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**SCIENTIFIC PERSPECTIVES ON
FUNDAMENTAL THEOLOGY**

**Understanding Christian Faith in the Age of Scientific
Reason**

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Preface

This book is part of the commitment of the Vatican Observatory to the interdisciplinary research on faith and science and to the evangelization of scientific culture. It is addressed to professors of university courses in science and theology, to students interested in these topics, and to everyone who wants to reflect on a Christian theology developed within our contemporary scientific context. The book originates from an idea I shared at the Vatican Observatory with Guy Consolmagno and Paul Mueller: to propose to the English public a selection of chapters especially relevant for the dialogue between science and theology, excerpted from my Italian four-volume treatise *Fundamental Theology within the Scientific Context*.¹ That treatise was intended to develop a complete program in Fundamental theology which accepted the “counterpoint” of scientific rationality, taking into account the relevant questions that the sciences pose to Christian faith.

Actually, the volume is more than the mere English version of its corresponding Italian work. In translating the original chapters, I tried to adapt their content to a wider English audience. Bibliographical references addressed to Italian readers have been simplified or omitted, while references and authors familiar to English readers have been added wherever possible. Passages referring to theological debates foreign to the English audience, or too specialized for a wider public, have been summarized or simplified. However, according to the intellectual environment of its author, the volume’s general approach still reflects the European theological context. The theological stance adopted here is mainly that of a Catholic perspective: for this reason, the teachings of the Catholic Church’s Magisterium are frequently exposed and given comment. Nevertheless, I am persuaded that most of the discussion presented here concerning the dialogue between theological work and the natural sciences can be shared fruitfully also by other Christian confessions, with Reformed Churches’ theologians often having contributed more than Catholics to these issues.

The studies at the origin of this book and its English presentation have been made possible thanks to the generous support of the Templeton World Charity Foundation and of the Vatican Observatory Foundation, both of which I gratefully acknowledge.

I am indebted to Gregory Gresko for his careful revision of the whole English manuscript and his very helpful suggestions. I also thank Siddhesh Mukerji for his comments on a first version of this text. I thank once again all the colleagues and scholars who have offered me their observations regarding the already published Italian volumes of the *Teologia Fondamentale in Contesto Scientifico*, on which this book is based.

The Author

¹ G. Tanzella-Nitti. *Teologia Fondamentale in contesto scientifico*. 3 vols. Rome: Città Nuova, 2015-2018; vol. 4 in preparation.

INTRODUCTION

Since the closing of the Second Vatican Council more than 50 years ago, much has been written about how Fundamental Theology should have gathered the legacy of the teachings that emerged. In particular, the Conciliar Fathers' careful formulations in *Dei Verbum* and the new way of conceiving the relations between the Church and the contemporary world as exhibited by *Gaudium et spes* looked closely at Fundamental Theology, whose task is to serve the understanding and proclamation of Revelation in a deeply changed social and pastoral climate. It is well known that one of the main areas of elaboration and confrontation in the post-conciliar debate referred to the way in which Fundamental Theology, which the Council did not mention explicitly, had to understand its role. Many suggested that if we were still to speak of the "credibility" of Revelation, then we had to do so while avoiding philosophical categories, resorting instead to more appropriate historic-salvific categories centered on the Paschal Mystery of Christ. In so doing, Fundamental Theology was asked to carry out a critical evaluation of the various strategies with which such credibility was proposed in past times.² One of the major questions concerned the way in which we now had to understand the "apologetic dimension" of Fundamental Theology. We were asked to re-examine this dimension with more theological categories, thereby renewing it ... understanding it in a new way, substituting it, or even, if necessary, eliminating it. This undertaking, as expected, led to significant backlash regarding how we understand the relationships between philosophy and theology, and faith and reason. The backlash included the uncertainty with which XX-century thinkers such as Martin Heidegger and Karl Barth regarded these relationships. This generated considerable consequences not only for Fundamental Theology but for all theological work, up to the point of necessitating a review of the role of philosophy within theology through the pages of *Fides et ratio* (1998) at the end of the century.

The various scenes where this debate has taken place since the 1960's—whose actors and interpreters have included biblical theology, ecclesiology, pastoral care, and catechesis—have given rise to an educational history that theological publications can only partially report because a large part of it has been written in the daily lives of the people of God. They belong to this story, already in progress:

² The bibliography describing the transition from classical Apologetics to contemporary Fundamental Theology is very ample. Among others, see: René Latourelle, "A New Image of Fundamental Theology," *Problems and Perspectives of Fundamental Theology* (R. Latourelle and G. O'Collins, eds.; New York: Paulist Press, 1982), 37-58; René Latourelle, "Fundamental Theology," *Dictionary of Fundamental Theology* (eds. R. Latourelle and R. Fisichella; New York: Crossroad, 1995), 324-332; Heinrich Fries, "From Apologetics to Fundamental Theology," *Concilium* 46 (1968): 57-68; Avery Dulles, *A History of Apologetics* (San Francisco: Ignatius Press, 2005), 325-345; Avery Dulles, "Apologetics. I. History," *Dictionary of Fundamental Theology* (eds. R. Latourelle and R. Fisichella; New York: Crossroad, 1995), 28-35; and Pierluigi Sguazzardo, "Storia della teologia fondamentale," *Teologia Fondamentale*, 4 vols. (ed. G. Lorzio; Roma: Città Nuova, 2005), 1: 237-339.

the close confrontation between Christian faith and secular thought; the inevitable debate with non-Christian religions; the ambiguous crisis of philosophical reason, too weak to deal with the ultimate questions about truth and the meaning of existence but strong enough to sanction and demand their banning from civil life; the emergence of new anthropological views, the result of which theology has suffered a certain displacement; the uncertainties with which the Church's ordinary pastoral work has responded to growing secularization and to the progressive affirmation of religious indifference; the seductive eruption of techno-science and the models of life that it presents; the secularity-affirming laws and claims of certain Western-world nations that have excluded, in principle, public space for Christianity and for religion in general while ignoring that religion, as part of the life of citizens, should be protected and respected by the laws of the State. It is precisely in this intellectual climate that the Magisterium of the Catholic Church has voiced the need for a new evangelization, emphasizing that the integral confession of the Christian identity and the witness of a holy life were, and still are, the two indispensable conditions for the *sequela Christi*.

Well aware of this state of affairs, most of the authors that developed theological-fundamental reflections around the time of the Council and then, again, at the end of the XX century were passionate interpreters of these delicate ecclesial and intellectual circumstances. However, they also saw the hopes and opportunities that new social and cultural frameworks could provide for theology and the proclamation of the Gospel. They all agreed upon one consensus: the task of "giving the reasons for one's own faith," a task common to theology and preaching, could no longer have as its sole purpose the defense of a religious patrimony, which seems to have been dangerously weakened or irreparably undermined by the anthropological changes produced by the world of technology and the fast evolution of moral and social customs. Rather, proclaiming the reasons for the Christian faith today includes the task of promoting the whole human being, a commitment towards man and all humans, to that man whom the Gospel still declares to reveal to himself, and to enlighten and save (cf. GS, 22).

The main repercussion for theology of all of these circumstances can be summarized by saying that, in the preceding decades, they generated a new awareness and an urgent call for a specific area or discipline within theological work to understand itself and be developed as a theology *before an interlocutor* and a theology *in context*. This discipline, however, is nothing but Fundamental Theology, whose role should never be dismissed. Beyond the still-open debates regarding the method that Fundamental Theology should follow and the internal articulation of its themes, it will be forever the discipline appropriate for that need, as it recognizes Revelation and its credibility, *jointly considered*, as its specific object and core.³

³ A precise reference to the need for a renewed "discourse on credibility" and for a new, original apologetics is one among the programmatic exhortations of Pope Francis: "Proclaiming the Gospel message to different cultures also involves proclaiming it to professional, scientific and academic circles. This means an encounter between faith, reason and the sciences with a view to developing

Fundamental Theology is called to embody the travail of our evolving society, fully understanding the intellectual, cultural, social, and spiritual situation of contemporary people, all of whom the proclamation of the Gospel addresses and who have the right to know the reasons for believing in it. Some authors have highlighted the role of Fundamental Theology by speaking of a theology placed at the frontier of theological discourse, as a sentinel that keeps watch for what can be seen on the horizon. Other authors did so by speaking of the need for a contextual theology.⁴

All agree, therefore, that Fundamental Theology has gained a meaningful specificity in our times. Like all other theological disciplines, it is asked to develop a “critical knowledge of faith” following a rigorous method of study. But, further, it is also asked to extend its work in exercising a “*diakonia* in favor of faith” that reaches all the people of God, albeit through appropriate mediations. In doing so, Fundamental Theology finds once again its most accredited historical task of fostering believers’ comprehension and intelligibility of Revelation so that they, in strengthening the reasons for their own faith, can adequately and credibly announce the Gospel to those who do not yet believe.

At this juncture, we may focus on the two expressions that I employed to present what contemporary Fundamental Theology should embody: “theology before an interlocutor” and “theology in context.” These do not signify that Fundamental Theology is simply a form of kerygmatic theology or should be reduced to a kind of hermeneutics that is attentive both to the existential and epistemological categories of the interlocutor. Nor do these expressions indicate a theology that employs a reason separate from faith. Instead, they point to the idea that fundamental theological discourse should be meaningful to anthropology, history, and science and, therefore, should also be able to listen to them. Fundamental Theology should dialogue with the other disciplines, avoiding too narrow or merely critical-epistemological perspectives. It should maintain a truly existential and holistic dimension because, rather than a set of particular responses to individual questions posed by different disciplines, the Gospel message declares a specific comprehension of human life and a precise vision of the world. It is by way of the global vision/comprehension of the interlocutor, of his intellectual and existential context, that the proclamation of the Gospel must encounter today’s realities.

It is not surprising how developing a Fundamental Theology that understands itself as a theology in context and before an interlocutor must sooner or later confront

new approaches and arguments on the issue of credibility, a creative apologetics, which would encourage greater openness to the Gospel on the part of all.” *Evangelii gaudium*, n. 132.

⁴ The idea that Fundamental Theology is placed not only in the foundation of theological discourse but also on its boundary can be found in the document of the CCE, *The Theological Formation of the Future Priests*, February 22, 1976, n. 109. We note that the ideas set out in these pages (cf. nn. 107-113), read years later, do not lose their relevance.

scientific thought, particularly a vision of the world coming from the natural sciences. It is this last form of thought, in fact, that today characterizes to a great extent the addressees of theological discourse and the general cultural context in which the Christian faith must be explained and transmitted. It is a matter of fact that the influence of scientific thought does not concern only today's cultural circles of learned people but also ordinary people. Contemporary humans come into contact with scientific data through an increasingly extended popularization (or through a certain image of those results) and experience the advancement of science through the many technological applications that are now part of daily life.

In a study commissioned by UNESCO from 1974 to 1977, Jean Ladrière (1921-2007) recognized that the interaction between contemporary science and culture generated a double effect. On the one hand, science can give rise to destructive and destabilizing consequences because it transforms the different cultures in which it operates, putting into crisis many of their convictions, value systems, and traditions. On the other hand, science engenders revolutionary advances and the construction of a new culture capable of unprecedented potentials.⁵ The destabilizing effect could, and does in fact, involve some aspects of theological work and the transmission of faith (*transmissio fidei*), especially when scenarios of the history of salvation are narrated and taught in contrast with (or placing in parentheses) the contemporary scientific worldview. This is why, in the preceding decades, faith-and-science topics have increasingly captivated public opinion in societies where the main religious references are represented by the teachings of Christianity or, in any case, by the Scriptures of the Judaeo-Christian tradition. In fact, the discourse on God carried out by this religious tradition intersects with the real world and natural history—the earthly context and the nature of the human being—most of all in the Christian belief of the Incarnate Word. This confrontation between faith, science, and culture concerns theology, catechesis, and the personal life of every believer to differing degrees.

In principle, there are enough theoretical bases to frame the relationship between theology and science within the classical approach to the faith and reason problem, which in some ways is associated with the age-old question of how theology relates to philosophy. In doing so, one can take advantage of the resources with which the theological tradition previously has addressed those earlier questions while also employing the more recent suggestions of the Church's Magisterium.

In all honesty, sufficient elements exist for framing the relationship between scientific thought and atheism, as it is historically demonstrated that the progress of the first does not necessarily cause the rise of the second. The image of a science based on materialism and ontological reductionism—as if those were the premises of any scientific knowledge—is no longer appropriate today, although such an image

⁵ Cf. Jean Ladrière, *Les enjeux de la rationalité. Le défi de la science et de la technologie aux cultures* (Paris: Aubier - Éditions Montaigne, 1977).

was widely transmitted during the XIX and early XX centuries. The current intellectual climate supports a scientific activity that remains open to a philosophical foundation transcending the empirical level, a science that remains open to recognizing the question of meaning.

However, the existence of non-conflictual ways for relating science and theology cannot avoid the fact that scientific rationality today poses specific requirements for the work of fundamental theologians. For instance, scientific rationality asks that the content of biblical Revelation be taught and proclaimed in a way that is respectful of the knowledge and scientific data shared by everyone, without falling into contradiction, and expects that the Word of God should be explained in an anthropologically significant way. Science also requires that the credibility of the witness be judged on the basis of his or her intellectual maturity, which today also includes a certain synthesis between science and faith, a synthesis that should be reflected in the Church's preaching and catechesis. In this respect, Fundamental Theology is called to play an intelligent mediating role in all theological work. When required, it should courageously propose homogenous development of the dogmatic teaching of the Church, taking into account the increase of knowledge brought about by scientific progress. Over the past centuries, some theological formulations have employed views of nature and of human beings that were consonant with the science of the time. These views, at least in some respects, are no longer adequate today. In summary, in our contemporary scientific era, the exposure *ad extra* of the Word of God requires its proper "inculturation" into scientific culture—just like the Church does when proclaiming the Gospel to people of different cultures with respect for their own languages and traditions.

A delicate approach must be taken concerning the interaction between science and theology. It is necessary to move away from a composition affirmed *in principle* (always possible at the theoretical level) and towards a *de facto* confrontation. While the former may consist in clear-cut philosophical statements, the latter obliges the theologian to closely examine scientific results and their reliability, as one would approach a work-in-progress at an open construction site.

The work urgently needed today is not a generic study of the relationship between theology and the natural sciences, which is a subject already tackled by many authors across numerous publications. It is not enough to confine ourselves to providing epistemological clarifications aimed at showing that scientific results and Christian Revelation do not overlap when trying to answer major questions about "the origins" of the cosmos, of life and its evolution, or of human beings. Pointing out a correct epistemology and the different reasoning levels involved in the sciences, philosophy, and theology is a necessary but insufficient step towards showing the significance and credibility of Revelation's message. Our urgent work is to investigate—and this is precisely what I wish to propose in the present volume—what "intelligence of faith" and "to give the reasons for faith" mean when we are faced with the natural history of the cosmos, that physical, chemical, and biological

knowledge corresponding to the scientific worldview of the XXI century. Essentially, Fundamental Theology is called to explore the delicate relationship between the history of salvation and the history of the cosmos, between the revelation of God addressed to every person and the historical-cultural heritage of *Homo sapiens*, between God's action in nature and in history and the development of natural phenomena within space and time, between God's fidelity to his promises and the cosmic future of matter and life. I am aware that theology cannot answer these paramount questions in a thorough way, and available data are often too scanty to solve them in a convincing manner. However, I also am persuaded that they demand a place in the theological agenda, and theology should suggest, whenever possible, which approaches are practicable and which are not.

A similar program was approached audaciously within a university context by Thomas Aquinas when he proposed explaining the meaning of Christian Revelation and its content against the backdrop of profane knowledge, especially that transmitted by Aristotle. As is well known, the Greek philosopher had entered the mediaeval university not only through his works on metaphysics, ethics, and politics, but also by way of his books on meteorology, physics, astronomy, biology, and zoology (i.e., the sciences of that time). When we talk today about the possible impact that scientific results and contemporary views on nature can exert upon theological work, we do not refer to results coming from provisional and changeable knowledge. Rather, we refer to a body of shared knowledge already consolidated over time, whose global coherence allows us to understand the intimate structure of matter and its fundamental forces in order to shed light on the history of the cosmos and life, and point out the essential steps of their evolution. There is a consolidated frame of scientific knowledge that certainly does not depend on changing paradigms, nor it is contingent on provisional language—no matter the extent of progress made by future investigations. The overall knowledge we have today about the history of the universe and the evolution of life, at least in its essential content, has reached a point of no return. For this reason, it contributes in ways that are certainly incomplete, yet also unambiguous, in humanity's unique quest to seek the truth of our place in the universe.

In many cases, the interaction between science and theology involves dogmatic issues, which usually are tackled and developed by specific theological treatises. On some of these issues, as we know, the Magisterium of the Catholic Church has also offered some explicit formulations over the centuries. Consider, for instance, the dogmatic content of the act of creation, the theology of original sin, and eschatology. However, the perspective of Fundamental Theology is somewhat different from that of dogmatic theology. The former focuses on the relationship between faith and reason—between faith and science—in order to assess the credibility of Revelation. The latter, rather, is aimed more at exposing dogma and deepening its meaning in

light of human salvation. The perspective of Fundamental Theology closely follows the four tasks that Thomas Aquinas assigns to the role of reason in theological work.⁶

In this volume, I deal particularly with the second among these tasks: to pave the way from errors that claim to demonstrate the content of Revelation as meaningless or irrational. Essentially, this is only to show that the progress of scientific knowledge does not deny or render pointless what Christian Revelation affirms and the faith of the Church announces. When examined against the backdrop of other truths now discovered by science, their teachings do not fall into contradiction. Their capacity to appeal to contemporary humanity remains unchanged. The “Fundamental Theology within the scientific context” that I suggest here is, first of all, entrusted to establish what I call the meaningfulness of the Word of God. Its movement towards establishing its credibility, which we understand today as an intrinsic property of Revelation, is secondary.

In order to comprehend in a sound, dogmatic way themes such as the Incarnation of the Word, the relationship between nature and grace, the Catholic doctrine regarding original sin, or Christian eschatology (just to give a few examples of the subjects we will encounter), we need specific biblical-dogmatic developments. These are well beyond what I can offer in this volume. In this respect, the work of Fundamental Theology remains clearly incomplete; just as the construction of a house remains unfinished if the engineer and the architect confine themselves to showing the suitability of the building, demonstrating that it does not violate any law of statics, or simply affirming to have all the necessary materials to construct it. A structured dogmatic exposition of the theological themes involved here—including commenting on the declarations of the Church’s Magisterium and their hermeneutics where such declarations exist—should be entrusted to other treatises of theology that have these specific purposes. The reader who now approaches my work proposal about the credibility of Revelation within the context of scientific thought will easily understand the reason for this.

⁶ Cf. C.G. I, 9.