

# Genesis and Prehistory:

## THE CONFLICTING CHRONOLOGIES

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For over a hundred years the Seventh-day Adventist church, through its official church publications, generally has supported a view which posits that man has been on the earth 6,000-7,000 years — that is, the period of time assumed to have elapsed since the creation of our planet and/or life on it. Adventists have been firm in their insistence that the earlier chapters of the Genesis narrative contain an account that is both a literal record of how life first appeared on this planet and the basis of an accurate chronology of man's early history.<sup>1</sup> Increasingly, however, responsible Adventist scientists have begun to raise serious questions as to the validity of the traditional Adventist interpretation of the Genesis creation story, especially in terms of the *age* of the earth and the antiquity of man.<sup>2</sup>

Today there seems to be little doubt that the Adventist church soon (if it is not already) will be stretched between the Scylla of scientific evidence and the Charybdis of entrenched traditional theology. For those who wish that some nice quiet compromise might suffice to resolve the dilemma, the seemingly clear statements of Ellen G. White pose a problem. In a number of different contexts she specifically stated that "the world is now only about six thousand years old."<sup>3</sup> The White Estate has collected eighteen references found in her writings (between 1864 and 1898) in which she seems to approve of the belief that all organic life and the world itself are about 6,000 years old. Statements in *The Seventh-day Adventist Bible Commentary* also endorse this view. For example, *The Commentary* states that "the figure 6,000 is undoubtedly a rough approximation of the time from creation."<sup>4</sup>

Many church members, on the other hand, have begun to question this view and to point out that evidence from such diverse fields as geology, archaeology,

physical anthropology, paleontology, and geochronology suggests an age of our planet and organic life on it (including man) far in excess of a few thousand years. Michael W. Holm has marshaled an impressive array of data to support a belief that the age of the earth and of certain organic forms is on the order of millions and hundreds of millions of years. After a lengthy discussion of several different lines of evidence that support his arguments, he concludes one article by noting: "Fundamentalists may attack one dating method or another, pointing out sources of error and uncertainty. But this is like walking into a forest and denying its existence because many of the trees have imperfections. The present system of geochronology is too coherent to be overthrown by attacking two or three or five or ten of the techniques employed."<sup>5</sup>

My essay is intended to build on Holm's excellent discussion by a brief outline, from an archaeologist's perspective, of some of the evidence suggesting that man has existed on this planet for a time far in excess of 6,000-7,000 years.

## I

Until the beginning of the nineteenth century, the major source materials for the reconstruction of the chronology and history of the ancient Western world consisted of the historical narratives of the Old Testament and the extant works of classical Greek and Roman writers. The antiquity of civilization in the ancient Near East was recognized, but accurate chronology was difficult to obtain in the absence of adequate primary archaeological evidence. In contrast to the fragmentary and frequently distorted nature of much of the classical narrative for the period before the Persian Empire, the Old Testament's historical narratives seemed to provide an almost unbroken account of Hebrew history that stretched back from the Persian period, through an independent Hebrew monarchy, through a period of residence in New Kingdom Egypt, and through individual "patriarchal" links, to a creation in the remote past calculated in modern times at some 6,000-7,000 years before the present. Until the middle of the nineteenth century, "ancient history" for the preclassical period of much of the Christian world centered about a chronology derived largely from Old Testament narratives.<sup>6</sup>

In the nineteenth and early twentieth centuries, archaeological discoveries in southwestern Asia began to provide archaeologists and historians with essential primary data on which the main outline of nonbiblical Near Eastern history could be built. The pioneer excavations of Mariette and Maspero (in Egypt), of Petrie (in Palestine and Egypt), and of Botta, Layard, and Woolley (in Mesopotamia) laid the foundation of modern Near Eastern archaeology and provided the basis for the work of Albright, Garstang, Glueck, Kenyon, Emery, and many others. The decipherment of the hieroglyphic (Egyptian) and cuneiform (Mesopota-

mian) writing systems and the translation of historical materials (such as king lists) enabled researchers to begin to block out a chronology for the historic civilizations of the ancient Near East going back to the early dynastic period in Sumer (Mesopotamia) and the First Dynasty in Egypt.<sup>7</sup>

The same decades that saw the beginning of scientific archaeological work in the *historic* cultures of ancient western Asia witnessed the emergence of *prehistoric* archaeology. This field concerned itself primarily with the reconstruction of the development of human culture in the period before written records became available. Until recently, attempts at establishing some sort of chronological system for most prehistoric cultures were based largely (with certain exceptions to be mentioned) on indirect methods. In most cases these methods, such as stratigraphy (the principle that older materials generally rest below younger materials), ceramic and other artifact typological cross-dating, and the correlation of human remains and artifacts with geological events and climatic changes, achieved only relative sequencing.<sup>8</sup> For example, a sequence of prehistoric cultures in Egypt was established originally by Sir Flinders Petrie, who utilized changing styles of pottery decoration.<sup>9</sup> As archaeological work continued to progress, however, it became increasingly clear that significant social and cultural changes had occurred during prehistoric times. These prehistoric periods witnessed such fundamental technological and subsistence innovations as the domestication of plants and the invention of pottery. The term that came to be assigned to this period was Neolithic, or New Stone Age.<sup>10</sup>

In western Europe, archaeologists working along the river courses and in caves and rock shelters began to uncover clear evidence of human activity where stone was the predominating type of tool or was the only kind of tool that remained for archaeologists to recover. This period of time seemed to long antedate the period when man built permanent structures, made pottery, and domesticated plants and animals — that is, to long antedate the Neolithic Age. This earlier period was called the Paleolithic or Old Stone Age and seemed to coincide with a geological epoch known as the Pleistocene — an era characterized at least in western Europe (and in the northern portion of North America) by a series of advances and retreats (usually thought to be at least four in number) of large continental ice sheets called glaciers. Thus, the period was called the Ice Age. On the basis of changing techniques of the manufacture of stone tools, archaeologists built up a chronological sequence that was assumed to span tens of thousands of years.<sup>11</sup>

By the twentieth century, a series of broad chronological categories had been set up that seemed to represent the sequence through which man's culture had developed — at least in parts of Europe and western Asia: Paleolithic, Mesolithic (a transition period), and Neolithic. A Bronze Age and an Iron Age completed

the sequence in late prehistoric/early historic times. The time-spans of these various units were more in the nature of "guesstimates." The beginning of the Paleolithic was estimated to lie between 100,000 and 1,000,000 years ago; the beginning of the Neolithic, between 6,000 and 8,000 years ago. The beginning of the historic period in Egypt, for example, at first placed at 6,000-8,000 years ago, was reduced further and further, until it was thought to be approximately 6,000-5,000 years ago, or 4000-3000 B.C.

To know whether these dates had any concrete validity, however, was difficult. What was real was the *relative* placement of the various units. For example, in a given area, such as western Europe or western Asia, the various stages of the Paleolithic clearly seemed to come before the Neolithic; and the Neolithic in turn antedated the historic periods. One major problem from a chronological perspective was developing a more rigorous means of determining accurate ages for these various periods. Techniques for estimating the actual passage of time in years were available, but they were restricted to specific areas (such as tree-ring dating, which was and is limited to a relatively small number of areas) or had been shown to be valid under only certain conditions.<sup>12</sup>

## II

A new dating technique, developed within the last twenty years, surmounts most of the problems that plagued earlier attempts at establishing specific dates for prehistoric as well as historic sequences. The technique is applicable on a worldwide scale and can date organic material (wood, charcoal, etc.) routinely for periods of 40,000-50,000 years. More than two decades of experience with the technique have brought increasing confidence in the general validity of its results. This method, based on the radioactive decay of carbon 14 (radiocarbon), now potentially permits archaeologists to date, in terms of years, sequences that heretofore could be "dated" only relatively, as noted above.<sup>13</sup>

Radiocarbon dating was developed by Willard F. Libby and coworkers at the University of Chicago after World War II. (Libby received the Nobel Prize in chemistry in 1960 for his discovery.) Since a number of clear and concise explanations of the technique have been published, interested persons should have no difficulty gaining an understanding of the basic concepts.<sup>14</sup> The first radiocarbon dates were published in 1949. Now, over sixty laboratories around the world are involved in dating archaeological and geological materials. Despite the problems of physical contamination of some of the earlier samples submitted for testing, and problems of uncertainty about some of the basic parameters of method, the general validity of the method now seems essentially established. This confidence is based in part on determinations made on samples of known age (historically

dated wood back to about 3000 B.C. and tree-ring-dated wood back to about 5000 B.C.) and in part on the consistent results obtained on samples with a known relative position in a stratigraphic column.<sup>15</sup>

When this new dating technique was applied to the problem of determining actual temporal placement of archaeological material, in most cases the *general* estimate of age assigned by the archaeologist to a specific period in a relative sequence was vindicated. This is not to say that many puzzling chronological problems do not exist even after the application of the C-14 method; what is being emphasized is that the *general* time depth of the major chronological divisions of the prehistoric period, as blocked out by modern prehistoric archaeology, was essentially confirmed (with a relatively small number of exceptions) by C-14 data. For example, radiocarbon dates on materials associated with the Paleolithic had values from about 8000 B.C. all the way back to the limits of the methods at about 50,000 years, with comparable younger dates on Neolithic and more recent periods.<sup>16</sup>

Radiocarbon dating is only one method, of course, of a rapidly increasing number of dating techniques that are being developed. Since space does not permit discussion of each one, a simple list of the most important is given: obsidian hydration, thermoluminescence, archaeomagnetic intensity and direction methods, amino acid, potassium-argon, fission track, dendrochronology (already mentioned), and varve dating.<sup>17</sup> Where C-14 values have been checked against data obtained from another method, in most cases the general validity magnitude of the C-14 age was confirmed.<sup>18</sup>

From time to time, various persons writing in Seventh-day Adventist church publications have attempted to discredit dating techniques on the basis of alleged specific erroneous results.<sup>19</sup> What is at issue is not the occasional anomalous results but the *general* validity of each method. Denying the total validity of a method on the basis of a few erroneous results is similar to the situation described by Holm of "walking into a forest and denying its existence because many of the trees have imperfections." Some have postulated what a universal flood "might" have accomplished in the way of disrupting the geophysical and geochemical parameters on which, for example, C-14 dating rests.<sup>20</sup> Speculations as to what a Genesis flood "might" have accomplished seem irrelevant unless specific scientific evidence can be introduced to support the assertions. What the evidence does seem to suggest is that it would be extremely difficult to fit the archaeological data, as known at the present time, into a chronological framework that allows only 6,000, 8,000, or even 50,000 years. Whole developmental sequences would have to be telescoped into seemingly impossible short spans.

Perhaps it would be appropriate to suggest that there is a need to reconsider

the whole problem of what constitutes a “biblical” chronology. Beyond the well-known breaks in the patriarchal lineages, the whole subject of the chronological reality of the Genesis narrative requires a much more critical appraisal. I would like to suggest that the major thrust of the Genesis story concerns *who*, not *when* or even *how*. It would seem that we Adventists have failed, in most church-published materials, to distinguish between *events* we associate with the Genesis accounts (chapters 1-10) and the *time* period or periods we associate with these events. That is, Adventists have neglected to make a distinction between *what happened* and *how long ago* it happened. It seems to have been assumed that to take the biblical narrative literally one must be literal not only about *what* but also about *when*.<sup>21</sup>

### CONCLUSION

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The Seventh-day Adventist movement was born in an era of intellectual, social, and political turmoil in American society. In the early nineteenth century, American sectarianism was taking shape, and at the same time a series of revolutions was shattering the Colonial institutional religious structures. Concurrent with this fragmentation of American Protestantism was a development that church, denomination, and sect alike were to face — the startling discoveries of the emerging scientific spirit in the Western world and specifically the problem of reconciling science (naturalism) and religion (supernaturalism). Until 1859, natural science had been regarded as a God-given support of religious orthodoxy. With the publication of Darwin’s *Origin of Species*, this association was soon dissolved, and the ill-named “conflict” between science and religion was joined. In many cases the dialogue, and sometimes diatribe, that ensued between Darwinism and religious orthodoxy quickly degenerated into polemic and impassioned oratory that generated much heat but little understanding. In the mid-nineteenth century, Boromé remarked:

Some scientists, restive under the [yoke] of religion, used Darwinism as a club with which to batter a way to independence, even to destroy the citadel of religion. Some religionists, fearful of the results, sought to pull down the columns of science that did not rest on the Scriptural foundation stone; they also set out to meet the dangers of civilization that lay in words now associated with Darwinism: whether chance, change, agnosticism, skepticism, atheism, relativism, free will, secularism, or modernism.<sup>22</sup>

There would have been little question what viewpoint the spokesman (or, more correctly, spokeswoman) for a small rebel group of religionists was to take with respect to this controversy. The opinions of Ellen Gould Harmon White, the leading writer and charismatic visionary of the emerging Seventh-day Adventist church, did not differ significantly *on this point* from views expounded by a number of other religious writers of the late nineteenth century. And the posi-

tion thus taken by the church she was instrumental in founding was hardly unique. For example, the Tennessee Conference of the Southern Methodist Church in 1878 made a solemn resolve concerning the teaching of evolution in their university: "This is an age in which scientific atheism . . . walks abroad in shameless denudation. The arrogant and impertinent claims of this 'science, falsely so-called,' have been so boisterous and persistent, that the unthinking mass have been sadly deluded."<sup>23</sup>

Thus, as the Seventh-day Adventist church took shape, one of the positions woven into the fabric of its theological traditions was a world view common to large segments of nineteenth-century rural Protestant America: that God had created the universe and/or the world and/or life on this planet in seven literal twenty-four-hour days approximately 6,000 years earlier. Like all other religious revolutions before and after it, Adventism inherited beliefs, attitudes, habits of thought, and customs that were compatible with its newly formulated "message," which focused in part on the Sabbath as a memorial of Creation.

Today, Adventists' perspective of the meaning and function of the Sabbath is broader. The commitment of the church to *present truth* should mean that its members are continually in the process of renewing and reevaluating the beliefs and opinions held by those of the movement who went before. Adventists must communicate and share with others what they believe to be their insights about the nature of God and the nature of man. Retaining a nineteenth-century world view — or, more specifically, the time frame of that world view — denies the Adventist church the opportunity of sharing these insights with modern man.

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