

Catholicism and Evolution: Polygenism and Original Sin

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Abstract. Theological attention to the Catholic doctrine of original sin has a history that extends from the letters of Saint Paul through the Council of Trent and Pius XII's 1950 encyclical, *Humani generis*. The doctrine has traditionally been articulated through the Genesis narrative of Adam and Eve as the first human beings from whom all others descend, an account known as monogenism. In the course of the nineteenth century, scientific research into human origins increasingly invoked polygenism, the descent of humanity from non-human ancestors through a transitional population. Subsequent Catholic engagement with evolution included resistance to polygenism from the Vatican due to a perceived conflict with the doctrine of original sin. *Humani generis* included a prohibition that remains in place today in spite of widespread *de facto* acceptance of polygenism among theologians. Understanding the origin and persistence of this disparity stands to benefit from comparison to a corresponding ambivalence toward the sixteenth century Copernican hypothesis of a moving earth, only conclusively resolved in 1992. In Part I of this essay I introduce this historical comparison and describe the origins of monogenism and polygenism terminology in nineteenth century debate over the unity of the human race. I then describe the conceptual changes that transpired during the first half of the twentieth century and the resulting role of polygenism in the *nouvelle théologie* of the decade prior to *Humani generis*. Subsequent developments and implications follow in Part II.

Keywords: human origins; monogenism; nouvelle théologie; Teilhard de Chardin.

Introduction

Some of the most theologically and culturally influential passages in Genesis describe an act of disobedience by Adam and Eve now commonly referred to as original sin. Saint Paul left a lasting legacy for theology by presenting a symmetry between the impact of one man's sin and the redemptive power of the one Christ:

For if, by the transgression of one person, death came to reign through that one, how much more will those who receive the abundance of grace and of the gift of justification come to reign in life through the one person Jesus Christ. In conclusion, just as through one transgression condemnation came upon all, so through one righteous act acquittal and life came to all (Romans 5:17–18).

This attribution of responsibility for sin and its consequences to a single individual became central to subsequent theological exposition. Most influentially, in response to the theological turmoil of the Reformation, the Council of Trent (1545–1563) issued a decree on original sin that included responses to a set of doctrines, collectively labelled Pelagian, which, in their most extreme form, denied hereditary sin altogether (Endres 1967). Canon One from Trent Session Five included an oft quoted passage.

If any one does not confess that the first man, Adam, when he had transgressed the commandment of God in Paradise, immediately lost the holiness and justice wherein he had been constituted; and that he incurred, through the offence of that prevarication, the wrath and indignation of God, and consequently death, with which God had previously threatened him [...] let him be anathema (Council of Trent 1546).

The decree further asserted that “this sin of Adam, –which in its origin is one (*origine unum*), and being transfused into all by propagation (*propagatione*), not by imitation (*imitatione*), is in each one as his own.” Additional theological reflection is needed to determine whether these references to Adam as “the first man” might be implicit or co-defined by the doctrine at stake or are simply a non-doctrinal mode of expression. Until the mid-twentieth

century, the preferred interpretation was that this phrase, used together with the terminology *propagatione* and *origine unum*, implies a unique sinful act with effects that are transmitted to all humanity through direct physical descent from Adam, the first human.

Scrutiny of this traditional reading intensified following the application of evolutionary biology to human origins. During the first half of the twentieth century, the evolution of the human body from non-human ancestors became increasingly acceptable to Catholics as long as the divine introduction of individual human souls was acknowledged. However, in a famous passage in the 1950 encyclical *Humani generis*, Pope Pius XII warned that, although the bodily evolution of humanity was a viable scientific topic in general, some specific evolutionary theories do conflict with the doctrine of original sin.

Christians cannot lend their support to a theory which involves the existence, after Adam's time, of some earthly race of men, truly so called, who were not descended ultimately from him, or else supposes that Adam was the name given to some group of our primordial ancestors. It does not appear how such a view can be reconciled with the doctrine of original sin, as this is guaranteed to us by Scripture and tradition, and proposed to us by the Church (Knox 1950, 190).

The ideas Pius castigated are commonly referred to collectively as polygenism and stand in contrast to monogenism, the attribution of human origins to a single pair of individuals. Given the longstanding reluctance by the Vatican to issue official pronouncements on scientific topics, it is natural to wonder why Pius singled out polygenism for special attention. His warning certainly did not settle the issue. Discussion increased during the 1950s, Vatican II, and through the 1960s. As late as 2003, when Kevin McMahan wrote "Monogenism and Polygenism" for *The New Catholic Encyclopedia*, he presented the topic as still unresolved.

The present situation amounts to a quandary for theologians. On the one hand, even though it has not been formally addressed by the magisterium since *Humani generis*, monogenism continues to be accepted as a basic premise in Church

teaching, as is shown by the relevant sections of the *The Catechism of the Catholic Church* (nn. 374–379, 390, 399–407). On the other hand, to deny the polygenistic origin of the human species places the theologian in clear opposition with science, and conjures up the image of an obscurantist faith combating the truth of reason. And yet it may very well prove to be that science, in its forthright drive for empirical knowledge, has only forced theology to deeper reflection on its own central claim that Christ lies at the heart of all (McMahon 2003).

The goal of the present paper is to clarify how this longstanding “quandary” took root and became established. In the tradition of drawing comparisons between Catholic responses to evolution and heliocentrism, it is tempting to construct an analogy using Galileo and Pierre Teilhard de Chardin as protagonists. Although that exercise might be informative, it ultimately loses traction because for polygenism there is no iconic public event of comparable notoriety when measured against the trial of Galileo. Instead of placing a focus on a representative individual, the present paper has a broader conceptual basis.

In Part I, after using as a starting point the seventeenth century Catholic hierarchy’s defense of geostatic astronomy, I document the analogous history of monogenism up to 1950. In both cases, with very little public direction from the Vatican, scientifically informed theologians encouraged a gradual transition away from earlier orthodox expectations. In 1661, in concession to some of the arguments of Copernicus, Galileo and Kepler, the Jesuit Giovanni Battista Riccioli granted that the sun was the center of some planetary orbits but he still rejected terrestrial motion and proposed that the sun orbited the stationary earth. Similarly, as the century after Darwin progressed, the descent with modification of “systematic species” was accepted by most Catholic theologians as a long process spanning many millions of years of earth history. However, in addition to the requirement of divine intervention for the introduction of each human soul, what was consistently rejected was polygenism, the idea that humanity originated through a transitional population rather than from two individuals. And, just as preference for Riccioli’s geostatic model gave way to an acceptance

of a moving earth, monogenism gradually was *de facto* supplanted by polygenism. From the extensive sources available, I concentrate on the French literature where discussion of evolutionary topics pertaining to original sin was embedded within the *nouvelle théologie* that immediately preceded the publication of *Humani generis*.

In Part II, the discussion continues through the publication of *Humani generis*, Vatican II and the 1960s, when many theologians developed conceptualizations of original sin independent of monogenism. Acceptance of biological polygenism became widespread, even if not condoned by any official Vatican pronouncement. In other cases, monogenism and polygenism were reconceptualized using a spiritual rather than a biological criterion. Reflection on the Vatican's long period of ambivalence with respect to the motion of earth suggests that a similar prospect can be foreseen for polygenism even as the concept at stake continues to evolve.

1. Catholicism and Geostasis

As would later be the case for polygenism, Copernicus's hypothesis that the earth moves in a heliocentric orbit generated widespread theological concern over apparent conflict with scriptural passages. One of the most frequently cited sources for biblically based arguments that the earth is stationary was Joshua 10:12–13, in which Joshua successfully prays for extended daylight during a military battle.

On this day, when the LORD delivered up the Amorites to the Israelites, Joshua prayed to the LORD, and said in the presence of Israel: Stand still, O sun, at Gibeon, O moon, in the valley of Aijalon! And the sun stood still, and the moon stayed, while the nation took vengeance on its foes.

In the sixteenth century, the most straightforward reading of this text included the idea that the earth is immobile and it is the motion of the sun that either stops or continues. Contentious Reformation arguments over the proper assignment of authority for biblical interpretation were fully engaged

when Copernicus published in 1543. Although astronomy was not explicitly discussed at the Council of Trent, theological concern motivated Catholic preference for Tycho Brahe's 1588 geostatic model in which all the planets have solar orbits while the sun orbits a stationary earth. Tycho's model did not conflict with scripture and could also accommodate high profile empirical phenomena, such as Copernicus' discovery of the correlation of planetary distances with periods of rotation around the sun and Galileo's later observations of a full range of phases for Venus. It also avoided the most glaring scientific problem for the Copernican model, the failure to observe any stellar parallax due to the earth's alleged annual orbit of the sun. In 1616, under the authority of Pope Paul V, two propositions taken from Copernican astronomy were submitted to consultants of the Congregation of the Holy Office for judgment on their theological legitimacy.

- I. The sun is the center of the world and completely immovable by local motion.
- II. The earth is not the center of the world, nor immovable, but moves according to the whole of itself, and also with diurnal motion (Langford 1966, 89).

The consultants found the first proposition to be "formally heretical" (directly contrary to a doctrine of faith based in scripture), while the second was declared "erroneous in the faith" (a conclusion contrary to scripture because it is inferred from the formally heretical claim that the sun is stationary). The Congregation's 1616 decree conflated these two assessments and rendered judgement on the compound idea that the sun is immobile and the earth moves. It was not declared heretical but was deemed "false and contrary to Holy Scripture" (Langford 1966, 98–99; Finocchiaro 2005, 18). Copernicus' book was also "suspended until corrected"; his model could be discussed and taught as a mathematical hypothesis for computational purposes, but it could not be defended as a thesis of physical truth.

Jesuits such as Orazio Grassi encouraged further research in Tyconic astronomy based upon observations that comets were accompanied by no observable parallax and must be celestial rather than atmospheric phenomena (Gal and Chen-Morris 2013, 91–101). Giovanni Battista Riccioli presented

the most famous of these geostatic models in his 1651 *Almagestum novum astronomiam veterem et novem complectens*. Riccioli compiled and evaluated forty-nine arguments in favor of a moving earth and seventy-seven counterarguments for a geostatic model; he concluded that neither set of arguments was absolutely compelling and he advised acceptance of a stationary earth in accordance with the consensus of scriptural interpretation. Riccioli only revised Brahe's model slightly by having Jupiter and Saturn orbit the earth rather than the sun. 1651 was also the year in which Francesco Piccolomini issued the *Ordinatio pro studiis superioribus* during his brief tenure as Jesuit superior general. The *Ordinatio* included a list of philosophical and theological theses that could not be taught in Jesuit schools (Hellyer 2005, 38–46). Points thirty-five and thirty-six prohibited instruction that the firmament is stationary and the earth is in motion.¹ Although Riccioli's 1651 text would have been completed prior to any exposure he might have had to this *Ordinatio*, he became more adamantly opposed to the Copernican model thereafter. Historian Alfredo Dinis has argued that Riccioli was not a “secret Copernican” and was sincere in his conclusion that because the issue could not be objectively resolved purely on the basis of empirical evidence, the model in conformity with traditional Biblical interpretation was to be preferred (Dinis 2002). Meanwhile, Galileo's failure to conform to the 1616 directive of the Holy Office had resulted in his 1632 trial where he was found guilty of vehement suspicion of heresy on two counts: believing in the earth's heliocentric mobility, the doctrine judged in 1616 to be false and contrary to scripture, and secondly, believing that such a doctrine could be held and defended as probable (Langford 1966, 152; Finocchiaro 2005, 11–14). Vehement suspicion of heresy was a serious offense, ranking below only formal heresy and strong suspicion of heresy in severity. That Galileo was found guilty of a mode of heresy for holding a doctrine that was not itself ever declared heretical, but only contrary to scripture, would be one of the complicating factors in the historical legacy of the case.

¹ The full Latin text of the *Ordinatio* is provided in Bargiel 2006, 263–267.

Catholic disengagement from geostasis was a slow and convoluted process. It was not until 1757 that the Congregation of the Index dropped its longstanding prohibition of “all books teaching the earth’s motion and the sun’s immobility” (Finocchiaro 2005, 138–139). Books by Copernicus, Galileo, and Kepler remained on the *Index of Prohibited Books* until they were quietly removed for the 1835 edition. Finally, in 1981 Pope John Paul II authorized a committee of scholars from the Pontifical Academy of Sciences to investigate the Galileo affair anew. Cardinal Paul Poupard presented his summary of the results in a 1992 speech.

It is in that historical and cultural framework, far removed from our own times, that Galileo’s judges, incapable of dissociating faith from an age-old cosmology, believed, quite wrongly, that the adoption of the Copernican revolution, in fact not yet definitively proven, was such as to undermine Catholic tradition, and that it was their duty to forbid its being taught (Poupard 2003, 348).

The sporadic and drawn-out nature of the acceptance of the earth’s mobility should be kept in mind as we turn to the history of polygenism. That the earth moves in a solar orbit obviously became the *de facto* understanding of Catholic scientists and theologians long before 1992. Riccioli’s model played a temporary role in this transition. He acknowledged that the earth is not the center of all planetary motion but he also believed it to be stationary due to his understanding of scripture. Similarly, many aspects of evolutionary science, including the evolution of the human body, have become theologically viable as long as monogenism is retained. But for most modern theologians polygenism has lost its theologically threatening status and has been relegated to the scientific domain along with the motion of the earth. As the following survey will document, monogenism has had a historical trajectory analogous to geostasis but with a future still to be determined.

2. Nineteenth Century Racial Polygenism

In what would become a longstanding terminological problem, the general nineteenth century import of “polygenism” was that there were multiple

very ancient origins for distinct human races that some adherents believed to be separate species. Monogenism was the contrary view that racial distinctions are insignificant compared to the unity humanity owes to its singular origin. Both labels included multiple versions, some with religious motivation and others purely secular. Racial polygenism flourished in the United States, London, and Edinburgh before being extensively taken up by French authors. Historians Adrian Desmond and James Moore have located the terms monogenism and polygenism used in this racial sense by George Gliddon as early as 1857 (Desmond and Moore 2009, 287–289). Prior to Gliddon’s explicit use of this terminology, American slave owners had already relied upon a variety of polygenetic concepts as justification for slavery. In response, James Cowles Prichard used a biblical argument for the unity of humanity due to descent from a single ancestor. This reliance upon Genesis allowed racists such as Josiah Nott to claim the mantle of science and belittle monogenists as religiously biased and culturally backward. In his 1830 *Thoughts on the Original Unity of the Human Race*, Charles Caldwell claimed that Caucasians, Mongolians, Africans, and American Indians were created as separate populations and were easily recognized as distinct species (Desmond and Moore 2009, 152–154). He worried that, if it was accepted that races were truly descended from a recent common ancestor, then the same conclusion might be drawn for other sets of animal or plant varieties. For Caldwell, extensive common descent thus became part of a *reduction ad absurdum* argument against monogenism. From his prestigious position at Harvard, Louis Agassiz also asserted separate creation of races and incorporated racial polygenism into his biogeographical hypothesis of multiple zones of creation for disjoint sets of plants and animals (Agassiz 1850). One obvious problem for all racial polygenists was that reputable experts repeatedly documented fertile cross breeding and it was difficult to discount all of these as isolated exceptions.

A prominent Catholic opponent of racial polygenism in America was Clarence Augustus Walworth, a Redemptorist priest and subsequent Paulist. Walworth rejected both polygenism and evolution but, of the two ideas, he considered polygenism to be the greater threat to Catholic doctrine. This

judgment was not unusual; as historian William Astore comments, for American Catholics during the 1845–1859 period, “Polygenism – not geology or evolutionary theories – emerged as the most significant issue” (Astore 1996, 41). Walworth felt evolution could be rejected on scientific grounds and he argued for a compatibility of geology with a metaphorical or spiritual reading of Genesis and a localized Noachian flood. Racial polygenism was not so readily dismissed; here his objection was theologically motivated since he did not consider polygenism compatible with a traditional interpretation of Adam and Eve. Walworth proposed sudden saltations guided by providence as a cause for distinct races within the one human species descended from the initial couple (Walworth 1863, 332–366).

Support for racial polygenism waned in the United States after the Civil War but it continued to find a scientific voice in Europe. Karl Vogt asserted that human races took their origins from separate ancestral species and evolved in parallel to the point where they were capable of some interbreeding (Bowler 1986, 132). As did most racial polygenists, he relied upon an extreme degree of convergent evolution to make interbreeding possible. Ernst Haeckel was also a polygenist with respect to human origins due to his belief that races emerged through independent achievements of language in isolated populations; he certainly did not think that divine intervention played any role (Richards 2008, 259–260). Haeckel serves as a transitional figure in the present discussion because he introduced much of the relevant terminology employed during the twentieth century. In particular, by 1866 he was using the word “phylon”, in the sense of “stem”, as a root for terms such as monophyletic (*monophyletischer*) and polyphyletic (*polyphyletischer*) (Richards 2008, 138–139). He incorporated this vocabulary into his contrast between two general scenarios for the evolutionary history of life (Haeckel 1876, 2: 45).

The unitary, or *monophyletic*, hypothesis of descent will endeavor to trace the first origin of all individual groups of organisms, as well as their totality, to a single common species of Moneron which originated by spontaneous generation. The multiple, or *polyphyletic*, hypothesis of descent, on the other hand, will assume that several different species of Monera have arisen by spontaneous generation, and that these gave rise to several different main classes (tribes, or phyla).

Although he was a polygenist with respect to human races, Haeckel tentatively preferred the monophyletic hypothesis for the full history of life since its first inception; he did leave open the possibility of polyphyletism involving multiple independent cases of spontaneous generation (Dayrat 2003). This monophyletic and polyphyletic terminology would be incorporated into Catholic literature with divine intervention replacing Haeckel's use of spontaneous generation.

American, British, and German arguments all contributed to the context in which racial monogenism and polygenism were debated in France (Blanckaert 1996). Among French anthropologists, Paul Broca and Georges Pouchet espoused racial polygenism during the 1860s. Broca was especially influential through his establishment of the Société d'anthropologie de Paris in 1859, the journal *Revue d'anthropologie* in 1872, and the Ecole d'anthropologie de Paris in 1875. His vigorously anti-religious and anti-clerical tone contributed to a widely perceived antagonism between materialistic anthropology and Catholicism. Pouchet adopted the American terms monogenism and polygenism with the latter defined as recognizing "no direct relationship among the races of mankind" (Pouchet 1864, 3). Distancing himself from any reliance upon scriptural authority, Pouchet accepted the fertile interbreeding of human races but discounted it as a secondary phenomenon. Neither Broca nor Pouchet provided any theoretical basis or mechanism for the evolution of distinct races.

At the end of the nineteenth century, Jean Guibert was noteworthy for his well-informed and even-handed discussion of tenable Catholic engagement with biology and paleontology. An ordained priest of the Society of Saint Sulpice, Guibert wrote for the benefit of his students at the Séminaire d'Issy where he taught natural sciences (Guibert 1896). Jean Bouyssonie and Henri Breuil were among his students there and they would become important figures in French anthropology and paleontology. Guibert referred to Dalmace Leroy and John Zahm hesitantly, but more or less approvingly, even though he knew that objections to human evolution from the Vatican had resulted in Leroy's agreement to discontinue publication (Guibert 1900, 148, 169 and 200). Leroy had speculated that evolutionary processes alone

might produce the initial bodies which became fully human through divine infusion of souls. Guibert's more careful references to "several primitive forms" (Guibert 1900, 169) resembled Erich Wasmann's later use of "natural species," taxa tentatively thought to have been produced through divine intervention with no prior ancestry. Regarding human origins, Guibert distinguished his view from Leroy's by proposing that "science itself inclines us to believe that the Creator at the moment in which He resolved to form man fashioned him directly or at least consummated and crowned the organism He was about to vivify by the spiritual soul" (Guibert 1900, 210). Leroy preferred the hypothesis that no final intervention of this kind into the process of physical evolution was necessary. Guibert's discussion of human races concentrated on the refutation of racial polygenism and he did not discuss possible human descent from a non-human population. He cited Jean Louis Armand de Quatrefages as Agassiz's chief opponent in France and marshalled many of his arguments to find flaws in polygenist claims. Guibert concluded that "The problem of the unity of the human origin seems now made quite clear. We consider the thesis as scientifically proved, which affirms that all the human races descended from one and the same primitive couple (Guibert 1900, 251). Guibert's wording was representative of Catholic conviction that God's intervention into human origins involved the single couple described in Genesis.

At some far distant period of which science cannot determine the date, but which apparently does not exceed 18,000 or 20,000 years, the first human pair appeared on the earth, their nature formed and decided by a superior power intellectual and personal whom we call God (Guibert 1900, 377).

At the turn of the twentieth century, Guibert's racial monogenism was an accepted Catholic position. Racial polygenism was uniformly held to be in clear contradiction with the biblical account of a single locus for human origins in Adam and Eve. Although extensive evolution of plant and animal life was allowed, the manner in which God's intervention resulted in the first human beings was less settled. The human soul was necessarily held to be supernaturally introduced and could not be considered a product of

material evolution. It was also considered rash to speculate that the bodies into which human souls were initially introduced were solely the result of evolutionary processes. Conformity to these expectations was primarily maintained by communications from the Congregation of the Index, often conveyed through the superiors of religious orders (Artigas et al 2006; Paul 1979). There certainly were influential individuals within the Roman curia who took broader exception to evolution in general and it is not surprising that these issues were scrutinized anew as the twentieth century opened.

3. Early Twentieth Century Prelude to *Humani generis*

On June 30 of 1909, the Pontifical Biblical Commission published a decree on Genesis 1–3, a document that would cast a long shadow over the first half of the twentieth century. The decree rendered judgment on a set of *dubia*, theses to which it responded either positively or negatively with no explanatory comments. The Commission prohibited the third *dubium* that included several aspects of human origins:

In particular may the literal historical sense be called in doubt in the case of facts narrated in the same chapters which touch the foundations of the Christian religion: as are, among others, the creation of all things by God in the beginning of time; the special creation of man; the formation of the first woman from the first man; the unity of the human race (Pontifical Biblical Commission 1909).

The reference to a “special creation of man” (*peculiaris creatio hominis*) did allow for some latitude in interpretation as long as doubt was not cast upon the “literal historical sense” of the Genesis account. In thorough keeping with a conservative reading, Xavier-Marie le Bachelet wrote the article “Adam” for the *Dictionnaire de Théologie Catholique* (Le Bachelet 1909). Le Bachelet was a Jesuit professor of dogmatic theology at Ore House in Hastings where Pierre Teilhard de Chardin briefly was one of his students. Never departing in the slightest from the conviction that Adam was a single individual and the “father of the human race,” Le Bachelet also cited an extensive literature addressing the location of Adam’s death and burial at an age of 930 years,

while acknowledging that these topics are not included in Catholic doctrine. He quoted Saint Paul to illustrate the parallel between the initial perpetrator of sin and Christ the redeemer but felt no compulsion to invoke Saint Paul to justify belief in Adam as a single ancestor for all humanity.

Serving as a secular foil to Le Bachelet's orthodoxy, Hermann Klaatsch became a notorious early twentieth century proponent of racial polygenism (Bowler 1986, 134–139). In 1910 he proposed that, although *Propithecantropi* might be a common ancestor of apes, Neanderthals and modern humans, the lineages leading to modern human races have been distinct for long periods of time dating back to well before each of these lineages independently became human. Negroes, Australians, Pacific islanders and Aurignacians were claimed to have diverged into separate lineages at very different times and places: "That all have a common ultimate origin cannot be questioned—but it is very remote—as remote as the separation of the apes and man. We can say very little in the present state of science about the home of the common ancestor" (Klaatsch 1923, 107). Klaatsch attributed any multi-racial similarities to independent convergent evolution and claimed that he provided an objective perspective in contrast to religiously based assumptions of racial unity.

We may not be prepared to go so far as to trace the human race to two or more different roots, but we cannot deny that the recent tendency of anthropology is not to support the idea of the unity of the race that had been suggested by religious and sentimental considerations. Modern science cannot confirm the exaggerated humanitarianism which sees brothers and sisters in all the lower races (Klaatsch, 1923, 106–107).

Klaatsch presented these ideas at a 1910 Cologne Congress where, according to his editor Adolf Heilborn, "There were jokes about his supposed 'conversion from monogenetic Saul to polygenetic Paul'," a quip which of course does not do justice to Saint Paul (Klaatsch, 1923, 27). Although Richard Wegner wrote a receptive review of Klaatsch for *Nature*, Arthur Keith was more representative in his dismissal of Klaatsch's views as rampant speculation and excessively dependent upon convergence (Keith 1910). Nevertheless,

Klaatsch's notoriety was such that for many twentieth century writers the term "polygenism" continued to be associated with the hypothesis of independent evolution of human races from a set of non-human ancestors. Although this terminology was not uniform, the contrast between racial polygenism and the "unity of the human race" monogenism asserted by the Biblical Commission was firmly established.

Early twentieth century articles and books in keeping with the Biblical Commission's 1909 decree were readily published and gave an appearance of a united voice. Catholic opposition to racial polygenism in accord with the "unity of the human race" certainly was not a point of controversy. However, on the broad topic of the "special creation of man," exploratory hypotheses considered to be rash were generally kept out of print through communications from the Congregation of the Index. There is ample archival evidence that one hypothesis that was not welcomed was the idea that the initial human population was larger than a single pair of individuals. This position also gradually became known as polygenism although ambiguous terminology that confused it with racial polygenism was rampant.

Among early twentieth century European Catholics trained in both science and theology, perhaps none was more influential in public discussions of evolution than the Jesuit entomologist Erich Wasmann (Hofmann 2020). In addition to his specialized study of myrmecophile ants and termites, Wasmann published and lectured on broader evolutionary topics shortly after the turn of the century. He argued for the extensive scope of descent with modification but also remained skeptical about extrapolation of empirically well-supported evolutionary lineages back to an origin in a single common ancestor. Instead, he proposed divine intervention for the production of "natural species" without ancestry. These natural species were subject to evolutionary change, resulting in extensive lineages of many descendent "systematic species." In the terminology introduced by Haeckel, Wasmann defended polyphyletic evolution rather than monophyletic evolution or universal common descent. In general, he considered the determination of the number and time of origin of natural species to be subject to empirical research. He emphatically took human beings to be his paradigmatic example

of a natural species and rejected the hypothesis of a common ancestor for humans and apes as not yet sufficiently supported by fossil evidence. However, Wasmann also speculated that human origins might involve the introduction of a human soul into a body of pre-human ancestry and his private notes indicate that he harbored reservations about the Biblical Commission's admonitions. In 1909 his Jesuit superior general, Xaver Wernz, warned Wasmann not to engage in any further writing or lecturing on this topic. Monophyletic evolution that included the descent of humanity from non-human ancestors had a controversial status in 1909 comparable to that of the Copernican hypothesis for Riccioli in 1651. Wasmann abided by Wernz's order throughout the two decades prior to his death in 1931. This mandated silence was unfortunate since Wasmann would have been a well informed and articulate resource as the evidence for monophyletic evolution increased and Catholic discussions shifted to the possible doctrinal acceptability of human origins from a population rather than a single pair of individuals. Wasmann's form of progressive creation by means of natural species was gradually abandoned in response to new empirical evidence and a more receptive theological climate.

This shift in emphasis was not uniform and its irregular development is quite noticeable in French theological encyclopedias and journals. For example, writing in 1911, the French Jesuit entomologist and historian Robert de Sinéty was still concerned about the scope of polyphyletic evolution. In 1906 he had defended Wasmann's measured approach against attacks by Haeckel and other German monists (de Sinéty 1906). De Sinéty now cited Wasmann as one of the "moderate transformists" whose position fell in between the two extremes of creationist "fixism" and "universal transformism" (de Sinéty 1911). Moderate transformism was polyphyletic and included the idea that natural species are divinely produced with a characteristic "organic perfection" that gives rise to differentiation along lineages of directly related systematic species. De Sinéty temporarily adopted Wasmann's distinction between natural species and systematic species although he would later drop it as insufficiently operational. He also followed Wasmann in accepting the extensive evolutionary history of systematic species and he noted Wasmann's

arguments for the gradual development of new species from varieties. For philosophical reasons, de Sinéty posed three propositions that were not acceptable extensions of well-confirmed lineages of evolutionary descent: the monist assertion of the origin of life through spontaneous generation, the monophyletic commitment to a single source for all animal and plant life, and the idea that humanity is purely the spontaneous product of evolution. De Sinéty agreed with Wasmann that, aside from human evolution, the scope of polyphyletic evolution is an empirical question and philosophers need to defer to scientific expertise. In the case of humanity, however, de Sinéty was convinced that the gap in mental capacity between animal and human is too large to attribute to descent from non-human ancestors. He also held that it was not theologically prudent to affirm that the natural evolution of the human body was complete prior to the introduction of a soul, although this opinion was not expressly forbidden; some physical transformation of the physical body prior to ensoulment should be reserved for divine intervention.

Both Wasmann and de Sinéty considered the paleontological and anatomical data to be inconclusive concerning human origins, even in light of new Cro-Magnon, Neanderthal and *Pithecanthropus* data. Among the numerous Neanderthal discoveries during this period, one of the most significant was in La Chapelle-aux-Saints where the three Bouyssonie brothers had been excavating since 1905. Jean Bouyssonie had been a student of Jean Guibert at the Séminaire d'Issy during the 1890s. Ordained to the priesthood in 1901, he became professor of natural sciences at the Brive seminary in 1905. His brother Amédée was also a priest and a theology instructor at Petit Séminaire, Lacabane. In 1908, together with their younger brother Paul, the Bouyssonies discovered a complete Neanderthal skeleton that had been deliberately buried in a low-ceilinged cave (Bouyssonie, Bouyssonie and Bardon 1908). In addition to anatomical arguments and tool evidence, the circumstances of the burial initially convinced the Bouyssonies that, instead of being a distinct species of Homo, Neanderthals were a human race with religious beliefs. Amédée was particularly assertive on this point, arguing that Adam and Eve were the ancestors of several human races: Neanderthals,

Cro-Magnons, and modern humans. He speculated that each of these races descended from a sub-population of early humans, descendants of Adam with a distinct set of characteristics (A. Bouyssonie 1911). Although Amédée maintained this hypothesis at least through 1913, he would abandon it in 1925 when he and Jean published a reassessment and concluded that Neanderthals were not human (Bouyssonie and Bouyssonie 1925).

In 1912 the Bouyssonie brothers also contributed to a lengthy entry on “Homme” for the second volume of the *Dictionnaire apologétique de la foi Catholique* (d’Alès et al 1912). The discussion was divided into four separate essays. Adhémar d’Alès, the director of the *Dictionnaire*, wrote a section on Genesis, Henri Breuil joined the Bouyssonies to cover relevant developments in paleontology, Jean Guibert addressed the unity of the human race, and Pierre Teilhard de Chardin concluded with theological and philosophical issues. Teilhard’s essay is most relevant to the topic of polygenism, with the preceding sections providing theological and scientific context.

Adhémar d’Alès, a Jesuit professor of theology at the Institut catholique in Paris, noted that the Genesis account gives no support to an evolutionary origin of humanity; the most direct reading would be that God directly created humanity without animal ancestry. Since no vestige of humanity’s supernatural creation and subsequent fall is available for scientific analysis, revelation serves as a secure basis for the believing Catholic. The strictly scientific account of pre-history by Henri Breuil and the two Bouyssonie brothers was primarily a survey of European fossils and artifacts. Breuil was an anthropologist specializing in cave art who would become a colleague of Teilhard beginning in Paris during the 1920s. He was a close companion of Jean Bouyssonie and had been his classmate in courses taught by Jean Guibert at the Séminaire d’Issy during the 1890s. Breuil and the Bouyssonies discussed *Pithecanthropus*, Neanderthal and Cro-Magnon material as well as scientific hypotheses for how they might be related to modern humans, possibly through a common ancestor. They also made a point of rejecting racial polygenism, as did Jean Guibert in his section on human unity. Guibert used the term “polygenist” or one of its variants only once, retaining a nineteenth century sense of the term as an assertion of several

distinct human species (Guibert 1912, col. 495). He painstakingly argued that there is no trait that can accurately delineate human races and that “there is no serious reason to suppose that the multiple races, whether historical or pre-historical, do not descend from a single initial couple” (Guibert 1912, col. 494).

Pierre Teilhard de Chardin’s contribution to the “Homme” article marked the beginning of his life-long investigation of the science and faith interface. Unlike many of the more specialized Catholic theologians, he had direct scientific experience as a paleontologist from very early in his career. Between 1905 and 1908 he was an avid fossil collector while teaching physics and chemistry at a Jesuit high school in Cairo. In October of 1908 he began his concentrated study of theology at the Jesuit house at Hastings in Sussex, England, where he had instruction in dogmatic theology from Xavier-Marie Le Bachelet. Ironically, it was there that his interest in evolution was accelerated by reading Henri Bergson’s 1907 *L’évolution créatrice*, a volume made popular in England due to a 1911 translation as *Creative Evolution* (King 2013). At some point during this period, probably during 1908, Teilhard composed his section of the “Homme” article for the *Dictionnaire apologetique* (Teilhard de Chardin 1912). The essay reflects an early stage in his development and it conformed to a thoroughly acceptable Catholic position with respect to human evolution and monogenism. After summarizing the traditional Catholic doctrine of human nature as a composite of body and soul, and acknowledging that Genesis is written in a difficult genre to identify, Chardin stipulated two undeniable propositions (Teilhard de Chardin 1912, col. 505):

- a) God has directly created the soul of the first man and probably thoroughly redesigned the material destined to form his body.
- b) The human race descends entirely from a single couple (monogenism, which alone is compatible with the doctrine of original sin).

Even at this early date, Teilhard consistently used the term “monogenism” to refer to human descent from a single couple rather than in a nineteenth century sense of a single human lineage prior to racial diversification. Teil-

hard commented that although there is no scientific problem in extending evolution to include humans, scripture does impose the constraints of monogenism and a discontinuity between humans and animals. Nevertheless, he was optimistic about the improbability of a conflict between science and doctrine. The difficulty in determining the exact scientific import of scripture, when combined with the lack of precision in paleontology and ancient anthropology, portends that scientific investigation confronts dogma with “nothing to fear or to hope” (Teilhard de Chardin 1912, col. 513). These expressions of a conventional mindset are not surprising considering Teilhard’s fledgling status within the Jesuits in 1909. At this point he did not suggest any hypothetical revisions to the doctrine of original sin if monogenism were to be acknowledged as scientifically untenable.

Ordained on August 24 of 1911, Teilhard moved to Paris in October 1912 to begin graduate study in paleontology under the direction of Marcellin Boule at the Museum of Natural History. He would eventually acquire his doctorate from the Sorbonne in 1924. His initial research included work with poorly catalogued dental and jawbone mammal fossils and the construction of tentative phylogenies for some of the carnivore lineages that now are dated from the Eocene through the end of the Oligocene (Teilhard de Chardin 1914–1915).² In December of 1912, Arthur Smith Woodward and Charles Dawson announced what would become known as the infamous Piltdown skull, a fraudulent fabrication now generally attributed to Dawson (De Groote et al 2016). On a visit to England in the summer of 1913, Teilhard discovered a fossil tooth that contributed to the Piltdown controversy; the fabricated skull at the center of the affair was not established to be a hoax till 1953. Teilhard never attributed much importance to the specimen and suspected that it was a composite of two species (Teilhard de Chardin 1920). From December 1914 through March of 1919 he served heroically as a stretcher bearer during some of the fiercest fighting of WWI. A total of 841 Jesuits were called into service and 164 of them were killed (Fouilloux 2005, 261). Many of those who survived were

² See de Bonis 2006.

severely affected and upon returning to their religious communities they often felt stifled by the smug nineteenth century mentality exhibited by their older noncombatant superiors.

In 1920 Teilhard returned to Paris where he continued work on his dissertation. At this point he wrote a short composition on original sin dated 20 July that remained unpublished until after his death (Teilhard de Chardin 1971a). Here he set out the broad outline of the perspective he would periodically elaborate over the following three decades.

The principle obstacle encountered by orthodox thinkers when they try to accommodate the *revealed* historical picture of human origins to the present scientific evidence, is the traditional notion of original sin. It is the Pauline theory of the Fall and the two Adams which (somewhat illogically, we may add) makes it impossible to regard all the details found in Genesis as equally didactic and symbolic. It is that theory which is responsible for the jealous maintenance, as a dogma, of strict monogenism (first one man, and then one man and one woman), which it is in actual fact impossible for science to accept (Teilhard de Chardin 1971a, 36).

His alternative was to propose “an extensive metamorphosis of the notion of original sin,” a concept of universal scope untethered to one historical event.

[...] original sin, taken in its widest sense, is not a malady specific to the earth, nor is it bound up with human generation. It simply symbolizes the inevitable chance of evil (*Necesse est ut eveniant scandala*) which accompanies the existence of all participated being. Wherever being *in fieri* is produced, suffering and wrong immediately appear as its shadow: not only as a result of the tendency towards inaction and selfishness found in creatures, but also (which is more disturbing) as an inevitable concomitant of their effort to progress. (Teilhard de Chardin 1971a, 40).

Rather than a temporally located event attributed to a single pair of individuals, Teilhard now envisioned original sin as a concomitant condition of all creation.

Original sin is the essential reaction of the finite to the creative act. Inevitably it insinuates itself into existence through the medium of all creation. It is the *reverse side* of all creation. By the very fact that he creates, God commits himself to a fight against evil and in consequence to, in one way or another, effecting a redemption (Teilhard de Chardin 1971a, 40).

Although these theological ideas were not widely distributed at the time, Teilhard also published several paleontology articles shortly after the war. Among these was a review of *Les Hommes fossiles. Éléments de paléontologie humaine*, a widely read 1921 volume written by his mentor, Marcellin Boule. While conceding that some of Boule’s terminology and inferences were not appropriate for Christians without some “explication,” Teilhard’s enthusiasm was obvious. He concluded that scientific research suggests that when the Genesis account refers to man being formed from “earth,” this should be understood as a prolonged effort of the entire universe, *la totalité des choses* (Teilhard de Chardin 1921, 577). Teilhard’s expansive sense of evolution was not at all typical of the time. For example, Henry de Dorlodot’s development of evolution by means of secondary causes in his 1921 book was considered controversial, but when it came to human evolution, even Dorlodot merely mentioned that: “We know from Revelation that all human beings actually living on the earth have sprung from one single couple. But revelation alone can give such details concerning origins” (Dorlodot 1922, 104–105).³

In March of 1922, Teilhard began teaching geology at the Institut catholique in Paris, and it was at this point that he was invited to give a lecture on evolution for students at the Jesuit scholasticate in Enghien Belgium. When he included some comments on original sin, he was asked

³ De Dorlodot reserved further discussion of human evolution for a second volume that he worked on during the early 1920s. He included discussion of possible human co-Adamites and pre-Adamites but, in contrast to Teilhard, he upheld monogenism by insisting that the supernatural aspect of humanity applied only to Adam and his descendants, the sole lineage responsible for modern humans. Although in 1925 the Holy Office prohibited publication of this volume, Ernest Messenger translated some sections and incorporated them into his 1932 book but without the co-Adamite and pre-Adamite material (Messenger 1932). De Dorlodot’s draft was only discovered in 2006 and was published in Groesens-van Dyck and Lambert, 2009. See also De Bont 2005.

by Louis Riedinger, a theology faculty member, to write up a summary of his views. It is difficult to assess the immediate impact of the resulting “Note” since it is not known how widely it circulated and who studied it. It was not published until 1969 in *Comment je crois*, volume 10 of Teilhard’s collected works (Teilhard de Chardin 1971b). As he had done in his earlier 1920 sketches, Teilhard pointed out the scientific improbability that the present human diversity could have resulted through descent from a single couple. The rejection of both monogenism and any idyllic prehistoric world without evil is presented as scientifically unavoidable.

As far as the mind can reach, looking backwards, we find the world dominated by physical evil, impregnated with moral evil (sin is manifestly ‘in potency’ close to actuality as soon as the least spontaneity appears) – we find it *in a state of original sin* (Teilhard de Chardin 1971b, 47).

Here Teilhard accepts the inevitability of evil wherever there is life or even inanimate matter almost in analogy to the degradation of energy in an entropic process subject to the second law of thermodynamics. His scientific mentality simply could not accommodate a literal interpretation of the Genesis account.

The truth is that it is so impossible to include Adam and the earthly paradise (taken literally) in our scientific outlook, that I wonder whether a single person today can at the same time focus his mind on the geological world presented by science, and on the world commonly described by sacred history (Teilhard de Chardin 1971b, 47).

In his concluding remarks, Teilhard again proposed original sin as a state coextensive with creation.

[...] we must so expand our ideas that we shall find it impossible to locate original sin at any one point in our whole environment, and will realize simply that it is everywhere, as closely woven into the being of the world as the God who creates us and the Incarnate Word who redeems us (Teilhard de Chardin 1971b, 54).

In April of 1923 Teilhard departed for paleontological research in China as a collaborator with Father Émile Licent. There he had the spiritual experience that prompted his famous “Mass on the World.” By the time he returned to Paris in October 1924 an unknown informant had transmitted his “Note” on original sin to Rome where it ignited a firestorm of theological consternation. It is tempting to speculate that the “Note” was read by more theologians within the Roman curia than among Teilhard’s initial intended audience. After a meeting with the Lyons Jesuit provincial, Jean-Baptiste Costa de Beauregard, Teilhard’s contrite letter promising conformity was not enough to satisfy superior general Włodzimierz Ledóchowski. A list of six “propositions” were submitted to Teilhard for his signature of affirmation (Grumett and Bentley 2018; Kemp 2019; Grumett 2019). It is not clear who composed these propositions. They were included in a letter to Ledóchowski from Father Gabriel Huarte, theology professor at the Gregorian University in Rome. Since there is no documentary evidence to the contrary, Kenneth Kemp has argued that they may well have been composed by Huarte himself. Nor is there direct evidence of input from outside the Jesuits although informal interactions with the Roman curia cannot be ruled out. At any rate, the first four of the six propositions were vexing for Teilhard.

- 1) The first man, Adam, when he acted against God’s command in paradise, immediately lost that holiness and justice in which he had been created (Council of Trent, Session 5, Canon 1).
- 2) The sin of Adam damaged not only him alone but also his descendants; and the holiness and justice received from God, which he lost, he lost not only for himself alone but also for us (Council of Trent, Session 5, Canon 2).
- 3) This sin of Adam, which is one by origin and passed on to all by propagation and not by imitation, inheres in everyone as something proper to each (Council of Trent, Session 5, Canon 3).
- 4) Therefore the whole human race takes its origin from one protoparent, Adam (this fourth proposition is nowhere explicitly defined; but is clearly implied by the proceeding three) (Grumett and Bentley 2018, 314).

The fourth proposition certainly made Teilhard hesitate; it was in fact precisely the idea of monogenism, as Teilhard used the term. The English

translation of the proposition by Grumett and Bentley includes its parenthetical claim that it “is clearly implied by the proceeding three.” Teilhard may well have questioned that reasoning, and when he ultimately did sign on July 1, he did so with an interesting qualification above his signature.

I accept these propositions in the full sense that the Holy Church gives to them. And I sign them all the more voluntarily because, despite the appearances that I might have given, I have never had any other idea than to let them dominate all scientific truth (Grumett and Bentley 2018, 314).

These words were carefully chosen and there is an intriguing ambiguity about “the full sense that the Holy Church gives to them.” Suspicious of Teilhard’s resolve, Ledóchowski promptly terminated his teaching assignment at the Institut catholique and ordered him back to China. For Teilhard, the contrast between the invigorating depth of scientific discovery and mystical experience in China and the narrow confines of doctrinal orthodoxy back in Europe must have been insufferable. And yet he did tolerate it and he remained obedient to his superior general just as Wasmann had fifteen years earlier.

In sharp contrast to the originality of Teilhard’s unpublished explorations, Xavier-Marie Le Bachelet wrote a thoroughly mundane essay on original sin for the *Dictionnaire apologétique* (Le Bachelet 1926). Drawing support from scripture and the Council of Trent, Le Bachelet presented the orthodox doctrine of original sin as the transmission of the effects of Adam’s sin to all humans through direct descent. He saw no reason to engage with scientific input based upon evolution. Asserting that theological synthesis with scientific research was not necessary, he simply referred his readers to the *Dictionnaire apologétique* articles on “Transformisme” and “Homme.”

The “Transformisme” entry was in fact written by Robert de Sinéty shortly after Teilhard’s return to China (de Sinéty 1928). Again, the contrast to Teilhard was considerable. While Teilhard had been inspired by Boule’s *Les Hommes fossils*, De Sinéty used it as an example of a theologically unacceptable line of reasoning. He then made a distinction between *transformisme théiste généralisé* and *transformisme théiste mitigé*. He argued in support of the

second of these two versions of theistic evolution in which God intervenes in the evolutionary process to bring about directed innovations in an unknown number of cases. As he had in his earlier discussion of Wasmann, de Sinéty made an effort to show that evidence for universal common descent by means of natural selection is not convincing. He drew heavily upon Louis Vialleton, a vitalist and professor of histology from the faculty of medicine in Montpellier. Vialleton had published a critique of Darwinian evolution in 1924 that was negatively reviewed by Teilhard (Teilhard de Chardin 1925).

In his concluding remarks, de Sinéty posed a choice between human descent from a single couple or from a larger population, using monogenism and polygenism as labels for these two hypotheses. He noted that although a purely scientific perspective favored polygenism, he considered the required theological choice to be monogenism with God intervening not only to introduce the first human souls but also to modify in some manner the two pre-existing bodies in which the initial souls would function. In addition to retaining his earlier commitment to polyphyletic evolution, de Sinéty was explicit about the exclusive character of human origins through a single couple.

Man is not the product of evolution. His mental capacity, of an order essentially superior to that of a brute, requires a creative act of God at the origin of each human soul. No apodictic scientific argument can be opposed to the traditional thesis among Catholics according to which the Creator intervened in a special manner for the constitution of the initial human couple (De Sinéty 1928, col. 1847).

De Sinéty's essay is a rare example of a terminological shift at the relatively early date of 1928. Quite independent from any discussion of racial origins, he applied the terms monogenism and polygenism to the descent of humans from either a single couple or a larger population. Of course this sense of monogenism invoking Adam and Eve does imply the old sense of monogenism as the unity of the human race. However, the new sense of polygenism that attributes human origins to a population certainly does not imply the old sense of racial polygenism, the idea that human races are a plurality of deep evolutionary lineages that might even be distinct species.

Meanwhile, after returning to China from research in Ethiopia, Teilhard experienced a spiritual and intellectual crisis that peaked during the first two months of 1929 (Cuénot 1965, 116–119). He emerged with a renewed sense of both liberation and acceptance of his dual role as a Jesuit and a scientist. Apparently inspired by this sense of equanimity, he wrote a bold essay in which he once again addressed the linkage between monogenism and the doctrine of original sin. Initially published in 1929 in a journal primarily intended for clergy in China (Teilhard de Chardin 1929), a reprint appeared in the much more widely read *Revue des questions scientifiques* (Teilhard de Chardin 1930). In a paragraph that raised some eyebrows, Teilhard bluntly stated the scientific unacceptability of monogenism.

If there is anything in modern scientific views that still greatly disturbs Catholic thought, it is not the possible derivation of man (a spiritual being) from the animals. It is the difficulty of making a plausible reconciliation between transformism (once accepted) and a *strict monogenism*, that is to say our common descent from a single couple. On the one hand, for reasons which are not definitely philosophical or exegetic but essentially *theological* (the Pauline conception of the Fall and Redemption), the church clings to the historical reality of Adam and Eve. On the other, for reasons of probability and also comparative anatomy, science, left to itself, would never (to say the least of it) dream of attributing so narrow a basis as two individuals to the enormous edifice of humankind (Teilhard de Chardin 1966, 156).

In spite of this apparent impasse, Teilhard struck an optimistic note in predicting that as both science and theology progress “monogenesis will gradually, without losing any of its theological ‘effectiveness,’ assume a form fully satisfying our scientific requirements.”⁴ Whatever Teilhard may have meant by theological “effectiveness,” he clearly was hoping that the concept of monogenism could be transformed in such a way as to be compatible with the scientific evidence.

Kenneth Kemp has chronicled the flurry of correspondence, accusations, and reactions that transpired after the publication of this essay and several

⁴ Translation by Kenneth Kemp, 2019, 944.

paleontological papers Teilhard wrote at this time (Kemp 2019, 942–947). In 1931, Ledóchowski, after learning from Donato Raffaele Sbaretto, the Secretary of the Holy Office, of numerous complaints about Teilhard’s publications, replied that future essays would be screened by two readers prior to publication, a requirement reiterated in 1934. The Franciscan Agostino Gemelli was a particularly persistent critic, sending frequent letters of protest to Rome. In May of 1931 he wrote a twenty-page letter to the Holy Office in which he warned that Teilhard’s view of human evolution from non-human ancestors was ill-advised and was not conclusively supported by the available scientific evidence. Gemelli had been the Italian translator of the last edition of Erich Wasmann’s book on evolution and had inserted his own conservative commentary. In his letter on Teilhard, Gemelli used Wasmann’s terminology of natural and systematic species to express the cautious position Wasmann had taken in print prior to being silenced (Kemp 2019, 15). At this point Gemelli was not alone in fighting a rearguard campaign against not only polygenism but monophyletic evolution as well.

Polygenism certainly was not the primary concern for all theologians interested in human evolution. Ernest Messenger hardly mentioned it in his widely discussed 1932 book, commenting only that “St. Paul would have led the Church into error on a matter concerning the essential mission of the Church, if there were in existence men who, in point of fact, were not descended from Adam” (Messenger 1932, 944). Similarly, when Thomas Motherway surveyed the numerous critiques of Messenger’s book published during 1932 and 1933, he concentrated on whether or not divine intervention was required to prepare Adam’s body for ensoulment. The presumption that Adam was a single person was not even mentioned except in reference to the 1909 mandate of the Biblical Commission (Motherway 1944).

Auguste Gaudel did briefly take up the issue in his article on original sin for the *Dictionnaire de Théologie Catholique*. Following a detailed account of the history of the doctrine, Gaudel quoted Teilhard’s 1930 statement of the opposition between scientific methodology and monogenism and granted that this appeared to be a serious difficulty. He insisted that monogenism

was the Church's position and confidently assured his readers that, as long as theologians and scientists remained in their proper domains and scientists did not advance mere hypotheses as established truths, "faith assures us that there will be no contradiction between our creed and human knowledge" (Gaudel, 1933, col. 591).

Two years later, Jean and Amédée Bouyssonie took a less conventional and more open-ended approach in their "Polygénisme" article for the *Dictionnaire de théologie catholique*. In 1925 they had abandoned their earlier assertion of the humanity of Neanderthals and had also disagreed with Teilhard's claims that the role of mutation in evolutionary change necessarily supports polygenism (Bouyssonie and Bouyssonie 1925, 110). By 1935 they had become more receptive to polygenism and their article would become a focal point for future debate. In contrast to Robert de Sinéty and Teilhard, they began with a definition inherited from the nineteenth century dispute over racial unity: "Polygenism may be defined as a theory that considers humanity to be composed of groups having different origins" (Bouyssonie and Bouyssonie 1935, col. 2520). After surveying some of the history of that argument, the Bouyssonies dismissed the conclusions of racial polygenists such as Klaatsch as mostly speculation. They agreed with Henri Vallois, a well-respected French anthropologist and paleontologist, who during the late 1920s was an articulate defender of the monophyletic makeup of humans (Vallois 1927). Vallois was adamant that comparative anatomy thoroughly demonstrates that modern humanity is one species and distinct from Neanderthals. Based upon their own first-hand experience with Neanderthal fossils and artifacts, it had been difficult for the Bouyssonies not to consider them human. However, they also realized that if *Homo sapiens* and human Neanderthals were descended from a non-human common ancestor, that would mean that some humans would not have Adam as an ancestor. Although the Neanderthal lineage eventually went extinct, there was a danger that a belief in human Neanderthals would be found contrary to the doctrine of original sin. They left this issue undecided for the present since the scientific evidence was still inconclusive on the structure and timing of the relevant phylogeny.

Turning to more recent discussions of monogenism, the Bouyssonies cited both Teilhard and Robert de Sinéty for arguments that a purely scientific approach excludes all but the slimmest possibility of human descent from just two forebears. They then concluded by posing a pair of rather daring hypothetical questions for further consideration.

Might it be that original sin is due to a more or less large collectivity rather than a single couple, and, if this is the case, might not all humanity still be descended from these first sinners? Secondly, might the analogies drawn by Saint Paul between the first Adam, father of the human race, and the new Adam, Jesus Christ, be more relevant to the universal and hereditary culpability of humanity and its redemption rather than to its community of origin? (Bouyssonie and Bouyssonie 1935, col 2536)

These were not purely rhetorical questions; they offered polygenism as a viable option that Wasmann and Teilhard, among others, had been forbidden to discuss. In avoiding censorship, the fact that Jean and Amédée Bouyssonie were not members of a religious order may have worked to their advantage, but their provocative questions did not go unnoticed.

Writing after WWII, the Dominican biblical theologian Francis Ceuppens indignantly objected to how the Bouyssonies had posed suggestive questions without providing orthodox answers. He also took umbrage at the blasé manner in which Teilhard had assumed the scientific necessity of polygenism in his 1930 essay. Ceuppens emphasized the tentative nature of scientific conclusions, based as they always are on incomplete evidence. After summarizing his reading of Genesis 1–3, he drew his own unequivocal conclusion regarding polygenesis.

At the origin: God created only two human beings, Adam and Eve, and from these two persons descended by means of generation, all other men; Adam and Eve are the proto-parents of all humanity, (Gen III, 20); from that follows the unity of the human race, directly opposed to polygenism (Ceuppens 1947, 28).

For Ceuppens, a correct reading of Genesis rules out polygenesis even though it is possible that evolutionary processes brought about the pre-human

animal body that God then transformed into the first ensouled human body. Furthermore, monogenesis follows from the doctrine of original sin propounded by Saint Paul. “Original sin is not the deed of a more or less numerous collective, but the deed of one alone, Adam, father of the human race” (Ceuppens 1947, 31). Ceuppens concluded by providing what he considered to be the appropriate answers to the questions the Bouysonnies had posed.

1. According to the doctrine of Saint Paul to the Romans, original sin is not the deed of a more or less numerous collective but is the deed of a unique Genesis couple from which, according to Genesis, all humanity descends through generation.
2. Saint Paul, through his analogies, certainly teaches the universal and hereditary culpability of the entire human race as well as its integral redemption, but he also insists, in a quite specific manner, on the common origin of this very humanity, a common origin which he assumes to be known to his readers, as is clearly taught in Genesis (Ceuppens 1947, 32).

Ceuppens’ answers to the Bouysonnies’ questions amounted to a synopsis of conventional theology on the topic. It may be that, in so thoroughly and dogmatically objecting to the Bouysonnies and Teilhard, Ceuppens brought more attention to their essays than they might otherwise have received.

Ceuppens’ perspective was shared by Abbé Émile Amann when he wrote the article on evolution for the *Dictionnaire de théologie catholique*. A theologian at the University of Strasbourg, Amann had taken over as director of the *Dictionnaire* in 1922 and gradually moderated the anti-modernist orientation typical of the volumes published earlier in the century (Fouilloux 2014). Although in 1907 he had been removed from his teaching position at the Nancy seminary due to his course on evolution, he now conformed to the expected constraints. After summarizing some of the history of evolutionary thinking and theological responses, he concluded that: “in the present state of theological science, it would appear at least rash (*téméraire*), not to say erroneous, to contest the descent of our humanity from a single couple” (Amann 1946, col. 1390). Furthermore, concerning the current consensus of theologians:

In fact, they are almost unanimous in excluding as inadmissible the hypothesis of polygenism and even a monogenism that would ascribe the origins of our humanity, not to a single couple, but to a single human group. It would therefore appear difficult to envision any attempt at a solution in which original sin would be a collective act (Amann 1946, col. 1391).

Once again, the terminology is potentially confusing. Amann refers to the hypothesis of the origins of humanity in “a single human group” as a form of monogenism, albeit one that would be rash to assert. For Teilhard and Robert de Sinéty, this scenario was in fact the version of polygenism most supported by science, and it would become the polygenetic hypothesis most under theological scrutiny after 1950.

In 1947 Teilhard returned to the theme of original sin in another essay that remained unpublished until 1969. After reiterating his view of original sin as “a reality that belongs to the trans-historic order” (Teilhard de Chardin 1971c, 188–189), he concluded that this sense of original sin, inseparable from creation,

[...] entirely respects Christian thought and the customary Christian approach – the only corrective it contributes, in short, being to substitute a collective ‘matrix’ and a collective heredity for the womb of our mother Eve. And this, incidentally, has the further result of releasing us from the necessity (progressively more unacceptable) of having, illogically, to derive the whole human race from one single couple (Teilhard de Chardin 1971c, 197).

It is hardly surprising that this essay was not published at the time of composition. The “corrective” Teilhard now proposed did not have monogenism merely “assume a different form,” as he had hoped back in 1929; it was simply replaced by polygenism. Yet Teilhard mentioned in a footnote that “the theological side of the explanation offered here has been upheld in Lyons by Pere Rondet” (Teilhard de Chardin 1971c, 197).

Teilhard’s reference to Henri Rondet links the topics of original sin and polygenism to a far broader theological conflict. By the mid-1930s, prominent French theologians were calling for a revitalized theology that

would be more engaged with active spiritual life. In particular, Dominicans such as Yves Congar and Marie-Dominique Chenu proposed a renewed attention to historical sources and a sensitivity to the cultural context of spiritual experience that would make theology independent from scholastic methodology and terminology.⁵ During the 1940s, the movement was labelled *nouvelle théologie*, initially with negative implications, as was the case with the “modernism” label at the beginning of the century. By this point the center of innovation shifted to Jesuits such as Jean Daniélou and Henri de Lubac.

Henri Rondet contributed to *nouvelle théologie* as Prefect of Studies at the Lyon-Fourvière Jesuit house. Copies of Teilhard’s unpublished essays circulated freely there, much to the consternation of the Jesuit Superior General (Avon 2005). As Teilhard noted, Rondet was indeed primarily concerned with the “theological side” of the original sin concept. While he acknowledged the “mystery” of original sin, his studiously vague references to Adam were primarily incorporated into an exploration of how the history of philosophy depicts human confrontation with good and evil; he did not explore implications of paleontology (Rondet 1946). However, Rondet also wrote a Socratic dialogue reminiscent of Galileo’s 1632 *Dialogue on the Two Chief World Systems*, although on a much smaller scale. Here Rondet imagined a spirited conversation in which an astute and well-read Catholic seeks council from a sympathetic clerical advisor on how best to reconcile scientific conclusions with Catholic doctrine. When the conversation turns to original sin, the priest admits that, although the majority of theologians profess monogenism, some quietly prefer polygenism, the overwhelming choice of scientists. His interlocutor has read Robert de Sinéty’s article “Transformisme” and is troubled by the conflict with original sin that polygenism generates when evolutionary theory is applied to human beings. The advisor recommends the article by the Bouyssonies in the “more liberal” *Dictionnaire de théologie catholique* and quotes their two provocative questions in full. While granting that raising these questions might be considered theologically rash, he finds them worthy of further

⁵ See Nichols 2000, Kirwan 2018, and Mettepenningen 2010.

consideration. Ultimately, he advises patience: “The most serious difficulties against the ordinary formulation of the dogma of original sin come less from paleontology or ethnology than from biblical criticism and the comparative history of religions” (Rondet 1943, 980). Furthermore, even if polygenism should be demonstrated as indubitably true, “the dogma of an original sin would remain absolutely intact” (Rondet 1943, 979). Writing from the relatively safe shelter of a fictional dialogue, Rondet may well have been paraphrasing conversations he entertained as Prefect of Studies at Fourvière. In the absence of any definitive pronouncements from the Vatican, his imaginary advisor could acknowledge the guidelines imposed by the Biblical Commission but also claim that scientific support for polygenism does not pose a threat to original sin doctrine, properly understood. The tacit implication was that the doctrine needed to be clarified; Rondet himself would not return to the topic until after Vatican II.

Jean Daniélou was willing to make a more explicit call for immediate theological renewal. Writing in the Jesuit journal *Études*, where he served as editor, Daniélou praised Teilhard for compelling Christians to embrace evolutionary perspectives.

The broad lines of his system, according to which history is progressively raised from the biological world to that of thought, and from the world of thought to that of Christ, and which furthermore reconnect with the views of the Fathers, will persist as established (Daniélou 1946, 15).

It was Teilhard’s sensitivity to historical process that for Daniélou was such a welcome contrast to the scholastic theology of the age, a “mummification of thought that remained fixed in its scholastic forms and had lost contact with the development of philosophy and science” (Daniélou 1946, 6). In particular, a modern understanding of the doctrine of original sin should concentrate upon just three central ideas: “that man before Christ is in a state of sin; that human freedom bears responsibility for this sin, and that men are in solidarity with respect to this sin” (Daniélou 1946, 15). It is in this context that the Christian experience of the apparently absurd coexistence of good and evil finds vivid expression in modern philosophy,

especially existentialism. To engage productively with the modern world, theology must draw upon all its resources, ranging from Saints Ireneus and Augustine, to Teilhard and Kierkegaard (Daniélou 1946, 16).

Daniélou's essay became a lightning rod for Jesuit praise and Dominican condemnation. While formal theological clarification from the Vatican was not to be expected in the midst of WWII, shortly thereafter a concerted Dominican attack on *nouvelle théologie* came from Thomists such as Marie-Michel Labourdette who defended the primacy of Thomistic metaphysics as an essential foundation for the explication of the unchanging truths of revelation (Fouilloux 1995). Of particular import for the polygenism issue was the more aggressive critique by Réginald Garrigou-Lagrange, an authoritative fixture at the Angelicum in Rome, where he taught from 1909 to 1960. As a stalwart Thomist, he characterized *nouvelle théologie* as a revival of modernist errors (Garrigou-Lagrange 1930). He found particularly objectionable the idea that Catholic doctrine is a developmental symbolic representation of religious aspiration contingent upon changing cultural and philosophical conceptual systems for its legitimate expression. Garrigou-Lagrange insisted upon a stable bedrock of revealed truths accurately understood through Aristotelian metaphysics. In 1946 he wrote a stern condemnation of *nouvelle théologie* in which he used the erosion of the doctrine of original sin as one of his primary examples of the consequences of holding theological truth hostage to philosophical expression. He had been scandalized by the unauthorized circulation of type-written theological essays in which "Adam seems not to be an individual man from which the human race descends, but rather a collectivity," a view he took to be irreconcilable with Saint Paul's doctrine of original sin (Garrigou-Lagrange 1946, 135). He quoted a long passage from Teilhard's clandestinely circulated essay "How I believe" in which Teilhard developed an evolutionary sense of the incarnation as a teleological approach toward the *universal cosmic centre*.⁶ Garrigou-Lagrange considered these ideas delusional results of losing touch with the unchanging truth of permanent doctrine.

⁶ Written in 1934, Teilhard's essay was eventually published in *Comment je crois*, volume 10 of his collected works, in 1969. The passage quoted by Garrigou-Lagrange is also in the 1971 English edition, *Christianity and Evolution*, 127–128.

The Incarnation of the Word, the mystical body, the universal Christ, thus would be mere moments of evolution, and from this perspective of a constant progress from the origin, it would not appear that there would have been a fall at the beginning of the history of humanity, but a constant progress of good triumphing over evil according to the very laws of evolution. Original sin in us would be the consequence of the faults of men who have exerted a dark influence upon humanity (Garrigou-Lagrange 1946, 138).

In 1948 Garrigou-Lagrange reiterated his opposition to the polygenetic opinion that “*Adam* can be interpreted as a *collective name* rather than as an individual” (Garrigou-Lagrange 1948, 191). His misleading gloss of polygenism was that “If polygenism were true, there would have been several initial men in very different regions of our terrestrial globe, any place where higher primates were sufficiently evolved” (Garrigou-Lagrange 1948, 197). This polyphyletic sense of polygenism was of course not a necessary consequence of rejecting monogenism. Although Teilhard’s monophyletic polygenism was a more relevant option, Garrigou-Lagrange seems to have lapsed into the polyphyletic terminology of nineteenth century racial polygenism. At any rate, he agreed with Ceuppens that Saint Paul attributed original sin to an individual, as confirmed by the Council of Trent, the exegetical tradition, and the 1909 decree of the Biblical Commission. To hold that “Adam” is actually a reference to more than one person would be to say that all these sources “*have not positively taught what they appeared to teach according to the obvious and literal sense of their words*” (Garrigou-Lagrange 1948, 195). If polygenism were true, the Holy Spirit would in effect have preserved an error in the writings of all those who have taught monogenism as the correct theological doctrine. Garrigou-Lagrange gave no thought to subordinating theology to the authority of the natural sciences. Furthermore, he was skeptical about any significant unmediated evolutionary progression, that is, the descent of a “higher” species from a “lower” one. Such a transition would violate the metaphysical principal that an effect cannot have a higher degree of perfection than its cause. Given the shortcomings of the science that provides the grounding for polygenesis, he labelled evolution simply

a hypothesis rather than an established fact. Since science cannot establish polygenism with certitude, why should it be adopted in clear contradiction with scriptural revelation? On the other hand, concerning monogenism, “according to the majority of theologians, it is explicitly revealed in specific scriptural texts, implicitly in others, and virtually in the dogma of original sin” (Garrigou-Lagrange 1948, 196). In short, “according to scripture, tradition, and theology, monogenism appears increasingly as a truth *proxima fidei*,” a doctrine accepted by most theologians as a revealed truth but not yet ruled upon as such by the Church (Garrigou-Lagrange 1948, 202). Preserving the traditional role of monogenism in the doctrine of original sin was essential to Garrigou-Lagrange’s energetic attack on *nouvelle théologie* and motivated him to encourage an authoritative pronouncement from the Vatican. Directives from Rome resulted in strictures against the Fourvière Jesuits carried out by their Superior General, Jean-Baptiste Janssens, especially in 1950. Rondet was forced to resign as editor of *Études* and also would lose his position as Prefect of Studies in 1951.

In spite of this hostile environment and the energy spent in silencing Teilhard, favorable discussions of polygenism proliferated. Philip Donnelly commented that: “In the past fifteen years there has been a growing inclination among some French Catholic scholars toward polygenism and toward attempts at reconciling this scientific hypothesis with Genesis” (Donnelly 1949, 433). As examples, Donnelly mentioned the Bouyssonie brothers, Jean Guitton, René Boigelot, Henri Rondet, André-Marie Dubarle, and Dominique Dubarle. In one respect, Donnelly’s comment was inaccurate in that the primary focus for efforts to resolve the polygenism issue were more focused on original sin doctrine than on Genesis itself. There is also reason to believe that this choice was encouraged by seemingly unrelated events in Rome during the 1940s. The years directly following 1942 included several high-profile lectures and publications to mark the tricentennial of Galileo’s death (Finocchiaro 2005, 275–294). Galileo was enthusiastically acclaimed for his piety and his faithful submission to the verdict of a misguided trial. In a widely distributed lecture and publication, the Jesuit Filippo Soccorso found fault with the theologians who had attributed scientific authority to

scripture and mistakenly inferred a conflict with Copernican astronomy. Pius XII surely took note of this assessment and would avoid a similar mistake with respect to polygenism; he would express his concerns in the context of doctrine rather than Genesis.

The relevant terminology still had not become standardized. In a 1949 article, Joseph Bataini contrasted two groups, the first, “hominids more or less similar to us,” including modern humans and Cro-Magnons, and the second, “those who present profound differences from us,” including Neanderthals and *Homo erectus*. He then claimed that proponents of monogenism would characterize the two groups as races while from the viewpoint of polygenism they would be species (Bataini 1949, 189). This is a puzzling assertion in that it would have monogenism imply not just that all modern humans are part of the same species but also that only a racial distinction separates them from Neanderthals and *Homo erectus*; polygenism would simply make the Neanderthal and *Homo erectus* group a separate species from the modern human group. Bataini presented examples of scientists and theologians who allegedly favored either monogenism or polygenism without noting that they did not use these terms in the sense that he had defined them. In effect, midway through his article, he implicitly shifted to an updated and more useful understanding of monogenism as the view that all humans descend from a single couple. He concluded that scientific research had not absolutely ruled out monogenism while theological and exegetical arguments had not yet established it as revealed truth. When he revisited the issue in 1950, he rejected A. Mancini’s hypothesis that God ensouled a large population out of which one couple sinned and passed the consequences on to their descendants (Bataini 1950). Bataini himself remained loyal to the monogenism of a single initial human couple.

A final example of Catholic thinking about polygenism just prior to *Humani generis* appeared in the initial French edition of Jacques de Bivort de La Saudée’s widely read anthology of scientific and theological essays, *Essai sur Dieu, l’Homme et l’Univers*. In a chapter on human origins and the fossil record, Georges Vandebroek, the Louvain professor of comparative anatomy and anthropology, summarized the evidence for human evolution

and noted the complexity of data provided by the large number of newly discovered specimens, especially *Homo neanderthalensis* and *Homo erectus*. His concluding remarks included the common retention of nineteenth century terminology.

In the eyes of certain biologists, these considerations might suggest the idea of polygenism, namely the scientific theory that the various human races derive from parallel lines that separated from a common stock before attaining the human level. But this, it must be said, is a theory for which at present there is no shadow of scientific proof. A sounder conception is that all the hominids derive from a single stock that had already attained a human level, and thereafter various lines would have become rapidly established, all more or less parallel. They produced the different fossil and present-day types. This is a form of monogenism (Vandebroek 1953, 140).

Here Vandebroek still used the terms polygenism and monogenism much as they had often been used in the nineteenth century. The version of “monogenism” he preferred had humanity descending from a single “stock” (*souche*), but not necessarily from a single couple; as was the case in Amann’s 1946 discussion, this excessively inclusive definition actually allowed for the possibility of polygenism in the sense that Teilhard and Robert de Sinéty used the term.

The immediate context for *Humani generis* clearly included a growing undercurrent of receptivity to polygenism even if it was not expressed with terminological precision. Garrigou-Lagrange’s strong opposition was also well-known. As historian Michael Kerlin has argued, although there is no direct evidence that Garrigou-Lagrange helped to ghost-write the encyclical, “it is plain that he had a major role in its gestation” (Kerlin 2007, 111). Just as Pius X’s *Pascendi* condemned “modernism” in 1907, *Humani generis* took aim at *nouvelle théologie* and would make manifest Garrigou-Lagrange’s conviction that polygenism was not a theologically acceptable facet of human evolution.

References

- Agassiz, Louis. 1850. "The Diversity of Origin of the Human Races." *Christian Examiner* 49: 110–145.
- Amann, Émile. 1946. "Transformisme." *Dictionnaire de théologie catholique* 15(1): col. 1365–1396.
- Artigas, Mariano, Thomas Glick, and Rafael Martinez. 2006. *Negotiating Darwin: The Vatican Confronts Evolution 1877–1902*. Baltimore: Johns Hopkins University Press.
- Astore, William. 1996. "Gentle Skeptics? American Catholic Encounters with Polygenism, Geology, and Evolutionary Theories from 1845 to 1875." *The Catholic Historical Review* 82(1): 40–76.
- Avon, Dominique. 2005. "Une école théologique à Fourvière?." In *Les jésuites à Lyon: XVIe–XXe siècle*, edited by Étienne Fouilloux and Bernard Hours, 231–246. Lyon: École normale supérieure.
- Bargiel, Franciszek. 2006. "Ordinatio pro studiis superioribus u jezuitów w połowie XVII wieku." *Forum Philosophicum* 11: 249–267.
- Bataini, Joseph. 1949. "Monogénisme et polygénisme." *Divus Thomas* 52: 187–201.
- Bataini, Joseph. 1950. "Monogénisme et polygénisme. Une explication hybride." *Divus Thomas* 53: 363–369.
- Blanckaert, Claude. 1996. "Monogénisme et polygénisme." In *Dictionnaire du darwinisme et de l'évolution*, edited by Patrick Tort, 3: 3021–3037. Paris: Presses Universitaires de France.
- Bouyssonie, Amédée, Jean Bouyssonie and Louis Bardon. 1908. "Découverte d'un squelette humain moustérien à la bouffia de La Chapelle-aux-Saints (Corrèze)." *L'Anthropologie* 19: 513–518.
- Bouyssonie, Amédée. 1911. "Un problème qui se posera. Polygénisme et Monogénisme." *Revue de Clergé Français* 66: 32–46.
- Bouyssonie, Amédée and Jean Bouyssonie. 1925. "Chronique de Préhistoire." *Revue apologétique: doctrine et faits religieux* 41(467): 98–117.
- Bouyssonie, Jean and Amédée Bouyssonie. 1935. "Polygénisme." *Dictionnaire de théologie catholique* 12(2): col. 2520–2536.
- Bowler, Peter. 1986. *Theories of Human Evolution: A Century of Debate, 1844–1944*. Baltimore: Johns Hopkins University Press.
- Ceuppens, Francis. 1947. "Le Polygénisme et la Bible." *Angelicum* 24(1): 20–32.
- Council of Trent. 1546. "Decree Concerning Original Sin." Fifth Session: <https://www.papalencyclicals.net/councils/trent/fifth-session.htm>
- Cuénot, Claude. 1965. *Teilhard de Chardin: A Biographical Study*. Translated by Vincent Colimore. Baltimore: Helicon Press.

- D'Alès, Adhémar, Amédée Bouyssonie, Jean Bouyssonie, Henri Breuil, Jean Guibert, and Pierre Teilhard de Chardin. 1912. "Homme." In *Dictionnaire apologétique de la foi Catholique*, 4th edition, edited by Adhémar d'Alès, 2: col. 457–514. Paris: Beauchesne.
- Daniélou, Jean. 1946. "Les orientations présentes de la pensée religieuse." *Études* 79(249): 5–21.
- Dayrat, Benoît. 2003. "The Roots of Phylogeny: How Did Haeckel Build His Trees?" *Systematic Biology* 52(4): 515–527.
- De Bonis, Louis. 2006. "Les carnassiers des phosphorites du Quercy: évolution et phylogénie d'après P. Teilhard de Chardin." *Annales de Paléontologie* 92: 205–215.
- De Bont, Raf. 2005. "Rome and Theistic Evolutionism: The Hidden Strategies behind the 'Dorlodot Affair', 1920–1926." *Annals of Science* 62(4): 457–478.
- De Groote, Isabelle et al. 2016. "New genetic and morphological evidence suggests a single hoaxer created 'Pitdown man'." *Royal Society open science* 3(8): 160328. <http://dx.doi.org/10.1098/rsos.160328>
- De Sinéty, Robert. 1906. "L'Haeckélianisme et les idées du P. Wasmann sur l'évolution." *Revue des Questions Scientifiques* 9: 226–242.
- De Sinéty, Robert. 1911. "Les preuves et les limites du transformisme." *Études* 127: 660–693.
- De Sinéty, Robert. 1928. "Transformisme." *Dictionnaire Apologétique de la Foi Catholique*. 4: col. 1793–1848.
- Desmond, Adrian, and James Moore. 2009. *Darwin's Sacred Cause: How a Hatred of Slavery Shaped Darwin's Views on Human Evolution*. New York: Houghton Mifflin.
- Dinis, Alfredo. 2002. "Was Riccioli a Secret Copernican?" In *Giambattista Riccioli e il merito scientifico dei gesuiti nell'età barocca*, edited by Maria Teresa Borgato, 49–78. Florence: Leo S. Olschki.
- Donnelly, Philip. 1949. "Book Reviews." *Theological Studies* 10(3): 433–437.
- Dorlodot, Henry de. 1922. *Darwinism and Catholic Thought*. Translated by Ernest Messenger. London: Burns Oates and Washbourne.
- Endres, Benedict. 1967. "The Council of Trent and Original Sin." *Proceedings of the Catholic Theological Society of America* 22: 51–91.
- Finocchiaro, Maurice. 2005. *Retrying Galileo 1633–1992*. Berkeley: University of California Press.
- Fouilloux, Étienne. 1995. "Dialogue théologique?." In *Saint Thomas au XXe siècle: Colloque du centenaire de la 'Revue thomiste' (1893–1992), Toulouse, 25–28 mars 1993*, edited by Serge Bonino, 153–195. Paris: Saint-Paul.
- Fouilloux, Étienne. 2005. "Les jésuites de France, du XIXe au XXe siècle." In *Les jésuites à Lyon: XVIe–XXe siècle*, edited by Étienne Fouilloux and Bernard Hours, 247–264. Lyon: École normale supérieure.

- Fouilloux, Étienne. 2014. “L’abbé Amann, directeur du *Dictionnaire de théologie catholique* (1922–1948).” In *Théologie et érudition de la crise moderniste à Vatican II Autour du Dictionnaire de théologie catholique*, edited by Sylvio Hermann de Franceschi, 113–129. Limoges: Presses Universitaire de Limoges.
- Gal, Ofer and Raz Chen-Morris. 2013. *Baroque Science*. Chicago: University of Chicago Press.
- Garrigou-Lagrange, Réginald. 1930. “Modernismus Redivivus.” *Angelicum* 7(2): 249–252.
- Garrigou-Lagrange, Réginald. 1946. “La nouvelle théologie où va-t-elle?.” *Angelicum* 23: 126–145.
- Garrigou-Lagrange, Réginald. 1948. “Le Monogénisme n’est-il nullement révélé, pas même implicitement?” *Doctor Communis* 2: 191–202.
- Gaudel, Auguste. 1933. “Péché originel.” *Dictionnaire de théologie catholique* 12(1): col. 275–606.
- Groessens-Van Dyck, Marie Claire, and Dominique Lambert. 2009. “Le darwinisme d’un chanoine.” In *L’origine de l’homme: Le Darwinisme au point de vue de l’orthodoxie catholique*, 2, edited by Marie Claire Groessens-Van Dyck and Dominique Lambert, 11–90. Wavre: Mardaga.
- Grumett, David, and Paul Bentley. 2018. “Teilhard de Chardin, Original Sin, and the Six Propositions.” *Zygon: Journal of Religion and Science* 53: 303–330.
- Grumett, David. 2019. “Teilhard, the Six Propositions, and Human Origins: a Response.” *Zygon: Journal of Religion and Science* 54(4): 954–964.
- Guibert, Jean. 1896. *Les Origines Questions d’Apologétique*. Paris: Letouzey et Ané.
- Guibert, Jean. 1900. *In the Beginning*. Translated by G. S. Whitmarsh. London: Kegan Paul, Trench, Trüber & Co.
- Guibert, Jean. 1912. “Unité de l’espèce humaine.” *Dictionnaire apologétique de la foi Catholique* 2: col. 492–501.
- Haeckel, Ernst. 1876. *The history of creation*. Translated by E. Ray Lankester. London: H. S. King and Company.
- Hellyer, Marcus. 2005. *Catholic Physics: Jesuit Natural Philosophy in Early Modern Germany*. Notre Dame: University of Notre Dame Press.
- Hofmann, James. 2020. “Erich Wasmann, S.J.: Natural Species and Catholic Polyphyletic Evolution during the Modernist Crisis.” *Journal of Jesuit Studies* 7(2): 244–262.
- Keith, Arthur. 1910. “A New Theory of the Descent of Man.” *Nature* 85: 206.
- Kemp, Kenneth. 2019. “Teilhard De Chardin, the ‘Six Propositions,’ and the Holy Office.” *Zygon: Journal of Religion and Science* 54(4): 932–953.

- Kerlin, Michael. 2007. "Reginald Garrigou-Lagrange: Defending the Faith from *Pascendi dominici gregis* to *Humani Generis*." *U. S. Catholic Historian* 25(1): 97–113.
- King, Ursula. 2013. "A Vision Transformed: Teilhard de Chardin's Evolutionary Awakening at Hastings." *Heythrop Journal* 54: 590–605.
- Kirwan, Jon. 2018. *An Avant-garde Theological Generation: The Nouvelle Théologie and the French Crisis of Modernity*. Oxford: Oxford University Press.
- Klaatsch, Hermann. 1923. *The Evolution and Progress of Mankind*. Edited by Adolf Heilborn, translated by Joseph McCabe. London: T. Fischer Unwin.
- Knox, Ronald. 1950. "The Encyclical 'Humani Generis' Specially Translated for the Tablet by Monsignor R. A. Knox." *The Tablet* (Sept. 2) 196: 187–190.
- Langford, Jerome. 1966. *Galileo, Science and the Church*. Ann Arbor: University of Michigan Press.
- Le Bachelet, Xavier-Marie. 1909. "Adam." *Dictionnaire de Théologie Catholique* 1: col. 368–386.
- Le Bachelet, Xavier-Marie. 1926. "Péché Originel." *Dictionnaire Apologétique de la Foi Catholique* 3: col. 1735–1755.
- McMahon, Kevin. 2003. "Monogenism and Polygenism." *New Catholic Encyclopedia*. <https://www.encyclopedia.com/religion/encyclopedias-almanacs-transcripts-and-maps/monogenism-and-polygenism>
- Messenger, Ernest. 1932. *Evolution and Theology: The Problem of Man's Origin*. New York: Macmillan Company.
- Mettepenningen, Jürgen. 2010. *Nouvelle Théologie – New Theology: Inheritor of Modernism, Precursor of Vatican II*. New York: T&T Clark.
- Motherway, Thomas. 1944. "Current Theology: Theological Opinion on the Evolution of Man." *Theological Studies* 5(2): 198–221.
- Nichols, Aidan. 2000. "Thomism and the Nouvelle Théologie." *The Thomist* 64(1): 1–19.
- Paul, Harry. 1979. *The Edge of Contingency: French Catholic Reaction to Scientific Change from Darwin to Duhem*. Gainesville: University Presses of Florida.
- Pontifical Biblical Commission. 1909. "Concerning the Historical Character of the First Three Chapters of Genesis." Translated by E. F. Sutcliffe. <http://www.catholicapologetics.info/scripture/oldtestament/commission.htm>
- Pouchet, Georges. 1864. *The Plurality of the Human Race*. London: Anthropological Society.
- Poupard, Paul. 2003. Speech transcript in *Papal Addresses to the Pontifical Academy of Sciences 1917–2002*, 344–348. Vatican City: Pontifical Academy of Sciences.
- Richards, Robert. 2008. *The Tragic Sense of Life: Ernst Haeckel and the Struggle over Evolutionary Thought*. Chicago: University of Chicago Press.

- Rondet, Henri. 1943. "Les Origines Humaines et la Théologie: Problèmes pour la réflexion chrétienne." *Cité nouvelle: Revue Catholique d'Étude et d'Action* 55: 961–987.
- Rondet, Henri. 1946. "Croyons-nous encore au Pêché originel?." In *Problèmes pour la réflexion chrétienne. Le péché originel. L'enfer et autres études*, 9–39. Paris: Spes.
- Teilhard de Chardin, Pierre. 1912. "Homme IV: L'homme devant les enseignements de l'Église et devant la philosophie spiritualiste." *Dictionnaire apologétique de la foi Catholique* 2: col. 501–514.
- Teilhard de Chardin, Pierre. 1914–1915. "Les carnassiers des Phosphorites du Quercy." *Annales de Paléontologie* 9: 101–192.
- Teilhard de Chardin, Pierre. 1920. "Le cas de l'homme de Piltdown." *Revue des questions scientifiques* 77: 149–155.
- Teilhard de Chardin, Pierre. 1921. "Les Hommes fossils: À propos d'un livre récent." *Études* 166: 570–577.
- Teilhard de Chardin, Pierre. 1925. "Le paradoxe transformiste: À propos de la dernière critique du transformisme par M. Vialleton." *Revue des Questions Scientifiques* 7: 53–80.
- Teilhard de Chardin, Pierre. 1929. "Que faut-il penser du transformisme?." *Dossier de la Commission synodale* 2(6–7): 462–469.
- Teilhard de Chardin, Pierre. 1930. "Que faut-il penser du transformisme?." *Revue des questions scientifiques* 97(1): 89–99.
- Teilhard de Chardin, Pierre. 1966. "What Should We Think of Transformism?" Translated by J. M. Cohen in *The Vision of the Past*, 151–160. New York: Harper & Row.
- Teilhard de Chardin, Pierre. 1971a. "Fall, Redemption, and Geocentrism." Translated by René Hague in *Christianity and Evolution*, 36–44. New York: Harcourt.
- Teilhard de Chardin, Pierre. 1971b. "Note on Some Possible Historical Representations of Original Sin." Translated by René Hague in *Christianity and Evolution*, 45–55. New York: Harcourt.
- Teilhard de Chardin, Pierre. 1971c. "Reflections on Original Sin." Translated by René Hague in *Christianity and Evolution*, 187–198. New York: Harcourt.
- Vallois, Henri. 1927. "Y a-t-il plusieurs souches humaines?" *Revue générale des sciences pures et appliquées* 38: 201–209.
- Vandebroek, Georges. 1953. "The Origin of Man and the Recent Discoveries of the Natural Sciences." In *God, Man and the Universe*, edited by Jacques de Bivort de La Saudée, 93–143. New York: P. J. Kenedy and Sons.
- Walworth, Clarence. 1863. *The Gentle Skeptic; or, Essays and Conversations of a Country Justice on the Authenticity and Truthfulness of the Old Testament Records*. New York: D. Appleton and Company.

Catholicism and Evolution: Polygenism and Original Sin (Part II)

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Abstract. As documented in the first installment of this essay (Hofmann 2020b), throughout the first half of the twentieth century, theological conformity to monogenism, the alleged descent of all human beings from Adam and Eve, was closely linked to Catholic doctrines of original sin. Receptivity to polygenism, the more scientifically supported account of human origins through a transitional population, was further discouraged by Pius XII's 1950 encyclical *Humani generis*. Nevertheless, *de facto* acceptance of polygenism became commonplace following Vatican II. A significant turning point was reached when an effort to have polygenism designated "contrary to Catholic faith" failed to persuade the Council Fathers and the topic was not included in *Dei Verbum*, the 1965 Dogmatic Constitution on Divine Revelation. In 1968, the presentation of polygenism as a viable theological option in *The Supplement to A New Catechism* was clear evidence that opposition to polygenism within the Roman Curia had abated. Furthermore, a preponderance of post-Vatican II theological discourse on original sin either marginalized monogenism or retained it in a spiritual rather than a biological sense. The historical record shows that theological commitment to monogenism has been more deeply rooted in doctrines of Catholic tradition than was the case for geostasis. Secondly, again in contrast to geostasis, monogenism has been amenable to nuanced conceptual development, including purely spiritual characterizations. These two historical factors provide some explanation for the longstanding Catholic commitment to monogenism.

To the extent that dogmatic convictions premised upon traditional doctrines of original sin continue to be perceived as both compelling and authoritative, it can be expected that some form of theological monogenism will also persist.¹

Keywords: *Dei Verbum*, *Humani generis*, Karl Rahner, monogenism, Paul VI, pre-Adamites.

1. Initial Reactions to *Humani generis*

The twelve-year period between the publication of *Humani generis* and the beginning of Vatican II was a time of complex scientific and theological dialectic (Kapusta 2009). It included the discovery of the molecular structure of DNA and the initial applications of protein sequencing and molecular clocks to the study of human evolution, developments that of course could not be foreseen when *Humani generis* was issued on August 12 of 1950. Although the encyclical did not single out any specific proponent of *nouvelle théologie*, it did admonish anyone who would deny the primacy of Thomistic metaphysics as the best vehicle to explicate permanent theological truth. But it also expressed a guarded receptivity to the science of human origins.

Thus, the Teaching of the Church leaves the doctrine of Evolution an open question, as long as it confines its speculations to the development, from other living matter already in existence, of the human body. (That souls are immediately created by God, is a view which the Catholic faith imposes on us.) In the present state of scientific and theological opinion, this question may be legitimately canvassed by research, and by discussion by experts on both sides (Knox 1950, 190).

On the other hand, after a passing reference to those who are “misrepresenting the whole nature of original sin,” Pius XII explicitly ruled out two versions of polygenism. His brief comments were slightly enigmatic and translations of the original Latin to some extent reflected the expectations or prior convictions of the translators. What the pope actually wrote was that, in contrast to the freedom granted to Catholic scholars for research on the general topic of human evolution, and with respect to polygenism in partic-

¹ Earlier drafts of this essay have been improved due to very helpful comments from Kenneth Kemp who should not be assumed to agree with my analyses or conclusions.

ular, “*cum nequaquam appareat quomodo huiusmodi sententia componi queat cum iis quae fontes revelatae veritatis et acta Magisterii Ecclesiae proponunt de peccato originali*” (Pius XII 1950). Gustave Weigel credited Ronald Knox with one of the most accurate English translations of the encyclical (Weigel 1951, 544); Knox rendered the crucial phrase *cum nequaquam appareat* by the English “it does not appear.”

There are other conjectures, about polygenism (as it is called), which leave the faithful no such freedom of choice. Christians cannot lend their support to a theory which involves the existence, after Adam’s time, of some earthly race of men, truly so called, who were not descended ultimately from him, or else supposes that Adam was the name given to some group of our primordial ancestors. It does not appear how such a view can be reconciled with the doctrine of original sin, as this is guaranteed to us by Scripture and tradition, and proposed to us by the Church. Original sin is the result of a sin committed, in actual historical fact, by an individual man named Adam, and it is a quality native to all of us, only because it has been handed down by descent from him (Knox 1950, 190).

The Vatican website presently uses a similar translation that “it is in no way apparent” how polygenism is to be reconciled with the doctrine of original sin. In either version, the encyclical’s wording does seem to hold open the possibility that the appearance of incompatibility might be overcome in the future. It also should be noted that *Humani generis* warned that polygenism appeared to be irreconcilable with *fontes revelatae veritatis et acta Magisterii Ecclesiae*; Knox translated this tandem as “Scripture and tradition,” and the relative import of each factor would be subject to scrutiny by both biblical scholars and theologians during the subsequent two decades.

Two general categories of polygenism were suspect. One scenario would involve humans who exist “after Adam’s time” but are not descended from him. This would be the case, for example, if humans originated independently in more than one time and place. This was how polygenism had been defined by Georges Vandebroek, and it would also apply to Hermann Klaatsch’s earlier racial polygenesis (Hofmann 2020b, 108 and 133). These

cases would more accurately be termed polyphyletic polygenism or human polyphyletism.² There are other possibilities that might be included in this first category of polygenism depending upon how humanity is characterized, either physically or spiritually. For example, if members of a unique human population contemporary to Adam left human offspring not descended from him and living “after Adam’s time,” this would be a form of monophyletic polygenism included in Pius XII’s first category. During the 1950s and 1960s, hypotheses involving “pre-Adamite” or “co-Adamite” populations were carefully formulated with due concern about this form of polygenism.

Humani generis also precluded a second general category of polygenism in which, using Knox’s translation, “Adam was the name given to some group of our primordial ancestors.” This imprecise wording implies the more common twentieth century form of monophyletic polygenism where “Adam” would refer to the entire initial human population rather than an individual. Reliance upon transitional populations was of course central to the population genetics approach to species change developed by Theodosius Dobzhansky during the 1930s (Dobzhansky 1937). For example, analysis of a single transitional population as the source of *Homo sapiens* would pertain to the simplest version of what came to be known as the “out of Africa” hypothesis. Although he did not elaborate any detailed examples, Pius XII presumably held that all forms of both polyphyletic and monophyletic polygenism were in apparent conflict with traditional understanding of the origin and transmission of original sin from a unique initial pair of human individuals responsible for the first sin.

Interpretations of the encyclical’s succinct wording ranged over quite a broad spectrum. Anthony Cotter took it to have a very restrictive import; he translated the encyclical’s precautionary sentence on polygenism as “For it is unintelligible how such an opinion can be squared with what the sources of revealed truth and the documents of the Magisterium of the Church teach on original sin, which proceeds from sin actually committed

² The non-racial hypothesis that during the 1980s became known as multi-regionalism also posits multiple sources for the evolution of modern humans but additionally allows for significant complications such as migration and gene flow.

by an individual Adam, and which, passed on to all by way of generation, is in everyone as his own” (Cotter 1951, 43). Cotter had previously published objections to virtually all aspects of evolutionary theory (Hofmann 2020a, 261), and he maintained this perspective in his commentary with a blunt condemnation of polygenism.

Neither theory can be reconciled with what the Magisterium has always taught on original sin. While the Encyclical is not a new definition on this point, a Catholic would be rash to ignore it. Some die-hards might wish to see a loophole in the words “for it is unintelligible” (*cum nequaquam appareat*) as if they left the door open for a different decision in the future. This would be an illusion. Polygenism is definitely banned; it should not even be put forward as a hypothesis. Monogenism is the Catholic doctrine, though the Encyclical does not settle the further question what precise theological note it is to be assigned (Cotter 1951, 105).

Cotter’s uncompromising assessment was seconded by Charles Boyer, theology professor at the Pontifical Gregorium University in Rome.

Under the name of Adam, one cannot understand a collectivity, but only an individual. The reason for these affirmations is to be found in the fundamental doctrine of original sin, as found in scripture and fixed by the Councils. A single man sinned and his sin has been transmitted by generation to all men. There is no way to accommodate polygenism. A Christian is not free to sustain it even as a hypothesis. It would certainly be to betray the thought of the Holy Father to see in the formula “*cum nequaquam appareat*” a door left half-open for a different directive in the future. Polygenism, as defined in the encyclical, is definitely precluded (Boyer 1950, 533).

Although Cotter and Boyer were free to publish their interpretations, Teilhard de Chardin was not allowed that privilege. His writing had been subject to Jesuit censorship since the 1930s and for the rest of his life he was consistently barred from non-scientific publication by either his Superior General or the Holy Office. Shortly after the publication of *Humani generis*, he wrote a short note, only published posthumously, in which he maintained the position he had held since 1910, namely that the application of mono-

genism and polygenism terminology should be to designate the initial human population as one couple or multiple couples. The pope had also referred to a second mode of polygenism, which Teilhard noted was more accurately called polyphyletism, the descent of humanity through multiple lineages. More substantively, he also pointed out that because science cannot with absolute certainty decide between monogenism and polygenism, they “are in reality *purely theological notions*, introduced for dogmatic reasons” (Teilhard de Chardin 1971, 209). Nevertheless, concerning monogenism, a scientist “may judge that this hypothesis is rendered scientifically untenable by all we believe we know so far of the biological laws of ‘speciation’ (or ‘genesis of species’)” (Teilhard de Chardin 1971, 210). Here Teilhard had in mind the speciation process from the perspective of population genetics, the gradual change in gene frequencies due to mutation and natural selection. He could only hope that “theologians will somehow come to realize that, in a universe as organically structured as that of which we are now becoming conscious, a solidarity of man, much closer even than that which they seek in ‘the bosom of Mother Eve’, is readily provided for them by the extraordinary internal cohesion of a world which, all around us, is in a state of cosmo- and anthro-genesis” (Teilhard de Chardin 1971, 211).

It would take about fifteen years for Teilhard’s evolutionary conception of human unity to become commonplace in discussions of original sin. In the meantime, a frequently adopted alternative to the uncompromising position of Cotter and Boyer was a tentative acceptance of monogenism subject to reconsideration based upon possible theological progress. For example, along with the prominent Jesuit biblical scholar Jean Levie, Ernest Messenger was one of those who, in the view of Cotter and Boyer, illegitimately saw “a door left half-open” for a future reassessment of polygenism. Messenger repeated Levie’s observation that “the Pope has carefully given the reason why the polygenism in question is to be rejected: he says, not that ‘it is altogether clear that such a theory cannot be reconciled with’ the doctrine of original sin, but ‘it is in no wise clear how such a doctrine can be reconciled with’, etc.” (Messenger 1951, 214; Levie 1950, 789). Although Messenger died on December 25 of 1951, his last comments on polygenism were published

posthumously and he again expressed his views cautiously. On the one hand, "...*Humani generis* does not constitute a final and irrefrangible decision, or a dogmatic definition on the point in question by the Holy See, and it is for the theologian to examine more closely the nature of the unique sin of Adam and the mystery of its transmission to his descendants" (Messenger 1953, 163). Here Messenger again implied that, if polygenism should prove to be true, theological adjustments may have to be made in the traditional understanding of original sin and its transmission. However, he was not willing to simply consign the issue to scientific inquiry. "Science, on the other hand, does not finally settle the question one way or the other, and a Catholic scholar should experience no very great difficulty in accepting the monogenist hypothesis suggested to him by considerations arising from a different branch of knowledge, i.e. Christian theology" (Messenger 1953, 163). A similar but slightly more conservative position was taken by Marie-Michel Labourdette. He agreed that monogenism could not be theologically assessed in isolation from the defined doctrine of original sin, which of course was why polygenism was ruled out in *Humani generis*. Scientific assertions of polygenism are not only fallible but pertain only to physical phenomena rather than the spiritual domain of salvation history in which monogenism has been revealed. On this point, "our faith is more affirmative than our science" (Labourdette 1953, 165).

In 1951 the American Jesuit Gustave Weigel wrote a bibliographic survey article in which he summarized the first eighteen months of the published literature on the encyclical. Unfortunately, he conflated the two categories of polygenism cited in *Humani generis* in his introductory definition.

As to the meaning of the word "polygenism" in the encyclical there was unanimous agreement: the origin of the human race that we know on this our earth, not from a single couple but from an indefinite number of original pairs, unrelated among themselves and directly produced by evolution (Weigel 1951, 544).

In spite of his less than ideal starting point, Weigel did accurately observe that polygenism was not the primary concern of most of the early commentators; much more attention was given to *nouvelle théologie* and

the reasons for the Vatican's disapproval. For example, writing in *Études*, Robert Rouquette emphasized the encyclical's positive tone concerning evolutionary research and added only a brief comment that, "according to the polygenic hypothesis, the human race would have appeared simultaneously within a multitude of individuals. This is only a hypothesis that, contrary to evolutionism, does not arise from a consideration of observable facts. Under these conditions, the magisterium considers that this pure hypothesis should not be held by the theologian" (Rouquette 1950, 115). As had been the case during the modernist crisis a half century earlier, the status of Thomism as the metaphysical structure for theology was once again in question. Henri de Lubac was frequently singled out by commentators and accused of arguing both that theological truths are subject to changes in philosophical expression and that theology should adopt the language of modern philosophy, especially existentialism (Greenstock 1950).

In those cases where polygenism was discussed at length, attention was sometimes given to improving terminology. Guy Picard defined monogenism as "the doctrine according to which the modern human species only had its origin in a single couple." Although he then gave a less precise definition of polygenism as "the contrary opinion, which affirms several initially independent couples" (Picard 1951, 65), he did qualify it by distinguishing between polygenism "in the strict sense," where multiple human couples would be the initial descendants of a single ancestral non-human species, and polyphyletism, the convergent evolution of distinct human populations from several ancestral non-human species.³ As had been argued by many others, Picard agreed that comparative anatomy gave no support to polyphyletism but did give limited confirmation of polygenism in the strict sense. Picard also presented what he called a "probability argument." Scientific analysis yields no expectation that the origin of a new species would include a bottleneck of two individuals; there is no empirical reason to expect such a small population during the transitional stage. The relevant mutations take place by chance and would be equally probable for a large number of

³ By simply equating polygenism with polyphyletic polygenism, Augustin Bea's claim that scientists had abandoned polygenism was seriously misleading (Bea 1951, 52–54).

individuals. However, Picard also felt that philosophically there was reason to see in the orderly pattern of evolution an imposition of intelligence, God's creation of an "immense work of art." From this perspective, "the arrival of a new species is monogenist or polygenist according to the intention of the Author of nature" (Picard 1951, 87). Picard's conclusion, if not his rather trite philosophical argument, was widely shared by theologians in 1951; monogenism could and should be accepted because it was not absolutely ruled out scientifically and because it is known through "revelation" or, more specifically, the *revelatae veritatis et acta Magisterii Ecclesiae* (revealed truth and the documents of the Magisterium of the Church) referred to in *Humani generis*.

The divergence between scientific and theological reactions to the encyclical's prohibition was inadvertently expressed in an article co-authored in two independent sections by the Louvain anatomist Georges Vandebroek and the Jesuit theologian Léon Renwart (Vandebroek and Renwart 1951). The two parts of the article were not tightly synthesized and the resulting discordance reflected a widening gap between science and orthodox theology. For this publication, Vandebroek revised his earlier 1950 essay and did not include his definitional comments. Recall that Vandebroek's formulation of polygenesis was not that all humans are descended from one ancestral population, but rather that "the various human races derive from parallel lines that separated from a common stock before attaining the human level" (Vandebroek 1953, 140; Hofmann 2020b, 133). Even if one of these lineages had Adam as its origin, this form of polygenism would assert the existence of other human lineages not descended from Adam. This is presumably the primary version of polygenism Pius XII had in mind when prohibiting the idea that "there existed on this earth true men who did not take their origin through natural generation from him as from the first parent of all." Secondly, Vandebroek's broad sense of monogenism was that "all the hominids derive from a single stock that had already attained a human level." In Renwart's section of the article, he pointed out that Vandebroek's notion of monogenism was not how the term was used by theologians unless Vandebroek's reference to a "single stock" of human

ancestors was restricted to a single couple (Vandebroek and Renwart 1951, 348). Vandebroek also included a long footnote in which he commented that from a scientific perspective the descent of all humans from a single couple was “almost inconceivable” (Vandebroek and Renwart 1951, 341). The resulting message of this co-authored article was highly ambivalent. As a scientist, Vandebroek considered the narrow sense of monogenism to be “almost inconceivable,” while Renwart the theologian held it to be precisely the one dictated by Pius XII. Renwart’s serenely optimistic recommendation was that Catholic scientists should have no reservations about incorporating monogenism into their understanding of human origins. Even though the genetics of large populations is central to the study of evolutionary change, scientific methods cannot detect the defining characteristic of the first humans, the human soul, and scientific research cannot unequivocally refute the monogenetic hypothesis even if it has no parallel in the origin of any other species (Vandebroek and Renwart 1951, 351). In the immediate aftermath of *Humani generis*, Renwart’s conclusion was a typical example of the pervading message from theologians not subject to censorship: in spite of its scientific shortcomings, monogenism must be accepted due to theological doctrines associated with original sin. As Dominique Dubarle commented a few years later, adherence to the pope’s directive in *Humani generis* did not rule out hope that future scientific and theological progress would alleviate any immediate psychological “tension” (D. Dubarle 1957, 90).

2. Pre-Adamite Hypotheses prior to Vatican II

One set of responses to the challenge of *Humani generis* relied upon combinations of biological polygenism and theological monogenism. That is, while sizable populations of individuals biologically equivalent to modern humans might have preceded and coexisted with Adam, he could still be thought of as the first individual to be both human and capable of sin. There were several variations of this idea. In some cases, “pre-Adamites” were thought to be only biologically equivalent to humans and Adam was the first to be ensouled. For other authors, the predecessors were thought of as

ensouled humans who either were not granted the gift of sanctifying grace or who had not reached the state of psychological development needed for the moral responsibility exercised in the first instance by Adam. In all these options, the shared insight was that, by giving Adam a distinct spiritual status within the co-Adamite population, theological monogenism might be preserved by postulating that lineages unrelated to Adam all go extinct.

Although pre-Adamite populations are not mentioned in Genesis, speculation about them is not prohibited by any Catholic doctrine. In a 1911 volume of *The Catholic Encyclopedia*, Anthony Maas warned that conflict with doctrines of original sin and the unity of the human race would be avoided as long as no fully human descendants of hypothetical pre-Adamite forebears were thought to survive into the time of Adam and thereafter. In his 1935 article on pre-Adamites for the *Dictionnaire de théologie catholique*, Émile Amann was less assertive and considered the duration of these descendants' survival to be a complicated open question (Maas 1911; Amann 1935, col 2799).

One of the first reactions to *Humani generis* that relied upon pre-Adamites came from Canon Camille Muller, a botanist at the University of Louvain, who insisted that he wrote as a Catholic scientist without any claim to theological authority. In an earlier 1949 essay, reissued in translation in 1962, Muller had considered the possibility that human groups might have existed “before the one to which Jesus Christ belonged” (Muller 1962, 25). He did not identify these populations with any scientific nomenclature and he argued that the existence of these people would not necessarily contradict the doctrine of the universal scope of the redemptive power of Christ. He did so by drawing upon the elevated state of a human soul when granted the benefit of sanctifying grace. In general, sanctifying grace acts as an infused *habitus*; a sanctified soul is given a disposition or receptivity to the divine will over and beyond natural propensities and is thereby raised to the supernatural order.⁴ Although pre-Adamites were human insofar as they were ensouled, Muller speculated that they may not have been called

⁴ For an example of contemporary discussion, see Michel 1941.

to the supernatural order (*appelée à l'ordre surnaturel*) through the gift of sanctifying grace. If not, then they could not fall from this order through sin and were not in need of salvation. He noted that their ultimate fate would present a theological puzzle but not one as pressing as that posed by unbaptized children from our own era (Muller 1962, 26). Muller also prudently acknowledged the theoretical possibility of human monogenesis for “our group” of humans: “we could strictly speaking just say that its origin from one pair is not altogether impossible and that the believer may therefore reasonably admit designs of a higher order without attempting to determine it scientifically” (Muller 1962, 26).

In his 1951 commentary on *Humani generis*, Muller interpreted the encyclical as an encouragement for scientists to pose new theological questions based upon the modern understanding of human evolution. He repeated a long passage from his 1949 essay and again considered possible “human groups” existing prior to the “definitive humanity” that began with Adam. He acknowledged that it is a matter of faith that Christ died for all of sinful humanity, a single genealogy descended from the initial sinner. He then cited Robert De Sinéty’s 1928 article on “Transformisme” to point out that at Trent the Council Fathers could not have foreseen the scientific investigation of ancient life; they necessarily thought of human unity within the restricted scope of modern humans (De Sinéty 1928). Muller considered it plausible that God bestowed sanctifying grace upon a single couple within a larger population of co-Adamites and he then offered for consideration a hypothetical “less strict” form of monogenism.

Through the successive unions of the descendants of several primitive couples (including the initial couple of *Genesis*), a very limited number of generations would be enough for all men to be descended from the first man of which *Genesis* speaks (without requiring marriages between brothers and sisters), and, just as likely perhaps, for all modern humanity (the only ones the Fathers of the councils would have considered) to be tainted by original sin and saved by Christ. Would not this still be monogenism, less strict, but equally efficacious? (Muller 1951a, 304).

Under this scenario, interbreeding between the direct descendants of Adam and Eve would take place with their human contemporaries. After an indefinite period of time, all lineages stemming from “primitive couples” that did not include this interbreeding could be presumed to die out. After that point, all humans would be able to trace their ancestry back to Adam and Eve and would have inherited the results of original sin. This state of affairs would have been reached well before the time when the Council Fathers at Trent proclaimed that all humans are descended from Adam. Because the genealogical descendants of Adam would include all living humans “after a limited number of generations,” Muller’s hypothesis could be considered a “less strict” form of theological monogenism. However, there would be a period of time during which some human lineages existed that were not descended from Adam and this would appear to violate the prohibition in *Humani generis* against that category of polygenism.⁵ Muller’s succinct expression of theological monogenism was not widely discussed by theologians; most were more inclined to reassess the doctrine of original sin than to try to make monogenism compatible with evolutionary biology. For example, André-Marie Dubarle took note of Muller’s expansive interpretation of *Humani generis* but did not mention his efforts to preserve monogenism (A.-M. Dubarle 1964, 228).

Muller also was quite assertive in complaining that Pius XII had understated the status of evolution among scientists; he admitted that arguments continued about evolutionary lineages and causal mechanisms, but the scientific world “is convinced of the fact of evolution” (Muller 1951a, 301). Although accurate, this declaration contradicted high-profile statements by Réginald Garrigou-Lagrange, who still insisted upon calling evolution an unproven hypothesis (Garrigou-Lagrange 1948, 200). Furthermore, in a speech in September of 1953, Pius XII seconded Garrigou-Lagrange’s view and added that “if most researchers present the doctrine of descent as a ‘fact’, this constitutes a hasty judgment” (Pius XII 1953). This point of contention may have been one reason why the pamphlet reprint of Muller’s

⁵ Muller did not invoke Adam’s longevity to speculate that he survived past the expiration date of these lineages.

1951 essay was placed on the *Index of Forbidden Books* in December of 1953 (Muller 1951b).

Andrew Alexander offered a defense of monogenism that was more theologically acceptable than Muller's but was premised upon an improbable genetic hypothesis (Alexander 1964). He speculated that the final stage in the transition from the non-human to the human physical body transpired through a single genetic mutation in one individual out of a larger population, a scenario that René Lavocat would pointedly reject as scientifically unrealistic several years later (Lavocat 1967b). Alexander imagined that one novel gene made Adam suitable for ensoulment and hominization and that this crucial gene could then be passed on to offspring who would in turn become human upon introduction of souls. Ensoulment would also be granted to the offspring of interbreeding between direct descendants of Adam and non-human co-Adamites; all humans would necessarily be genealogically descended from Adam while purely non-human lineages went extinct. Alexander managed to preserve theological monogenism but only at the cost of a scientifically improbable genetic hypothesis.

Another brief discussion of pre-Adamites published in the immediate aftermath of *Humani generis* was provided by Charles Journet, a long-standing professor of dogmatic theology at the diocesan major seminary in Fribourg. His extensive contributions to apologetics were informed by his relatively conservative Thomism and his concern for papal authority. In his 1951 *Petit Catéchisme sur les Origines du Monde*, Journet used a question-and-answer format to explain how monogenetic human origins might be integrated into an evolutionary perspective. One possibility was that, out of a pre-existing non-human population, one couple was ensouled and became the first humans from whom all subsequent humans descend (Journet 1951, 41). Another option would involve ensoulment of an entire preexisting non-human population prior to the choice of one couple to play a role in subsequent spiritual development. "It is from these men that God, in order to inaugurate on earth the order of grace, would set aside one couple. He would form them in his image and bestow upon them original justice. Only the descendants of this group would survive the catastrophes

of prehistory” (Journet 1951, 42). By postulating appropriate extinctions of all lineages other than that of Adam and Eve, either scenario could be scripted to preserve theological monogenism. The *Petit Catéchisme* was not a venue where an extensive discussion was to be expected and Journet did not address any of the relevant scientific issues. In response to the question of whether polygenism should be rejected as irreconcilable with revelation, he simply quoted the relevant section from *Human generis* and repeated the truism that science could not unequivocally prove either monogenism or polygenism. Journet later participated in one the pre-conciliar theological commissions for Vatican II and was appointed Cardinal by Paul VI in 1965. Shortly thereafter he would serve on the commission of Cardinals responsible for an evaluation of the controversial *New Catechism*, an investigation that would result in a *Supplement* in which polygenism was presented as a legitimate possibility.

Giovanni Blandino was relatively unconcerned about the importance of monogenism and placed more emphasis on the process of sin’s transmission. Trained in philosophy, theology, and biology, Blandino was a prolific author who taught for many years at the Pontifical Lateran University in Rome where he accepted the plausibility of the human body’s evolution from non-human ancestors. In a 1962 essay on original sin, he presented for theological consideration two “hypotheses” involving a pre-Adamite population. Blandino reserved the term “human” to refer only to individuals in which human souls have been introduced and he considered both pre-Adamites and co-Adamites to be human in this sense. However, he also proposed a time period of indefinite duration during which human mental capacity developed to the point at which it became capable of understanding revealed truth and moral injunction. Although the Genesis text does not distinguish between the initial production of humans and a subsequent infusion of sanctifying grace, Blandino argued that the conflation of separate events for expository purposes is not uncommon in biblical literature. Furthermore, to refer to Adam as “the first man,” as is the case in the Trent documents, “may be only a repetition of biblical expressions, without any intention to define that the first couple elevated

to the supernatural state had no human ancestors” (Blandino 1962, 4). With this understanding of human development in mind, Blandino proposed his first “hypothesis”.⁶

Perhaps the human couple that was the first to receive sanctifying grace from God, as well as other preternatural gifts, and that committed the original sin and from which the entire human race descends, was not the first human couple to live on earth, but was engendered by pre-existing humans (Blandino 1962, 1).

Blandino added that, when Adam and Eve failed the test set for them by God, they lost the supernatural gifts they had been accorded, both for themselves and all their descendants. Although he agreed with the tradition that all modern humans are descended from Adam and Eve, it would have taken some time for unrelated lineages of co-Adamites to die out. The extent of this time period would depend upon whether or not the direct descendants of Adam and Eve interbred with co-Adamites and their offspring. The case in which this interbreeding did take place was the second of Blandino’s hypothetical scenarios, and the one he preferred. Even though pre-Adamites and co-Adamites were human and left some offspring who were not descended from Adam and Eve, Blandino calculated that, after approximately ten thousand years of interbreeding, all humans would have either maternal or paternal ancestry going back to Adam and Eve. “In order to enter the world with original sin and to inherit the promise of salvation, it suffices to descend from Adam and Eve through a single branch, that is, either the paternal line or the maternal line” (Blandino 1962, 2).

Both of Blandino’s two hypothetical scenarios appeared to conform to Catholic doctrine insofar as original sin was depicted as a sin by one couple transmitted through generation to all humans existing after approximately the time of Abraham. However, prior to that point in time, the existence of human descendants of co-Adamites not subject to the effects of original sin was problematic. As was the case for Muller, because Blandino considered co-Adamites to be human, both of his hypotheses at least nominally

⁶ Blandino noted that Charles Journet had mentioned this idea in his 1951 *Petit Catéchisme*.

included polygenism and stood in apparent conflict with the *Humani generis* prohibition. Blandino was never publicly sanctioned; whether he was ever delated to the Holy Office might be determined when relevant archival records are subject to research.⁷

During the 1950s and early 1960s few theologians were willing to make a serious commitment to the existence of pre-Adamites. The German Jesuit Karl Rahner commented that, even though the idea is not prohibited, “this is not to say that a theologian may not hold that Pre-Adamitism is a theory which is scientifically speaking arbitrary, as well as being absurd and dangerous theologically” (Rahner 1961, 233). The admission of human pre-Adamites “would imply a divine decree in which not all spiritual creatures were called to the vision of God by grace” (Rahner 1969, 105). Contrary to Muller and Blandino, Rahner considered it unacceptable to imagine that, prior to original sin, God would withhold sanctifying grace from any individuals who could legitimately be referred to as human (Rahner 1962, col. 561; Rahner 1970, 187). Nevertheless, in spite of Jean Levie’s comment that pre-Adamite theory had had its “hour of celebrity” (Levie 1950, 789), the idea survived and would be discussed more widely after Vatican II. Meanwhile, although prior to 1950 German theologians had not published as profusely on monogenism as had the French, they now became more engaged with the issue. In particular, Karl Rahner gave an influential argument that, although monogenism is theologically certain, it does not have a secure basis in scripture. His complex argument contributed to concern over how original sin doctrine should be included in a broader understanding of the relationship of scripture and tradition to revelation, an inquiry that would intensify during the Vatican II years.

⁷ According to Henri-Marie Guindon, Blandino submitted his ideas to a Vatican II theology commission in 1962 (Guindon 1979, 107). He also reprinted his 1962 essay in the 1977 first volume of his three-volume collection of essays, *Questioni dibattute di teologia* although by this later date he no longer ascribed to his earlier views.

3. Pre-Conciliar Developments and Vatican II

Two events bracketed the decade between 1954 and 1964, a period of uncertainty in which a significant turning point was reached. In 1954 Karl Rahner supplied an argument against polygenism that ratified the *Humani generis* prohibition and affirmed monogenism as theologically certain. Ten years later, a chapter of a Vatican II preliminary schema that would have targeted polygenism as contradictory to Catholic doctrine was not considered worthy of discussion by the council and was not incorporated into *Dei Verbum*, the Dogmatic Constitution on Divine Revelation. This decision in effect marked the end of concerted effort by anti-polygenists within the Roman Curia to mandate the acceptance of monogenism.

When *Humani generis* was issued in 1950, Karl Rahner was a Professor of Dogmatics at the University of Innsbruck. Despite the interruption of World War II, he had begun to assert himself as an independent thinker with a philosophical penchant for drawing subtle distinctions in the exploration of hypothetical premises and their contingent implications. His zeal for sustained theological argument and his relentless stamina for lecturing, public speaking, editing, and prolific publication would make him one of the most influential German theologians during the 1960s. His nuanced analysis of monogenism first appeared in 1954 and was reprinted in English translation in 1961 (Rahner 1954 and 1961; McMahon 2002a). Although his argument that monogenism is theologically certain temporarily supported a conservative reading of *Humani generis*, Rahner would reverse his position in 1966. His initial discussion is an important example of theological reluctance to abandon monogenism during the years between *Humani generis* and Vatican II.

Rahner began by explaining the sense in which he was using the category “theologically certain:”

... by theologically certain we mean anything of which on the one hand it cannot be said with absolute certainty that it is revealed by God and is indubitably taught as such by the Church; and which on the other hand can legitimately claim our interior assent, in such a way that a contrary doctrine is not tolerated by the Church (Rahner 1961, 234).

The *Humani generis* prohibition of polygenism certainly proclaimed that it was not to be tolerated.

What is said of polygenism formally and substantially characterized in this way is that it is not a free opinion in the Church, it cannot be held. Thus it is not permitted positively to defend polygenism even as a possible theory or scientific hypothesis, the grounds of this inadmissibility being of course theological and not derived from natural science. Quite intentionally, a more precise theological *qualification* (for instance, ‘This opinion is heretical’) is not given. Thus the only theological qualification of monogenism which may be derived from the encyclical just by itself is that it is theologically certain (Rahner 1961, 233).

Rahner’s goal was to provide a detailed explanation of how polygenism contradicted doctrine, an argument that *Humani generis* had not included. While avoiding any direct engagement with scientific issues, his discussion was three-pronged: exegetical, doctrinal, and more briefly, metaphysical. From an exegetical perspective, Rahner was convinced that although the author of Genesis asserted the unity of humanity using a monogenetic narrative form, this did not mean that monogenism itself was also being taught. Furthermore, Saint Paul simply repeated the wording of the Genesis source and should not be attributed independent significance on this score. Rahner placed more weight on indirect arguments in which the assumption of polygenism leads to a contradiction with doctrine that thereby confirms monogenism.

The indirect proof of monogenism consists in the demonstration that it is an indispensable presupposition of the doctrines of redemption and original sin as these are contained in Scriptures and in its interpretation by Tradition and the Church’s *magisterium*; and that in this sense it is taught in Scripture. That this proof must be regarded as the most important of all may also be seen from the arguments with which ‘*Humani Generis*’ justifies its rejection of polygenism, though with the utmost brevity (Rahner, 1961, 268).

Rahner first considered the most commonly used indirect proof in which the assumption of polygenism is said to conflict with the Tridentine doctrine of

original sin as a singular historical event with effects transmitted through *propagatione*. Rahner noted that although the term *propagatione* must be contrary to *imitatione*, it might not have to be restricted to direct physical descent. He then offered for consideration a polygenetic hypothesis in which direct descent would not be necessary for the initial transmission of sin's effects to all co-Adamites.

The first man created in the state of original justice is nominated by God as the trustee, in respect of the justice compulsorily intended by God for all men, for all the men who follow him, whether they descend from him physically or not. This first man loses original justice for himself and all other men. Thus all are subject to original sin. The universality of original sin and its unity of origin are preserved. It is through Adam that all are subject to original sin, the other first pairs not indeed *generatione*, but *per inoboedientiam primi hominis, non imitatione*. Soon, one could go on, all these men become so mixed that there was no longer a single man left who did not go back to Adam *generatione* as well (Rahner 1961, 270–271).

This polygenetic scenario would conform to the requirement that original sin was a unique event with universal effect. To make the indirect argument for monogenism compelling would require ruling out this hypothetical counterexample through an additional argument that the correct understanding of *propagation* must be limited to direct physical inheritance. Rahner had reservations about that train of thought; in 1966 he would explicitly reject it and also drop his objections to polygenism. For the present, he considered a second indirect proof to be more promising. He insisted that the doctrine of universal salvation requires that Christ be of common human “stock” and he cited numerous New Testament references to the incarnation that go beyond mere symbolic expression to make this point.

The emphasis laid upon the identity of origin and on the assumption of a human nature precisely as historically incriminated ... shows clearly that Christ's brotherhood with us can be neither a mere community of disposition or of grace, nor one based purely upon the specifically human nature. Rather, he enters

redemptively into our *one* common history of guilt, which is one because it is the history of our physically real common stock (Rahner 1961, 276).

At this stage in Rahner's thinking, although he suspected that the required universal transmission of the effects of original sin might be construed in such a way as to allow polygenism, he could not imagine an analogous compatibility with his understanding of the incarnation and redemption. "All we have said about the situation of salvation and damnation may be summed up as follows: Scripture knows of such a common situation of salvation and ruin only in so far as men are of one stock" (Rahner 1961, 279). Furthermore, "A *universal* situation of damnation is only conceivable, supposing it to be based upon the community of a stock, if it is historically established at the *origin* of this community," that is, with the first two individuals of the Genesis narrative (Rahner 1961, 281). Consequently, the prohibition of polygenism in *Humani generis* was appropriate and requires adherence to the theological certainty of monogenism "with inner (but not in itself irreformable) assent" (Rahner 1961, 234).

Hans Küng, more reliant upon scripture rather than doctrinal tradition as a basis for his theology, once gave an apt description of Rahner's deft theological skill that applies to his defense of monogenism: "As a master of theological dialectics he transforms his historical no into a dogmatic yes" (Küng 2008, 332). Rahner added a more succinct metaphysical argument using a principle of parsimony; since it would suffice to initiate humanity through a single couple, polygenesis would be superfluous. But in 1954 he primarily maintained that monogenism was appropriately ruled theologically certain due to an indirect argument that polygenism contradicted doctrines of salvation, the reasoning he believed was the best motivation for the *Humani generis* prohibition.

As might be expected, Rahner's argument was seconded by those who agreed with his conclusion. Nevertheless, during 1957 and 1958 several theologians also alluded to the disturbing incompatibility between scientific support for polygenism and theological commitment to monogenism. Johannes Feiner, a Swiss professor of fundamental theology at the Chur

seminary, contributed to a collection of essays originally published in 1957 and reissued in the United States in 1965. For Feiner, “Monogenism is an important instance in the *encounter between the Church’s teaching and the scientific concept of the world*,” a situation in which Feiner alleged that “*as yet no final certainty has been reached on either side*” (Feiner 1965, 54). Feiner held that polygenism would require “an essential change of the Church’s teaching concerning original sin and redemption,” a change he was not willing to condone (Feiner 1965, 54–55). He agreed with Rahner that scripture alone could not resolve the issue and he also commended Rahner’s indirect argument against polygenism, that is, that the universal redemptive intercession of Christ is based upon membership in the human race, “a true community of flesh and blood ‘from one’” (Feiner 1965, 55). Feiner also agreed with Rahner that this understanding of Christ’s lineage is a revealed doctrine of the New Testament. “This Christological truth requires that the unity of race be understood in a strict sense, as a fact dependent on a first man who establishes the totality of the race in its historical origin” (Feiner 1965, 55). Consequently, monogenism must be accepted, even if contrary to “our modern habits of thinking” (Feiner 1965, 56).

The growing malaise associated with the topic of monogenism during the 1950s was clearly articulated by the Dubarle brothers, André-Marie and Dominique Dubarle, both French Dominicans. André-Marie published his first book on original sin in 1958; during Vatican II he would thoroughly revise it for an American edition in which he contributed to the new perspectives of the early 1960s (A.-M. Dubarle 1964). In 1957, Dominique Dubarle acknowledged that with respect to monogenism, “We therefore find ourselves, for the moment, in the presence of a certain tension between the more or less spontaneous intellectual tendency among certain believers and a determination maintained by theologians, with the sanction of the magisterium authority, in a matter of faith” (D. Dubarle 1957, 89). Dubarle advised that the “psychological difficulty” of this tension should be accepted as part of an active spiritual life; adherence to monogenism as a point of faith did not rule out hope that scientific and theological progress would eventually clarify the situation.

While Dominique Dubarle included in his discussion a conventional summary of the Catholic doctrine of the divine introduction of human souls, Rahner was at that time proposing a more innovative account of hominization. In his *Das Problem der Hominisation*, Rahner concentrated on how the human soul might originate without miraculous divine intervention. In his references to “Adam” and the “first man” he seemed to tacitly assume monogenism, although he did not make this explicit, and he affirmed that the biblical account is silent about how humanity originated, informing us only that it received a unique spiritual status. With respect to evolutionary theory in general, Rahner wrote that he detected a new consensus forming “behind the facade of printed theology” (Rahner 1965, 29). Furthermore, “the change of view has taken place more rapidly in the oral teaching of lectures (which are much more numerous and livelier than printed textbooks), than in printed books, which are few and always voice the views of only a small number of theologians” (Rahner 1965, 30). Nevertheless, in his 1962 article on monogenism for the *Lexicon für Theologie und Kirche*, Rahner reaffirmed the conservative position that polygenism cannot be scientifically proven and that “On theological grounds, monogenism must be maintained in any case” (Rahner 1962, col 562). So it certainly was not Rahner’s position on polygenism that resulted in the warning he received in 1962 that he would need to submit future writing to a preliminary Roman censorship. His views on ensoulment, Mariology, and concelebration of the Eucharist were more likely to have been in question. Later that year Pope John XXIII appointed him *peritus* for Vatican II and the threat of censorship was lifted in 1963 (Vorgrimler 1986, 92–93). Rahner’s acceptance of polygenism later in the 1960s would contribute to the new theological climate of that period.

The death of Teilhard de Chardin on the evening of Easter Sunday in 1955 was followed by a new phase in the impact of his work. Collections of his writings now were systematically published in response to extensive interest in his legacy. The Jesuit Edouard Boné was one of a new generation of Catholic paleontologists who explicitly drew inspiration from Teilhard’s example. In the year of Teilhard’s death, Boné began a prestigious career as a paleontologist and theologian at the University of Louvain. He wrote

an assessment of the Piltdown fraud shortly after it was revealed (Boné 1955), and his celebration of Teilhard's life appeared in the *Revue des questions scientifiques* (Boné 1956). Boné was fulsome in his praise for Teilhard's scientific work and his efforts to achieve a philosophical and theological synthesis with Christianity; he did not mention the strained relationship Teilhard had endured with his religious superiors. During 1959 Boné completed a review of the polygenism issue in which he wrote from a scientific perspective and did not introduce theological issues (Boné 1960). He accurately noted that, while nineteenth century debate had concentrated on the question of human races arising from one or multiple ancestral human lineages, twentieth century theologians had shifted attention to the alleged origin through a single couple. In addition to Teilhard, Boné credited Henri Vallois for appropriately using the terminology of monophyletism and polyphyletism to analyze the nineteenth century issue of the unity of the human race. Boné retained this usage and reserved the distinction between monogenism and polygenism for discussion of whether human origins took place within a population or by means of a single couple. He then compared two approaches to speciation, either rapidly due to a crucial mutation, or more slowly through the gradual fixation of multiple mutations subject to natural selection. In neither case is monogenism at all scientifically probable. In this respect, Boné cited Teilhard and the Bouyssonie brothers approvingly, as well as geneticists who were accomplishing the neo-Darwinian synthesis: George Gaylord Simpson, Ronald Fisher, Sewall Wright, and J.B.S. Haldane. The scientific arguments against monogenism had become far too strong to simply ignore or dismiss as uncertain. Boné returned to the issue in 1962, again quoting Teilhard extensively and using him and Robert de Sinéty as support for the conclusion that monogenesis had no standing from a purely scientific perspective (Boné 1962). There was no scientific reason to doubt that humanity had the same type of polygenetic origin as other animal species and the best available theory of speciation included a slow process of mutation and natural selection, the population genetics of Neo-Darwinism. Boné acknowledged that the theory still had its detractors, but it was the best

one available and any forthcoming objections to polygenism could only be expected from theological quarters.

Conservative theological voices were of course still in evidence. When the American Jesuit Cyril Vollert contributed an essay on Genesis and evolution to a symposium held at Duquesne in 1959, his reading of *Humani generis* was that it decidedly ruled out polygenism, albeit not because of direct scriptural revelation, but because of the doctrine of original sin enshrined in tradition.

Pius XII states that polygenism is incompatible with the dogma of original sin. The supposition of a collective Adam is untenable because it is out of joint with what the sources of revelation and the acts of the magisterium of the Church proclaim about original sin, which stems from a sin truly committed by an individual person, Adam. This declaration of the Holy Father decides the question and closes discussions, formerly engaged in by some theologians, on the reconciliation of the polygenist hypothesis with faith (Vollert 1959, 116).

Jean de Fraïne drew more nuanced conclusions similar to those of Rahner. Although at Trent the bodily transmission of original sin from Adam was not declared doctrine, it certainly was presumed. “If we deny theological monogenesis, the transmission of original sin is in danger of being denied too. Therefore we consider the denial of the descent of mankind from one single couple as at least temerarious” (De Fraïne 1962, 74). Nevertheless, de Fraïne concluded that Pius XII’s stance against polygenism was not irrevocable and he expected further theological investigation of the issue.

Meanwhile, on June 30 of 1962, just prior to the opening session of Vatican II, the Congregation of the Holy Office issued a “Monitum” concerning Teilhard de Chardin. This admonition asserted that Teilhard’s writings “abound in such ambiguities and indeed even serious errors, as to offend Catholic doctrine. For this reason, the most eminent and most revered Fathers of the Holy Office exhort all Ordinaries as well as the superiors of Religious institutes, rectors of seminaries and presidents of universities, effectively to protect the minds, particularly of the youth, against the dangers presented by the works of Fr. Teilhard de Chardin and of his followers” (Congregation of the Holy Office 1962). No specific doctrines or followers

were mentioned. Publication of Teilhard's collected works, including his discussions of original sin, continued amid a high demand indicative of the disparity between the closed perspective typical of the Roman Curia and the more receptive mentality of many working theologians on the eve of Vatican II.

Although the council would not result in any new doctrinal definitions, this was not a foregone conclusion in 1959 when John XXIII announced his intention to convoke it. Only after extensive debate and negotiation would the Council Fathers decide to reaffirm general principles for the sources of revelation rather than define new doctrines of original sin, for example. Trent had of course left a legacy bearing upon both of these topics. In addition to its canons on original sin, it had decreed that the truths of the gospel are preserved in written books *and* in unwritten tradition. It was well known that this formulation replaced an earlier proposal using the wording "*partly* in written books and *partly* in unwritten tradition," a formula that some parties found objectionable because it implied that scripture and tradition each was incomplete and only partly conveyed the truths of the gospel (Schelkens 2010, 85). Josef Geiselman had revived this issue during the 1950s and Stanislaus Lyonnet further complicated the situation by pointedly arguing that the Tridentine contributions to original sin doctrine were not supported by scripture.⁸ Given the complexity of this context, it is not surprising that the composition of the council's Dogmatic Constitution on Divine Revelation became contentious.

During 1960 and 1961, the Preparatory Theological Commission, headed by Cardinal Alfredo Ottaviani, Secretary of the Holy Office, drafted several initial schemata concerning the sources of doctrine and its preservation. Among these schemata, *De fontibus revelationis* (On the Sources of Revelation), especially emphasized a broadly understood concept of tradition as a more extensive source of revelation than scripture (Baum 1967; Schelkens 2010). Another schema, *De deposito fidei pure custodiendo* (Defending Intact the Deposit of Faith), included specific material pertaining to original sin,

⁸ See, for example, Geiselman 1958 and Lyonnet 1955 and 1956.

particularly in its Chapter VIII, “Original Sin in the Children of Adam.” As might be expected from a commission predisposed to emphasize tradition more than scriptural exegesis, the wording of *Humani generis* was expanded in *De deposito fidei* to include the assertion that acceptance of polygenism would be to “contradict Catholic doctrine.”⁹ During 1962 the preliminary schemata were pre-circulated to the Fathers of the Council who in many cases sought commentary from theologians before submitting their assessments to the Papal Secretary of State, Amleto Cicognani. For example, critiques of *De deposito fidei* were provided by Karl Rahner for Cardinal Franz König, Joseph Ratzinger for Cardinal Joseph Frings, and Pieter Mulders for Archbishop Giuseppe Beltrami. These responses were generally very critical. The document was considered too reminiscent of the “syllabus of errors” approach to doctrinal uniformity. It condemned positions still under debate among Catholic theologians and had the negative tone of an admonition from the Holy Office rather than the celebratory affirmation of Catholicism called for by John XXIII. Ratzinger, for example, concluded that *De deposito fidei* was “in no way suitable but is so faulty that as it stands it cannot be proposed to the Council” (Wicks 2008, 267). During the first session of Vatican II, *De deposito fidei* was not considered worthy of discussion and was never put to a vote; the topics of evolution, monogenism, and original sin would not be addressed in detail in any conciliar documents.¹⁰

⁹ An English translation of the schema *De deposito fidei pure custodiendo* has been provided by Joseph Komonchak. One passage of Chapter VIII pertained directly to monogenism: “The sacred Synod, therefore, rejects the views of those who assert either that after Adam there have been here on earth true men who did not derive by natural generation from that one first parent or that Adam represents some multitude of first parents; such views contradict Catholic doctrine. For it is not at all apparent how such views are compatible with what the sources of revealed truth and the acts of the Church’s Magisterium present about original sin, which proceeds from the sin truly committed by the one Adam and which is transmitted to all by generation, and which is in each person as his own.” <https://jakomonchak.files.wordpress.com/2012/09/defending-the-deposit-of-faith.pdf>. Jared Wicks attributes the editorial composition of the document to Luigi Ciappi (Wicks 2018, 53).

¹⁰ For full citations to brief references to Adam or original sin in the relevant documents, see Vandervelde 1981, 46–47. For example, *Gaudium et Spes* included an allusion to Saint Paul’s oft-cited correlation: “For Adam, the first man, was a figure of Him Who was to come, namely Christ the Lord” (*Gaudium et Spes*, ¶ 22). For the procedural history of *De deposito fidei* and *De fontibus revelationis*, see Wicks 2001, Wicks 2018, and Schelkens 2010.

Based upon similar widespread dissatisfaction and lengthy debate, the more foundational schema *De fontibus revelationis* was removed from the council's agenda through an intervention by John XXIII and a reconstituted committee was assigned to rewrite it. Ultimately, on November 18th of 1965, Pope Paul VI approved the final version of Vatican II's *Dei Verbum*, the Dogmatic Constitution on Divine Revelation. Although the fraught relationship between scripture and tradition was not resolved, *Dei Verbum* did not include the preference given to tradition in *De deposito fidei* and it encouraged exegetes to apply modern analytic techniques to scripture.

To search out the intention of the sacred writers, attention should be given, among other things, to "literary forms." For truth is set forth and expressed differently in texts which are variously historical, prophetic, poetic, or of other forms of discourse. The interpreter must investigate what meaning the sacred writer intended to express and actually expressed in particular circumstances by using contemporary literary forms in accordance with the situation of his own time and culture (Paul VI 1965).

The import of *Dei Verbum*, and Vatican II more generally, for the issue of monogenism thus was important but muted. The effort by representatives of the Holy Office to have polygenesis declared contradictory to Catholic faith was forestalled and historically based scriptural exegesis was encouraged. On the other hand, theological discussion of original sin had in practice already shifted focus from biblical sources to the implications of tradition; *Dei Verbum* offered little guidance for this endeavor. As John Thiel has recently argued, "*Dei Verbum*'s clear teaching on the legitimate role of historical criticism in the interpretation of Scripture provides the proper precedent for addressing the role of historical criticism in the interpretation of tradition" (Thiel 2020, 231). Edward Yarnold had already clearly expressed this point in 1971. "It has rightly been pointed out that it is inconsistent to reject fundamentalism in the exegesis of the Bible while insisting on a fundamentalist interpretation of the Church's definitions of dogma. The same interpretive techniques apply in both areas" (Yarnold 1971, 88). In the specific case of original sin, elucidation of the distinction between the substance of doctrine

and its historical formulation through a particular means of expression was pursued with new enthusiasm during the years immediately after the Council. The abandoned schema *De deposito fidei* would be one of the last efforts by members of the Roman Curia to invoke tradition to insist that polygenism be excluded from Catholic doctrine. The contrast between the generally positive outlook of *Dei Verbum* and the prohibitive strictures that had been proposed in *De deposito fidei* indicates that a crucial turning point had been reached and that concern for the preservation of monogenism as at least theologically certain had decidedly waned.

4. Post-Vatican II Developments of the 1960s

During the Vatican II years, and throughout the 1960s, publications on the topics of original sin and polygenism increased exponentially. The elimination of the *Index of Prohibited Books* in 1966 was symptomatic of the fact that the Holy See was no longer capable of efficiently monitoring the sheer volume of modern publications. At the end of 1965 Paul VI also reconfigured the Sacred Congregation of the Holy Office as the Sacred Congregation for the Doctrine of the Faith (CDF). The pope himself became the Prefect of the CDF with Alfredo Ottaviani, the former Secretary of the Holy Office, now serving as CDF Pro-Prefect. In 1968 Paul VI withdrew from the CDF, Ottaviani resigned, and Franjo Šeper became Prefect until 1981. During the two decades after Vatican II Ottaviani and Šeper thus were the two most influential members of the Roman Curia with respect to determination of doctrinal orthodoxy. Two generalizations characterize developments during this period. Theological discourse featured novel presentations of original sin that either pushed monogenism to the periphery as irrelevant or explicitly incorporated polygenism. Secondly, the CDF did not raise objections to polygenism even though, on a straightforward reading of *Humani generis*, it should not have been acceptable.

Terminology had finally stabilized by this point and polygenism was rarely confused with polyphyletism, the racial polygenism of the nineteenth century. For example, Pieter Smulders articulated this distinction in a re-

freshly clear analysis, initially written in 1963 (Smulders 1967). He also argued that the essential doctrine of original sin does not necessarily include monogenism, even though this is the narrative form in which the doctrine has traditionally been presented. The methodology of Neo-Darwinism obviously relies upon polygenism, but, as had been pointed out by so many others, Smulders agreed that empirical evidence alone could not absolutely rule out monogenism, the longstanding preference of the magisterium.

While Smulders' point was commonplace among conservative theologians, more innovative thinkers took the theology of the 1960s in directions where a defense of monogenism rarely arose. In his historical analysis of this period, George Vandervelde used the terms "situationalist" and "personalist" to refer to two general approaches (Vandervelde 1981). Largely inspired by the Dutch Jesuit Piet Schoonenberg, the situationalist school included variations later developed by Karl Rahner, Karl-Heinz Weger and André-Marie Dubarle, among others. Influential personalists included Alfred Vanneste and Urs Baumann. In addition to taking a Christocentric orientation, these theologians shifted emphasis to *peccatum originale originatum*, the present reality of the fallen human condition, as opposed to *peccatum originale originans*, the origin or cause of this condition.¹¹ Using this scholastic distinction introduced by Augustine, the discussion of monogenism and polygenism pertains primarily to original sin *originans* and only indirectly to original sin *originatum*. In both the situationalist and the personalist approaches, monogenism was not so much refuted as it was ignored as a scientific issue irrelevant to the discussion of *peccatum originale originatum*. As is frequently the case in the history of philosophy, some unresolved questions are simply left behind by a change in focus, a change in the topic of conversation.¹² Some

¹¹ This distinction is generally preserved linguistically in English, French, and Italian by expressing *peccatum originale originans* as originating original sin, péché originel originant and peccato originale originante respectively. Similarly, *peccatum originale originatum* becomes originated original sin, péché originel originé, and peccato originale originato. In German, the distinction is sometimes expressed by using Ursünde for *peccatum originale originans* and Erbsünde for *peccatum originale originatum*. See Gutwender 1967, 433.

¹² See McMahon 2002b, 202.

details of this process are worth consideration as an important transitional phase in the disengagement from monogenism.

Piet Schoonenberg provided pivotal inspiration for the situationist school of thought in which original sin is understood as a collective state of sin, the “sin of the world.” Here Schoonenberg adopted the phrase used by John the Baptist in John 1:29, “Behold, the Lamb of God, who takes away the sin of the world,” emphasizing that John referred to the sin of the world, not the sin of Adam. He characterized original sin as the “being in situation” (*Situiertsein*) of each person within a spiritually hostile environment. Recognizing that traditional theological discussion of original sin had concentrated on the sin of Adam, Schoonenberg set out to refocus attention on the present human condition, as in his only direct allusion to monogenism in his 1962 essay.

Did the first sin of humanity also change our human nature biologically? If so, it still also embodied our situation for the “death of the soul.” If not, it is merely the terrible beginning of the dominance of sin which clearly expresses itself in the personal sinning of each person. The answer to this question, which also is closely tied to the question as to whether monogenism is postulated by the Church’s doctrine of original sin, still appears unclear to us (Schoonenberg 1962, 68–69).

Schoonenberg considered the origin of the sin of the world, and the issue of monogenism in particular, to be relatively unimportant and he gave much more attention to an analysis of the consequences of sin, the debased state of humanity in need of redemption. Schoonenberg’s ideas became widely accessible through his 1965 book *Man and Sin*; after discussing at some length his conception of the sin of the world, he analyzed the history of the magisterium’s teachings on original sin.

An influence of more than one ancestor – that is, polygenism – is not envisaged by the Fathers of Trent. But since they did not intend to say more than that the unity of original sin consists only in its origin, they do not propose as an article of faith the image which they held of that origin. ... We do not find in Trent any direct reason for making monogenism a doctrine of faith (Schoonenberg 1965, 175).

Schoonenberg admitted that the most difficult issue for his approach is the origin of the sinful situation. Instead of using the scholastic terminology of *peccatum originans* and *peccatum originatum*, he simply asked “Does that origin lie in ‘Adam’ or in ‘the world’? Should Adam perhaps be equated with ‘the world’; that is, with sinful humanity?” (Schoonenberg 1965, 187). Here it was crucial to separate the issue of monogenism from the central core of original sin doctrine, or, as Schoonenberg put this point, “the theological question can only be whether that descent from one couple of first parents is or is not contained in the dogma of original sin. If this is not the case, the question whether we descend from one couple matters only (if at all) for biology or paleontology” (Schoonenberg 1965, 188). Schoonenberg’s interpretation of *Humani generis* was that although polygenism has not been shown to be compatible with the traditional theology of original sin, investigation of this issue might eventually resolve it. Granting the universal effect of original sin, “from this point of view there is no need to admit one sinning couple of first parents – or, to put it positively, on this last point, too, there is not any difference between original sin and the sin of the world” (Schoonenberg 1965, 190–191).

Critics such as Anthony Padovano found shortcomings in Schoonenberg’s account, but not solely due to a failure to require monogenism. In analyzing the Tridentine formulation of the unity of original sin, Padovano commented:

Original sin is “one by origin.” This phrase militates less against the possibility of polygenism than it does against Schoonenberg’s quasi-identification of original sin with sin of the world. The latter theory seems too diverse and too gradual to assign unity of origin with any real meaning. The progressive, non-universal sinfulness of our history before Christ, which Schoonenberg depicts, seems to contradict “one by origin” (Padovano 1967, 114).

This criticism raised the most obvious problem for Schoonenberg. While the sin of the world may be a valuable description of *peccatum originatum*, it is problematic to also equate it with *peccatum originans*.

We must acknowledge the uniqueness of original sin. I would find it, therefore, difficult to equate original sin with “sin of the world.” The latter may be a result of the former; the latter may have a much closer relationship to the former than we realized; the latter and the former are, however, distinct from each other (Padovano 1967, 120).

Acceptance of Schoonenberg’s approach was generally correlated with the degree to which monogenism and *peccatum originans* were not considered to be central issues to original sin theology. Supporters such as Karl-Heinz Weger and André-Marie Dubarle were primarily interested in advancing the idea of original sin as the “sin of the world.”

We see original sin now as a truly tragic and actual situation: no longer merely the loss of wonderful gifts at a great remove from our day and condition, but the moral and religious perversion in which every man finds himself inevitably plunged by reason of his birth into a perverted environment: ignorant of God, or idolatry and a more or less profound corruption (A.- M. Dubarle 1964, 244).

While situationalists did not emphasize direct confrontation with the scriptural narrative of the origin of sin, Alfred Vanneste inspired a more radical personalist school of thought by insisting that genuine sin must always be a freely chosen individual act. For Vanneste, the terminology of original “sin” is simply a conceptual proxy for the universality of both personal sin and the need for redemption. In short, “Original sin is the need of every man for redemption by Christ” (Vanneste 1967, 209). From this perspective, the mythological embellishments relied upon in scripture have lost their utility.

First, our aim is to free the theology of original sin from the insurmountable difficulties of the traditional historical framework. How many hypotheses have tried to explain how a sin can be inherited! Nor should the explanation of original sin be tied to some other scientific or pseudo-scientific theory – monogenism, polygenism, even evolution. Original sin is concerned only with salvation history (Vanneste 1967, 213).

As had Schoonenberg, Vanneste swept aside concerns about monogenism as irrelevant. “It is our opinion that the *peccatum originale originans* has only a symbolical significance left” (Vanneste 1975, 180).

From a less iconoclastic perspective, Zoltán Alszeghy and Maurice Flick, Jesuits at the Gregorian University in Rome, co-authored two influential publications that were widely discussed in the literature of this period (Alszeghy and Flick, 1965 and 1966). They accepted biological polygenism in the sense that Adam and Eve would have descended from human pre-Adamites and lived within a large human population of co-Adamites.¹³ They also proposed, as had Blandino, what they considered to be a more important theological monogenism. That is, Adam and Eve were postulated to be the first humans to reach a stage of psychological development appropriate for the reception of sanctifying grace and prerequisite for moral judgment and potential sin. However, unlike Blandino, Alszeghy and Flick did not accept the necessity of the doctrine that the effects of Adam’s sin always propagate through physical procreation. Instead, they considered the initial solidarity and unity of humanity to be such that all members would be affected by Adam acting as their “corporate personality,” a concept they appropriated from H. Wheeler Robinson (Alszeghy and Flick 1966, 223–224). Although James Mackey tried to discredit corporate personality as a simplistic reification, and John Rogerson criticized Robinson’s reliance upon questionable anthropology (Mackey 1967, 111–114; Rogerson 1970), the idea did gain some traction among theologians interested in combining biological polygenism with theological monogenism (Yarnold 1971, 36).

At the invitation of Paul VI, concentrated discussion of these issues took place during a July 1966 symposium on the mystery of original sin. Under the direction of Edouard Dhanis, the thirteen participants included Alszeghy, Flick, and Rahner, as well as Marie-Michel Labourdette and Charles Moeller, the Secretary of the CDF. Alszeghy and Flick had just published a digest of their polygenism hypothesis in the *Civiltà Cattolica*, so it must have been familiar to both the pope and the symposium participants (A.-M. Dubarle

¹³ In an earlier paper, Flick had explicitly rejected polygenism as “impossible” to reconcile with the dogma of original sin (Flick 1947, 557).

1966). In his opening address, Paul VI placed the topic in historical context and acknowledged the relevance of recent scientific progress. However, he also upheld a prohibition on polygenism if it precludes attribution of the first sin to the individual Adam.

It is evident, therefore, that the explanations which some modern authors give of original sin will seem to you irreconcilable with Catholic doctrine. For these authors start with the presupposition of *polygenesis*, which has not been demonstrated. They deny, more or less clearly, that the sin committed at the very dawn of history and which originated such an avalanche of evils in mankind, was first of all the disobedience of Adam, the “first man” and figure of him who was to come. . . . Consequently, such explanations are not in accord with the teachings of Sacred Scripture, of Sacred Tradition and of the Magisterium of the Church (Paul VI 1966, 81).

It is not clear whether the pope had Alszeghy and Flick in mind when he referred to “some modern authors.” They did attribute the first sin to Adam although by accepting biological polygenism they did not posit him as the “first man.”

In a commentary on the pope’s speech, Robert Rouquette noted that subtle changes had been made for the published version. The initial press release description of the status of polygenism was that it is “anything but firmly demonstrated;” the *Osservatore Romano* publication read simply that it “has not been demonstrated.” The press release version also ascribed original sin to “a single first man, Adam, progenitor of the entire human race,” while the published version referred to “Adam, the ‘first man’ and figure of him who was to come” (Rouquette 1966, 382). Rouquette surmised that the changes in wording indicated that there was still uncertainty on how the doctrine should be understood and that the pope had not ruled out research on the topic. As Rouquette cautiously remarked, “We restrict ourselves to confirming that, between the first and second version of his discourse, Paul VI mitigated the affirmation of the unicity of Adam, and, in the definitive edition, the qualifier of first man applied to Adam is placed in quotation marks” (Rouquette 1966, 388). For Rouquette himself, the tension

between personal responsibility and the idea of inherited guilt made the entire topic of original sin problematic.

Karl Rahner was not deterred by the pope's introductory warning and in fact used the ensuing symposium as the occasion to report that he had changed his mind and no longer considered polygenism to be theologically objectionable. He summarized his new perspective in a 1967 essay and expanded it for a 1970 publication in which he commented that Paul VI's speech had not prevented the symposium participants from considering polygenism compatible with original sin doctrine. As he wrote in December of 1967:

The question of polygenism within Catholic theology may with all due respect for the interpretation of *Humani Generis* be treated as still open. There is certainly no dogma of monogenism. Cautious theological reflection enables us to show today that Trent's dogma of original sin does not exclude polygenism. The two can coexist. On this point I have reappraised my own earlier view (Rahner 1967a, xii).

Rahner presented his new position as a thesis to be defended.

In the present state of theology and natural science, it cannot be demonstrated with certainty that polygenism is incompatible with the orthodox doctrine of original sin. Therefore, it is preferable and more prudent that the magisterium refrain from censuring polygenism (Rahner 1970, 185).

Rahner explained that he used a negative formulation because polygenism is a scientific hypothesis that cannot be deduced theologically. He offered two polygenetic hypotheses as legitimate settings for the occurrence of original sin. One possibility was that a single individual sinned and thereby blocked "the grace-transmitting function" of the entire human population. This was essentially the process he had hypothetically discussed in 1954 and then discarded as incompatible with the teachings of Trent unless the propagation of sin transpires in a manner other than through physical descent, a possibility he now accepted. Rahner also suggested another

option that would involve a collective sin so that Adam represents “the concrete expression used for that one group,” the population that caused “the consequences which traditional teaching attaches to this sin” (Rahner 1967b, 71). By introducing these two versions of polygenism as theologically legitimate, Rahner unapologetically departed from the strictures of *Humani generis*. In 1969 he reiterated that “in spite of *Humani Generis*, some form of polygenism may be prudently maintained” and that “it does not matter whether ‘Adam’ was an individual or a word for *humanitas originans*. It does not matter whether the sin which set up a situation of blight from the beginning was committed by an individual or by many among this *humanitas originans*. It follows that monogenism is not a necessary element of the dogma of original sin” (Rahner 1969, 107). Rahner abandoned his earlier indirect argument in support of monogenism by accepting that universal redemption through Christ requires only the biological and historical unity of the human race and does not require the additional restraint of monogenism (Rahner 1967b, 66–67; 1970, 196–199). The presence of Charles Moeller of the CDF at the 1966 symposium where Rahner initially presented these ideas should not be overlooked. In light of the unsuccessful effort to place a stricture on polygenism through the Vatican II preliminary schema *De deposito fidei*, the fact that no proceedings were initiated against either Rahner or Alszeghy and Flick is a confirmation that a turning point had been reached.

1967 was also a noteworthy year due to publications by Francisco José Ayala and René Lavocat as well as new contributions from Blandino and Henri Rondet. Ayala had been ordained a Dominican priest in 1960, although he immediately reached an agreement with his order that he would leave the priesthood five years later. During that interval he studied genetics at Columbia University and received his doctorate in 1964 under the supervision of Theodosius Dobzhansky, author of the 1962 volume *Mankind Evolving*. As a research geneticist, Ayala followed Dobzhansky in rejecting Carleton Stevens Coon’s polyphyletic speculations and found the idea of monogenism simply untenable.

That all living men are derived from a single evolutionary line of development, what is called monophyletism, is strongly supported by the available evidence and the understanding of evolutionary processes. Most evolutionists reject the opinion that the developments leading from non-human ancestors to the races of modern man occurred independently in several lines of descent. If monophyletism is strongly supported by the evidence from the natural sciences, monogenism certainly is not (Ayala 1967, 14).

Ayala warned that theologians such as John O'Rourke (O'Rourke 1965) were inadequately informed about the consensus among geneticists concerning polygenism and that "from the point of view of the natural sciences only polygenism makes sense. Evolution does not happen in individuals, but in populations." Furthermore, "There is no known mechanism by which the human species might have arisen by a single step in one or two individuals only, from whom the rest of mankind would have descended" (Ayala 1967, 15). Ayala concluded that Catholic theologians are confronted by a difficult dilemma.

I can see only two possible alternate solutions for the Catholic theologian. One, to find an explanation which would make polygenism compatible with the doctrine of original sin – an explanation that, according to Pius XII, does not appear likely to be forthcoming. Two, to bring additional theological hypotheses in support of monogenism. Such hypotheses are not available from, and are consistently opposed by, the natural sciences (Ayala 1967, 16).

Although Ayala did not venture a theological solution of his own, he commended theologians who attempted what Pius XII declared difficult, the adjustment of original sin doctrine to allow polygenism, the approach Ayala clearly preferred.¹⁴ Among those Ayala mentioned was Robert North who noted that polygenism had become such an integral aspect of evolutionary science that there was no scientific reason to expect any radically different process for the transition to *Homo sapiens*. North was a strong advocate of

¹⁴ Ayala cited Marie-Michel Labourdette, Robert North, André-Marie Dubarle, Piet Schoonenberg, Piet Smulders, and Robert Francoeur.

Teilhard's ideas and credited him for helping to shift theological attention away from skepticism about polygenism to a more fundamental reconsideration of original sin doctrine (North 1963). Furthermore, the theological status of monogenism was unclear. "Is it a truth of revelation? Is it a fact of partially human knowledge, yet genuinely certain and therefore of itself unalterable? Is it a reformable decree of authority? No one can claim a consensus of experts for his answer today" (North 1967, 57).

Abbé René Lavocat was sympathetic to North's assessment. As Director of the Laboratoire de Paléontologie des Vertébrés at the Ecole Pratique des Hautes Etudes in Montpellier, he agreed with the scientific consensus that human origins took place through gradual genetic changes in a population and not due to an "exceptional mutation" in one or two individuals (Lavocat 1967a, 584). Lavocat speculated that human ensoulment could have happened as long ago as *Homo habilis* and he shared the view of Blandino, Alszeghy, and Flick that ensoulment preceded the gradual development of the moral consciousness prerequisite for sin. He also interpreted *Humani generis* as an invitation to investigate how polygenism might be compatible with innovative theological understanding of original sin. Perhaps Adam was the conduit through which God granted humanity an elevated state of grace, a status Adam initially conveyed to all members of his species. The effect of Adam's sin might then be a termination of this condition throughout the species. This disastrous spiritual effect would subsequently be shared by all humans but would not need to be transmitted through physical propagation (*per generationem*), that is, it would not necessarily take place through direct physical descent. As had Alszeghy and Flick, Lavocat combined biological polygenism with *monoculpisme*, assignment of responsibility for the initial sin to a single individual (Lavocat 1967a, 593).

Schoonenberg's conception of original sin as "the sin of the world" had a significant impact on Giovanni Blandino. Although in 1962 he had relied upon the role of an historical Adam, upon further consideration, his calculation of the time required for Adam to become an ancestor of all surviving human lineages now struck him as having an "artificial rigor," and to have God choose to sanctify only Adam's descendants seemed too

arbitrary (Blandino 1977b, 74). In 1967 he took a very different approach.¹⁵ He now characterized the Catholic doctrine of original sin as the assertion that all humans are born in a physical and spiritual state of “dying” caused by personal sin. From Blandino’s new perspective, “the originating original sin would not only consist of the sin of the first man, but also the sins of all other men” (Blandino 1977b, 62), or, as he later expressed this point more fully, “the originating original sin would be constituted, *in the first place and in an emblematic way*, by the first grave sin (that with which sin entered into the world), but it would *also* be constituted, *and not any less*, by the sins of all the other men” (Blandino 1989, 161). Blandino conceded that this interpretation was contrary to the constraint Paul VI had urged in his 1966 speech but he nevertheless denied that the deposit of the faith includes “the uniqueness of the originating original sin” (Blandino 1977b, 60; 1989, 159). This starting point allowed him to deny that revealed doctrine includes attribution of original sin to the single sin of Adam and the transmission of the effects of that sin to all humans through physical descent. Rather, “the sin which caused the ruin of man was not the sin of a single man, but *the sins of all men in general* (Blandino 1977b, 65; 1989, 164). Understanding original sin from this perspective “requires neither monogenism nor polygenism, but follows as equally valid in any form of natural evolution” (Blandino 1977b, 70; 1989, 169). For scientific reasons, Blandino clearly preferred the polygenism option; he denied that monogenism was revealed doctrine but he also was careful to include a caveat that he could be in error (Blandino 1977c, 90). To his critics, Blandino’s emphasis on God’s foreknowledge of the inevitability of human sin overshadowed his articulation of the sin of the world. André-Marie Dubarle found that aspect of his presentation excessively “artificial” (A.-M. Dubarle 1969, 102).

¹⁵ Originally published as a short pamphlet (Blandino 1967), his 1967 essay was included in a later collection (Blandino 1977a) and partially incorporated into a 1989 English version (Blandino 1989). Blandino acknowledged the merit of Schoonenberg’s “sin of the world” approach but added that “the sin of the world has influenced the very structure of human nature. And the sin of the world which has influenced a given man is not constituted by the sins *of the others* (of the surrounding environment), but is constituted by all the sins of humanity and *also and above all* by the sins of that same man” (Blandino 1989, 172).

That Rahner, Lavocat, and Blandino were not unusual in their disengagement from monogenism was thoroughly demonstrated in James Connor's 1968 survey article. He agreed with many other commentators that the Council of Trent had not directly addressed the choice between monogenism and polygenism. The point of emphasis at Trent was that all humans acquired the effects of original sin through *propagatione* from the initial perpetrators, traditionally referred to as Adam and Eve; this literary expression of monogenism was simply assumed without supportive argument and was never intended to be taught as doctrine. After noting how Rahner had withdrawn his earlier argument that monogenism is theologically certain, Connor gave detailed attention to the work of Alszeghy, Flick, Schoonenberg, Rondet, and Vanneste, as well as Pierre Grelot, Ansfridus Hulsbosch, and Engelbert Gutwenger. For example, Grelot proposed a "mitigated polygenism" in which, even if Adam and Eve are assumed to have initiated sin, they would have done so within a tightly integrated population in which the effects of sin were realized. Connor's sympathetic conclusion was that:

there has been a progressive change of focus in the doctrine of original sin from man's solidarity in sin with Adam to the human condition as not-yet-in-Christ. To be in "original sin" is simply to be outside of Christ prior to the possibility of free personal decision for or against Christ (Connor 1968, 238–239).

During the 1940s, Henri Rondet had foreseen and encouraged this reorientation of original sin theology (Hofmann 2020b, 127–128). In the immediate aftermath of *Humani generis*, he had been removed from his position as Prefect of Studies at the Lyon-Fourvière Jesuit house. Allowed to return to teaching at the end of the 1950s, he once again wrote extensively on original sin after Vatican II, using an approach quite similar to Blandino's. Praising the Bouyssonie brothers as "far-seeing theologians" due to the questions they had broached in 1935 (Hofmann 2020b, 123–124), Rondet offered his own "working hypothesis."

Without denying that chronologically there may have been a first man, without raising any question on the subject of monogenism or polygenism, the thesis

affirms, from the start, that *Adam is Man*, mankind taken as a whole, which, in a second dialectical epoch, appears in the sight of God as separated by sin from this Christ whose role will be to make it one with him (Rondet 1967, 313; 1972, 263–264).

This *Adam is Man* perspective required theologians to transcend the linear human chronology explored by scientific research. “Original sin in us has as its cause an actual, but collective, sin, formed by the sum of the personal sins of men of all times” (Rondet 1967, 321; 1972, 270–271). Connor welcomed these innovations as a collective indication that theologians were approaching a new basis for consensus.

Finally, all must agree that it is most gratifying to read theologians of such stature who, with their characteristic scholarly humility, have attempted in their tentative hypotheses to free the doctrine of original sin from a structure which had proven too narrow to embrace the fundamental Christian doctrine of sinful man’s need for salvation in Christ (Connor 1968, 240).

With publications reliant upon polygenism becoming so extensive, it is remarkable that during this period they did not generate any high-profile cases of intervention by the Holy Office or the CDF. In a 1968 lecture, Rahner was confident that:

we may surely say that the development of Catholic theology since ‘*Humani Generis*’ has made such advances (advances that have been tolerated by the Church’s *magisterium*) that the opinion that polygenism is not irreconcilable with the doctrine of original sin is no longer exposed to the danger of being censured by the authorities of the Church (Rahner 1974, 252).

The secrecy maintained for Congregation proceedings of course means that archival research may eventually reveal cases where pressure was privately brought to bear upon polygenist authors during the 1960s just as had been the case for Teilhard during the 1920s. However, it is safe to tentatively conclude that this did not happen, especially since polygenism was not the point at issue when the Holy Office or the CDF did raise issues about original sin doctrine. For example, in 1961 the French Jesuit Stanislaus Lyonnet was

temporarily suspended from his position at the Pontifical Biblical Institute in Rome where he had taught since 1943. As part of his widely cited research into Paul's letters to the Romans, Lyonnet had published a 1956 article in which he sought to explicate the nature of sin between the time of Adam and that of Moses, a period in which neither the initial justice of Eden nor the law of Moses was in effect (Lyonnet 1956). There obviously was sin and death throughout this period and Lyonnet's paraphrase of Paul's text was that, although death entered the world due to Adam's sin, it also perdures because all men sin. The topic of polygenism never arose in the article in question and could not have initiated the decision to suspend Lyonnet. Based upon his study of this case, Brian Harrison concluded that the Holy Office apparently thought that, in his interpretation of Paul, Lyonnet gave too much weight to the effect of personal sin (Harrison 2012, 4). Toleration of polygenism clearly had become commonplace in the midst of concern about other innovations in original sin doctrine; this adjustment was especially striking during the CDF's response to *A New Catechism* and the proceedings enacted against the biblical scholar Herbert Haag.

5. The Supplement to A New Catechism and the Investigation of Herbert Haag

Two 1966 publications involving original sin provoked aggressive reactions by the CDF. The first was *De Nieuwe Katechismus (A New Catechism)*, issued on behalf of the Bishops of the Netherlands and due largely to the efforts of Piet Schoonenberg and the Dominican theologian Edward Schillebeeckx. The other was a short volume by Herbert Haag, a prominent Tübingen professor of the Old Testament, who argued that Catholic original sin doctrine does not have a scriptural basis. The CDF responded to *A New Catechism* expeditiously but the Haag investigation dragged on into the 1970s and never was fully resolved. The two cases provide ample evidence that polygenism was no longer a serious point of concern to the CDF.

Published just three months after Paul VI's symposium on original sin, *De Nieuwe Katechismus* was produced through the Higher Catechetical Institute

(Hoger Katechetisch Instituut) in Nijmegen (*De Nieuwe Katechismus*, 1966). Schoonenberg had been associated with the Institute since 1957 and also taught dogmatic theology with Schillebeeckx at the Catholic University of Nijmegen beginning in 1964. Designed for adults, the catechism had an expository format rather than the question-and-answer structure often used in catechisms for children. The book was enormously popular and an English translation was quickly released in the United States (*A New Catechism*, 1967). The section on “The Power of Sin” included a relatively short discussion of the initial chapters of Genesis. Although polygenism was not directly mentioned, the topic of original sin was introduced through some telling comments on Paul’s references to Adam in Romans 5.

At first sight it seems that his intention is to stress the fact that it was through one man that sin came into the world. But the repetition of the word “one”, occasioned by the view of the world history as it existed in Paul’s time, is only part of the literary dress, not the message. What this difficult passage teaches is that though sin and death ruled over mankind, grace and eternal life, the restoration, has come in greater abundance through Jesus (*A New Catechism* 1967, 262).

In the pages that followed, the most important passage devoted to original sin showed an obvious imprint from Schoonenberg’s approach; the unity of humanity and the “oneness” of sin can be understood without reliance upon the traditional inheritance narrative that is not part of revealed doctrine.

They looked to “human nature” which was propagated by bodily generation since sinful Adam. But this explanation of the collectivity or “oneness” of sin is not something that has been directly revealed. It is not part of the direct intention of revelation (what is *per se* revealed). The unity of the human race, according to scripture, is not based on propagation (“Greek, barbarian or Jew”) but on the call by the one Father. The oneness of sin is to be sought on the same level, though here in man’s refusal. It reaches us, not merely by way of generation, but from all sides, along all the ways in which men have contact with one another. The sin which stains others was not only committed by an

Adam at the beginning of man's story, but by "Adam", man, every man. It is "the sin of the world" (*A New Catechism* 1967, 266).

Furthermore, the traditional causal linkage between death and sin is not essential.

There is a very special and mysterious connection in our minds between sin and death. Holy Scripture sometimes expresses this by saying that through sin death came into the world. But since the beginnings are obscure to us, the beginning of biological death is also obscure. What we do see, when we look at the course of the history of salvation, is that along with sin death lost its sting (*A New Catechism* 1967, 269).

Although published with the *Imprimatur* of Cardinal Bernardus Alfrink, *De Nieuwe Katechismus* was immediately delated to the CDF by a Dutch group of lay Catholics who generated considerable publicity in the popular press.¹⁶ A commission of Cardinals was appointed to assess the book and, following some unproductive meetings with Dutch representatives, on 15 October of 1968 a "Declaration" was issued in which ten issues were listed as needing clarification.¹⁷ The second of these judgments addressed "The Fall of Man in Adam" and warned that:

in the New Catechism the doctrine of the Church is to be faithfully proposed, that man in the beginning of history rebelled against God (Cf. Conc. Vat. II, Const. *Gaudium el Spes*, n. 13, 22) and so lost for himself and his offspring that sanctity and justice in which he had been constituted, and handed on a true state of sin to all through propagation of human nature. Certainly those expressions must be avoided which could signify that original sin is only contracted by individual new members of the human family in this sense that from their very coming

¹⁶ A published letter addressed to Paul VI and objecting to *De Nieuwe Katechismus* included the assertion that "As regards original sin, the book denies that we contract it as a sin inherited from one original ancestor and transmitted to us by physical reproduction" (*Herder Correspondence* 1967, 94).

¹⁷ The commission consisted of Cardinals Joseph Frings, Joseph Lefebvre, Lorenz Jaeger, Ermenegildo Florit, Michael Browne and Charles Journet with Pietro Palazzini serving as Secretary.

into the world, they are exposed within themselves to the influence of human society where sin reigns, and so are started initially on the way of sin (Frings et al. 1968).

Although this guideline included no references to Adam and Eve as a monogenetic first human couple, it did insist that the effect of sin was passed down through “propagation.” It also clearly cautioned against giving the impression that original sin could be thought of as solely the result of exposure to sinful society, no doubt because of references in *A New Catechism* to “the sin of the world.” During the next few months it was decided that, instead of revising *A New Catechism*, future editions would simply include as an appendix a copy of *The Supplement to A New Catechism*, a booklet that provided expanded discussion of the Declaration points of emphasis.¹⁸

Published in 1969, *The Supplement* listed Edouard Dhanis and Jan Visser as authors on behalf of the Commission of Cardinals. It is not clear who actually wrote the lengthy section on original sin. Among the Cardinals on the Commission, Charles Journet may have been consulted since he had included a hypothetical example of polygenism in his 1951 *Petit Catéchisme*. *The Supplement* preserved the core of a traditional account of original sin and emphasized the inheritance of the effect of sin through physical descent. However, it did not insist upon monogenism and strikingly even presented a hypothetical example of how polygenism could be adopted as a legitimate alternative. The stated intention was “not to invite the faithful to give up the doctrine of monogenism, but to ease their minds in the midst of the various questions which their faith has to undergo today,” particularly due to the scientific consensus in favor of polygenism (Dhanis and Visser 1969, 21). From the proposed polygenetic perspective, “Adam and Eve” would represent an “Adamite population.” Original sin took place within this population and the effects were spread through descent so that, after either one or perhaps several generations, there would no longer exist any innocent human couple capable of transmitting the state of original justice; all humans would then be in a state of sin.

¹⁸ For some minor changes in wording for the English translation, see Ratzinger 1971, 750.

Consequently, all the descendants of the “Adamite population” which would have been the equivalent of the “sinful Adam” have been burdened at birth with original sin. They would all have “sinned in Adam” (Dhanis and Visser 1969, 22).

Reliance upon the awkward phrase “sinned in Adam” may have been out of deference to Paul VI’s preference for this language. Since the sixteenth century, English translations of Romans 5:12 typically read “Therefore as sin came into the world through one man and death through sin, and so death spread to all men because all men sinned.” The fourth century Vulgate Latin translation of Saint Paul’s original Greek had been relied upon throughout the Middle Ages and used the phrase *in quo omnes peccaverunt* (in whom all have sinned) instead of the more accurate *quatenus omnes peccaverunt* (because all have sinned). The Vulgate version of Romans 5:12 was not questioned until Desiderius Erasmus published a new translation just prior to the Council of Trent (Coogan 1986). Although the Vulgate continued to be the preferred edition for the Western Church, Erasmus’ rendition of Romans 5:12 with the phrase “because all have sinned” certainly prevailed. Numerous scholars, including Stanislaus Lyonnet, engaged in further philological discussion of the passage just prior to Vatican II. Although some variants of “because” were proposed, such as “insofar as,” the rejection of “in whom” was not in question. More controversially, the improved translation now was often incorporated into a theological argument that Saint Paul did not teach a doctrine of original sin that included an inheritance of Adam’s sin. For example, Lyonnet wrote that personal sin, while precipitated by Adam’s initial sin, was a contributing factor to the need for redemption, “a genuine causality but subordinated and not simply juxtaposed to that of the sin of Adam.”¹⁹

This train of thought did not align with Pope Paul VI’s assessment of the import of Trent. In his address to the 1966 original sin symposium, after noting that the eighth chapter of the schema *De deposito fidei* had not been included in *Dei Verbum*, “for reasons you know,” the pope claimed that other documents of the council fully confirmed the original sin doctrine

¹⁹ Lyonnet 1955, 456; also see Lyonnet 1956, 73.

formulated by earlier councils. For example, he quoted from the only reference to “Adam” in *Lumen Gentium*: “Fallen in Adam (*lapsos in Adamo*), God the Father did not leave men to themselves, but ceaselessly offered helps to salvation” (Paul VI 1966, 77). Paul VI’s attachment to the wording “in Adam” continued in his “Credo” of June 30, 1968, a creed he issued in hopes of quieting doctrinal controversies during the post-Vatican II period.²⁰ It was based upon a draft provided by Jacques Maritain that had included an insistence upon monogenism.²¹ This passage was dropped from the final version in which the relevant section on original sin read: “We believe that in Adam all have sinned (*Credimus in Adam omnes peccavisse*), which means that the original offense committed by him caused human nature, common to all men, to fall to a state in which it bears the consequences of that offense ... We therefore hold, with the Council of Trent, that original sin is transmitted with human nature, ‘not by imitation, but by propagation’ and that it is thus ‘proper to everyone’” (Paul VI 1968). This insistence upon the transmission of original sin solely through propagation from Adam was shared by the CDF and may well have contributed to the decision to temporarily suspend Lyonnet from his teaching position.

Nevertheless, according to the authors of *The Supplement*, although the warning about polygenism in *Humani generis* and the “traditional formulas” promulgated by Paul VI certainly safeguard the faith, they do

²⁰ Paul VI’s “profession of faith” was issued in the *motu proprio Solemni Hac Liturgia*. Section 16 stated: “We believe that in Adam all have sinned, which means that the original offense committed by him caused human nature, common to all men, to fall to a state in which it bears the consequences of that offense, and which is not the state in which it was at first in our first parents—established as they were in holiness and justice, and in which man knew neither evil nor death. It is human nature so fallen, stripped of the grace that clothed it, injured in its own natural powers and subjected to the dominion of death, that is transmitted to all men, and it is in this sense that every man is born in sin. We therefore hold, with the Council of Trent, that original sin is transmitted with human nature, ‘not by imitation, but by propagation’ and that it is thus ‘proper to everyone.’” (Pope Paul VI, 1968)

²¹ See Cagin 2009. Maritain’s draft was conveyed to Paul VI by Charles Journet. It included the assertion that “all men and all races that today populate the earth descend from a first human couple that emerged from the peak of the animal world and ... were the first beings to receive a spiritual and immortal soul” (Cagin 2009, 30).

so “without closing the door to questions which are raised by scientific findings.” Furthermore, “the Church allows theologians to continue their investigations and to go on with their dialogue with the students of the natural sciences” (Dhanis and Visser 1969, 23). Inclusion of the wording “sinned in Adam” notwithstanding, the entire *Supplement* discussion was characterized by a remarkably receptive attitude toward polygenism as a viable possibility. The other aspects of original sin doctrine stated in the Commission’s Declaration and Paul VI’s creed clearly were considered more important to mandate than monogenism.

These CDF priorities were also evident during its investigation of a publication by the Swiss biblical theologian Herbert Haag. Haag had been called to the Catholic Faculty at the University of Tübingen in 1960, the same year as Hans Küng, who became his colleague and close friend. An internationally renowned scholar and Professor of the Old Testament, Haag published a 1966 monograph in which he argued that the doctrine of an original sin inherited by all mankind from Adam is not taught either in the Old Testament or by Saint Paul (Haag 1966). The book quickly went through four German editions and an American translation (Haag, 1969). Haag apparently was delated to the CDF shortly after the initial publication; in February of 1968 he was informed by Undersecretary Charles Moeller that the CDF had reservations about several propositions concerning original sin that allegedly were advanced in his book. These assertions were conveyed to Haag in Latin translation and he was asked to explain how they were in conformity to Catholic doctrine. Haag initially complained that the propositions had been taken out of context and inaccurately expressed in Latin; when he did not comment more specifically, a slightly revised second set of propositions was sent to him in April of 1971. Following some additional correspondence, Haag finally responded in detail the following August. After providing what he considered to be more accurate Latin expressions of his published statements, he argued at length that his views were indeed a legitimate reading of scripture and its bearing upon tradition.²² By this

²² In 1973 Haag published some of his 1968–1972 correspondence with Franjo Šeper who served as the CDF Prefect between 1968 and 1981 (Haag 1973b).

point Haag felt his book was slightly out of date and he had also written a series of trenchant review articles critiquing many recent discussions of original sin as too timidly adhering to traditional formulas.²³

It is noteworthy that none of the propositions ascribed to Haag and brought into question by the CDF made any mention of polygenism. Instead, the Congregation asked for resolution of other methodological and substantive issues. For example, did Haag propose that in modern explanations of original sin theologians should explicate dogma in the light of scripture rather than explicate scripture in the light of dogma? Did he assert that the concept of hereditary sin was not found in either the Old Testament or in the thought of Saint Paul? Haag certainly had expressed himself on these issues. For example, he had written that “The concept of sin or death as *inherited* is not mentioned at all by Paul” (Haag 1969, 97), and “For the same reason, it is impossible to agree in finding here a teaching of ‘inherited death’” (Haag 1969, 121). Similarly, he wrote that “In reality, the idea of the passive participation of all Adam’s descendants in the sin of Adam is far from Paul’s mind, and it is not permissible to read this idea into verse 12 by understanding ‘because all have sinned’ in the sense of ‘because all (in Adam) have become sinful’” (Haag 1969, 99). “No man enters this world a sinner” (Haag 1969, 107).

The CDF judged Haag’s responses defending his position on these points to be unsatisfactory and he was told to abjure the assertions at stake and desist from advancing them in any manner. Haag ignored this order and the affair was never resolved.²⁴ Although the Congregation did not include monogenism in its inquiries, Haag had in fact been quite explicit in arguing that it is not supported by scripture and should not be considered a theological issue. “Whether mankind originated in monogenism or polygenism is a question which only science can answer; it is not a theological question.

²³ See, for example, Haag 1970.

²⁴ Hans Küng mentioned that in 1977 a last attempt by Bishop Georg Moser to get a response from Haag was unsuccessful (Küng 2008, 273). From Haag’s perspective, “The proceedings – while saving face for the Romans – went in my favor and I can attest that since then in theological textbooks and catechisms ‘original sin’ has been treated differently than previously” (Haag 1991, 76–77).

The thesis of polygenism cannot be rejected on the basis of original sin” (Haag 1969, 107). Furthermore, in his correspondence with the CDF, Haag noted that recent developments in theological discussion of original sin did not rely upon monogenism. “A not unimportant role is played therein by the scientifically supported fact that a monogenetic origin of humanity appears to be excluded. Even Karl Rahner, counter to his earlier assertions, has expressly recognized the compatibility of “Erbsündenlehre” with polygenism As a matter of fact, however, with the abandonment of monogenism the diffusion of an original sin by means of descent is fundamentally ruled out” (Haag 1973b, 188).

So, while Haag pointedly rejected both monogenism and the inheritance of the effects of sin, the CDF did not object to his acceptance of polygenism. Haag was undeterred by the investigation and continued to write predominantly negative commentary on original sin publications. He labelled the efforts in *The Supplement* to hypothetically combine inheritance of sin with polygenism “absurd” (Haag 1973a, 263), and added that “one is also tempted to ask if it would not have been more consistent to drop the term ‘original sin’ and thus to eliminate all the problems consequent on the use of the term” (Haag 1973a, 269). By this point the CDF was also investigating Haag’s 1969 book, *Abschied vom Teufel* (Farewell to the Devil), and the 1970 *Infallible? An Inquiry* by his Tübingen colleague Hans Küng. Haag was not intimidated and proclaimed that “a farewell to original sin will not come too soon. The doctrine of original sin is a test case, serving to focus more sharply the question of whether traditional Church teaching is binding and infallible—a question which dogmatic theologians have long oversimplified” (Haag 1973a, 288).

Although Küng did not cite the doctrine of monogenism in his polemic against infallibility, Francis Sullivan has argued that it can serve as a relevant case study. Vatican I had of course been the occasion for the proclamation of papal infallibility, but it also brought new attention to the potential power of the ordinary universal magisterium, a topic that resurfaced at Vatican II and was asserted in *Lumen Gentium*.

Although the individual bishops do not enjoy the prerogative of infallibility, they nevertheless proclaim Christ's doctrine infallibly whenever, even though dispersed through the world, but still maintaining the bond of communion among themselves and with the successor of Peter, and authentically teaching matters of faith and morals, they are in agreement on one position as definitively to be held (Paul VI 1964).

Necessary and sufficient conditions for invoking the infallibility of magisterial teaching have been difficult to establish and Sullivan uses monogenism as an example of how the criterion of universality is not satisfactory. At Vatican I, draft documents included proposals to define monogenism as a dogma of faith; they encountered no opposition from the Council Fathers prior to the premature interruption of the council by political developments. One century later, the lack of consensus offered a stark contrast.

Here we have an instance of a consensus that seemed strong enough in 1870 to justify defining a doctrine as a dogma of faith, but which has not remained constant and is no longer universal. It would hardly seem reasonable to argue that since the former consensus had fulfilled the conditions required for the infallible exercise of ordinary universal magisterium, the subsequent lack of consensus could not nullify the claim that the doctrine had already been infallibly taught (Sullivan 1996, 349).

Mindful of the gradual acceptance of polygenism during the century after 1870 and its relevance to arguments against infallibility, Haag took broader exception to the entire doctrine of original sin. In contrast to his sharp critiques of many authors, he was more sympathetic to the position taken by Charles Baumgartner. Due to the posthumous publications of Teilhard's essays on original sin, Baumgartner could quote approvingly from the explanatory note Teilhard had written just after *Humani generis*. Although he granted that the best argument for monogenism was an indirect one showing that it seemed to be presupposed by the Tridentine doctrine of original sin, Baumgartner denied that monogenism truly is a necessary prerequisite; "what is certain is that the dogma of original sin, as well as that

of redemption, necessarily postulate the unity of the human race, a unity which is also a direct teaching of scripture itself” (Baumgartner 1969, 129). While earlier theologians could only conceptualize this unity by invoking monogenism, modern science strongly encourages other possibilities. As long as the central idea of an initial free human choice of sin is preserved, detailed depiction of attenuating circumstances, including the choice between monogenism and polygenism, “no longer directly concern the substance of the faith.” If this is the case, then, along with the motion of the earth and its age, “monogenism and polygenism would be problems relevant to the domain of the natural sciences and exclusively within their competence” (Baumgartner 1969, 130). Baumgartner argued for a decisive disengagement from presuppositions such as monogenism that in the past were considered essential but now have become impediments to acceptance of the essential Catholic doctrine of original sin, namely, “the theological condition of humanity bereft of Christ” (Baumgartner 1969, 165).

Subsequent developments in original sin theology have to a large extent accomplished the disengagement Baumgartner recommended. Arguments over monogenism and polygenism have become less and less important in most of these discussions (McDermott 1977). In 1971 Edward Yarnold followed Schoonenberg’s lead in asserting that “One need not even argue that monogenism is false: it is simply irrelevant. We are all members of the same guilty race whether we have all descended from a single ancestor or not” (Yarnold 1971, 78). By 1981 Karl Rahner could comment that, just as it is common knowledge that Catholic doctrine now holds no objection to the antiquity of humanity, “To all appearances the teaching office has also abandoned its opposition to polygenism despite Paul VI’s original intention to adhere to monogenism” (Rahner 1988, 41). Pope John Paul II made no mention of polygenism in a 1996 discourse in which he famously asserted that, in reference to *Humani generis*, “Today, almost half a century after the publication of the encyclical, new knowledge has led to the recognition of the theory of evolution as more than a hypothesis” (John Paul II, 1996). Later in John Paul II’s papacy, under the supervision of Cardinal Joseph Ratzinger, the future Pope Benedict XVI, the International Theological

Commission issued a lengthy document on the creation of humanity in the image of God and made only a passing and noncommittal reference to the distinction between monogenism and polygenism. “Catholic theology affirms that the emergence of the first members of the human species (whether as individuals or in populations) represents an event that is not susceptible of a purely natural explanation and which can appropriately be attributed to divine intervention (International Theological Commission 2004, ¶ 70).

It would appear that the Catholic magisterium has gradually arrived at approximately the same attitude toward polygenism that it maintained for so long toward the motion of the earth: nonassertive official disapproval combined with *de facto* acceptance. Nevertheless, as the historical record demonstrates, there is far more conceptual complexity to the monogenism issue than was the case for geostasis. In particular, in addition to its irrelevance for some schools of original sin theology, monogenism can be given a spiritual characterization in which it is immune to the scientific mode of refutation that made geostasis untenable. This capacity for a synthesis with biological polygenism means that there is reason to expect some form of theological monogenism to persist.

Conclusion

In 1992, 360 years after the trial of Galileo, Pope John Paul II brought some closure to the affair by agreeing with his investigative Pontifical Academy committee that exegetical and theological mistakes had been made. The initial arguments that the earth is in motion had been put forward just when the Reformation made Catholic ecclesiastical authority over biblical exegesis a point of contention.²⁵ Under those confrontational circumstances,

²⁵ In 1546, just three years after Copernicus’ *De Revolutionibus*, the Fourth Session of the Council of Trent decreed that “no one, relying on his own skill, shall,—in matters of faith, and of morals pertaining to the edification of Christian doctrine, —wresting the sacred Scripture to his own senses, presume to interpret the said sacred Scripture contrary to that sense which holy mother Church,—whose it is to judge of the true sense and interpretation of the holy Scriptures,—hath held and doth hold; or even contrary to the unanimous consent of the Fathers.” <https://www.papalencyclicals.net/councils/trent/fourth-session.htm>

the Vatican Curia decided that the Copernican planetary model contradicted scripture and must be prohibited; noncompliant Galileo was found guilty of a vehement suspicion of heresy and Riccioli's geostatic model received longstanding preference (Hofmann 2020b, 99–102). Although the Catholic magisterium gradually recognized the legitimacy of heliocentric models that included the motion of the earth, stubborn theological allegiance to geostasis persisted in many instances. When Robert de Sinéty defended Erich Wasmann's acceptance of the evolution of systematic species, he compared reactionary theological concerns about Wasmann to those that had continued for so long over Copernicus and Galileo. He noted an example of theological preference for a geostatic model as late as 1764 (De Sinéty 1906, 238–239). William Wallace has cited other examples of not only geostasis but *geocentrism* in Catholic scholastic teaching manuals as late as 1783 (Wallace 1968, 74). To be sure, the 1741 publication of Galileo's collected works received an *imprimatur*, the 1758 edition of the *Index of Prohibited Books* ended previous prohibition of "all books teaching the earth's motion and the sun's immobility," and in 1835 books by Copernicus, Galileo and Kepler were finally dropped from the *Index*. However, in the absence of any summary and decisive Vatican directive, there were extensive objections and convoluted negotiations over every stage in this intermittent and piecemeal process (Finocchiaro 2005, 126–240).

How comparable is the Catholic Church's lengthy commitment to monogenism? The nuanced triangulation of revelation, scripture, and tradition clearly has been at the heart of prolonged resistance to both the motion of the earth and polygenism. However, the central error of the Galileo case, the flawed reasoning that a scientific assertion was contrary to scripture, was not repeated when theologians questioned the necessity of monogenism. Instead, attention focused almost exclusively on doctrinal tradition as the potential source of conflict; debate over polygenism unfolded in conjunction with more fundamental disputes over the authority of tradition and its relation to scripture and revelation.

The nexus of scripture and tradition obviously was a central concern when documents responding to *sola scriptura* were composed at the Council

of Trent. When the Council Fathers incorporated references to the Genesis narrative into what became the Tridentine teaching on original sin, they created an influential doctrinal formulation using wording that gave a strong impression that monogenism was a prominent component of Catholic tradition. During the second half of the nineteenth century, two theological issues related to human origins directed new attention to this teaching. On the one hand, the Genesis narrative gave a biblical grounding to Catholic support for the unity of mankind thesis, a position that stood in opposition to human polyphyletism, the hypothesis of multiple independent human racial lineages that was often misleadingly referred to as polygenism. Among many others, Clarence Augustus Walworth, Jean Guibert, Robert de Sinéty, Henry de Dorlodot, Henri Breuil, as well as Jean and Amédée Bouyssonie, all contributed refutations of polyphyletism, a collective effort that continued well into the twentieth century. By the 1960s, in spite of a belated retrograde effort by Carleton Stevens Coon, human polyphyletism in the crude racial form proposed by Hermann Klaatsch could be curtly dismissed as scientifically unviable.²⁶

On the other hand, evolutionary research into monophyletic human origins prompted a wide variety of reactions from Catholic theologians who were allowed some latitude with respect to the evolution of the human body but were also expected to safeguard the unique spiritual character of ensouled humanity. It was in this context that concern arose over the much more scientifically plausible form of polygenism, the descent of humans from a single population but not from a single couple. When the 1909 Biblical Commission decree on Genesis 1–3 called for acknowledgment of the historical import of the Genesis narrative of Adam and Eve, insistence upon monogenism was included in anti-modernist reaction against “development of doctrine” theology. This pressure intensified when proponents of the *nouvelle théologie* reopened debate over the historically conditioned nature of doctrinal formulations. The result was that throughout the first half of the twentieth century monogenism was tenaciously upheld by a multitude

²⁶ See Smulders 1967 and Ayala 1967. For Coon, see Jackson and Depew 2017, 172–206.

of influential voices that included Xavier-Marie Le Bachelet, Francis Ceuppens, Émile Amann, Maurice Flick, Joseph Bataini, and especially Réginald Garrigou-Lagrange. Bolstered by institutional support that provided ready access to prominent publication opportunities, these adamant apologists thoroughly eclipsed the cautious doubts tentatively raised by the Bouyssonie brothers and Henri Rondet. Teilhard's unpublished but clandestinely circulated rejection of monogenism became one of Réginald Garrigou-Lagrange's primary examples of what he considered to be a dangerous tendency to deny the immutability of dogma, a conviction that contributed to Pius XII's decision to prohibit polygenism in *Humani generis*. Widespread supportive response to the encyclical included unsympathetic assessments of polygenism in publications by Anthony Cotter, Charles Boyer, Augustin Bea, Guy Picard, Léon Renwart, Marie-Michel Labourdette, Karl Rahner, Johannes Feiner, Cyril Vollert, and Jean de Fraine. A less insistent set of commentators, including Ernest Messenger, Georges Vandebroek, Dominique Dubarle, Pieter Smulders, and Robert North, did express reservations about monogenism based upon scientific evidence but they deferred to ecclesiastical authority pending further theological development, progress that was difficult to achieve under the threat of Vatican censorship.

During the years immediately prior to the convocation of Vatican II, historical research by Josef Geiselman and Stanislaus Lyonnet contributed to renewed debate over how the truths of the gospel have been preserved in scripture and tradition, the crucial issue for the acceptability of polygenism. The 1965 proclamation *Dei Verbum* that excluded a proposed prohibition of polygenism was an important turning point and a defeat for the conservative position represented by Cardinal Alfredo Ottaviani and Paul VI. At this point Zoltán Alszeghy and Maurice Flick published their polygenetic analysis of original sin and Karl Rahner announced that he no longer saw any convincing theological barrier to polygenism. Shortly thereafter *The Supplement to A New Catechism* sent a clear signal that theologically judicious use of polygenism was not objectionable to the highest levels of the Roman Curia. Acceptable examples would include reliance upon an Adamite

population that either engaged in a collective sin or collectively suffered the immediate consequences of an individual sin.

Of course by this point numerous Catholic theologians were no longer interested in explicitly synthesizing the scientific idea of polygenism with the theology of original sin. Situationalists such as Piet Schoonenberg, André-Marie Dubarle and Edward Yarnold found the choice between monogenism and polygenism theologically inconsequential and irrelevant to their understanding of original sin as the “sin of the world.” By assigning the Genesis narrative a primarily historical significance as a familiar but nonessential representation of doctrine, they relegated analysis of ancestral human population structure to the scientific domain.

A more conventional approach that retains a role for Adam and Eve is to recognize that acceptance of biological polygenism does not rule out theological monogenism based upon a spiritual demarcation. As explored by Camille Muller, and René Lavocat, as well as in the early work of Giovanni Blandino, for example, monogenism in this guise does not conflict with the polygenetic scientific analysis of species change via population genetics. If Adam and Eve differed from their biologically human contemporaries in a purely spiritual manner, there are no prohibitive scientific implications. Francisco Ayala’s argument, that the high degree of genetic diversity in modern humans rules out an ancestral population of a single human couple, would only be pertinent under the assumption that theological monogenism requires the initial existence of just two biological humans, presumably *Homo sapiens* (Ayala et al 1994). Both Kenneth Kemp and Joshua Swamidass have recently pointed out that arguments in this vein do not apply if a spiritual condition distinguishes the first two humans from a larger population of their contemporaries (Kemp 2011; Swamidass 2019). Furthermore, additional distinctions between human ensoulment and subsequent spiritual and psychological development to the point of moral discernment have been invoked by Blandino, Lavocat, Alszeghy, and Flick, among others. In general, those who reconceptualize monogenism in an exclusively spiritual sense can choose to designate Adam and Eve as

the first ensouled or sanctified humans while also accepting the biological polygenism of a larger population.

It would be premature to expect that progress within any of these frameworks will prompt a new pronouncement on polygenism from the Vatican. In 1992, the same year as John Paul II's resolution of the Galileo affair, discussions of original sin in new publications of the *Catechism of the Catholic Church* included multiple references to Adam and Eve.

How did the sin of Adam become the sin of all his descendants? The whole human race is in Adam "as one body of one man". By this "unity of the human race" all men are implicated in Adam's sin, as all are implicated in Christ's justice. Still, the transmission of original sin is a mystery that we cannot fully understand. But we do know by Revelation that Adam had received original holiness and justice not for himself alone, but for all human nature. By yielding to the tempter, Adam and Eve committed a *personal sin*, but this sin affected *the human nature* that they would then transmit *in a fallen state* (*Catechism of the Catholic Church*, n. 404).

Among theologians, this reliance upon the biblical narrative does not have the implications that it had a century ago. As Stephen Duffy confidently remarked in 1988:

Obviously Christology eliminates the need for the supplementary hypothesis of monogenism to ground the assertion of sin's radical and universal sway. Biological descent of the race from Adam as its historical progenitor yields to the unity of human finality revealed in the second Adam and is reflected in the saga of the first Adam only as its antitype (Duffy 1988, 618–619).

In conclusion, when a contrast is drawn between geostasis and monogenism, the historical record supports two fairly straightforward generalizations. First, theological commitment to monogenism has been more deeply rooted in historically conditioned doctrines of Catholic tradition than was the case for geostasis. Secondly, monogenism has been much more amenable to nuanced conceptual development than geostasis was. In particular, monogenism can be given a purely spiritual characterization;

it is difficult to imagine an analogous role for “theological geostasis.” The combination of these two historical factors provides some explanation for the persistence of monogenism. As Teilhard perceptively observed in 1950, “monogenism and polygenism are in reality *purely theological notions*, introduced for dogmatic reasons” (Teilhard de Chardin 1971, 209). To the extent that dogmatic reasons traditionally associated with original sin continue to be perceived as both compelling and authoritative, it can be expected that theological monogenism in some form will persist as well.

References

- A New Catechism. Catholic Faith for Adults*. 1967. Hoger Katechetisch Instituut. Translated by Kevin Smyth. New York: Herder and Herder.
- Alexander, Andrew. 1964. “Human Origins and Genetics.” *The Clergy Review* 49: 344–353.
- Alszeqhy, Zoltán, and Maurice Flick. 1965. “Il peccato originale in prospettiva personalistica.” *Gregorianum* 46: 705–732.
- Alszeqhy, Zoltán, and Maurice Flick. 1966. “Il peccato originale in prospettiva evolucionistica.” *Gregorianum* 47: 201–225.
- Amann, Émile. 1935. “Préadamites.” *Dictionnaire de théologie catholique* 12(2): col. 2793–2800.
- Ayala, Francisco. 1967. “Man in Evolution: A Scientific Statement and Some Theological and Ethical Implications.” *The Thomist* 31(1): 1–20.
- Ayala, Francisco et al. 1994. “Molecular genetics of speciation and human origins.” *Proceedings of the National Academy of Sciences* 91: 6787–6794.
- Baum, Gregory. 1967. “Vatican II’s constitution on revelation: history and interpretation.” *Theological Studies* 28(1): 51–75.
- Baumgartner, Charles. 1969. *Le Péché Originel*. Paris: Desclée & Cie.
- Bea, Augustin. 1951. “Die Enzyklika ‘Humani generis’ Ihre Grundgedanken und ihre Bedeutung.” *Scholastik* 26: 36–56.
- Blandino, Giovanni. 1962. *Deux hypotheses sur l’origine de l’homme, Observations theologiques et scientifiques*. Bologna: Assoguidi.
- Blandino, Giovanni. 1967. *Peccato originale e poligenismo: le recenti ipotesi teologiche e un nuovo tentativo di soluzione*. Ethica: Forlì.
- Blandino, Giovanni. 1968. “Tre recenti ipotesi sul peccato originale.” *Rassegna di Teologia* 2: 81–95.

- Blandino, Giovanni. 1977a. *Questioni dibattute di teologia* vol. 1. Rome: Pontificia Università Lateranense, Città Nuova Editrice.
- Blandino, Giovanni. 1977b. "Peccato originale e poligenismo: le recenti ipotesi teologiche." In *Questioni dibattute di teologia*, vol 1, 45–77.
- Blandino, Giovanni. 1977c. "Discussioni sul peccato originale." In *Questioni dibattute di teologia*, vol 1, 87–105.
- Blandino, Giovanni. 1989. "The Problem of Suffering. The Original Sin." *Teresianum* 40: 149–173.
- Boné, Edouard 1955. "La solution de l'énigme de Piltdown." *Nouvelle Revue Théologique* 77 (2): 163–183.
- Boné, Edouard. 1956. "Pierre Teilhard de Chardin." *Revue des questions scientifiques* 127(1): 90–104.
- Boné, Edouard. 1960. "Polygénisme et polyphylétisme, orientation présente de la pensée scientifique en matière de l'apparition de l'homme." *Archives de philosophie* 23(1): 99–141.
- Boné, Edouard. 1962. "Un siècle d'Anthropologie préhistorique. Compatibilité ou incompatibilité scientifique du Monogénisme?" *Nouvelle Revue Théologique* 84(7): 709–734.
- Boyer, Charles. 1950. "Les leçons de l'Encyclique 'Humani Generis'." *Gregorianum* 31(4): 526–539.
- Cagin, Michel. 2009. "Le Credo du peuple de Dieu." *Nova & Vetera Revue Trimestrielle* 84(1): 7–43.
- Catechism of the Catholic Church*. 1993. https://www.vatican.va/archive/ENG0015/_INDEX.HTM
- Congregation of the Holy Office. 1962. "Monitum." *Acta Apostolicae Sedis* 54: 526. <https://www.catholicculture.org/culture/library/view.cfm?recnum=3160>
- Conner, James. 1968. "Original Sin: Contemporary Approaches." *Theological Studies* 29(2): 215–240.
- Coogan, Robert. 1986. "The Pharisee Against the Hellenist: Edward Lee Versus Erasmus." *Renaissance Quarterly* 39(3): 476–506.
- Cotter, Anthony. 1951. *The Encyclical "Humani Generis" with a Commentary*. Weston: Weston College Press.
- De Fraigne, Jean. 1962. *The Bible and the Origin of Man*. New York: Desclee Company.
- De Nieuwe Katechismus: Geloofsverkondiging Voor Volwassenen*. 1966. Hoger Katechetisch Instituut. Hilversum: Paul Brand.
- De Sinéty, Robert. 1906. "L'Haeckélianisme et les idées du P. Wasmann sur l'évolution." *Revue des Questions Scientifiques* 9: 226–242.

- De Sinéty, Robert. 1928. "Transformisme." *Dictionnaire Apologétique de la Foi Catholique*. 4: col. 1793–1848.
- Dhanis, Edouard, and Jan Visser. 1969. *The Supplement to A New Catechism*. Translated by Kevin Smyth. London: Burns & Oates.
- Dobzhansky, Theodosius. 1937. *Genetics and the Origin of Species*. New York: Columbia University Press.
- Dubarle, André-Marie. 1964. *The Biblical Doctrine of Original Sin*. Translated by E. M. Stewart. New York: Herder and Herder.
- Dubarle, André-Marie. 1966. "Évolution et Péché Originel." *Le Monde*: August 6.
- Dubarle, André-Marie. 1969. "Bulletin de Théologie. Le Péché Originel: Recherches Récentes et Orientations Nouvelles." *Revue des Sciences philosophiques et théologiques* 53(1): 81–113.
- Dubarle, Dominique. 1957. "Évolution et Évolutionnisme." *Lumière et Vie* 34: 75–90.
- Duffy, Stephen. 1988. "Our Hearts of Darkness: Original Sin Revisited." *Theological Studies* 49: 597–622.
- Feiner, Johannes. 1965. "Man's Origin and Contemporary Anthropology." In *Theology Today* (vol. 1): *Renewal in Dogma*, edited by Johannes Feiner, Josef Trütsch and Franz Böckle, translated by Peter White and Raymond Kelly, 27–65. Milwaukee: Bruce Publishing Company.
- Finocchiaro, Maurice. 2005. *Retrying Galileo: 1633–1992*. Berkeley: University of California Press.
- Flick, Maurice. 1947. "Il poligenismo e il dogma del peccato originale." *Gregorianum* 28(4): 555–563.
- Frings, Joseph, Joseph Lefebvre, Lorenz Jaeger, Ermenegildo Florit, Michael Browne, Charles Journet. 1968. "Declaration of the Commission of Cardinals on the 'New Catechism'." <https://www.ewtn.com/catholicism/library/declaration-of-the-commission-of-cardinals-on-the-new-catechism-2060>
- Garrigou-Lagrange, Réginald. 1948. "Le Monogénisme n'est-il nullement révélé, pas même implicitement?" *Doctor Communis* 2: 191–202.
- Geiselman, Josef. 1958. "Scripture and Tradition in Catholic Theology." *Theology Digest* 6:73–78.
- Greenstock, David. 1950. "Thomism and the New Theology." *The Thomist* 13(4): 567–596.
- Grelot, Pierre. 1968. *Réflexions sur le Problème du Péché Originel*. Tournai: Casterman.
- Guindon, Henri-Marie. 1979. "Review of Blandino, Giovanni, *Questioni dibattute*." *Laval théologique et philosophique* 35(1): 107.
- Gutwender, Engelbert. 1967. "Die Erbsünde und Das Konzil von Trient." *Zeitschrift für katholische Theologie* 89(4): 433–446.

- Haag, Herbert. 1966. *Biblische Schöpfungslehre und kirchliche Erbsündenlehre*. Stuttgart: Katholisches Bibelwerk.
- Haag, Herbert. 1969. *Is Original Sin in Scripture?* Translated by Dorothy Thompson. New York: Sheed and Ward.
- Haag, Herbert. 1970. "Die hartnäckige Erbsünde: Überlegungen zu einigen Neuererscheinungen II." *Theologische Quartalschrift* 150(3): 436–456.
- Haag, Herbert. 1973a. "The Original Sin Discussion 1966–1971." *Journal of Ecumenical Studies* 10: 259–289.
- Haag, Herbert. 1973b. "Ein Verfahren der Glaubenskongregation." *Theologische Quartalschrift* 153(2): 184–192.
- Haag, Herbert. 1991. *Mein Weg mit der Kirche*. Zurich: Benziger.
- Harrison, Brian. 2012. "Paul VI's Ambivalence Toward Critical Biblical Scholarship. B. Indications of Approval: Administrative Decisions." *Living Tradition* 157:1–10. <http://www.rtforum.org/lt/lt157.pdf>
- Hofmann, James. 2020a. "Erich Wasmann, S.J.: Natural Species and Catholic Polyphyletic Evolution during the Modernist Crisis." *Journal of Jesuit Studies* 7(2): 244–262.
- Hofmann, James. 2020b. "Catholicism and Evolution: Polygenism and Original Sin." *Scientia et Fides* 8(2): 95–138.
- International Theological Commission. 2004. "Communion and Stewardship: Human Persons Created in the Image of God." http://www.vatican.va/roman_curia/congregations/cfaith/cti_documents/rc_con_cfaith_doc_20040723_communion-stewardship_en.html
- Jackson, John, and David Depew. 2017. *Darwinism, Democracy, and Race. American Anthropology and Evolutionary Biology in the Twentieth Century*. London and New York: Routledge.
- John Paul II. 1996. "Truth Cannot Contradict Truth: Address of Pope John Paul II to the Pontifical Academy of Sciences." <https://www.vofoundation.org/faith-and-science/truth-cannot-contradict-truth-1996/>
- Journet, Charles. 1951. *Petit Catéchisme sur les Origines du Monde*. Saint-Maurice: Éditions de L'œuvre St-Augustin.
- Kapusta, Pawel. 2009. "Darwinism from Humani Generis to the Present." In *Darwinism and Catholicism: The Past and Present Dynamics of a Cultural Encounter*, edited by Louis Caruana, 27–42. London: T&T Clark.
- Kemp, Kenneth. 2011. "Science, Theology, and Monogenesis." *American Catholic Philosophical Quarterly* 85(2): 217–236.
- Knox, Ronald. 1950. "The Encyclical 'Humani Generis' Specially Translated for the Tablet by Monsignor R. A. Knox." *The Tablet* (Sept. 2) 196: 187–190.

- Küng, Hans. 2008. *Disputed Truth*. Translated by John Bowden. New York: Continuum.
- Labourdette, Marie-Michel. 1953. *Le Péché Originel et les Origines de l'homme*. Paris: Alsatia.
- Lavocat, René. 1967a. "Réflexions d'un paléontologiste sur l'état originel de l'humanité et le péché originel." *Nouvelle revue théologique* 89: 582–600.
- Lavocat, René. 1967b. "Polygénisme. Le point de vue scientifique." *Supplément au Dictionnaire de la Bible* 8: col. 92–102.
- Levie, Jean. 1950. "L'Encyclique 'Humani Generis'." *Nouvelle Revue Théologique* 72(8): 785–793.
- Lyonnet, Stanislaus. 1955. "Le Sens de ἐφ' ᾧ en Rom 5:12 et l'Exégèse des Pères Grecs." *Biblica* 36(4): 436–456.
- Lyonnet, Stanislaus. 1956. "Le péché originel et l'exégèse de Rom., 5, 12." *Recherches de Science Religieuse* 44: 63–84.
- Maas, Anthony. 1911. "Preadamites." *The Catholic Encyclopedia* 12. New York: Robert Appleton Company. <http://www.newadvent.org/cathen/12370a.htm>
- Mackey, James. 1967. "Original Sin and Polygenism: The State of the Question." *Irish Theological Quarterly* 34(2): 99–114.
- McDermott, Brian. 1977. "The Theology of Original Sin: Recent Developments." *Theological Studies* 38(3): 478–512.
- McMahon, Kevin. 2002a. "Karl Rahner and the Theology of Human Origins." *The Thomist* 66: 499–517.
- McMahon, Kevin. 2002b. "The Christological Turn in Recent Literature on Original Sin." *The Thomist* 66: 201–229.
- Messenger, Ernst. 1951. *Theology and Evolution*. London: Sands & Co.
- Messenger, Ernst. 1953. "The Origin of Man in the Book of Genesis." In *God, Man and the Universe*, edited by Jacques de Bivort de La Saudée, 147–167. London: P. J. Kenedy and Sons.
- Michel, Albert. 1941. "Surnaturel." *Dictionnaire de théologie catholique* 14(2): col. 2849–2859.
- Muller, Camille. 1951a. "L'Encyclique 'Humani Generis'." *Synthèses; Revue mensuelle internationale* 5(57): 296–312.
- Muller, Camille. 1951b. *L'encyclique "humani generis" et les problèmes scientifiques*. Louvain: Editions Nauwelaerts.
- Muller, Camille. 1962. *Science and Faith: Co-existence or Synthesis?* Louvain: Editions Nauwelaerts.
- North, Robert. 1963. "Teilhard and the Many Adams." *Continuum* 1(3): 329–342.
- North, Robert. 1967. *Teilhard and the Creation of the Soul*. Milwaukee: Bruce Publishing Company.

- O'Rourke, John. 1965. "Some Considerations About Polygenism." *Theological Studies* 26: 407–417.
- Padovano, Anthony. 1967. "Original Sin and Christian Anthropology." *Proceedings of the Catholic Theological Society of America* 22: 93–132.
- Paul VI. 1964. *Lumen Gentium*: "Dogmatic Constitution on the Church Solemnly Promulgated by His Holiness Pope Paul VI on November 21, 1964." http://www.vatican.va/archive/hist_councils/ii_vatican_council/documents/vat-ii_const_19641121_lumen-gentium_en.html
- Paul VI. 1965. *Dei Verbum*: "Dogmatic Constitution on Divine Revelation Solemnly Promulgated by Pope Paul VI, November 18, 1965." https://www.vatican.va/archive/hist_councils/ii_vatican_council/documents/vat-ii_const_19651118_dei-verbum_en.html
- Paul VI. 1966. "The Mystery of Original Sin: Address of Pope Paul VI to a special audience for theologians participating in a symposium on the Mystery of Original Sin July 11, 1966." Translated in William G. Heidt, 1967, *The Book of Genesis Chapters 1–11*, 76–82. Collegeville: Liturgical Press. Original Italian: http://www.vatican.va/content/paul-vi/it/speeches/1966/documents/hf_p-vi_spe_19660711_peccato-originale.html
- Paul VI. 1968. "*Solemni Hac Liturgia* (Credo of the People of God) of the Supreme Pontiff Paul VI." http://www.vatican.va/content/paul-vi/en/motu_proprio/documents/hf_p-vi_motu-proprio_19680630_credo.html
- Picard, Guy. 1951. "La Science expérimentale est-elle favorable au polygénisme?" *Sciences ecclésiastiques* 4: 65–89.
- Pius XII. 1950. *Humani generis*: "Encyclical of the Holy Father Pius XII to Our Venerable Brethren, Patriarchs, Primate, Archbishops, Bishops, and other Local Ordinaries Enjoying Peace and Communion with the Holy See Concerning Some False Opinions Threatening to Undermine the Foundations of Catholic Doctrine." http://www.vatican.va/content/pius-xii/la/encyclicals/documents/hf_p-xii_enc_12081950_humani-generis.html
http://www.vatican.va/content/pius-xii/en/encyclicals/documents/hf_p-xii_enc_12081950_humani-generis.html
- Pius XII. 1953. "Discours du Pape Pie XII aux Participants au 'Primum Symposium Internationale Geneticae Medicae'." https://www.vatican.va/content/pius-xii/fr/speeches/1953/documents/hf_p-xii_spe_19530907_genetica.html
- Rahner, Karl. 1954. "Theologisches zum Monogenismus." *Schriften zur Theologie* 1: 253–322.
- Rahner, Karl. 1961. "Theological Reflexions on Monogenism." *Theological Investigations* 1: 229–296. London: Darton, Longman & Todd.

- Rahner, Karl. 1962. "Monogenismus." *Lexicon für Theologie und Kirche*, 2nd ed., 7: col. 561–562.
- Rahner, Karl. 1965. *Hominisation: The Evolutionary Origin of Man as a Theological Problem*. Translated by W. T. O'Hara. New York: Herder and Herder.
- Rahner, Karl. 1967a. "Introduction." In *Teilhard and the Creation of the Soul*, by Robert North, ix–xii. Milwaukee: Bruce Publishing Company.
- Rahner, Karl. 1967b. "Evolution and Original Sin." *Concilium* 26: 61–73.
- Rahner, Karl. 1969. "Monogenism." *Sacramentum Mundi. An Encyclopedia of Theology* 4: 105–107.
- Rahner, Karl. 1970. "Exkurs: Erbsünde und Monogenismus." In *Theologie der Erbsünde*, edited by Karl-Heinz Weger, 176–223. Freiburg: Herder.
- Rahner, Karl. 1974. "The Sin of Adam." *Theological Investigations* 11: 247–262.
- Rahner, Karl. 1988. "Natural Science and Reasonable Faith." *Theological investigations Vol. 21: Science and Christian Faith*, edited by Hugh Riley, 16–55.
- Ratzinger, Josef. 1971. "The Dutch Catechism: A Theological Appreciation." *The Furrow* 22(12): 739–754.
- Rogerson, John. 1970. "The Hebrew Conception of Corporate Personality: A Re-examination." *The Journal of Theological Studies* 21(1): 1–16.
- Rondet, Henri. 1967. *Le Péché Originel dans la Tradition Patristique et Théologique*. Paris: Libraire Fayard.
- Rondet, Henri. 1972. *Original Sin: The Patristic and Theological Background*. Translated by Cajetan Finegan. New York: Alba House.
- Rouquette, Robert. 1950. "L'Encyclique 'Humani generis'." *Études* 83(267): 108–116.
- Roquette, Robert. 1966. "De Rome et de la chrétienté." *Études* 325(10): 372–391.
- Schelkens, Karim. 2010. *Catholic Theology of Revelation on the Eve of Vatican II: A Re-daction History of the Schema de Fontibus Revelationis (1960–1962)*. Boston: Brill.
- Schoonenberg, Piet. 1962. "Erbsünde und 'Sünde der Welt'." *Orientierung: Katholische Blätter für weltanschauliche Information* 6: 65–69.
- Schoonenberg, Piet. 1965. *Man and Sin. A Theological View*. Translated by Joseph Donceel. Notre Dame: University of Notre Dame Press.
- Smulders, Piet. 1967. *The Design of Teilhard de Chardin*. Translated by Arthur Gibson. Westminster, Maryland: Newman Press.
- Sullivan, Francis. 1996. "The Ordinary Universal Magisterium." *Jurist* 56: 338–360.
- Swamidass, Joshua. 2019. *The Genealogical Adam & Eve: The Surprising Science of Universal Ancestry*. Downers Grove: InterVarsity Press.
- Teilhard de Chardin. 1971. "Monogenism and Monophyletism: an essential distinction." In *Christianity and Evolution*, translated by René Hague, 209–211. New York: Harcourt.

- Thiel, John. 2020. “*Dei Verbum*: Scripture, Tradition, and Historical Criticism.” *Horizons* 47(2): 207–231.
- Vandebroek, Georges, and Léon Renwart. 1951. “L’encyclique ‘*Humani Generis*’ et les sciences naturelles.” *Nouvelle Revue Théologique* 73(4): 337–351.
- Vandebroek, Georges. 1953. “The Origin of Man and the Recent Discoveries of the Natural Sciences.” In *God, Man and the Universe*, edited by Jacques de Bivort de La Saudée, 93–143. New York: P. J. Kenedy and Sons.
- Vandervelde, George. 1981. *Original Sin: Two Major Trends in Contemporary Roman Catholic Reinterpretation*. Washington D.C: University Press of America.
- Vanneste, Alfred. 1967. “Toward a Theology of Original Sin.” *Theology Digest* 15: 209–214.
- Vanneste, Alfred. 1975. *The Dogma of Original Sin*. Translated by Edward Callens. Louvain: Vander.
- Vollert, Cyril. 1959. “Evolution and the Bible.” In *Symposium on Evolution, held at Duquesne University, April 4, 1959, in commemoration of the centenary of Charles Darwin’s The Origin of Species*, edited by Bernard Boelen, 81–119. Pittsburgh: Duquesne University Press.
- Vorgrimler, Herbert. 1986. *Understanding Karl Rahner An Introduction to His Life and Thought*. Translated by John Bowden. New York: Crossroad.
- Wallace, William. 1968. “Thomism and Modern Science: Relationships Past, Present, and Future.” *The Thomist* 32(1): 67–83.
- Weigel, Gustave. 1951. “Gleanings from the Commentaries on *Humani Generis*.” *Theological Studies* 12(4): 519–549.
- Wicks, Jared. 2001. “Pieter Smulders and *Dei Verbum*: 1. A Consultation on the Eve of Vatican II.” *Gregorianum* 81: 241–297.
- Wicks, Jared. 2008. “Six Texts by Prof. Joseph Ratzinger as *Peritus* Before and During Vatican Council II.” *Gregorianum* 89: 233–311.
- Wicks, Jared. 2018. *Investigating Vatican II. Its Theologians, Ecumenical Turn, and Biblical Commitment*. Washington, D.C.: The Catholic University of America Press.
- Yarnold, Edward. 1971. *The Theology of Original Sin*. Notre Dame: Fides.