

## Negotiating Darwin: The Vatican Confronts Evolution, 1877–1902

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Charles Darwin died in April 1882 at which time William Bateson and Walter Weldon were still Cambridge undergraduates and, indeed, still friends. In later years their bitter feud over the mechanisms of inheritance, evolution, and, in particular, the status of 'Natural Selection', was to colour Darwinian studies throughout the 1890s and well beyond. Gregor Mendel had completed and published his work by 1865, but neither Darwin nor anyone else read it. Its full impact did not begin to dawn until the early 1900s, and even then the initial effect was to encourage a belief in saltational evolution, as favoured by Bateson, rather than the Darwinian gradualism, advocated by Weldon. By this time, Thomas Hunt Morgan was busy breeding fruit flies and mapping chromosomes at Columbia University. His work is now regarded as one of the foundation stones of our modern understanding of evolution, yet Morgan himself saw his results as anti-Darwinian! In London, meanwhile, the young Arthur Holmes was not only literally preparing his 'time bomb' which would transform the geological time scale but also provide enough time for Darwinian evolution to operate. In 1900, however, Bateson was famously to comment on the current state of knowledge of heredity and evolution that, '...not only is our ignorance complete, but no one has the remotest idea how to set to work on that part of the problem'. *Negotiating Darwin* is, firstly, a series of case studies on how six Catholic apologists were able to exploit the disputes and uncertainties of these 'eclipse of Darwinism' years (p. 20) in attempts to reconcile, or, rather, to 'harmonize' (p. 3), evolution with Catholic theology. Secondly, but more importantly, it is a detailed account of the reaction of Vatican bureaucracy to these reconciliatory attempts.

There has been, and still is, an extremely naïve attitude towards the so-called conflict between Science and the Church, and this naïvete has generated a series of myths which have been perpetuated as truths. The

authors of *Negotiating Darwin*, however, subscribe to John Hedley Brooke's 'complexity thesis' of history, and demonstrate just how intertwined and non-linear the debates really were; and in addition they also trace the origins of those myths.

They are able to produce this fine-grained study as a result of the opening up (on 22 January 1998) of the archives of the Congregations of the Holy Office and of the Index. For the first time, this allowed scholars free access to the documentation recording the actions taken by the Vatican with respect to the reconciliatory writings of these six authors. The period covered is from 1877 to 1902, with all but two of the six cases taking place in the 1890s during the pontificate of Leo XIII. Of these six, two are Italian, two English, one American, and one French. All are clerics, save the English anatomist St. George Mivart, but all, without exception, are Catholics. It is important to note that the subtitle of this work is 'the Vatican confronts evolution' and not 'the Vatican confronts Darwin' for, unlike that other paradigmatic case of 'Church versus Science', that of Galileo and Urban VIII, there was no clash of personalities here. The authors of *Negotiating Darwin* are, however, at pains to demonstrate how the 'long shadow of Galileo's condemnation' had a moderating influence on the way the Vatican approached the perceived threat of evolutionary theory, and, indeed, the echoes of Galileo's philosophy appear time and time again throughout the book. Of course, the two situations were very different but, taking an overview of these case studies, it is apparent that all six authors, while accepting, more or less, that evolution, *sensu lato*, had taken place, were unhappy about natural selection as being its sole driving force and about the fact that there was no obvious *experimentum crucis* to test it. At least the Copernican theory had been amenable to such a test, if only stellar parallax could have been measured with the requisite accuracy. This lack of evidence, and the fierce debates that it engendered within the scientific community itself, provided our apologists with the opportunity they needed to propose a series of non-materialistic alternatives to natural selection; alternatives which involved secondary, but law-abiding, causes and thereby retained Divine Providence which the Darwinian 'Russian roulette' was seen to threaten. Such strategies did less violence both to scriptural exegesis and the consensus fidelium of the Catholic Church. Conversely, this lack of proof also enabled the anti-evolutionists smugly to dismiss the whole idea as 'unscientific'. What irony that Karl Popper, some ninety years later, controversially came to the same conclusion because, he said, the theory of evolution was not falsifiable!

While the writings of these six authors have always been readily available, published as they were in book form or in the press, the critiques, reports, and recommendations of the Holy Office and the Congregation of the Index have never seen the light of day. It is these reports which have made *Negotiating Darwin* both possible and fascinating. The book goes a long way to closing an enormous gap, often erroneously filled from secondary sources, particularly the notoriously conservative Jesuit journal, *La Civiltà Cattolica*, in our knowledge of the understanding of how Darwinism was received. It also highlights a number of issues which, with the resurgence of interest in 'intelligent design' (ID), are still relevant today.

It is impossible to summarize the subtly-nuanced dialectic which took place between the Darwinian 'harmonizers' and the consultors of the Congregations. While some telling points are made on both sides, much of it has the flavour of a disputation between twelfth-century schoolmen transposed into the nineteenth century. Did St Thomas Aquinas and St Augustine really anticipate Darwin? In his attempt at harmonization, the American, John Zahm, in his *Evolution and Dogma* (Case no.3 p. 124 et seq.) argues that this is indeed the case. His reviewer, on the other hand, says that he finds it 'difficult to tease evolution, as we currently understand it, out of the philosophers of antiquity or the doctors of the Church' (p. 134). So the debates swung back and forth, often with the same 'facts' being used in the support of both sides; and one has to admire the intellectual gymnastics involved, if not the selectivity. Certainly the protagonists were selective and the omissions are as interesting as the inclusions. For example, only passing reference is made to the age of the Earth, poor Darwin's 'sores trouble'. This was a difficult problem which was not solved until Arthur Holmes used his radioactive dating techniques, the results of which were first published in 1911. Another of Darwin's problems, which none of the authors mention, in the context under study is that of the 'incipient stages of organs'. This formed a major element in Mivart's initial critique of Darwin's theory. It was, indeed, of such extreme importance that Darwin felt himself forced to address it by adding a completely new chapter to the sixth edition of *The Origin* (1872). We still lack a fully satisfactory answer to this critique but it is

gradually beginning to yield to the new science of 'Evo-Devo'.

It was, of course, the year before this sixth edition of *The Origin* was published that Darwin unleashed his second wild boar to rampage through, and scatter, the sacred text of Genesis. *The Descent of Man* was much harder to come to terms with than *The Origin* had been, and the consequences leap from the writings of both the apologists and the from consultor's reports. In general, both sides, in their different ways, make Herculean efforts to cage this particular wild boar, and you must read the book to discover the theological contortions that they performed in order to 'save appearances', as Galileo might have said. The real tussle was between the emphasis on God's orderly immanence in the creation of all living creatures except man. Here, it was necessary to require that the Almighty be an interventionist 'God-of-the-Gaps'. The tension is palpable. One of Darwin's biographers, Ronald Clark, has likened these efforts of theologians in general to defend the 'special creation' status of man to 'Custer's last stand'. Reading the reports of these six apologists, however, and the ways they invoked concepts such as 'mitigated', 'limited', and 'theist' evolution, brings to mind much more Neville Chamberlain's futile note waving.

So why did two books by a middle-aged gentleman, from a country one of whose former queens had been excommunicated in 1570 and whose clergy were not recognized by the Catholic Church, ruffle so many feathers? The traditional answer is that Darwinian evolution destroyed the 'watch on the heath'/'argument from design' teleology, and intoned the last rites of William Paley's 'final causes'. This was certainly the belief of some of the apologists, John Zahm for example (p. 133). In fact 'natural theology' had been on the wane for some thirty years before *The Origin* appeared. Both the comparative anatomists and the geologists came to regard it as a sterile explanation of Nature's underlying unity. *Negotiating Darwin* makes it clear that the real danger lay not so much with the pros and cons of any specific theory, but was rather to do with who had the ultimate authority to interpret the scriptures. Galileo, quoting Aquinas, had said that God had assigned Holy writ concerning scientific matters to scientists ...' and not to theologians, or ecclesiastical tribunals, or the Roman congregations' (p. 244). This was, perhaps, something of an unlooked for backfire of Leo XIII's encyclicals, *Aeterni Patris* (1879) and *Providentissimus Deus* (1893), in which he had encouraged new Thomist scholarship. It also opened the floodgates to an allegorical reading of the scriptures, thus undermining the authority of Holy Church. The book concludes that Leo XIII was undoubtedly more cautious in handling the 'new learning', especially science, than his predecessor, Pius IX. Pius was rather given to thunderous, sweeping condemnations of the innovations of an age of 'reason' and materialism, culminating in his infamous declaration, at the end of the *Syllabus of Errors*, that 'The Roman Pontiff could not and would not reconcile himself with the progress, liberalism and modern civilization'. One wonders whether he would have condemned Darwin as well...

The final chapter, 'The Church and Evolution', puts the question, 'Was there a policy?'. We will not spoil it for the reader by giving the authors' answer, but, suffice it to say that, in the 1890s there were no inquisitorial witch hunts of yesteryear, no threats of torture, house arrest, or burnings at the stake. The word 'heresy' is hardly mentioned, in 'Fact, nothing to laugh at at all'. Instead, lack-lustre admonitions such as 'rash', 'unsafe', or 'erroneous in the Faith' replaced the more muscular responses. However, it is clear that the Vatican still wished to restrain any loose cannon that might be directed at that sacred Leonine wall, the last physical bastion of the pope's erstwhile secular domain. Evolution did, however, remain a problem for the Catholic Church for some time afterwards. For example *La Civiltà Cattolica* devoted a series of articles by Jesuit Father Gaia to the question of 'Evolution or the Stability of Species?' in 1919 and 1920, which, after presenting scientific evidence both for and against, came out against evolution.

This is a fine study of the Church's response to Darwin and evolutionism in the late-nineteenth century, even if there are some literary/linguistic lapses, with the result that it is difficult to understand quite what the authors are trying to say. One of the book's great strengths, however, is that the authors resist the temptation to force conclusions on their readers. The treatment is even-handed with sufficient background being given to contextualize each case study yet allowing the apologists and the consultors to speak for themselves. The work will appeal to a wide readership.

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