ICR SKIRTS GEOCENTRICITY AGAIN

December's issue of *Impact* from the Institute for Creation Research was devoted to an article by Fred Wilson on the mathematical patterns found in nature.[1] In particular, the article describes a mathematical sequence called a *Fibonacci Series*. The series is created by taking the numbers one and two and then forming the next number in the sequence by adding the previous two together. The series runs:

1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, ...

When the larger of an adjacent pair of numbers is divided, the larger by the smaller, the ratio is usually close to 1.618. This ratio is called the *Golden Ratio*. It turns out that rectangles, whose sides satisfy this ratio, are pleasing to the eye. The ratio of these pages is about 1.55. The Greeks used the *golden rectangle* in the design of their temples. The ark of the covenant was 2.5 cubits long and 1.5 cubits wide, which is a ratio of 1.6767. The altar for sacrifices was 3 cubits high, by 5 long and wide. The list of ratios for the above list is:

2, 1.5, 1.667, 1.6, 1.625, 1.615, 1.619, 1.618, 1.618, 1.618, 1.618, 1.618

More difficult to see is the pattern in flowers. A flower like the sunflower will have two sets of spirals spiraling in opposite directions. (Each spiral is made of tiny flowers which yield the sunflower seeds.) Counting in each direction, one finds that the number of tiny flowers or seeds, depending upon the size of the flower, will number a follows: if the flower is small, 34 and 55, if medium 55 and 89, and if large 89 and 144. These form what is called a *golden spiral*.

Mr. Wilson does a very nice job of showing the broad scope under which the golden spiral, rectangle, and ratio occur. The reader is encouraged to get a copy or check for it at ICR's web site.

The most interesting part of the article from our perspective is the Fibonacci sequences for the planetary periods. Wilson's table could be clearer by using years in stead of days and by showing more intermediate values, but his table served the purposes of his article just fine. The following table includes intermediate values, including one for the asteroids. We selected the largest asteroid, Ceres, for the period of an asteroid. Wilson's 1550 days gives a period of 4.24 years and actually

[1] Wilson, F., 2002. "Shapes, Numbers, Patterns, and the Divine Proportion in God's Creation," *Impact*, no. 354, December.

does not match the ratios as well as the Ceres period, which is representative of the largest asteroids.

FIBONACCI RATIOS FOR THE PLANETS						
Planet	Period (years)	Observed Period Ratio	Expected Fibonacci Ratio	Expected Fibonacci Value	Best-fit Observed Ratio	Best-fit Observed Value
Pluto	248.43	**---**	---	---	---	**---**
Neptune	164.78	**1.51**	3:2	1.50	3:2	**1.50**
Uranus	84.02	**1.96**	2:1	2.00	2:1	**2.00**
Saturn	29.46	**2.85**	3:1	3.00	3:1	**3.00**
Jupiter	11.86	**2.48**	5:2	2.50	5:2	**2.50**
Asteroids	4.60	**2.58**	8:3	2.67	8:3	**2.67**
Mars	1.88	**2.45**	13:5	2.60	13:5	**2.60**
Earth	1.00	**1.88**	21:8	2.63	***13:8***	**1.63**
Venus	0.62	**1.61**	34:13	2.62	***21:13***	**1.63**
Mercury	0.24	**2.58**	55:21	2.62	55:21	**2.62**

In the table, the first column lists the name of the planet. The second column gives its orbital period, its “year,” in earth years. The third column is computed by dividing the period of the planet on the line above by the period of the planet on that line, giving the observed ratio of the periods.[2] For instance, the value of 1.51 for Neptune is computed by dividing the period of Pluto, 248.42 years, by Neptune’s period of 164.78 years. The fourth column gives the Fibonacci ratio that is theoretically expected to give to the value in column three, only expressed as a fraction of two integers. The Fibonacci ratios start with Uranus as 2 to 1 (2:1, read as “two to one”). Neptune’s Fibonacci ratio is in the opposite direction of the planets interior to Uranus. The ratio of 5:2 for Jupiter is derived by adding the 2 from Uranus and the 3 from Saturn to give the 5. The 2 is found by adding the 1 from Uranus to the 1 from Saturn. The fifth column is the ratio in column 4 divided out to two decimal places. In other words, the 2.60 for Mars is computed by the division 13/5. Columns four and five are theoretical, that is, computed, values derived from Uranus’s starting value. The values in column five are to be compared with those in column three. Note that the computed values fail to match the observed ones, for earth and Venus.

[2] Wilson presents the inverse, but the only effect is to swap the numbers in the ratio, that is, the 3:1 for Saturn becomes 1:3. It makes no difference in the analysis or the results. It’s just a personal preference, I’d rather work with numbers like 3 instead of 0.33333....

The sixth and seventh columns give the best-fit observed match to column three, given the expected sequence. Thus I have left the ratio for Mercury the same as expected (55:21) whereas Wilson changes it to 34:13. Since both ratios evaluate to 2.62, there is no way to tell which is "correct." Columns six and seven, then, express what is actually *observed,* not what is wished for, while keeping the values in columns three and four, where appropriate.

The table is not the same as appeared in the *Impact* article. In the original article, the period of Mars was changed from 1.88 years to 1.63 years, and that of Venus was changed from 0.62 year to 0.76 year. Also, Wilson's article had the planetary periods in days, but whether days or years, it makes no difference to the ratios since they are unitless. Using the adjusted periods for Mars and Venus vastly improves the results in column six, for then the ratio for both earth and Venus becomes 21:8. The ratio for Mars was kept the same by adjusting the period for the asteroids from 4.60 to 4.24 years.

We find that the earth and Venus are oddballs, neither fitting the expected Fibonacci series. Thus we should compare column three with column seven; the observed ratio of the period, to the observed ratio value.

ERROR ANALYSIS			
	O-C		Theory minus
Planet	Theory	Best fit	Best fit
Pluto	---	---	---
Neptune	-0.01	-0.01	0.00
Uranus	0.04	0.04	0.00
Saturn	0.15	0.15	0.00
Jupiter	0.02	0.02	0.00
Asteroids	0.09	0.09	0.00
Mars	0.15	0.15	0.00
Earth	0.75	-0.26	1.00
Venus	1.00	0.00	1.00
Mercury	0.04	0.03	0.00

The table at left shows the error, that is, the difference between the observed Fibonacci ratio (O), and the computed value (C). The subcolumn labeled "Theory" is the difference between columns 5 and 3 in the first table, "Best fit" is column 7 minus column 5. The last column is the Theory column less the Best fit column of this table. By far, the largest discrepancy is for the earth. At -0.26, its magnitude is 1.7 times larger than the errors for Saturn and Mars, both of which are near "asteroid belts," meaning that their periods may not be representative of the mass distribution in that are.

All things considered, the fit for the outer planets (Pluto through Mars) is good, as is Mercury's. The only problems planets, as clearly

DETAILED COMPARISON WITH WILSON'S ANALYSIS

Planet	Observed Period	Wilson's Period	Observed Period Ratio	Wilson's Period Ratio	Expected Fibonacci Ratio	Wilson's Fibonacci Ratio	Our Corrected Ratio	Expected Fibonacci Value	Wilson's Fibonacci Value	Our Corrected Value
Pluto	248.43	248.43								
Neptune	164.78	164.78	1.51	1.51	3:2	3:2	3:2	1.50	1.50	1.50
Uranus	84.02	84.02	1.96	1.96	2:1	2:1	2:1	2.00	2.00	2.00
Saturn	29.46	29.46	2.85	2.85	3:1	3:1	3:1	3.00	3.00	3.00
Jupiter	11.86	11.86	2.48	2.48	5:2	5:2	5:2	2.50	2.50	2.50
Asteroids	4.60	4.24	2.58	2.80	8:3	8:3	8:3	2.67	2.67	2.67
Mars	1.88	1.63	2.45	2.60	13:5	13:5	13:5	2.60	2.60	2.60
Earth	1.00	1.00	1.88	1.63	21:8	21:8	13:8	2.63	2.63	1.63
Venus	0.62	0.76	1.61	1.32	34:13	21:8	21:13	2.62	2.63	1.62
Mercury	0.24	0.24	2.58	3.17	55:21	34:13	55:21	2.62	2.62	2.62

seen in the last column of this table, are earth and Venus. (Do not be alarmed that earth's value is not 1.01. This is because of rounding errors. The underlying values in the spreadsheets shown carried more than three significant digits.)

The table at left is a comparison of our results with Wilson's. The last three columns should fit the observed values in column 4.

After making his adjustments to the periods of the asteroids, Mars, and Venus, Wilson writes: "It is my opinion that this anomaly is evidence of God's showing the uniqueness of planet Earth in relationship to the whole cosmos." We can take that a step further and point out that if he is correct, then it shows that the earth is not a planet. Wilson correctly notes that this would not be expected if the solar system formed by the commonly accepted Nebular Hypothesis. The solar system had to be created, for if it came about by chance, the Fibonacci series would apply to the earth, too.

But our analysis did not fudge the planetary periods to force a fit to the Fibonacci ratios. We found that without altering the periods of Mars, the asteroids, and Venus, only two objects are affected, Venus and earth. Although Wilson's fudging gives him a nice recovery of the ratios, isolating the difference to earth, the process itself is questionable. Wilson does not go into a detailed defense for his action other than to wave his hands saying that some creationists have postulated that an "unknown cosmic force" altered the solar system about or at the time of Noah's flood. But that is nothing more than a creationist version of Velikovskyism. The "unknown cosmic force" is proposed because the actions postulated cannot naturally occur. It is possible that miraculous events at the time of the flood may have moved the planets around, but as there was no need for God to do so to create the flood, and as there is no mention of such events in Scripture, it seems pointless to invent a superficial miracle to explain what may or may not be a true pattern in planetary periods.

Elsewhere we have noted the special place that Venus holds in the creation.[3] Venus is the only planet identified with the Deity. In particular, Venus, the morning star, is identified with the Lord Jesus Christ in Revelation 22:16, "I Jesus have sent mine angel to testify unto you these things in the churches. I am the root and the offspring of David, *and* the bright and morning star." Though it may be tempting to adopt Wilson's analysis and say, "See! The earth is not a planet," there is sufficient evidence for that without this rather circumstantial datum. But if both Venus and earth hold a special place, as indicated in both analyses (in his table, Wilson highlighted both their rows in green), we should not be upset. Both earth and Venus have a special place in Scripture; earth because God created it for man, to dwell there and to enjoy God's glory and grace; and Venus as a type of the Scripture–as a light shining in darkness and heralding the morning, and as the herald of the Lord Jesus as he will return to establish a righteous and everlasting kingdom on earth. What Wilson has stumbled upon is not so much that the earth is special, but that the Scripture is special; for no other solar system objects, except the sun and moon, are singled out specially in Scripture. Earth and Venus are distinct in the Fibonacci series because they are distinct in Scripture: the earth because it is in a special state, i.e. stationary, in creation, and Venus because it is a type of the Lord Jesus, both the word of God (Mk. 7:13) and the Word of God (Rev. 19:13).

---

[3] Bouw, G.D., 2001. "The Morning Stars," *B. A.* **11**(97):69.