

SCRIPTURE AND SCIENCE: THE VOICES OF AUTHORITY

“Ordinary speech primarily and properly describes what comes under the senses; and somewhat in the same way the sacred writers—as the Angelic Doctor also reminds us—‘went by what sensibly appeared.’”
Pope Leo XIII, *Providentissimus Deus*

Exegetical Principles

General Principles

Two exegetical principles to be held – St. Thomas says: “Two rules are to be observed, as Augustine teaches (Gen. ad lit. i, 18). The first is, to hold the truth of Scripture without wavering. The second is that since Holy Scripture can be explained in a multiplicity of senses, one should adhere to a particular explanation, only in such measure as to be ready to abandon it, if it be proved with certainty to be false; lest Holy Scripture be exposed to the ridicule of unbelievers, and obstacles be placed to their believing.” I, q. 68, a. 1

Here, we have expressed two great boundaries for Catholic interpretation of Scripture. Firstly, no interpretation can stray from the truths of the faith, as it is absolutely certain that Scripture teaches nothing contrary to the Faith. Secondly, with regard to other truths, no interpretation should be held to that has been manifested to be false, e.g. by one of the profane sciences.

Interpreting Scripture in Practice

In practice – What is important is not so much what the Bible says, as what is its proper interpretation. It cannot err in the latter, and it is the work of exegetes to find out that proper sense of the Bible. St. Augustine lays down the principle that exegetes are to start with the obvious literal sense and only abandon it when there is a strong reason or necessity for doing so.

The direct literal sense can prove to be untenable by the fact that:

1. It conflicts with the Faith, e.g. we cannot hold that Our Lord is a plant when He says “I am the Vine” and so we move to a metaphorical literal sense.
2. It conflicts with the obvious context of the passage, e.g. it is clear in Judges 9 that Joatham intends to tell a fable about trees and bushes talking, and does not intend to say that plants talk.
3. It makes Scripture look foolish by its conflict with knowledge obtained through the profane sciences, e.g. when Ps. 92:1 says that “The Lord hath established the earth and it shall not be moved”, we cannot conclude that Scripture is intending to say that the earth does not rotate, since science has long established this rotation of the earth.

When a certain direct literal sense is untenable, the exegete must conclude that either another direct literal sense or a metaphorical literal sense is intended by Scripture. The first example above shows having recourse to the metaphorical literal sense. In Josue 10:12-13, it relates that Josue commands the sun and the moon to stand still and that they obey. We could take the direct literal sense as indicating that both the sun and the moon move around the earth. But, when this meaning has been excluded by science, we take the direct literal sense as meaning that Josue commanded the sun and the moon to stop their movement as it appears to us in the sky and that they obeyed.

Scripture’s Relationship to Science

Two principles suffice to clarify the relationship between Scripture and science

1. **Scripture was written for a religious purpose** – By this principle, we exclude the possibility of a scientific sense in Scripture.
2. **Scripture employs popular language to make its religious truths accessible to all peoples** – This follows logically from the first principle. Each book uses the language required to communicate the truths that it proposes. If the Bible intended to teach science, it

NOTES FOR *THE REALIST GUIDE* SCRIPTURE AND SCIENCE

would need to use technical language. Because it rather seeks to give all men revealed truths, it uses a popular language that all can understand. Examples:

- a) **Anthropomorphisms** – In Genesis 1, God is portrayed as speaking to Himself and to animals. Genesis 3 refers to His voice as walking through the Garden of Eden. In other places, God is spoken of as being angry (Num. 22:22) or jealous (Ex. 20:5) or as having regret (Gen. 6:6, 1 Kings 15:11).
- b) **Popular scientific conceptions** – Scripture does not hesitate to speak in the scientific language of Biblical times, i.e. according to the appearances of the senses, referring to the earth as being supported by columns (Ps. 74:4, 103:5), which are rooted in a great abyss of water (Gen. 7:11, 8:2, 49:25), the sky as being a solid roof or tent (Gen. 1:6-8, Eccles. 43:9, Ps. 103:2, Is. 40:22), and the earth as unmoving (Ps. 92:1).

Thus, because Scripture does not intend to teach science, it does not teach science, and to mine Scripture for truths of astronomy, geology, etc. is to impose on Scripture a sense that is not there, to expose it to the ridicule of unbelievers, and to set it up as the enemy of science when its supposed scientific sense conflicts with the empirical data gathered by scientists.

As a result, a priori, there can never be a conflict between science and Scripture, for the simple reason that the scope of their respective truths does not overlap. Cardinal Ruffini applies this principle to the first chapter of Genesis:

“Let no one in the name of science claim the right of making difficulties against the cosmogony of Genesis. Nor is it lawful for exegetes to force the meaning of the sacred text in order to make it harmonize with science from which it prescinds and above which it rises supreme. In short, God could very well reveal (and who doubts it?) in what order and in what time He made the various things appear in the world; but in His inscrutable wisdom he preferred to leave such questions to human research.” *Evolution Judged by Reason and Faith*, pp. 86-87.

Church Magisterium

Providentissimus Deus

In 1893, Pope Leo XIII wrote the first encyclical on Sacred Scripture, addressing in it all of the major difficulties introduced by rationalists and scientific discoveries. He clearly lays down the mind of the Church as to the mode of interpretation to be used in passages where there is an apparent conflict between Scripture and science. Below are the relevant passages (the entire section is a quotation that I have set off in numbered points):

1. **No contradiction between faith and science** – “There can never, indeed, be any real discrepancy between the theologian and the physicist, as long as each confines himself within his own lines, and both are careful, as St. Augustine warns us, ‘not to make rash assertions, or to assert what is not known as known’.”[In Gen. op. imperf ix., 30]
2. **Resolution of apparent contradiction** – “If dissension should arise between them, here is the rule also laid down by St. Augustine, for the theologian: ‘Whatever they can really demonstrate to be true of physical nature, we must show to be capable of reconciliation with our Scriptures; and whatever they assert in their treatises which is contrary to these Scriptures of ours, that is to Catholic faith, we must either prove it as well as we can to be entirely false, or at all events we must, without the smallest hesitation, believe it to be so’.”[De Gen. ad litt., i., 21, 41]
3. **Exegetical principles that aid in that resolution**
 - a) **Scripture’s popular language** – “To understand how just is the rule here formulated we must remember, first, that the sacred writers, or to speak more accurately, the Holy Ghost ‘Who spoke by them, did not intend to teach men these things (that is to say, the essential nature of the things of the visible universe), things in no way profitable unto salvation.’[De Gen. ad litt., i., 9, 20] Hence they did not seek to penetrate the secrets of nature, but rather described and dealt with things in more or less figurative language, or in terms which were commonly used at the time and which in many instances are in daily use at this day, even by the most eminent men of science. Ordinary speech primarily and properly describes what comes under the senses; and somewhat in the same way the sacred writers—as the Angelic Doctor also reminds us—‘went by what sensibly appeared,’[l, q.70, a.1, ad 3] or put down what God, speaking to men, signified,

NOTES FOR *THE REALIST GUIDE* SCRIPTURE AND SCIENCE

in the way men could understand and were accustomed to.”

- b) Liberty of opinion in scientific questions** – “The unshrinking defense of the Holy Scripture, however, does not require that we should equally uphold all the opinions which each of the Fathers or the more recent interpreters have put forth in explaining it; for it may be that, in commenting on passages where physical matters occur, they have sometimes expressed the ideas of their own times, and thus made statements which in these days have been abandoned as incorrect. Hence, in their interpretations, we must carefully note what they lay down as belonging to faith, or as intimately connected with faith—what they are unanimous in. For ‘in those things which do not come under the obligation of faith, the Saints were at liberty to hold divergent opinions, just as we ourselves are,’ [In Sent. ii., Dist. q. i., a. 3] according to the saying of St. Thomas. And in another place he says most admirably: ‘When philosophers are agreed upon a point, and it is not contrary to our faith, it is safer, in my opinion, neither to lay down such a point as a dogma of faith, even though it is perhaps so presented by the philosophers, nor to reject it as against faith, lest we thus give to the wise of this world an occasion of despising our faith.’ [Opusc. x] The Catholic interpreter, although he should show that those facts of natural science which investigators affirm to be now quite certain are not contrary to the Scripture rightly explained, must nevertheless always bear in mind, that much which has been held and proved as certain has afterwards been called in question and rejected. And if writers on physics travel outside the boundaries of their own branch, and carry their erroneous teaching into the domain of philosophy, let them be handed over to philosophers for refutation.”

Pontifical Biblical Commission

This commission applies the principles of Leo XIII’s encyclical in the following questions

Dz 2127 Question VII: Whether, since in writing the first chapter of Genesis it was not the mind of the sacred author to teach in a scientific manner the detailed constitution of visible things and the complete order of creation, but rather to give to his people a popular notion, according as the common speech of the times went, accommodated to the understanding and capacity of men, the propriety of scientific language is to be investigated exactly and always in the interpretation of these?—Reply: In the negative.

Dz 2128 Question VIII: Whether in that designation and distinction of six days, with which the account of the first chapter of Genesis deals, the word “day” (Yom) can be assumed either in its proper sense as a natural day, or in the improper sense of a certain space of time; and whether with regard to such a question there can be free disagreement among exegetes?—Reply: In the affirmative.

Other Encyclicals on Sacred Scripture

***Spiritus Paraclitus* by Pope Benedict XV (1920)** – he concurs with the principles of Pope Leo XIII and corrects some false interpretations of those principles

***Divino Afflante Spiritu* by Pope Pius XII (1943)** – on the 50th anniversary of *Providentissimus Deus*, he confirms the principles laid down by Pope Leo:

The first and greatest care of Leo XIII was to set forth the teaching on the truth of the Sacred Books and to defend it from attack. Hence with grave words did he proclaim that there is no error whatsoever if the sacred writer, speaking of things of the physical order “went by what sensibly appeared” as the Angelic Doctor says, speaking either “in figurative language, or in terms which were commonly used at the time, and which in many instances are in daily use at this day, even among the most eminent men of science.” For “the sacred writers, or to speak more accurately—the words are St. Augustine’s—the Holy Spirit, Who spoke by them, did not intend to teach men these things—that is the essential nature of the things of the universe—things in no way profitable to salvation”; which principle “will apply to cognate sciences, and especially to history,” that is, by refuting, “in a somewhat similar way the fallacies of the adversaries and defending the historical truth of Sacred Scripture from their attacks.” ... This teaching, which Our Predecessor Leo XIII set forth with such solemnity, We also proclaim with Our authority and We urge all to adhere to it religiously.

The Fathers

Opinions of the Fathers

Among the Fathers, there were three different schools in the interpretation of the first chapter of Genesis:

- **Syrian and Latin Fathers** – these Fathers held that God created the world successively in six natural days of 24 hours each; among them were Sts. Ephrem, John Chrysostom, Ambrose, Jerome, Gregory the Great
- **Cappadocian Fathers** – these Fathers held to both an instantaneous creation of all matter in an unformed state and to a development of that matter over time. It was especially St. Basil the Great and St. Gregory of Nyssa who held this opinion.
- **St. Augustine and the Alexandrians** – their opinion does not find any real chronological data in Genesis 1, but only a popular description of an inscrutable Creation, in order to make key dogmatic truths accessible to man. Sts. Clement of Alexandria, Athanasius, Augustine, and also Origen held to this position.

Principles and Conclusions on Their Opinions

1. The opinion of the Fathers is to be held when they are unanimous on a matter of faith and morals. When, however, they opine on physical matters not connected to the faith, their opinion in no way obliges the faith of the faithful.
2. Exegetes throughout the ages have followed the principle of not abandoning the obvious literal sense unless there is a strong reason or necessity for doing so. At the time of the Fathers, there were no strong reasons for abandoning this sense for the passages which modern science has shown today cannot be so interpreted.
3. Though many Fathers pursued an historical literal sense as the meaning intended by Genesis 1, yet none of them thought to read in it a scientific sense. None of them thought that the Bible would provide them with revealed scientific truths. Thus, they did not seek to show the science that the Bible taught, but rather that there was no contradiction between the Bible and the science of their times. This is the same thing that we do today.
4. The great variety of opinions taken by the Fathers on the first chapter of Genesis shows both the absence of unanimity among them and the flexibility of interpretation for the Creation narrative that exists to this day.
5. Despite this freedom among the Fathers, St. Thomas points out why the allegorical interpretation of some Fathers can be considered as a better exegetical approach: “Ambrose and the other saints hold that there was an order of time by which things were distinguished. This opinion is indeed more generally held, and seems to accord better with the apparent literal sense. Still the previous theory (that of St. Augustine) is the more reasonable, and ensured a better defense of Holy Scripture against the derision of unbelievers. To this, insists St. Augustine, must the fullest heed be given: ‘the Scriptures are so to be explained that they will not incur the ridicule of unbelievers’ (Gen. Ad litt. 1.19); and his theory is the one that appeals to me.” II Sent. Dist. XII q.1, a.2

Conclusions

It is not so much important what the Bible says as what is its proper interpretation. Holy Mother Church, through the guidance of her Head, Our Lord Jesus Christ, indicates to us exactly what Scripture intends to say in certain cases and, in other cases, the general line of interpretation to be used in finding what Scripture intends to say.

With respect to the first chapter of Genesis and other passages of Scripture that can be read as giving a scientific sense, the Church has indicated for us what dogmatic truths are to be taken from them (e.g. the various decisions of the Pontifical Biblical Commission on Genesis). At the same time, she has stated with all clarity that reading a scientific sense into these passages is to go beyond the scope of Scripture’s intent and thus to force on it a meaning that is not present.

Because the books of the Bible were written to communicate religious and not scientific truths, they

NOTES FOR *THE REALIST GUIDE* SCRIPTURE AND SCIENCE

were written in a popular language accessible to all, and not in the scientific language that would befit a textbook or dissertation on astronomy.

Thus, we can conclude that those who use the Bible to overturn physical theories proposed by modern science, which are not in conflict with the faith, are not interpreting the Bible according to the mind of the Church, are forcing on Scripture a meaning that is not there, are exposing the Bible to ridicule and are making religion a threat to the legitimate aspirations of science.

Extended quotation from St Thomas Aquinas showing the spirit of the Church in interpreting Scripture

St. Thomas in *De Potentia*, q.4, a.1, corpus

As to the first discussion two things are to be avoided: one is the making of false statements especially such as are contrary to revealed truth, the other is the assertion that what we think to be true is an article of faith, for as Augustine says (*Confess. x*), when a man thinks his false opinions to be the teaching of godliness, and dares obstinately to dogmatise about matters of which he is ignorant, he becomes a stumbling block to others. The reason why he says that such an one is a stumbling block is because the faith is made ridiculous to the unbeliever when a simple-minded believer asserts as an article of faith that which is demonstrably false, as again Augustine says in his commentary (*Gen. ad lit. i*). As regards the other discussion two things also are to be avoided. One is to give to the words of Scripture an interpretation manifestly false: since falsehood cannot underlie the divine Scriptures which we have received from the Holy Spirit, as neither can there be error in the faith that is taught by the Scriptures. The other is not to force such an interpretation on Scripture as to exclude any other interpretations that are actually or possibly true: since it, is part of the dignity of Holy Writ that under the one literal sense many others are contained. It is thus that the sacred text not only adapts itself to man's various intelligence, so that each one marvels to find his thoughts expressed in the words of Holy Writ; but also is all the more easily defended against unbelievers in that when one finds his own interpretation of Scripture to be false he can fall back upon some other. Hence it is not inconceivable that Moses and the other authors of the Holy Books were given to know the various truths that men would discover in the text, and that they expressed them under one literary style, so that each truth is the sense intended by the author. And then even if commentators adapt certain truths to the sacred text that were not understood by the author, without doubt the Holy Spirit understood them, since he is the principal author of Holy Scripture. Consequently every truth that can be adapted to the sacred text without prejudice to the literal sense, is the sense of Holy Scripture.

Having laid down these principles we must observe that commentators have given to the opening chapter of Genesis various explanations, none of which is contrary to revealed truth: and as far as concerns the question in point they may be divided into two groups in respect of their twofold interpretation of the formless state of matter indicated at the beginning of Genesis by the words, *The earth was void and empty*. Some understood these words to mean that matter was formless in the sense that it actually had no form but that all forms were in it potentially. Now matter of this kind cannot exist in nature unless it receive formation from some form: since whatever exists in nature exists actually, and actual existence comes to a thing from its form which is its act, so that nature does not contain a thing without a form.

NOTES FOR *THE REALIST GUIDE* SCRIPTURE AND SCIENCE

Moreover, since nothing can be included in a genus that is not contained specifically in some division of the genus, matter cannot be a being unless it be determined to some specific mode of being, and this cannot be without a form. Consequently if formless matter be understood in this sense it could not possibly precede its formation in point of duration, but only by priority of nature, inasmuch as that from which something is made naturally precedes that which is made from it, even as night was created first. This was the view taken by Augustine. Others took the view that the formless state of matter does not denote absence of all form in matter, but the absence of natural finish and comeliness: in which sense it is quite possible that matter was in a formless state before it was formed. This would seem in keeping with the wise ordering of its Maker who in producing things out of nothing did not at once bring them from nothingness to the ultimate perfection of their nature, but at first gave them a kind of imperfect being, and afterwards perfected them: thus showing not only that they received their being from God so as to refute those who assert that matter is uncreated; but also that they derive their perfection from him, so as to refute those who ascribe the formation of this lower world to other causes. Such was the view of Basil the Great, Gregory and others who followed them. Since, however, neither opinion is in conflict with revealed truth, and since both are compatible with the context, while admitting that neither may be held, we must now deal with the arguments advanced on both sides.