

# Geocentric gobbledegook

A review of  
*The Earth is not Moving*  
by Marshall Hall,  
Fair Education Foundation,  
Cornelia, Georgia, 1991.

## Danny Faulkner

I have demonstrated the errors of geocentrism, as exemplified by the views of Gerardus Bouw,<sup>1</sup> elsewhere in this issue (pp. 114–125). The problems with Bouw's book pale in comparison with those of this book by Marshall Hall. Hall's book is written as a dialogue between two people in a very conversational style filled with contractions, slang, and nicknames. The reasoning is so erroneous at many points that one has to question whether the book was actually intended as some sort of weird parody or satire. Private communications with a few people who have met Hall suggest that this is not the case. It appears that Hall simply failed to understand many of the things that he wrote about. Lest

association with Hall malign Bouw, we should emphasize that there are marked differences between these two gentlemen's books, hence the separate articles.

For instance, Hall claims that the Foucault pendulum,<sup>2</sup> Coriolis effect,<sup>3</sup> and the oblateness of the Earth<sup>4</sup> that are cited as evidence of a rotating Earth are fakes. Bouw accepts the reality of all of these, but explains them in terms of a rotating universe. Hall even quotes Bouw on the matter that a rotating universe can explain the Foucault pendulum.<sup>5</sup> Apparently it never occurred to Hall that this places him in the curious position of simultaneously denying

the reality of the Foucault pendulum experiment and claiming that it could best be described geocentrically.

Hall engages in dubious mathematical calculations to argue that ocean tides are not caused by the moon's gravity, but are instead supernatural in origin and timed to lunar phases.<sup>6</sup> Bouw does not agree with this, but accepts the usual explanation for tides, albeit in a rotating universe. Hall's arguments on this point betray a complete lack of understanding of the basic theory of tides. If Hall had consulted any good discussion of the tides, such as the one in the astronomy textbook by Abell *et al.*,<sup>7</sup> he could have avoided embarrassing himself on this issue.

Hall repeatedly engages in egregious errors, most of them resulting from failure to understand the concepts that he is discussing. Throughout his book, he parrots the common misconception

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Hall states that geostationary satellites, if they are orbiting at all, must violate Kepler's first law, because they must have circular orbits when the first law demands that orbits be ellipses.<sup>13</sup> Apparently Hall is ignorant of the fact that a circle is a special case of an ellipse, with an eccentricity of zero.

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that modern relativity theory means that all motion is relative with no absolutes.<sup>8</sup> This is incorrect, for a key postulate is the constancy of the speed of light in a vacuum, regardless of the observer's motion. Einstein himself preferred to call it the 'invariance theory', but the name 'relativity' stuck. (See my article on geocentrism for further refutation of geocentrists' fallacies about relativity, pp. 114–125).

Hall ridicules non-Euclidean geometry, where the sums of the interior angles of triangles are not 180 degrees as in Euclidian geometry. Hall apparently is ignorant of spherical trigonometry



where the sum of the interior angles of every triangle exceeds 180 degrees. Since the Earth is spherical, this can be detected on the earth's surface by surveying techniques, if the area being surveyed is greater than about 200 acres. A discussion with any surveyor would confirm that non-Euclidian geometry is necessary on the Earth's surface.

Hall's leaps of logic in discussing Kepler are immense. With no evidence, he suggests that Kepler murdered Tycho.<sup>9</sup> He notes that Kepler's mother was tried for witchcraft and, though he admits that she was acquitted, Hall concludes (using the logic of 'where there is smoke, there is fire') that she was indeed guilty.<sup>10</sup> Besides the outrageous and unjust equation of indictment and guilt (violating Biblical principles), Hall fails to understand that the charge of witchcraft was a frequent accusation in the early 17<sup>th</sup> century, not only in Europe but in the Massachusetts colony of North America as well. Having assumed Kepler's mother's guilt, Hall then proceeds to tar Kepler with the same brush.<sup>11</sup>

Hall ridicules Kepler's three laws of planetary motion without ever really adequately describing them or offering any real and valid criticism.<sup>12</sup> He states

that geostationary satellites, if they are orbiting at all, must violate Kepler's first law, because they must have circular orbits when the first law demands that orbits be ellipses.<sup>13</sup> Apparently Hall does not know that a circle is a special case of an ellipse, with an eccentricity of zero.

Throughout his book Hall confuses the words rotate and revolve,<sup>14</sup> words for which astronomers have very specific meanings—rotation means a body's cyclic motion about its **own** axis, while revolution refers to cyclic motion about **another** object (or centre of mass).

Hall calls Isaac Newton's '... ideas on gravity nonsensical and unscientific ...'<sup>15</sup> As for his theology, Hall claims that Newton denied the deity of Jesus Christ,<sup>16</sup> a claim made by others. This is at odds with Bouw, who believes that Newton was a devout Christian who held views similar to those of independent Baptists of today.<sup>17</sup> Hall included in his book a copy of a brief article about a man named Robert Cook<sup>18</sup> who supposedly invented a machine that defies Newton's third law of motion. Unfortunately Hall did not include a reference for this article, so it is impossible to check. This is odd, because the book has hundreds of references.

There are other non-existent or incomplete references. For instance, the cryptic reference<sup>19</sup> used in making a charge of Satanism against Karl Marx is missing information and includes the words 'copy lost.' Apparently Hall once saw or possessed the reference, but no longer has it and is working from memory. More puzzling is that the title of the reference suggests that it is the collected writings of Marx when Marx was a student in the year 1818. This would have been difficult, considering that Marx was born in that year.

Hall uses an ancient argument against the Earth's motion: that it would leave the atmosphere behind.<sup>20</sup> Earth's gravitational force holds the atmosphere around the Earth. Some very low mass molecules / atoms, such as hydrogen, are not held with sufficient force to stop them from escaping, but the higher mass molecules, such as ni-

trogen, oxygen and carbon dioxide are bound to Earth. However, since Hall dismisses both Newton and Einstein, perhaps he does not believe in gravity either?

Hall also suggests that geostationary satellites are held in place by magnetic forces.<sup>21</sup> He also quotes another reference to the effect that parallax measurements have been greatly misunderstood, and so the universe is far smaller than most astronomers think.<sup>22</sup> This is followed by what appears to be a suggestion and diagram illustrating that some or perhaps all of the stars are located on a transparent sphere surrounding the earth.<sup>23</sup> While Hall seems to think that this represents a return to Biblical Christianity, it actually is a return to ancient pagan teachings.

One of the more pathetic sections is Halls' use of solar eclipses as an argument for a non-rotating Earth.<sup>24</sup> Hall points out that during a solar eclipse the shadow of the moon moves from west to east. He attempts to show that if the Earth is rotating, the Earth's rotation should carry the moon's shadow from east to west instead. Hall does correctly calculate the motion of the Earth at various latitudes. In what follows here, the scientifically obsolete units of miles will be used so that comparison with Hall may be facilitated. The maximum speed of rotation is a little over 1,000 mph at the equator, with speeds a bit less in temperate latitudes. What Hall fails to consider is that the moon is moving west to east in its orbit around the Earth. The radius of the moon's orbit is about 240,000 miles, which gives a circumference of about 1.5 million miles. The moon's synodic period is 29½ days, which means it moves roughly 51,000 miles per day, or at a speed of more than 2,100 mph. Thus the eastward movement of the moon's shadow is about twice the maximum rate of the Earth's rotation that would carry the shadow toward the west. Fore-shortening of the shadow's motion further increases its ground speed. Thus Hall's argument is easily refuted.

Hall's book is replete with this sort of sloppy reasoning. It should be an embarrassment to the geocentric community, but there does not appear to be

any criticism of Hall from that camp. In fairness to Bouw, his book should not be compared to Hall's book. For that reason I have separated the discussion of the two books as much as possible, and have treated Bouw's book as the definitive defence of geocentricity.

In conclusion, since creationists should distance themselves from even the best defence of geocentrism for reasons given in pp. 114-125 of this journal, much more so should we distance ourselves from Hall's book.

## References

1. Bouw, G.D., *Geocentricity*, Association for Biblical Astronomy, Cleveland, 1992.
2. Hall, M., *The Earth is not Moving*, Fair Education Foundation, Cornelia, Georgia, pp. 168-173, 1991.
3. Hall, Ref. 2, pp. 159-167.
4. Hall, Ref. 2, pp. 194-197.
5. Hall, Ref. 2, p. 172.
6. Hall, Ref. 2, pp. 198-206.
7. Abell, G.O. Morrison, D. and Wolff, S.C., *Exploration of the Universe, sixth edition*, Saunders College Publishing, Harcourt Brace Jovanovich, Orlando, pp. 68-70, 1993; earlier editions, e.g. the 3rd of 1975, predate Hall's book so there is no excuse.
8. Hall, Ref. 2, p. 14.
9. Hall, Ref. 2, p. 48.
10. Hall, Ref. 2, p. 52.
11. Hall, Ref. 2, pp. 52-65.
12. Hall, Ref. 2, pp. 62-64.
13. Hall, Ref. 2, pp. 62-64, 246-247.
14. Hall, Ref. 2, p. 77 is just one example.
15. Hall, Ref. 2, p. 83.
16. Hall, Ref. 2, pp. 88-89.
17. Bouw, Ref. 1, p. 216.
18. Hall, Ref. 2, pp. 87-88.
19. Hall, Ref. 2, p. 23.
20. Hall, Ref. 2, pp. 233-238.
21. Hall, Ref. 2, p. 258.
22. Hall, Ref. 2, p. 283.
23. Hall, Ref. 2, pp. 288-289.
24. Hall, Ref. 2, pp. 207-214.