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CALVIN AND COPERNICUS

I. INTRODUCTION

"Who", asks Calvin, "will venture to place the authority of Copernicus above that of the Holy Spirit?". This quotation from F.W.Farrar's "*History of Interpretation*"¹ (1886) found its way into numerous scholarly and popular works through mediation of A.D.White (1896), who in his widely read book accused Calvin of having taken the lead in the campaign against Copernicanism.²

Many years ago I was the first to point out in several international periodicals concerned with the history of science, that the "quotation" from Calvin is spurious.³ I became suspicious of its authenticity because it does not fit in with Calvin's exegetical principles and because a similar quotation, allegedly borrowed from the Independent divine John Owen, could immediately be proven to be spurious. According to Farrar, Owen wrote: "Newton's discoveries are against evident testimonies of Scripture".⁴ In the same work Farrar tells us *where* Owen said so:⁵ "When John Owen (*Works* XIX, p. 310) said that Newton's discoveries were "built on fallible phenomena, and advanced by many arbitrary presumptions against evident testimonies of Scripture, his sentences may stand as but one specimen ... of exegetical errors". In fact, however, Owen, after mentioning the order of the planets according to the ancient system, continued: "What alteration is made herein by the late hypothesis fixing

¹ F. W. Farrar, *History of Interpretation*, London, 1886, p. XVIII.

² A. D. White, *A History of the Warfare of Science with Theology in Christendom*, London, 1896, p. 127.

³ R. Hooykaas, "Thomas Digges' Puritanism", *Arch. internat. hist. Sc.*, vol. 8, 1955, p. 151; idem, "Science and Reformation", *J. World History*, vol. 3, 1956, pp. 136-8 (several times reprinted, a.o. in S. N. Eisenstadt ed.: *The Protestant Ethic and Modernization*, New York, 1968, pp. 211-39); *Rev. Hist. Sc.*, vol. 8, 1955, p. 180; *Philosophia Libera*, London, 1957, pp. 12-14.

⁴ F. W. Farrar, *op. cit.*, p. XVIII.

⁵ *Ibid.*, p. 432, n. 2.

the sun as the centre of the world, built on fallible phenomena, and advanced by many arbitrary presumptions, against evident testimonies of Scripture and reasons as probable as any that are produced in its confirmation, is here of no consideration".⁶ Newton is not at all mentioned and it would indeed have been odd if he were, for Owen's work is dated January 1671, whereas Newton's *Principia* was published in 1687, that is, after Owen's death.

A. It was proved by my articles (1) that in Calvin's commentaries on Bible texts with cosmological implications there was not the slightest indication of hostility towards Copernicanism as (2) he just ignored that issue.

B. A second claim I made in my earlier publications was that Calvin's exegetical method furthered the acceptance of the Copernican system by his co-religionists.

More recently, some American authors repeated the claim I made in my first points A(1) and A(2), without reference to my earlier statements. As they reached a wide audience, one may say that until quite recently the informed reader had to believe that Calvin hardly knew, or at any rate never mentioned, the Copernican system. It should be emphasized that also widely recognized "calvinologists", like Auguste Lecerf⁷ and Pierre Marcel⁸ had arrived at the conclusion that Calvin never condemned the theory of the motion of the earth.

A few weeks ago professor W. Voisé kindly sent me an article by R. Stauffer, in which is given incontrovertible proof that Calvin did know the Copernican system and that he was dead against it.⁹ Stauffer found in the 8th sermon on chapters 10 and 11 of Paul's first epistle to the Corinthians a passage which, though, not mentioning Copernicus by name, energetically rejects the central position of the sun and the motion of the earth.¹⁰ On the other hand, the secondary point at issue, *viz* the spuriousness of the Calvin quotation by Farrar and White, is fully recognized.¹¹

R. Stauffer does not level his criticism at my own publications, and this is quite understandable: being an outsider in the history of science, he had no reason to suppose that earlier publications touching this subject did exist, as the specialists whose articles he read did not mention them. But, having in the past also put forward the theses he combats, I feel justified to reconsider the whole problem and to see in how far my earlier conclusions (A¹ and A² and B) may stand in the light of this new find.

⁶ *The Works of John Owen D. D.* ed. W. H. Goold, Edinburgh-London, 1854, vol. XIX, p. 310.

⁷ A. Lecerf, *Etudes calvinistes*, Neuchâtel, 1949, p. 116.

⁸ Cf. *Revue réformée*, vol. 69, 1966, p. 51.

⁹ R. Stauffer, "Calvin et Copernic", *Ann. Musée Guinet., Rev. Hist. d. Religions*, vol. 179, 1971, pp. 31-40.

¹⁰ *Ibid.*, p. 31.

¹¹ *Ibid.*, p. 37.

II. CALVIN'S THEORY OF ACCOMMODATION

From the beginning of the christian era it had been held by theologians that the Holy Spirit, speaking to Man through prophets and apostles, accommodated himself to the human capacity of understanding by using anthropomorphic terms, e.g. when saying that God is angry, or that he repents. In order to prevent too free a use of such an exegetical principle, the Council of Trent demanded that biblical exegesis should be as literal as possible and that in no case should be deviated from the exegesis given by the Church Fathers and the acknowledged doctors of the Church. The question at issue between Galileo and the Inquisition mainly regarded these points. Galileo recognized that his cosmology should be conformable to the Bible, but he pretended that the exegesis of texts with a cosmological or astronomical implication should not be left to ancient or modern theologians alone, but that the help of better-informed professional scientists was indispensable.¹²

On the other hand, Calvin went much farther than other theologians when stressing the twofold character of the Bible, a divine revelation doubtless, but adapted to weak, human understanding, a heavenly message couched in inadequate human language. In his commentary on Psalm 58:45 ("They are like a deaf adder that stops her ear, which will not hear the voice of the charmers, charming never so wisely"), he has doubts about the possibility of charmers charming serpents and of adders stopping their ears. But, as the psalmist's intention is not to combat biological errors but rather to bring home to the reader an ethical message, the psalmist uses a striking metaphor borrowed from common popular belief: "David borrowed he similitude out of the common error, as if he had said, there is no wiliness to be found in serpents which reigns not in these men; yea, though it be so that adders be fenced by their own slyness against enchantments, yet are these men as crafty as they".¹³

In contrast to many of his contemporaries, Calvin did not expect the apostles and prophets to be supernaturally endowed with infallible scientific knowledge. Just as the "Word made flesh" (Christ) took on the form of a servant and voluntarily submitted to the limitations of humanity, so the Word that became Scripture had, in his opinion, its glory hidden and had assumed human frailty, sometimes even manifest in an uneloquent style of writing (at first sight, a serious shortcoming in the eyes of such an accomplished humanist as Calvin was).¹⁴

On the other hand, Calvin's doctrine of "common grace" prevented

¹² Cf. "Galileo on Scripture and the Motion of the Earth", in: R. Hooykaas, *Religion and the Rise of Modern Science*, Edinburgh-London, 1972, pp. 124-6 and 129.

¹³ J. Calvin, *Commentaries on the Psalmes*, 1957, LVIII, 4-5.

¹⁴ J. Calvin, *Commentary on Romans*, V, 15.

any wholesale disavowal of the scholarly heritage of the Greeks. Especially Greek astronomy and anatomy were highly praised by him, and he urged those "who have leisure and ability", not to neglect astronomical research.¹⁵

One might expect, then, that Calvin would follow the practice of the main Church Fathers and medieval doctors and that he would project Greek cosmology into Scripture. On the contrary, however, he recognized more clearly than his contemporaries that there was a discrepancy between the Aristotelian astronomy still prevalent in his own days and the world picture given in the Bible: whereas the Book of Genesis speaks of *one* expanse, the astronomers make a distinction between several spheres or heavens. Whereas Genesis calls the sun and moon the "great lights", the astronomers prove by conclusive reasoning that the little star of Saturn is greater than the moon.¹⁶

Calvin, being a layman in astronomy, could hardly be expected to do anything else than take for granted the system of the world that had been generally accepted since Antiquity and was still held by practically all contemporary astronomers and philosophers. But, having so keenly realized the incompatibility of this Aristotelian world picture with the naive world picture of the Bible, one might perhaps expect that he would reject the former, or at least correct it, in order to reconcile it with the words of the Bible. Calvin, however, has another explanation of the difference between Genesis and the astronomers: in his opinion Moses wrote in a popular way and described what all ordinary people are able to follow, whereas the astronomers investigate whatever the sagacity of the human mind can understand.¹⁷

According to Calvin, the Spirit of God has opened a common school for all; Moses was ordained a teacher of the unlearned as well as of the learned and therefore chose what is intelligible to all; had he spoken of things generally unknown, the uneducated might have pleaded in excuse that such subjects were beyond their capacity, and therefore Moses "rather adapted his writing to common usage". Calvin evidently wanted to base his exegesis on the Reformation doctrine which held that the message of the Bible is accessible to everybody and not to a select group of scholars only, and, moreover, that it does not purport to teach scientific truths but only religious and moral doctrine. The Bible, so he says, is "a book for laymen"; "he who would learn astronomy and other recondite arts, let him go elsewhere".¹⁸

In Calvin we meet with a leading biblical exegete who, while recog-

¹⁵ J. Calvin, *Commentaries upon the First Book of Moses, Called Genesis*, transl. J. King, Edinburgh, 1874, I, 16.

¹⁶ J. Calvin, *Commentary on Genesis*, I, 16.

¹⁷ *Ibid.*, I, 6 and 16.

¹⁸ *Ibid.*, I, 15, 16.

nizing the authority of Holy Scripture in religious and ethical matters, tries to demonstrate that it does not give information on scientific issues and that in cosmological matters it adapts itself to the conceptions of the common people. The Holy Ghost had not the purpose to teach us astronomy, but he "chose rather to stammer with us, than to shut up the way of learning from the vulgar and unlearned sort".¹⁹

His respect for the work of the astronomers made him accept the current Ptolemaic astronomy in spite of its being incompatible with the literalistic interpretation of the biblical text. If, then, one may accept the Aristotelian or the Ptolemaic geocentric system as objective truth, in spite of its being incompatible with the letter of the Bible, one is also free to admit that the Copernican heliocentric system might be true without its being in the Bible.

It is quite irrelevant whether Calvin himself was a Copernican or not; if one accepts his exegetical principles, one can no longer appeal to the authority of the Bible in order to combat the doctrine of the motion of the earth.

We should realize, however, that the Reformed Churches never were committed to Calvin's theology in the same way as the Lutheran churches were bound to Luther. They took rise with Zwingli (Zürich), Oecolampadius (Basel), Bucer (Strasburg) and others, and Calvin (Geneva), and the latter merely was the most influential and the greatest exegete of them all. But many of his followers in dogmatic theology and church discipline, felt free not to follow him in his bold way of interpretation. On the other hand, we might expect that astronomers who held the theory of the motion of the earth and who had read Calvin's commentaries, would reject "biblical" arguments against their theory, with a reference to his exegetical principles.²⁰

We have elsewhere demonstrated that this took place indeed.²¹ Edward Wright (1600), Philips van Lansbergen (1619 and 1629), Jacob van Lansbergen (1633) and John Wilkins (1638 and 1640) rejected attacks on the Copernican system that had been made with an appeal to biblical texts, by repeating Calvin's arguments for the non-scientific character of biblical "cosmology". Jacob van Lansbergen emphatically mentioned that he borrowed his arguments from "our Calvin" (Calvinus noster), though he fully realized that Calvin did "not intend to write on behalf of Copernicus". John Wilkins, too, repeatedly mentioned Calvin's name in corroboration of his view that Scripture does not use scientific language and,

¹⁹ J. Calvin, *Comment on the Psalms*, CXXXVI, 7.

²⁰ R. Hooykaas, "Thomas Digges' Puritanism", *Arch. intern. hist. sc.*, vol. 8, 1955, p. 151.

²¹ Cf. *J. World History*, vol. 3, 1956, pp. 135-7; *Philosophia Libera*, London, 1957, pp. 12-13; *Religion and the Rise of Modern Science*, Edinburgh-London, 1972, pp. 122-4, 126-35.

therefore, should not be adduced against Copernicanism.²² Even Kepler's exposition of the relevant biblical texts, practically coincided with Calvin's ideas.

The Roman-Catholic priest L. Fromondus (1631), not without good reasons, called Lansbergen's expositions a "copernicano-calvinistic theology".

The protestant theologian Gisbertus Voetius (1635), who was a violent opponent of the doctrine of the motion of the earth, when advising beginners in theological studies about which commentaries on Genesis they should read, recommended (in spite of his anti-papalism) that of the Jesuit B. Pereira. This strict "calvinist" kept silence about Calvin's commentary, because he realized that, if he followed Calvin's way of interpretation, this would weaken his anti-Copernican position.

III. CALVIN'S REJECTION OF THE EARTH'S MOTION

R. Stauffer's find does not alter the fact that White's and Farrar's "quotation" from Calvin about the incompatibility of Copernicanism and the Biblical text is fruit of their imagination. But we cannot maintain any longer that Calvin never mentioned the doctrine of the earth's motion, and we should not rashly say that Copernicus' name was unknown to him.²³ Stauffer emphasizes that those who said so, only scanned Calvin's Bible commentaries and that they looked only for his interpretation of texts that mentioned cosmological topics,²⁴ whereas they neglected purely theological texts. The present author added Calvin's Institutes to his reading, but he did not find any anti-Copernican verdict in places where all anti-Copernicans would have found a ready occasion to launch attack against the new system. Evidently, 17th century scholars acted in the same way and with the same negative results. The pro-Copernicans Lansbergen and Wilkins quoted the well-known "cosmological" passages from Calvin's commentaries on Genesis, Joshua and the Psalms and they used them to demonstrate the neutrality of the Bible with respect to scientific theories and they did not take into account Calvin's Sermons. Even Voetius, who certainly would not have neglected the anti-Copernican verdict of the sermon on I Corinthians 10, did not quote it in support of his own anti-Copernican standpoint. Whether Calvin was a Copernican or an anti-Copernican did not play a role in the way he influenced his

²² We hope to come back on this topic in our forthcoming work, *The Reception of Copernicanism in the Netherlands, 1550-1700*, to be published by the Royal Netherlands Academy of Science in commemoration of the 500th anniversary of Copernicus' birth.

²³ In historical statements of this kind it is always safest to add "as far as we know".

²⁴ R. Stauffer, *op. cit.*, p. 39.

followers, who all knew that he adhered to the *old* system in spite of its being incompatible with the biblical text when interpreted in a literal sense. The fact remains, then, that Calvin's exegetical method, when applied to "cosmological" texts, made it easy for *them* to accept the Copernican system. And, besides, that the same exegetical method made it impossible for *him* to use "cosmological" texts from the Bible to combat the Copernican system. Calvin's rejection of the Copernican system had nothing to do with biblical arguments. The question then becomes: what other reason could he have to reject it?

Dr Stauffer, who found the anti-Copernican quotation when editing Calvin's sermons, did not meet with any reference to the heliocentric system in Calvin's sermons on Genesis. He points out that this "only passage" in his sermons where the opponents of the geocentric system are mentioned, occurs in a purely theological and not at all in a cosmological context.²⁵ This explains why it escaped the attention of those who were interested in the Copernican controversy not only in modern times, but also when it still was a hot topic.

But it is precisely this circumstance (viz the non-cosmological and *ethical* character of the context), which makes it highly probable that even if they had known this quotation, this would not have prevented them from making an appeal to Calvin's accommodation theory on behalf of their cosmological standpoint.

It was a generally accepted tenet of christian theology that God does reveal himself in a *special* revelation through prophets and apostles in Holy Scripture, and in a *general* revelation to all people by an innate knowledge and by the work of his hands in the creatures.²⁶ Most christians held also that knowledge about Nature should be acquired from Nature and not from the Bible. Calvin, too, held that a small spark (*scintilla*) of innate, "natural" knowledge of truth remained in Man even after Adam's Fall. The result was the common sense²⁷ in which all people partake, the learned as well as the unlearned— and also the more sophisticated learning of the heathen philosophers, astronomers and physicians. Over against those protestant extremists who would only recognize the truth of biblical revelation and the inner light of the Holy Spirit in the souls of the faithful, and who despised all pagan science and learning as vain and useless, Calvin maintained that "if we hold the Spirit of God to be the only source of truth, we will neither reject nor

²⁵ R. Stauffer, *op. cit.*, p. 40, says that, as far as we know, Calvin did not come back on this subject, though perhaps there might be found something in his commentaries or his correspondence (*op. cit.*, p. 39). As, however, the commentaries were widely read in the 16th and 17th centuries, it seems improbable that an anti-copernican text there would have escaped notice.

²⁶ J. Calvin, *Institutes*, Book I, 1.

²⁷ "Common sense" is "the understanding of things acquired by vulgar exercise and daily use" (Antonius Brugmans, *Oratio inauguralis de sensu communi, mathematicos et philosophiae matre, dicta publice ... X Martii 1756*, Franeker, 1761).

despise the truth, wherever it may reveal itself, lest we offend the Spirit of God".²⁸

In particular, sound common sense was highly appreciated by him and it played an important role in his interpretation of the Bible.²⁹ This becomes evident when he interprets the "waters above the heaven" of Genesis I, neither as a real ocean (as the literalists thought), nor as angels (as the allegorical exegesis would have it), but as clouds: "For it appears opposed to common sense, and quite incredible, that there should be certain waters above the heaven" and, therefore, we should rather think of waters "such as the rude and unlearned also may perceive".³⁰

In his Sermons on Paul's first epistle to the Corinthians Calvin emphasizes that the passage in I Cor. 10:19-24 teaches us not to disguise good and evil, but to call right what is right and wrong what is wrong. We should not resemble those who have such a spirit of contradiction that they "turn upside down the order of nature", those phrenetics "who will say that the sun does not move and that it is the earth which moves and that she revolves". When one says: this is warm, they will say it is cold and "when they are shown a black thing, they will say that it is white, or the contrary as one who says that snow is black".³¹ These madmen would change the order of nature and they would blind people's eyes and dull their senses.³²

Though Copernicus' name is not mentioned, this evidently is a rejection of his system. Calvin did not belong to those "mataiologoi", who, as Copernicus said, founded an astronomical opinion on "some place of Scripture, wrongly distorted in order to suit their end",³³ but he did belong to that multitude of people who rejected, as Copernicus expected, the motion of the earth "because of its absurdity".³⁴ After all, "mathematics is written for mathematicians" (or, more adequately: astronomy is written for astronomers),³⁵ but even the vast majority of the "math-

²⁸ J. Calvin, *Institutes*, II, 2, 15.

²⁹ See e.g. the examples adduced in my *Religion and the Rise of Modern Science*, p. 120 and p. 153, n. 21.

³⁰ J. Calvin, *Comment on Genesis*, I, 7. On another occasion (*Comment. on Ps.*, 148) he considers this text as a plain accommodation to a popular belief; those who "hence conclude that there is a sea in the heavens ... too servilely tie themselves to the letter of the text", as we know that Moses and the prophets, to accommodate themselves to the capacity of ruder people, often use a vulgar expression, and "therefore it would be a preposterous course, to reduce their phrases to the exact rules of philosophy".

³¹ Probably an allusion to Anaxagoras' saying that "snow is black" (Cicero, *Academica*, II, 23 and II, 31).

³² Calvin, *Opera quae supersunt omnia*, Braunschweig, 1892, vol. 49, col. 677. The 8th sermon on chapters 10 and 11 of I Corinth. 10: 19-24, 1556.

³³ N. Copernicus, *De revolutionibus orbium coelestium*, Norimbergae, 1543, Praefatio, p. IV vs.

³⁴ *Ibid.*, p. III r.

³⁵ *Ibid.*, p. IV vs.

ematicians" (astronomers) considered his theory, if conceived in a realistic sense, as an absurdity.

An appeal to common sense often is legitimate, but it is well-nigh impossible to decide when it ceases to be so. In general we have a tendency to consider ideas and facts to which we have been accustomed since our school days as quite rational and not absurd.³⁶ Initially our common sense would only observe one expanse, but indoctrination with Greek astronomy was to make acceptable that in reality there are many invisible planetary spheres around the earth. "Common sense" made the contemporaries of Moses and David accept the one expanse, but it did not prevent Calvin and his contemporaries to accept many heavens, as it did not prevent them from accepting that "the little star of Saturn is greater than the Moon". Yet it was extremely absurd to them that the Earth is in motion and the Sun is standing still. And, indeed, in this case "common sense" seemed to speak particularly strongly against it: with our own eyes we see the sun moving and "sound reason" tells us that, if the earth performed a full revolution within 24 hours, we would get dizzy and we would be thrown off into space.³⁷ Moreover, one of the principles of Aristotelian physics (which was so strongly inculcated into the minds of 16th century people that its tenets were identified with the "order of nature" itself) is that heavy bodies (like earth) have only one "natural" motion, viz that in a straight line towards the centre of the universe. Aristotelian physics, however sophisticated it might be, started as a rule from naive daily experience. Consequently it is quite understandable that saying that the earth moves and the sun is standing still, was considered a perversity of the same kind as saying that snow is black³⁸ or soot is white, sayings which stem from an evil spirit of contradiction.

That is to say, in the passage under discussion the theory of the motion of the earth was condemned by Calvin not because it is against Holy Scripture ("special revelation"), but because it is considered to be against "general revelation" as given in the testimony of the senses and reason which have been given to all people on earth.

It goes without saying that, as the Greek astronomical system was partly highly sophisticated (the invisible spheres and their circular movement) and partly conformable to naive, immediate observation (the daily rotation of the heaven), the *former* (sophisticated) part would not be found in the Bible, so that on that account only the accommodation

³⁶ Cf. R. Hooykaas, *The Principle of Uniformity*, 2nd. ed., Leiden, 1963, pp. 165-8.

³⁷ Of course, our 20th century "common" sense has some difficulty in appreciating these arguments of the learned and the unlearned of some centuries ago.

³⁸ "Anaxagoras said that snow is black: would you endure me if I said the same? Not you, not even if I expressed myself as doubtful, and yet he was a man of high renown" (Cicero, *Academica*, II, 23).

principle must be resorted to when interpreting the texts. On the other hand, as far as the sun's motion and the earth's standing still are concerned, there was no need for "accommodation", for in these cases the scientific and the naive conceptions were coinciding, and they were true both for the learned and the unlearned. Therefore when Scripture speaks of the motion of the Sun accommodation is not assumed because there is no need of it.

Consequently, it is strange that R. Stauffer for once agrees with one of the people he criticizes, when accusing Calvin of inconsistently abandoning his accommodation principle when (in his commentary on Joshua 10:13) taking the words "And the sun stood still, and the moon stayed", as literally true.³⁹ What else should he have done, while thinking the motion of *sun* as well as that of the moon to be objective truth. In that case there is no question of "accommodation". And when it is said that "the moon stayed", even a Copernican would not have considered this an "accommodation to common speech" but objective truth. It is asking too much from the interpreter that he should have considered the motion of the sun as an accommodation to common speech and the motion of the moon as an objective reality. To the naive observer as well as to the philosopher of the 16th century both motions are reality.

SUMMARY

(1). A. D. White's quotation in which Calvin is said to condemn Copernicanism as conflicting with the Bible, is spurious.

(2). Calvin's conception of the Bible leaves the problem of the true cosmological system undecided and thus paved the way for the acceptance of Copernicanism.

(3). Several scholars of the early 17th century quoted Calvin's Bible commentaries to demonstrate that arguments borrowed from Scripture against Copernicanism have no value.

(4). Calvin rejected Copernicanism, not on Scriptural arguments but because of its being against the "order of nature" as revealed through "common sense" and the astronomical science of his days.

³⁹ R. Stauffer, *op. cit.*, p. 36.