaphors. It is read that way by enlightened Christians today precisely because of the long battle between science and religion, with the latter constantly on the losing side. Second, it is not true that religion is the only, or even a viable, quest for ethics. In fact, it is not a quest at all, since it is based on arbitrary sets of rules and on the enforcement of dogmas. Philosophy, using the tools of logic and informed by the discoveries of science, seems to me a much better candidate for that magisterium.

Perhaps the only valuable part of the book is the very last section of the last chapter, where Gould convincingly demolishes other attempts to reconcile science and religion. He calls these "the syncretic school," referring to the idea that science and religion actually describe the same unified reality

and will eventually converge toward one grand unified theory of knowledge. The Templeton Foundation is a generous source of funding for science-religion syncretism (their prize for the advancement of religion is more hefty than the Nobel). Gould lashes out at the Foundation for sponsoring conferences in which all sorts of bizarre arguments are used to achieve the ultimate science-religion fusion. For example, physicist E Russell Stannard suggested that the "mystery" of the dual nature of Jesus (human and divine) can be "understood" in terms of quantum electrodynamics (QED), as equivalent to the particle-wave nature of light. The good professor conveniently neglected to specify how QED field equations could predict the Second Coming. Gould does not seem to realize that the kind of syncretism that he so effectively tears down, together with the creationist version of religion dominating science that he rightly despises even more, are exactly what the overwhelming majority of people think of when they think of religion and reality. A few sophists and intellectuals are the only ones playing with more esoteric versions of religion for which the conflict with science may be remote or nonexistent.

In the end, the major reason for a fundamental conflict between science and religion was highlighted honestly and in a straightforward manner by physicist Richard Feynman. In *The Meaning of It All* (1998), he says that it boils down to a matter of attitude. Regardless of what the goal of the inquiry is, science fosters doubt and investigation based on empirical evidence; religion, on the other hand, is based on dogma and revelation. It is hard to see how those attitudes can logically coexist in the same brain.

This book rests on a basic, uncomplicated premise that sets my table of contents and order of procedure, and that requires restatement at several points in the logic of my argument: NOMA is a simple, humane, rational, and altogether conventional argument for mutual respect, based on non-overlapping subject matter, between two components of wisdom in a full human life: our drive to understand the factual

character of nature (the magisterium of science), and our need to define meaning in our lives and a moral basis for our actions (the magisterium of religion).

- Stephen Jay Gould, *Rocks of Ages*

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