

## **UC Irvine**

### **UC Irvine Previously Published Works**

#### **Title**

Negotiating Darwin: The Vatican confronts evolution 1877-1902

#### **Permalink**

<https://escholarship.org/uc/item/0nd3d5bh>

#### **Journal**

HISTORY AND PHILOSOPHY OF THE LIFE SCIENCES, 29(2)

#### **ISSN**

0391-9714

#### **Author**

Ayala, Francisco J

#### **Publication Date**

2007

#### **Copyright Information**

This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

Peer reviewed



---

Review: The Vatican and Evolution

Reviewed Work(s): Negotiating Darwin: The Vatican Confronts Evolution 1877-1902 by Mariano Artigas, Thomas F. Glick and Rafael A. Martínez

Review by: Francisco J. Ayala

Source: *History and Philosophy of the Life Sciences*, Vol. 29, No. 2, Current Reflections on Representation in Biology (2007), pp. 225-229

Published by: Stazione Zoologica Anton Dohrn - Napoli

Stable URL: <https://www.jstor.org/stable/23334229>

Accessed: 24-07-2018 19:05 UTC

---

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



JSTOR

*Stazione Zoologica Anton Dohrn - Napoli* is collaborating with JSTOR to digitize, preserve and extend access to *History and Philosophy of the Life Sciences*

*Essay Review*

The Vatican and Evolution

Francisco J. Ayala

*Department of Ecology and Evolutionary Biology  
University of California  
Irvine, CA 92697, U.S.A.*

MARIANO ARTIGAS, THOMAS F. GLICK, and RAFAEL A. MARTÍNEZ, *Negotiating Darwin: The Vatican Confronts Evolution 1877-1902*, Baltimore: The Johns Hopkins University Press, 2006, viii + 326 pp., \$50.00.

Many Christians, including Catholics, see the theory of evolution as incompatible with their religious beliefs, because it is inconsistent with the Bible's narrative of creation. The first chapters of the biblical book of Genesis describe God's creation of the world, plants, animals, and human beings. A literal interpretation of Genesis seems incompatible with the gradual evolution of humans and other organisms by natural processes. Beyond the biblical narrative, the Christian beliefs in the immortality of the soul and in humans as "created in the image of God" have appeared to many as contrary to the evolutionary origin of humans from nonhuman animals.

Religiously motivated attacks against the theory of evolution started during Darwin's lifetime. In 1874, Charles Hodge, an American Protestant theologian, published *What Is Darwinism?*, one of the most articulate assaults on evolutionary theory. Hodge perceived Darwin's theory as "the most thoroughly naturalistic that can be imagined and far more atheistic than that of his predecessor Lamarck." Hodge argued that the design of the human eye reveals that "it has been planned by the Creator, like the design of a watch evinces a watchmaker." He concluded that "the denial of design in nature is actually the denial of God."

Other Protestant and Catholic theologians saw a solution to the apparent contradiction between evolution and creation in the argument that God operates through intermediate causes. The origin and motion of the planets could be explained by the law of gravity and other natural processes without denying God's creation and providence. Similarly, evolution could be seen as the natural process through which God brought living beings into existence and developed them according to his plan. Gradually, well into the twentieth century, evolution by natural selection came to be accepted by a majority of Christian writers. Pope Pius XII in his encyclical *Humani generis* (1950, "Of the Human Race") acknowledged that biological evolution was compatible with the Christian faith, although he argued that God's intervention was necessary for the creation of the human soul. Pope John Paul II, in an address to the Pontifical Academy of Sciences on October 22, 1996, deplored interpreting the Bible's texts as scientific statements rather than religious teachings. He added: "New scientific knowledge has led us to realize that the theory of evolution is no longer a mere

hypothesis. It is indeed remarkable that this theory has been progressively accepted by researchers, following a series of discoveries in various fields of knowledge. The convergence, neither sought nor fabricated, of the results of work that was conducted independently is in itself a significant argument in favor of this theory." More recently, Pope Benedict XVI, at a meeting with Catholic priests of Belluno and Treviso, has stated that "There are so many scientific proofs of evolution that it is clear that we should accept it as a reality."

Bible scholars and theologians have long rejected a literal interpretation of the Bible as untenable, because the Bible contains mutually incompatible statements as well as erroneous factual statements about the sun's circling around the Earth and the like. Biblical scholars point out that the Bible is inerrant with respect to religious truth, not in matters that are of no significance to salvation. Augustine (354-430), one of the greatest Christian theologians, wrote in his *De Genesi ad litteram* ("Literal Commentary on Genesis"): "It is also frequently asked what our belief must be about the form and shape of heaven, according to Sacred Scripture .... Such subjects are of no profit for those who seek beatitude. And what is worse, they take up very precious time that ought to be given to what is spiritually beneficial. What concern is it of mine whether heaven is like a sphere and earth is enclosed by it and suspended in the middle of the universe, or whether heaven is like a disk and the Earth is above it and hovering to one side." Later in the same chapter Augustine adds: "In the matter of the shape of heaven, the sacred writers did not wish to teach men facts that could be of no avail for their salvation."

Augustine is saying that the book of Genesis is not an elementary book of astronomy. The Bible is about religion, and it is not the purpose of the Bible's religious authors to settle questions about the shape of the universe that are of no relevance whatsoever to how to seek salvation. Along the same lines, Pope John Paul II said in 1981 that the Bible itself "speaks to us of the origin of the universe and its make-up, not in order to provide us with a scientific treatise but in order to state the correct relationships of man with God and with the universe. Sacred Scripture wishes simply to declare that the world was created by God, and in order to teach this truth it expresses itself in the terms of the cosmology in use at the time of the writer. Any other teaching about the origin and make-up of the universe is alien to the intentions of the Bible, which does not wish to teach how the heavens were made but how one goes to heaven."

The position of the Catholic Church and of Catholic theologians was not always this clear about the interpretation of the Bible or about the understanding of evolution as a process of the "secondary causes" through which God's creating powers are present in the world of nature. *Negotiating Darwin* chronicles the Vatican's reaction in the nineteenth century to six Catholics, five of them members of the clergy, who tried to integrate evolution and Christian doctrine in the decades following the publication in 1859 of Darwin's *The Origin of Species*. One of the six authors was a British scientist, St. George Jackson Mivart, who had repeatedly corresponded with Darwin, although Darwin, later, was all but shocked by a critique of natural selection, which Mivart published in an article in the *Quarterly Review* and further developed in his *On The Genesis of Species*, published in 1871. The other five subjects in *Negotiating Darwin* are two Italians, the parish priest Raffaello Caverni and the bishop Geremia Bonomelli, the English Bishop John Cuthbert Hedley, the French Dominican priest Dalmace Leroy, and the American Holy Cross priest John A. Zahm.

St. George Mivart was a recognized biologist who taught comparative anatomy for many years and was elected to the Royal Society in 1867, when he was forty years old. Mivart was a front-line player in the Darwinian controversies that followed the

publication of Darwin's *The Origin of Species* in 1859 and the author of numerous scientific articles and several books, including *On The Genesis of Species*, already cited, where he propounds the evolution of species, although he raises doubts about natural selection as the main adaptive process, doubts that were shared by many contemporary biologists. *On The Genesis of Species* argues that biological evolution is compatible with Christian doctrine, but was criticized by theologians and received a negative evaluation from experts of the Holy Office of the Vatican, although it was not the object of any ecclesiastical censure. Mivart received further negative attention from the Vatican because of his incursions into theology, particularly three articles on "Happiness in Hell" that he published in 1892 and 1893. These articles were prohibited by the Holy Office by a decree dated July 19, 1893, and became listed in the *Index of Prohibited Books*. It was because of his theological arguments against the eternity of condemnation in hell, and not because of his ideas about evolution, that Mivart was also excommunicated by Cardinal Herbert Vaughan, Mivart's bishop, under instructions from the Vatican, a few months before Mivart's death in 1900.

Raffaello Caverni, born in 1837, was a parish priest of the village of Quarate, near Florence, for most of his adult life. He combined his ecclesiastical duties with a serious interest in mathematics and the sciences and was the author of numerous books, including a six-volume *History of the Experimental Method in Italy*. In 1877, he published a book titled *New Studies of Philosophy: Lectures to a Young Student*, where he argues that evolution could be harmonized with Christianity. This book was formally condemned and included in the *Index* in 1878, by the Congregation of the *Index of Prohibited Books*. This is the only work dealing with evolution, among all the authors studied in *Negotiating Darwin*, that was publicly condemned. Even in this case, it is doubtful that the condemnation of Caverni's book was because of his defense of evolution. More highly censured were Caverni's harsh criticisms of the ecclesiastical world, particularly the education of seminarians in Italy.

Geremia Bonomelli was born in 1831, near Brescia, in northern Italy, and was named bishop of Cremona in 1871. He wrote several books mostly concerning educational matters and was an admirer of ideas about evolution, "A stupendous, universal law which relates all the creatures one to another ... which creates order and beauty." But he did not consider himself an expert: "I confess that my knowledge of the great law of evolution and transformation is too slight." Bonomelli's enthusiastic support of John Zahm's evolutionary ideas (see below) placed him in a precarious position, which led him to a retraction. Bonomelli was notorious in Italy at the time, not because of his support of evolutionary ideas, but because of his endorsement of a political solution to "the Roman question" which was strongly opposed by the Vatican but was eventually adopted: recognition of the new state of Italy and elimination of the Papal states, except for a minuscule territory in the Vatican. A pamphlet proposing these ideas was placed in the *Index of Prohibited Books*, but the pamphlet had nothing to do with evolution.

John C. Hedley, born on April 15, 1837, was ordained as a Benedictine priest on October 19, 1862, and was bishop in the diocese of Newport from 1881 until his death in 1915. In 1898, Hedley published in the *Dublin Review* an enthusiastic review endorsing the evolution ideas of John Zahm's *Evolution and Dogma*. Zahm's book and Hedley's review were severely criticized in the Jesuit journal *La Civiltà Cattolica*, but Hedley was never condemned by the Holy Office, nor did he issue any formal retraction.

The two authors discussed at greater length in *Negotiating Darwin* are the French Dalmace Leroy and the American John Zahm. John Augustine Zahm was born on June 11, 1851, in New Lexington, Ohio, studied at the University of Notre Dame, and was

ordained a priest of the Congregation of the Holy Cross on June 4, 1875. He taught science and was vice-president at the University of Notre Dame. Between 1893 and 1896 he published six books on the relationship between science and religion, one of them *Evolution and Dogma*. Zahm cites St. Augustine and St. Thomas Aquinas as proponents of "theistic evolution" and asserts: "Both these illustrious Doctors declare explicitly that 'in the institution of nature we do not look for miracles, but for the laws of nature.'" An extremely critical review of this book was published in *La Civiltà Cattolica*, by the well known Jesuit and critic of all evolution ideas, Francesco Salis Sewis. Other influential critical reviews were published in English and French. The Italian translation of *Evolution and Dogma* was discussed by the Congregation of the Holy Office, but no official document was published, nor was there any retraction from Zahm, although, in view of the controversy, he asked his Italian translator "to use all of your influence to withdraw the book from the market".

Dalmace Leroy was born in Marseilles in January 1828, became a Dominican monk in 1851, and died in 1905 in Paris, where he had lived most of his adult life. In 1887 he published *The Evolution of Organic Species*, where he argues that evolution is compatible with religion, because it should be confined to the realm of science, without being converted into a materialistic or atheistic philosophy. He writes early (p. 2) in the book: "I think the idea of evolution will run the same course as that of Galileo; it will initially alarm the orthodox, but once emotions are calmed, truth will be distinguished from the exaggerations of both sides ... Let us know how to give to Caesar what is Caesar's, and to invite Caesar that he, in turn, give God what is God's." These words can be seen these days as prophetic.

In 1894, the Congregation of the Index received an accusatory letter against Leroy's book. The Congregation of the Index discussed Leroy's book on several sessions in 1894 and January 1895. The book was negatively evaluated but Leroy was not explicitly condemned. Rather, the Congregation's views were conveyed to the superior general of the Dominican Order and to Leroy. Leroy retracted his ideas in a letter written from Rome to the French daily, *Le Monde*, on February 26, 1895: "I have learned that my thesis, examined here in Rome by competent authority, has been judged untenable, above all for that which refers to the human body ... As a docile son of the Church, ... I disallow, retract, and repudiate all that I have said, written, and published in favor of this theory." The authors of *Negotiating Darwin* document reasons to doubt whether Leroy was convinced that he was wrong. Rather, they argue, he was simply accommodating the wishes of the ecclesiastical authorities. "Leroy obeyed. But he did not change his ideas, and in the years immediately following he expanded them in public" (p. 113).

The final chapter 8 of *Negotiating Darwin* is titled: "The Church and Evolution: Was There a Policy?" The answer was already given earlier in the book, in the final paragraph of chapter 3, dedicated to Leroy: "The discussions and uncertainties clearly show that no official doctrine existed in the Catholic Church regarding the issue of evolutionism. This was obviously well known by the officials and authorities in the Vatican" (p. 123). The summary conclusion reached in chapter 8 is similar: "In assessing the role of the Church, one of the principle [sic] conclusions that we might extract from the archival documents is that, in three of the cases examined (Bonomelli, Hedley, and Mivart) there was no action taken against the authors, nor did the Roman authorities make any decision at all, and that in the other three cases in which the Vatican intervened (Caverni, Leroy, and Zahm), it did so in response to denunciations that reached the Congregation of the Index from the outside. The Holy Office played no role in any of these cases. Therefore, we can say that the cases examined were not generated by any policy of the Roman authorities with respect to evolutionism" (p.

270). This conclusion should be of more than passing interest for historians, as well as for practicing Catholics, who will see it as consistent with the statements formulated in more mature times by Pius XII and the two most recent Popes, John Paul II and Benedict XVI, cited earlier in this review.

As Artigas, Glick, and Martínez write in the Introduction, for many years, some Catholic writers criticized evolution and hinted that the Church had officially pronounced against it and had intervened with several condemnations of Catholic authors. But “the exact picture was enveloped in darkness. The limited available data could not even be found in public documents.” The situation has changed, once the Vatican opened in 1998 the Archives of the Congregation for the Doctrine of the Faith, which contains the archives of the Old Congregation of the Holy Office and the Congregation of the Index. It is now possible for historians to mine these archives and not only, or principally, concerning the theory of evolution, but also for other matters of great religious and historical import. Three cheers for this Vatican’s decision in favor of openness and transparency, and three cheers for Pope John Paul II, whose approval was surely required for the decision to open the archives to historical research.