

How To Spot A Crackpot

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Abstract

Harold Camping was not the first to “predict” the Rapture based on Biblical numerology. (In fact, Camping has done it before.) He won’t be the last. Why do these people gain followers? Because they gain the trust of people who are unwilling or unequipped to evaluate the quality of the numerology. While the unwilling are beyond the help of our website, we can at least offer help to the unequipped.

1 Camping’s Prediction

According to Wikipedia,¹ Camping arrived at his prediction in two ways:

In 1970 Camping dated the Great Flood to 4990 BC. Using this date, taking the statement in Genesis 7:4 (“Seven days from now I will send rain on the earth”) to be a prediction of the end of the world, and combining it with 2 Peter 3:8 (“With the Lord a day is like a thousand years, and a thousand years are like a day”), Camping concludes that the end of the world will occur in 2011, 7000 years from 4990 BC. Camping takes the 17th day of the second month mentioned in Genesis 7:11 to be May 21, and hence predicts the rapture to occur on this date.

Another argument that Camping uses in favor of the May 21 date is as follows:

1. The number five equals “atonement”, the number ten equals “completeness”, and the number seventeen equals “heaven”.
2. Christ is said to have hung on the cross on April 1, 33 AD. The time between April 1, 33 AD and April 1, 2011 is 1,978 years.
3. If 1,978 is multiplied by 365.2422 days (the number of days in a solar, as distinct from lunar, year), the result is 722,449.
4. The time between April 1 and May 21 is 51 days.
5. 51 added to 722,449 is 722,500.

¹http://en.wikipedia.org/wiki/2011_end_times_prediction

6. $(5 \times 10 \times 17)^2$ or (atonement \times completeness \times heaven)² also equals 722,500.

Let us examine these steps in detail, shall we?

2 Counting Ahead From the Great Flood

For the purposes of this discussion, we shall assume that Camping's calculation for the date of the Great Flood is an accurate one.²

The first Biblical quote used by Camping is "Seven days from now I will send rain on the earth." This is the first demonstration of his habit of selective logic. He has chosen to believe that this rain is not the Great Flood, but that it is the destruction of the Earth itself. He has also assumed that God was speaking metaphorically about the time frame, as opposed to providing a literal warning to the select few God wanted to save. In other words, he assumes that the Bible is the literal truth to the degree that it may be used to predict the Rapture because it is the word of God, but that the word of God cannot be trusted. Right off the bat, there are logical flaws in the argument.

The second Biblical quote is treated to the same logic: "With the Lord a day is like a thousand years, and a thousand years are like a day." He assumed that the proper conversion was from seven days to seven thousand years, or a multiplicative factor of approximately 365,242.198781. However, the original statement is symmetric. This could just as easily have meant that the rain was approximately 0.236555360493 seconds away. (Granted, the fact that the next Bible passage wasn't about a sudden deluge could be seen as evidence that the conversion did not work this way.) What this also exposes is another logical inconsistency: his interpretation of the first statement was that God lies, or at least speaks metaphorically, while his interpretation of the second statement is that the less pure human speaks the exact truth. Furthermore, this quote does not say "a day is equal to a thousand years," but instead reads "a day *is like* a thousand years." Interpreting this literally means that the conversion factor he is using is off to begin with.

The mathematical component of this calculation comes from adding 7000 years to his calculation of the Great Flood. Well, *the calendar was rewritten* after the Bible was written. This should come as no surprise; after all, the author(s)/transcriber(s) of the Old Testament could hardly be expected to be using the BC and AD labels on the years, for obvious reasons. Beyond the re-labeling, the current date and the pattern of leap years were changed in 325 AD and 1582 AD respectively on the current calendar used by the western world, which wasn't even semiuniversally adopted until 1923. Thus, any calculation spanning the time frames involved *must* be performed with a consistent calendar.

²We shall also assume that the Bible is an accurate document in general. The validity of this assumption is the topic of an entirely different article.

This is a common problem with crackpots: the logic underlying the numerology is often inconsistent, and appears to serve no purpose other than to produce the conclusion that is claimed in the end. This is far more obvious when analyzing Camping's second prediction mechanism.

3 Camping's Numerical Prediction

We shall move through Camping's six step calculation step by step.

3.1 Step One

Step one: The number five equals "atonement," the number ten equals "completeness," and the number seventeen equals "heaven."

Logically speaking, there are two possible routes here. Either these numerical assignments are correct, or they are incorrect. If they are incorrect, then everything that follows is also immediately incorrect, and his calculation is dead in the water. We will examine the other case, assuming that these assignments are correct.

3.2 Step Two

Step two: Christ is said to have hung on the cross on April 1, 33 AD. The time between April 1, 33 AD and April 1, 2011 is 1,978 years.

There are two numbers used here. The first is April 1, 33 AD, which is a "best estimate" computing by a monk who felt he was in year 325 AD. The assignment of this date is in question. The second number used is April 1, 2011. Camping then subtracts the two numbers to arrive at 1978 years.

Problem number one: the changes in calendars are completely ignored. Thus, there are uncertainties on both of these numbers. Numbers like this are measured quantities, which means any calculation using them *must* also include the uncertainties on the dates. Now, the calendar has been adjusted by 10 days by Pope Gregory XIII, who decreed that October 15, 1582 be the day after October 4, 1582, which means the date 1978 years after April 1, 33 AD is April 12, 2011. Let us also assume that the April 1, 33 AD date is off by no more than the 2011 date, and give it an uncertainty of 10 days. This estimate of the uncertainty could well be wrong, but it will serve.

Problem number two: the crucifixion of Christ is an *arbitrary* starting point. There is no justifiable reason to pick this date over, say, the death of Christ (which would *not* have been the same day as the crucifixion; crucified people have lived for as many as 12 days after the crucifixion³), the rebirth of Christ, the original birth of Christ, the date God first predicted the Rapture, and so forth.

³**UPDATE:** Since the original publication, it has come to my attention that the Bible explicitly states that Christ died within hours of his crucifixion. Thus, the day of the crucifixion and his death would, indeed, be the same day.

3.3 Step Three

Step three: If 1,978 is multiplied by 365.2422 days (the number of days in a solar, as distinct from lunar, year), the result is 722,449.

Again, uncertainties are ignored. A more accurate calculation says that there are 365.242198781 days in a year. Why arbitrarily stop at the fourth decimal place? If one stops at two decimal places, the Rapture hits five days earlier. If one takes just enough decimal places to ensure that any additional number of decimal places still produce the same result when rounded to the nearest integer, then three decimal places is enough. This also ignores the starting point: if the crucifixion of Christ is, indeed, the starting point, then shouldn't one start counting from the moment of the crucifixion? If so, which moment is that? The moment he was tied to the cross, or the moment it was pounded all the way into the ground? In that case, additional decimal places are vital to ensuring that the Rapture doesn't "roll over" to the next day.

3.4 Step Four

Step four: The time between April 1 and May 21 is 51 days.

This is true. Here's the critical question: why is it *relevant* at this stage of the calculation? The inclusion of this step appears *only* to serve to produce the previously determined result! Furthermore, there is the same 10 day uncertainty as above, as it is based on the April 1 date to begin with.

3.5 Step Five

Step five: 51 added to 722,449 is 722,500.

Again, true, but of questionable relevance. Now, let's take a look at the calculation with the uncertainties in place. Let May 21 be represented by m , April 1 by a , 33 by c , 2011 by d , and the number of days in a year be y . Thus, the date of the Rapture R would be given by:

$$R = (d - c)y + (m - a)$$

The uncertainty δf in any function f which depends on n variables $x_1, x_2, x_3, \dots, x_n$, each of which has its own uncertainty δx_i is given by

$$\delta f = \sqrt{\sum_{i=1}^n \left(\frac{\partial f}{\partial x_i} \delta x_i \right)^2}$$

In our case, this means

$$\delta R = \sqrt{(y\delta d)^2 + (-y\delta c)^2 + ((d - c)\delta y)^2 + (\delta m)^2 + (\delta a)^2}$$

Using the assumptions listed above, the uncertainties we have here are $\delta m = \delta a = 10$, $\delta c = \delta d = \frac{10}{y}$ and $\delta y = 0.0001$. Thus, the uncertainty $\delta R = 20.0$. In

other words, *assuming* that the April 1, 33 AD date is accurate to within ten days (which would be a heck of a feat given the record keeping of the time and the delay before the calculation was performed) then there is a 20 day uncertainty in the Rapture date as calculated here. Furthermore, these are statistical uncertainties representing one standard deviation in the date. That means there is a 68% chance, given a valid calculation, that the Rapture falls some time between May 1, 2011 and June 10, 2011.

3.6 Step Six

Step six: $(5 \times 10 \times 17)^2$ or (atonement \times completeness \times heaven)² also equals 722,500.

This “coincidence” is taken as infallible proof by some that there are no coincidences, and the arbitrary steps taken earlier are valid. However, this is the most deeply flawed step of them all.

This is the calculation that is most deeply devoid of logic. First of all, there is no reason to be multiplying the numbers together as opposed to, say, adding them. I also strongly suspect that there are Biblical numbers that are also Christian virtues with values other than 5, 10 and 17. Why choose only these three? To further compound matters, these numbers are then squared *for absolutely no reason other than producing an earlier arbitrary number*. This is not a calculation motivated by logic or reason. This is a calculation motivated by desperately seeking mathematical meaning in a document that has been rewritten and translated so many times over the millennia that transcription errors⁴ and translation errors have muddied much of the content.

4 Key Points to Watch For

Camping is not the only person to predict the Rapture, and won't be the last. I won't claim to know his motivation for this, but I do know he was once trained as a civil engineer, which means he has some background in mathematics. I suspect he has some deep rooted emotional need for the Rapture to take place during his lifetime, and that this emotional need muddied the logical portion of his brain long enough for him to overlook the issues above. What we have here are the common errors: we have a seemingly plausible calculation of questionable motivation and quality with invalid assumptions (steps 2-5) which is “justified” by an identical result from an *entirely arbitrary* second calculation (steps 1 and 6). This would seem to imply validation of the results. However, there is one critical piece missing here. Look again at the equation

$$R = (d - c)y + (m - a)$$

Notice that the substitution works for one reason and one reason only: the values of d and m were chosen based on a *predetermined value of R!* In other

⁴Not to mention deliberate, agenda-driven changes by some of the transcribers; why else would there be so many versions?

words, *absolutely any date could be chosen, and this end of the calculation would work!* To do this calculation “properly,” one would need to *first* justify steps 1 and 6 in detail, particularly step 6, and *then* substitute that into R before solving for d and m .

Extreme claims require extreme evidence. Do *not* put stock in any computation in any context which requires use of the final result *before* the calculation is complete. These almost invariably result in circular logic.