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Galileo Response

In his *Letter to the Grand Duchess Christina*, Galileo is arguing that the Bible should not and can not be taken literally in all instances, and therefore it is not heresy to draw a conclusion about the physical universe that contradicts a passage in the Bible, in this case the conclusion that the Earth revolves around the Sun. To backup his argument, he quotes St. Augustine, St. Jerome, and gives a description of the favorable reception that Copernicus received from the church about his findings about the universe. Galileo would benefit from convincing the Grand Duchess that he is correct because she would be a powerful ally in his quest to have his findings recognized by the Church.

The concept of a heliocentric universe disturbed many people of Galileo's time for two main reasons. One, it directly contradicted the theories of Aristotle and Ptolemy, which were held as dogma by this point in time. While some aspects of Ptolemy's universe, like the equant point, people were glad to get rid of once Copernicus first published his works, they wanted to make Copernicus' ideas work within the idea of a geocentric universe instead of scrapping it entirely. Two, it directly contradicted with statements in the Bible that said the Sun moved around the Earth. The logical and Scriptural contradictions led most people to be against the idea. If Galileo could have convinced the Grand Duchess of the validity of his position, he would have had a great ally in defeating the people who disagreed with his theories. The Medici family was a great power in Italy at this time, and having their support would have bolstered his legitimacy and helped defend against the accusations of heresy.

Galileo used the *Letter to Grand Duchess Christina* to respond to the contradictions with the Bible and preach his own way of using the Bible in conjunction with the natural sciences. He makes the point that if everything in the Bible were to be taken literally, “not only contradictions and propositions far from true might thus be made to appear in the Bible, but even grave heresies and follies. Thus it would be necessary to assign to God hands, feet, hands and eyes, as well as corporeal and human affections, such as anger, repentance, hatred, and sometimes even the forgetting of things past and ignorance of things to come.”¹ He then says that these passages were given to the scribes so the common people would be able to better understand God and the universe, as the common people are “rude and unlearned”².

Connecting the two, he states that when the Bible speaks about the physical universe it is acceptable to not take them literally, and we should make conclusions based on sense experience first because nature is inflexible in its laws and passages in the Bible that contradict laws of nature may very well have a different meaning than the literal. Finally, he even offers a theological opinion about God’s intentions for humanity’s capacity for reasoning. “But I do not feel obliged to believe that the same God who has endowed us with senses, reason and intellect has intended us to forego their use and by some other means to give us knowledge which we can attain by them. He would not require us to deny sense and reason in physical matters which are set before our eyes and minds by direct experience or necessary demonstrations.”³

In addition, Galileo refutes the tendency of his opponents to use Scripture to disprove his arguments instead of using arguments based in logic. For the most part, he uses repeated quotes from St. Augustine to argue this. St. Augustine says that if anyone uses the Bible to refute a conclusion from reason that he is using his own interpretation of the Bible and things he

¹ Galilei, Galileo. *Letter to Grand Duchess Christina of Tuscany*, 1615. Letter. From The Internet Modern History Sourcebook. <http://www.fordham.edu/halsall/mod/galileo-tuscany.html> (accessed June 30, 2011).

² Ibid.

³ Ibid.

imagines are in there, because the true meaning of the Bible is beyond human comprehension. Hence, the Bible should not be used to refute reason. St. Augustine also says that the time and effort it would take to discern the true nature of the heavens would distract from the more important goal of obtaining salvation. He also realizes that if people were to see Scripture used to refute a proven physical truth that is irrelevant to salvation, like the order of the heavens, they would question Scripture in the matters of faith and salvation as well. There is also one quote from St. Jerome, who calls those who twist Biblical passages for their needs corrupted.

Besides quoting St. Augustine, Galileo also uses the fact that Copernicus and his theories were not only accepted but sought out by the Church. The discoveries Galileo made in the realm of astronomy would not have been possible if Copernicus had not “restored and confirmed,” as he said, the heliocentric system. Copernicus was a loyal church official as well as astronomer. Galileo brought up the valid point that when the Church had been trying to correct the errors in the church calendar, they had actively sought out Copernicus' help in fixing them. When Copernicus published his findings, it was at the insistence of church officials, dedicated to Pope Paul III, and widely read and accepted with no accusation of heresy. While this was probably influenced by the added introduction that stated that the ideas within were merely a hypothesis, nonetheless Copernicus died without having to deal with the Inquisition.

Galileo used the ideas of St. Augustine, along with his own interpretations and the fact that Copernicus was well received by the Church, to argue his point that the heliocentric worldview was not heresy. Unfortunately, due to missteps he made and the prevailing attitude of those in power at the Church, his efforts failed to stem the tide of disagreement against him. One wonders how much more Galileo could have accomplished had the Church accepted his findings and allowed him to continue working instead of keeping him under house arrest.