

D. Russell Humphreys' Cosmology and the 'Timothy Test'

PERRY G. PHILLIPS

ABSTRACT

The Big Bang model of the Universe enjoys vast support in scientific circles, but it is denied, ignored, or reviled by most young-Earth creationists. The major objection is that young-Earth creationists do not believe the Universe is billions of years old as claimed by Big Bang advocates. Their view stems from the belief that the Bible teaches that the Universe was created in six literal days just a few thousand years ago.

Some young-Earth creationists have attempted to devise alternative explanations to the Big Bang within the framework of conventional science. Others have invented non-conventional scientific theories to explain the evidence in a young-Earth framework. So far, neither approach has succeeded, but the lack of successful explanations has not stymied attempts to assimilate the evidence in an acceptable, young-Earth model.

*A recent effort to synthesise scientific and Biblical data on cosmology is by D. Russell Humphreys in his book **Starlight and Time: Solving the Puzzle of Distant Starlight in a Young Universe**. It is not our purpose to examine the scientific merits of Humphreys' thesis. Rather, we will evaluate Humphreys' 'Timothy test', which is his term for a straightforward, face-value approach to Biblical interpretation upon which he grounds his model.*

In this paper we will show that the 'Timothy test' fails to provide an adequate basis for Biblical interpretation. Further, we will illustrate by examples how application of the 'Timothy test' leads to erroneous conclusions about the Bible's teaching, thereby undermining the inerrancy of Scripture that Humphreys attempts to uphold. As such, the 'Timothy test' provides no support for Humphreys' cosmology and should be rejected.

INTRODUCTION

Peoples of all places and times have pondered the creation of the Universe. This, however, is the first century in human history in which a technological base exists that permits us to gather scientific evidence to help us formulate and test theories of creation.

From the early work of Vesto Melvin Slipher to the present observations with the Hubble Space Telescope, many scientists strongly support a view of the history of the Universe after its creation that is called the 'Big Bang'.¹⁻⁴ This theory holds that the Universe came into existence some 10-20 billion years ago in an extremely hot and dense condition. Since that time the Universe has expanded, cooled, and formed galaxies, stars and planets.

Although the Big Bang model enjoys vast support in

scientific circles, it is denied, ignored, or reviled by most young-Earth creationists. The major objection is that young-Earth creationists believe the Universe is only ten to twenty **thousand** years old. Their view stems from the belief that the Bible teaches that the Universe was created in six literal days just a few thousand years ago.

Some young-Earth creationists have attempted alternative explanations for the Big Bang within the framework of conventional science. Others have invented non-conventional scientific theories to explain the evidence in a young-Earth framework.. So far, neither approach has succeeded, but the lack of successful explanations has not stymied attempts to assimilate the evidence in an acceptable, young-Earth model.

A recent effort at forming a young-Earth cosmology is by D. Russell Humphreys in his book **Starlight and Time:**

Solving the Puzzle of Distant Starlight in a Young Universe. Humphreys bases his model on general relativity theory and on an interpretive principle that he calls the 'Timothy test'. It is not our purpose to examine the scientific merits of his model. Rather, we will investigate whether the 'Timothy test' qualifies as an adequate Biblical footing for his cosmology.

HUMPHREYS' INTERPRETIVE KEY

The words most often used by Humphreys to describe his exegetical method are 'straightforward' and 'face-value', although he recognises that these terms do not necessarily mean 'literal'.⁵ He acknowledges metaphors exist in Scripture, and he warns of the danger of trying to squeeze metaphors into 'concrete straight jackets'.⁶

Humphreys' interpretive key is what he dubs the 'Timothy test'. In his own words:

To make these points [about the straightforward, face-value meaning of Scripture] a little clearer, imagine a young Jewish Christian of the first century who understands Greek, Hebrew, and the scriptures well. Let's call him "Timothy", since Paul's protege was like that. But let's also imagine that this Timothy knows nothing of the advanced scientific knowledge of his day, such as Aristotle's works. All that Timothy knows is from either everyday experience or careful study of scripture, which Paul says is sufficient to give us wisdom (2 Tim. 3:5). Now if scripture really is straightforward and sufficient, then the meaning Timothy derives from the words is probably the meaning that God intended everybody to get.⁷

Humphreys then applies his test to Exodus 20:11:—

'For in six days the LORD made the heavens and the earth, the sea and all that is in them, and rested on the seventh day; therefore the Lord blessed the Sabbath day and made it holy'

For Humphreys, Timothy would notice from the context that ordinary days of the week are meant for the creation period. He continues:

'Not having Scientific American to tell him that the earth is billions of years old, Timothy is not looking for loopholes in this statement. Instead he simply concludes that scripture is saying Jehovah made the whole universe in six ordinary weekdays.⁸

Humphreys concludes that readers of Scripture should take Timothy's view of passages and not

'try to twist the words into new meanings compatible with Scientific American's worldview, or for that matter into anyone else's worldview.⁹

WHAT ARE THE PROBLEMS WITH THE TIMOTHY TEST?

On the surface, Humphreys' view seems reasonable. He emphasises that the readers to whom Scripture was

originally directed should be able to understand what they read without the help of 20th century knowledge. He also properly warns of the danger of injecting current ideas into the Bible — ideas totally foreign to the intended meaning of a passage.

The force of Humphreys' argument, however, comes from assuming we know exactly what Timothy would conclude after reading a particular passage. Humphreys **presumes** Timothy would infer that Exodus 20:11 teaches that creation occurred in six literal days, but how do we know this? Perhaps Timothy would have compared this passage with other parts of Scripture and concluded that **when taken in totality**, Scripture strongly favours creative periods longer than six 24-hour days?¹⁰ After all, one arrives at a proper interpretation of Scripture by using the well-worn rule that the true meaning of a passage is gained by carefully comparing it with all other relevant portions of the Bible. Timothy's careful investigation of any passage of Scripture, therefore, probably gave him a spectrum of reasonable interpretations, just as we have today among competent Bible scholars.^{11,16} It is specious, therefore, to presume we know which interpretation Timothy would have chosen.

Moreover, have we learned nothing new in the 2,000-year history of Biblical interpretation since the time of Timothy? The increase in the church's knowledge and the scholarly discussions of dedicated believers during two millennia have given us a deeper view of Scripture and its doctrines that was not available to Timothy. Restricting our theological conclusions, therefore, to those that Timothy would have reached (even assuming we knew what his conclusions would be!) unnecessarily limits the rich spectrum of thinking that has taken place in church history.¹⁷

Finally, the 'Timothy test' can lead to a view that Scripture has erred, as the examples below illustrate.

HOW THE TIMOTHY TEST' CAN LEAD TO IMAGINED SCRIPTURAL ERRORS

Joshua's 'Long Day'

Joshua chapter 10 relates the familiar story of Israel's defeat of a coalition of kings that attacked the city of Gibeon. In this event Joshua called for the Sun to 'stand still over Gibeon' and for the Moon to be stationary 'over the Valley of Aijalon' (Joshua 10:12). This astronomical event is described in verse 13 as follows:

'The sun stopped in the middle of the sky and delayed going down about a full day'

The use of this text to quash Galileo's heliocentric ideas is proverbial.^{18,19} The Catholic Church utilised this and other verses (for example, Psalm 104:5, Ecclesiastes 1:5, Isaiah 38:7,8 [also II Kings 20:9-11]) to argue that Galileo's view of the heavens was contrary to the teachings of the Bible.²⁰

The Church hierarchy, not having **Scientific American** to instruct them on the relative motions of the Earth and the Sun, were convinced that the **straightforward, face-value**

interpretation of this passage implied that the Sun moved around the Earth. Unfortunately, application of Humphreys' test leads inexorably to the same opinion as that of the Church.²¹⁻²³

Of course, Humphreys will reject this conclusion and argue that Timothy would have interpreted Joshua 10:12, 13 phenomenologically, not literally. If that is the case, then we infer that

- (1) either Timothy knew geocentrism was wrong, thereby accepting scientific evidence ahead of the straightforward Biblical evidence;²⁴ or
- (2) he did quite a bit of exegesis, comparing Scripture with Scripture, to come up with a non-straightforward view of this verse.

Either way, he would have obtained the correct teaching of Joshua 10:13 by **bypassing** the 'Timothy test', not by invoking it!

Finally, we stress that Timothy's view on this or any other passage is immaterial. What matters is God's intended meaning. As Humphreys correctly asserts, we do not study the Bible to know the mind of the writer; we study it to know the mind of God.²⁵ In the words of Charles Hodge:

*' . . . We must distinguish between what the sacred writers themselves thought or believed, and what they teach. They may have believed that the sun moves round the earth, but they do not so teach.'*²⁶

Yet, application of the 'Timothy test' to Joshua's 'long day' leads inexorably to the conclusion that Scripture has erred.

Did the Judges Rule Sequentially?

The period of the Judges is a sad one in Israel's history. Although the judges — charismatic rulers who were infused with God's Spirit — were able to save Israel from her enemies, Israel would slip back into idolatry and rebellion upon the death of the judge. As punishment, God would subject the Israelites to tribulation from enemies until they repented. Thereupon, God would raise another judge to save Israel, only to have a repeat performance after the judge's death.

It is fair to say that a 'Timothy test' reading of the book of Judges gives the distinct impression that the judges ruled sequentially. Nothing in the text suggests otherwise. Nevertheless, it is clear that sequential judgeships are impossible. Here is why: The book of Judges keeps track of the years of Israel's oppression by other nations, the length of rule of each judge, and the number of years of peace before the next rebellion. Herein, however, lies a problem: There is not enough time for the events described in Judges to have fit sequentially into the time period from the Exodus to the Monarchy.^{27,28}

Specifically, the periods of oppressions, judgeships, and peace recorded in Judges add up to approximately 410 years. I Kings 6:1, however, mentions that 480 years passed between the Exodus from Egypt to King Solomon's fourth year.²⁹ But these 480 years include the four years at the beginning of Solomon's reign, David's 40 years as king,

Saul's reign of two years,³⁰ 60 years for the judgeships of Eli and Samuel, at least 45 years for the Conquest and the occupation of Canaan,³¹ and 40 years for the wilderness wanderings. This leaves $480 - (4 + 40 + 2 + 60 + 45 + 40) = 299$ years for the judges to rule, which is far less than the 410 years required for sequential rule.³² It appears, therefore, that a number of judges ruled contemporaneously rather than sequentially.

We see that the straightforward, face-value reading of the book of Judges leads to a naive, incorrect view of the chronology of this period.

The Chronology of the Kings

The chronological problems of the period of the judges pale in comparison to the problems with the chronology of the kings of Israel and Judah. The books of Kings and Chronicles give an abundance of chronological data for their rulers. The dates are synchronistic; that is, the accession and length of rule for one nation's king is related to the other nation's king. Generally, we are told in what year a king in one nation came to power with respect to the rule of the king in the other nation (for example, II Kings 13:1). On other occasions the writer relates the number of years the king of one nation lived after the death of the king of the other nation (for example, II Kings 14:17).

In spite of the care of the writers to correlate the rule of the kings, their numbers appear to be in constant contradiction with one another and with our knowledge of the chronology of this period. The problems fall into four categories:^{33,34}

- (1) The date given for the beginning of a king's reign disagrees with the date one obtains from the number of years given for the length of his reign.
- (2) Passages that indicate the year of the beginning of a king's reign conflict (for example, Ahaziah's accession in II Kings 8:25 and in II Kings 9:29).
- (3) In one case two kings began to rule before each other (II Kings 1:17 and II Kings 8:16).
- (4) Adding up the years of rule for Israel's kings does not equal the total number of years for Judah's kings for the same period.

Difficulties such as those mentioned above have led to despair among Bible scholars in their attempts to correlate these chronological data. Jerome lamented.

*'Read all the books of the Old Testament, and you will find such a discord as to the number of the years, such a confusion as to the duration of the reigns of the kings of Judah and Israel, that to attempt to clear up this question will appear rather the occupation of a man of leisure than of a scholar.'*³⁵

Modern Bible scholars have been no gentler in their comments. Most would agree with G. Rawlinson's remark that:

'The numbers as they have come down to us in Kings are untrustworthy, being in part self-contradictory in part opposed to other scriptural notices, in part

*improbable, if not even impossible.*³⁶

Why has the chronology of the kings been so perplexing? Because scholars through the centuries took a 'Timothy test' approach to the narratives. The contradictions and confusions arose precisely because investigators employed a straightforward, face-value analysis of the Biblical data. This was recognised by Edwin R. Thiele, who tackled the problems and showed that the numbers are accurate.^{37,38} His solution is complex, and it rests upon the following chronological factors not explicitly stated in the text:³⁹

- (1) In Israel the beginning of the regnal year was the month of Nisan, which is in the spring of the year. In Judah, the regnal year began in the fall in the month of Tishri. This means that one regnal year in Israel could overlap two regnal years in Judah. Thus, an Israelite king who came to power in the early part of the year would be deemed to have begun his rule one year earlier, **as reckoned by a Judahite king**, than if the same Israelite king began his rule later in the year.
- (2) The two nations employed accession and non-accession years in their chronological reckonings. Accession-year reckoning counted the first year of rule, or any part thereof, as an accession year. In this scheme the king deemed his second year of rule as his first official year. In the non-accession-year scheme the king deemed his first year of rule, or any part thereof, as his first official year. Thus, in the accession-year scheme, the third official regnal year was actually the fourth year of the king's rule.
Upon careful study of the numbers in Kings, Thiele concludes that:
*' . . . In Judah the accession-year system was employed from Rehoboam to Jehoshaphat inclusive; then the nonaccession-year system was employed from Jehoram to Joash; and with the next ruler, Amaziah, Judah went back to accession-year dating and employed that system to the end of its history.'*⁴⁰
Israel, on the other hand, used a non-accession-year system from Jeroboam to Jehoahaz, inclusive, but then adopted an accession-year system from Jehoash to the end of Israel's existence.⁴¹
- (3) Each nation used its own chronological reckoning for the kings of the other nation. That is, even though non-accession years were used in Israel, the Judahite chroniclers used their own accession-year method to keep track of Israel's kings. The same was true of Israel's reckoning of Judahite kings.⁴²

With these three rules Thiele harmonised the chronologies of the kings of Judah and of Israel. In the end, he successfully correlated the Biblical and the extra-Biblical evidence in a complicated, but valid way.⁴³ The straightforward, face-value meaning of the text, however, led to a denial of its accuracy. The 'Timothy test', on the other hand, leads only to confusion.

The Genealogies of Genesis 5 and 11

The genealogies listed in Genesis chapters five and eleven are unique. They are structured in such a way that seemingly allows the reader to add up years to arrive at the date of the creation. The early attempt to do this by Archbishop James Ussher in the 17th century is well-known. He concluded that the world was created in 4004 BC. His conclusion received widespread acceptance, even finding its way into the margins of the 1611 Authorised King James Version of the Bible.

Ussher's system was straightforward. The genealogies appear to give the age of an individual when his son was born and the number of years he and his son lived. Ussher, therefore, added up the non-overlapping years of fathers and sons to determine the length of time from Adam to Abraham. Adding these years to the date of Abraham gives the date of creation.⁴⁴ What could be more straightforward?

In spite of a long tradition of acceptance, the 4004 date is wrong. As William Henry Green showed in 1890, the data in these genealogies cannot be used to find the date of creation.⁴⁵ His reasons are as follows:

- (1) Comparison of the genealogies of Genesis 5 and 11 with other genealogies in Scripture reveals that gaps exist in the records. Thus, the years cannot be added together to arrive at a date of creation.
- (2) No summation is made in Scripture of the years mentioned in Genesis 5 and 11. Note, however, that sums do appear for other events: Exodus 12:40 (430 years in Egypt); and I Kings 6:1 (480 years after the Exodus).
- (3) If the years are added in a straightforward way in Genesis 11:10, it appears that Shem, Arphaxad, Selah, and Eber outlived Peleg, son of Eber (Genesis 10:25) and Terah, Abraham's father. Yet the narrative of Abraham implies that the events of the Flood are long past and that God is beginning a new phase of redemptive history.
- (4) The years mentioned in Genesis 5 and 11 provide 'specimen lives' of antediluvian life and give an indication of the failing health of human beings as a result of sin and as a result of the Spirit of God no longer remaining in humans (Genesis 6:3).
- (5) The structure of the genealogies in Genesis 5 and 11 imply an internal structure that has been intentionally arranged. Noah is tenth from Adam and Terah is the tenth from Noah. Each ends with a father having three sons, which is the same as in Cain's genealogy (Genesis 4:17-22). It appears that the seventh in each line epitomises the good or the evil of the lineage. Enoch, the seventh in Adam's line, is good; Lamech, the seventh from Cain, is a murderer and a polygamist. This structure suggests that the author, writing under divine guidance, reported the lineages of Adam's descendants for other than strictly historical or chronological purposes.⁴⁶

The conclusion is that one cannot use the genealogies

in Genesis 5 and 11 to determine the age of the Earth or the age of humanity. On the contrary, a straightforward, face-value rendering of these chapters leads to Ussher's erroneous results and another failure of the 'Timothy test'.

Israel's Border Cities Listed in Joshua

The final example comes from the list of tribal border cities given in Joshua 14-19. In these chapters the writer delineates the tribal boundaries by listing the cities on their borders. The problem, however, is that archaeological surveys and excavations uncover only a fraction of these cities.⁴⁷ It appears, therefore, that the city lists in Joshua are later additions that were incorporated into the text so that successive generations of Israelites would know their tribal boundaries more accurately.

Undoubtedly, city lists existed in Joshua's time, but these lists contained very few cities. It was adequate, nevertheless, for delineating tribal borders as long as the tribes were small and few cities existed. Later, however, the original city lists proved inadequate in light of the expansion of the population and the erection of many more cities. The need arose for more accurate boundary descriptions to avoid border conflicts between tribes. Hence, Joshua's original city lists were updated, probably during the period of the Monarchy, when the number of cities flourished.⁴⁸

The modification of Joshua's city lists in the time of the Monarchy may strike some as antithetical to the doctrine of inspiration and inerrancy of the Scriptures. But this should not be any more of a problem than the appearance of the statement about Dan's exile in Judges 18:30. Clearly, the exile referred to in this passage is the one under the Assyrian invasion that led to the destruction of Israel in 722 BC. The addition was made to the Judges passage to clarify the situation for later readers. Why not the same for the city lists? The suggestion concerning the city lists does not detract from the intent of the book of Joshua any more than the later addition of the statement concerning Dan's exile detracts from the intent of Judges 18:30.

Perhaps an illustration will help. Suppose one were to ask today, 'Where did Washington cross the Delaware River?' The answer most likely would be, 'Just south of New Hope, Pennsylvania'. This answer is correct, and no one would be troubled by the fact that New Hope did not exist in Washington's time. True, the mention of New Hope is an anachronism, but its use does not degrade the truth of the answer. The same is true for anachronistic city lists in Joshua.

The conclusion to this discussion is clear. The straightforward reading of Joshua 14-22 implies that many more cities existed in Joshua's time than the evidence supports. A more careful analysis of all relevant data — Biblical and archaeological — strongly suggests that the original city lists were modified to clarify the tribal boundaries for later generations. But would Timothy have known this?

CONCLUSION

Humphreys claims that he bases his cosmology on the 'Timothy test', which is a straightforward, face-value approach to interpreting Scripture. We have focussed upon the dangers of his hermeneutical principle and have pointed out errors to which it leads. We have stressed that one obtains a correct understanding of a passage of Scripture by comparing it to all other relevant passages and to valid, extra-Biblical evidence that bears on the subject. This is not the easiest approach, but it is more accurate. The straightforward approach to understanding Scripture, unguided by harmonisation with truth discovered outside of Scripture, leads to errors such as those delineated above.

Thus, the hermeneutical basis of Humphreys' cosmology — the 'Timothy test' — fails from the start. It appears that **Starlight and Time** can be added to the list of failed attempts to explain both Scripture and the origin of the cosmos. Ironically, by invoking the 'Timothy test' Humphreys undermines the very doctrine of inerrancy that he seeks to uphold through his hermeneutic.

REFERENCES

- Peterson, I., 1991. State of the Universe: If not with a Big Bang, then what? *Science News*, 139:232-235.
- Ross, H., 1991. **The Fingerprint of God**, Second edition, Promise Publishing Company, Orange, California.
- Silk, J., 1989. **The Big Bang**, Second edition, W.H. Freeman, San Francisco.
- Smoot, G. and Davidson, K., 1993. **Wrinkles in Time**, William Morrow and Co., New York.
- Humphreys, D. R., 1994. **Starlight and Time: Solving the Puzzle of Distant Starlight in a Young Universe**, Master Books, Colorado Springs, USA, p. 56.
- Humphreys, Ref. 5, p. 57.
- Humphreys, Ref. 5, p. 57.
- Humphreys, Ref. 5, p. 57.
- Humphreys, Ref. 5, p. 57.
- Phillips, P. G., 1991. **Are the Days of Genesis Longer Than 24 Hours? The Bible says 'Yes'**, Research Report No. 40, Interdisciplinary Biblical Research Institute, Hatfield, Pennsylvania.
Here I argue that the terminology and the activities as recorded in Genesis chapter two strongly favour a duration of time for the sixth day that is much longer than 24 hours.
- A spectrum of interpretations is discussed by Ramm, B., 1954. **The Christian View of Science and Scripture**, William Eerdmans, Grand Rapids, Michigan; and by
- Cain, D. E., 1996. **Hindsight Translation of Genesis One**, Interdisciplinary Biblical Research Institute, Hatfield, Pennsylvania.
- Other examples, among many, are Newman, R. C. and Eckelmann, H. J., Jr., 1996. **Genesis One and the Origin of the Earth**, Interdisciplinary Biblical Research Institute, Hatfield, Pennsylvania;
- Van Till, H. J., 1986. **The Fourth Day: What the Bible and the Heavens are Telling Us About the Creation**, William Eerdmans, Grand Rapids, Michigan;
- Ross, Ref. 2; and
- Blocher, H., 1984. **In the Beginning: The Opening Chapters of Genesis**, InterVarsity Press, Downers Grove, Illinois.
- Consider how much richer and fuller our understanding is of the person and work of Jesus Christ as a result of the Nicene and Chalcedonian councils, or of our understanding of soteriology as a result of the works

- of Augustine and the Reformers.
18. A good summary of the Galileo affair is Shea, W. R., 1986. Galileo and the Church. *In: God and Nature: Historical Essays on the Encounter between Christianity and Science*, D. C. Lindberg and R. L. Numbers (eds), University of California Press, Berkeley and Los Angeles, pp. 114-135.
 19. Also recommended is Blackwell, R. J., 1991. *Galileo, Bellarmine, and the Bible*, University of Notre Dame Press, Notre Dame.
 20. Blackwell, Ref. 19, p. 120.
Galileo's censure explicitly mentions that his view '*contradicts sentences found in many places in sacred Scripture according to the proper meaning of the words and according to the common interpretation and understanding of the Holy Fathers and of learned theologians*'.
 21. Even today this verse is employed to argue for geocentrism. Bouw, G., 1984. **With Every Wind of Doctrine: Biblical, Historical and Scientific Perspectives on Geocentricity**, Tychonian Society, Cleveland.
 22. Cohen, M. A., 1993. **Heliocentrism vs Geocentrism: Defiance or Defense of the Gospel?** Paper presented at the Eastern Regional meeting of the Evangelical Theological Society, April 2, 1993.
Consult any elementary astronomy text for the evidence in favour of heliocentrism.
 23. Newman, R. C., undated. **Geocentrism: Was Galileo Wrong?**, Interdisciplinary Biblical Research Institute, PO Box 423, Hatfield, Pennsylvania.
This tract is an excellent short review of evidence for geocentrism.
 24. It is not unreasonable to suggest that Timothy would have been familiar with the geocentric views of Eudoxus, Plato and Aristotle; thus he most likely would have understood Joshua's 'long day' in a geocentric framework.
 25. Humphreys, Ref. 5, p. 56.
 26. **Systematic Theology**, 1965. Volume 1, William Eerdmans, Grand Rapids, Michigan, p. 170.
 27. For a complete discussion, see: Merrill, E. H., 1987. **Kingdom of Priests: A History of Old Testament Israel**, Baker Book House, Grand Rapids, Michigan, pp. 146-150.
 28. Also see: Harrison, R. K., 1969. **Introduction to the Old Testament**, William Eerdmans, Grand Rapids, Michigan, pp. 177-180.
 29. Solomon began to rule in 970 BC. Adding 480 to his fourth year (966) means the Exodus took place in 1446 BC. This is the so-called early date for the Exodus. Many scholars believe the Exodus took place around 1260 BC. This leaves even less time for the period of the Judges.
 30. Merrill, Ref. 27, p. 193.
The number of years of Saul's reign is in question because of the textual corruption in I Samuel 13:1. The best reading appears to be, '*Saul was [forty] years old when he began to reign. When he had reigned for two years*'
 31. Merrill, Ref. 27, p. 146.
The 45 years include five years for the conquest (Joshua 14:7-10) plus 40 years until Othniel becomes judge.
 32. This calculation assumes an early date for the Exodus of 1446 BC. If one accepts the late date for the Exodus, 1275-1250 BC, then the problem of the chronology of the judges becomes even more acute.
 33. For details, see: Thiele, E. R., 1971 **A Chronology of the Hebrew Kings**, Zondervan, Grand Rapids, pp. 10-11.
This book is a shortened version of his fuller discussion in:
 34. Thiele, E. R., 1965. **The Mysterious Numbers of the Hebrew Kings**, Second edition, William Eerdmans, Grand Rapids, Michigan.
 35. Quoted by Thiele, Ref. 33, p. 12.
 36. Rawlinson, G., 1901. **Introduction to the Two Books of Kings, The Holy Bible According to the Authorized Version**, Charles Scribner's Sons, New York, Vol. 2, p. 475 as quoted in Thiele, Ref. 33, p. 12.
 37. Thiele, E. R., 1944. The chronology of the kings of Judah and Israel. **Journal of Near Eastern Studies**, 3:137-186.
 38. Thiele, Ref. 34.
 39. Thiele, Ref. 33, pp. 14-22.
 40. Thiele, Ref. 33, p. 17.
 41. Thiele, Ref. 33, pp. 17-19.
 42. Thiele, Ref. 33, pp. 20-22.
 43. Thiele, Ref. 33, chapter 4.
Thiele realised that a resolution to the chronology problems was not forthcoming solely from the Biblical material. Specifically, he relied upon Assyrian eponym lists, Ptolemy's canon, and astronomical calculations. Without reference to this extra-Biblical information it would be impossible to understand the Biblical text. This is contrary to the tenure of the 'Timothy test'.
 44. This procedure gives varying dates because the genealogies listed in the three different manuscript traditions of Genesis — the Masoretic text, the Septuagint, and the Samaritan Pentateuch — contain name and year variations. Nevertheless, the date of 4004 BC is not too far off regardless of which manuscript tradition one chooses. Cf. Harrison, Ref. 28, pp. 147-150.
 45. Primeval chronology. **Bibliotheca Sacra**, 47(1890):285-303. Reprinted in: Newman, R. C., and Eckelmann, H. J., Jr., 1989. **Genesis One and the Origin of the Earth**, Interdisciplinary Biblical Research Institute, Box 423, Hatfield, Pennsylvania, pp. 105-123.
 46. Something similar occurs in Matthew's Gospel when he arranges the genealogy of Jesus into three groups of 14 generations, leaving out links in the lineage where necessary in order to bring his genealogy into a schematic structure.
 47. Kochavi, M., 1972. The land of Judah. *In: Judaea, Samaria, and the Golan: Archaeological Survey 1967-1968*, M. Kochavi (ed.), Carta, Jerusalem (Hebrew).
 48. Aharoni, Y., 1979. **The Land of the Bible**, Revised and Enlarged Edition, Translated by A. F. Rainey (ed.), Westminster, Philadelphia, pp.347-356.
-
- Dr Perry G. Phillips** has a Ph.D. in astrophysics from Cornell University and an M.Div. from Biblical Theological Seminary in Hatfield, Pennsylvania. He has taught science and Bible for many years at the college level.