The heavens are still telling the glory of God! (Ps. 19:1). So is the earth beneath our feet.

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Newman's Reply to Drews

I have no particular objections to Carl Drews' letter, as he does not deny the historicity of the account. I affirm that God often uses symbolic actions (which, however, are real actions). I would not weight the talking snake as counting against historicity, given the similar Balaam incident in Numbers 22. The phenomenon of prophecy spoken to people directly but applied to their descendants has precedent in Genesis 49.

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"The House of Elijah"

In reviewing Repcheck's *The Man Who Found Time* in the September 2003 issue of *PSCF* (p. 196), Robert Rogland quoted from it: "… the prophecy … of Elijah … proclaimed that the last two thousand years of the total six thousand would be the Age of the Messiah." Rogland then commented: "That is not in my Bible." However, the "House of Elijah" is connected with similar information on "the age of the Messiah" in the Talmud, as cited in a scholarly critique by James Barr: "Why the World was Created in 4004 BC: Archbishop Ussher and Biblical Chronology" in the *Bulletin of the John Rylands University Library of Manchester* 67 (pp. 575–608). Barr, Regius Professor of Hebrew at Oxford, writes:

> In placing creation around 4000 years before Christ, Ussher had … predecessors. The Talmud itself had spoken to the same effect: B. Abodah Zarah 9a (Soncino, ed., p. 43) … reported the Tanna of the House of Elijah as saying "The world is to exist 6000 years. The first 2000 years are to be void (Hebrew *tohu*); the next 2000 years are the period of the Torah; … the following 2000 years are the period of the Messiah."

Barr's article came from his lecture at Rylands University in May 1984, and Stephen J. Gould cited Barr in "Fall in the House of Ussher" (*Natural History* [11/91]: 16).

ASA member Davis Young also wrote about this matter in his book, *Christianity & the Age of the Earth* (Grand Rapids, MI: Zondervan [1982], 20):

> (A) widespread conviction existed that the present world order would last for six thousand years … (then) … Christ would return to establish His kingdom. … the church fathers regarded the days of creation as ordinary days … Yet they (also regarded) the days in a more figurative sense. Virtually all of them were struck by Psalm 90:4, "For a thousand years in your sight are like a day" and by 2 Peter 3:8, "With the Lord a day is like a thousand years …" They had no difficulty in transferring the days of creation into thousand-year periods on (this) basis. They did not believe that the creation had taken place over six millennia but that … human history would occupy six thousand years, a millennium of history for each of the six days of creation … Why this connection was made is obscure. No reason for it is given by the fathers; it was simply assumed and taught.

An explanation for this enigma may be that the church fathers knew of the information reported by the Tanna (House of Elijah) in the Talmud, described above in Barr's quote.

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Randomness and Divine Agency

In their article "Random Worms: Evidence of Random and Nonrandom Processes in the Chromosomal Structure of Archaea, Bacteria and Eukaryotes" (*PSCF* 55, no. 3 [September 2003]: 175–84), Glenn Morton and Gordon Simons make a valuable contribution to the design debate. However, a couple of comments might be in order.

First, I am not sure they have correctly applied biblical references to the Urim and Thrummim or to casting lots. In those examples, the point is not that God used randomness, the point is that when instruments of chance were employed to seek the divine will, the outcome was not random at all. As the authors themselves say, "God predetermined the result" (p. 176, bottom of the left hand column). A predetermined result is not an expression of chance. That makes the application of those examples to processes in nature problematic. If "humans are not able to distinguish between the appearance of chance and the actuality of chance" (p. 176, top of the first full paragraph in the right hand column), and if "randomness is something that cannot be proven" (p. 178, top of the first full paragraph of the right hand column), then it is not clear why "Christian apologists need to incorporate chance and randomness into their world views" (p. 183, bottom of the right hand column). After all, we can neither distinguish it nor prove it, and it does not exist from God's point of view.

Second, the authors claim that "Dembski's model is inadequate to the task he intends" (p. 183, middle of the second full paragraph in the left hand column). But if randomness cannot be distinguished or proved, if, as the authors maintain, it is an illusion created by human perspective, and if higher information content creates the appearance of randomness (p. 183, top of the left hand column), then it seems to me that the "bar" for Dembski is lowered, not raised. Under such circumstances, all Dembski must do is provide a plausible alternative to the randomness claim.

It may be that the authors were thinking along the lines of the Westminster Confession where in the second section of the fifth chapter we read: "Although in relation to the foreknowledge and decree of God, the first cause, all things come to pass immutably and infallibly, yet by the same providence he ordereth them to fall out, according to the nature of the second causes, either necessarily, freely, or contingently." If so, it would have been helpful had they made that explicit. However, I suspect they might have been thinking more along the lines laid out by Peter Zoeller-Greer in his March 2000 article, "Genesis, Quantum Physics and Reality" (*PSCF* 52, no. 1, pp. 8–17). Again, it would be interesting to know.

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Divine Sovereignty, Chance and Design: A Response to Carter

We are delighted that our article (*PSCF* 55, no. 3 [September 2003]: 175–84) has elicited further discussion of the role of randomness in Christian theology and we hope this continues. In response to Carter's first point, we wonder what evidence he has that "a predetermined result [by God] is not an expression of chance [from our vantage point]." This statement appears to us to have the earmarks of an unsupportable faith statement. Consider the situation if we flip a series of coins, observe the outcome, but do not tell you what the sequence is. Then, we ask you to guess the sequence one by one. From our perspective the coin tosses are predetermined, but for you, it appears random. We are making no claim that God needs to flip a coin to make decisions that appear to us to be random ones. We suspect that he does not, but we have no way of knowing one way or the other. We recognize that Christians have a difficult time accepting that what appears random to us can actually be fully within the scope of a sovereign God, but one of the points of the paper is to encourage Christians to get over this conceptual difficulty. We think the interpretation we have given to random-appearing events described in the Bible is a reasonable one, which in no way robs God of his sovereignty. Moreover, as we have explained in some detail, it squares well with what has been observed in DNA sequences.

We think it unwise for Christians to draw a line in the sand and insist that an appearance of randomness to humans is evidence to support an atheistic viewpoint—and therefore must be resisted at all cost. Of course, non-Christians are just as vulnerable as Christians are to fall into this trap. There is no justifiable reason for Christians to expect better of non-Christians. But Christians, who have properly digested the message of God to Job, should be able to accept, with humility and due reverence to their Creator, the huge gap between God's perspective and ours. Rather than argue with the non-Christian that what clearly appears random is not, we should agree with them that it really does appear random, and then point to the scriptural references (cited in our original article), which shows that God is still God.

Concerning the second point about lowering the bar for the detection of design, we do not feel that it is lowered. Just as with randomness, which cannot be proven, neither can design be proven. When an entire group of people is engaged in trying to prove the demonstrably unprovable, the assessment, "a waste of time," comes to mind. We must remember that Christianity is a faith, not a proof.

Finally, as to what "lines" we were thinking along, we were merely incorporating what we were seeing in the statistical structure of DNA into what we view as the best theological approach, given the observational data. Since we wrote this article for *PSCF*, we have encountered even more compelling evidence of randomness in DNA data, including human DNA data. Anyone who is interested may request an electronic copy of the manuscript "Global Markov Models for Eukaryote Base Data."

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What Is Randomness?

Randomness is a phenomenon very hard to verify. Statistical tests are used to test for randomness. Every statistical test is based on a null hypothesis (e.g., randomness) and a probability model associated with the null hypothesis. The test statistic is a condensation or summarization of data (e.g., a measure of randomness), and it has sampling distributions under the assumed probability model. The test statistic obtained from the data with its numerical value is compared with this sampling distribution. If the value is too extreme, then one can reject the null hypothesis. If the value is not extreme, one can only conclude that the null hypothesis is not rejected, but not that the null hypothesis is established. The reasons are several: the sample size may not provide enough power to reject the null hypothesis, the particular test is not powerful against certain deviations from the null hypothesis, or there are other possible probability models associated with the null hypothesis. Usually one could not conclude randomness just by a single test or measure. However, Morton and Simons (*PSCF* 55 [2003]: 175–84) used only one measure, the length of string, to carry out statistical tests. Their tests are examples of tests based on the total number of runs (See Jean D. Gibbons and S. Chakraborti, *Nonparametric Statistical Inference,* 3rd ed. [New York: Marcel Dekker, 1992], 68–93). There are other aspects and measures in the chromosomal structure that are worthwhile investigating (See Bruce S. Weir, *Genetic Data Analysis II: Methods for Discrete Population Genetic Data* [Sunderland, MA: Sinauer Associates, 1996], 291–340).

From Figure 1 (p. 179 in the Morton and Simons article), the total number of genes is 512, which is different from 522, the number given in the first row of Table 1 (p. 180). [*Managing Editor's note*: There is a typesetting mistake in Figure 1. In row Strings 61–80, the number in the tenth col-