Biblical Chronology: Legend Or Science?

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[p.1]

The subject of biblical chronology can be seen in two quite different ways. Firstly, there is scientific or historical chronology, which deals with the real chronology of actual events. This is the way in which the subject is approached in most current books, articles and encyclopaedias.¹

You may ask, for instance, in what year Jesus was born, or in what year John the Baptist began his preaching; and the way to approach this is to consider the years in which Augustus or Tiberius was Roman emperor, in which Herod was king of Judaea, in which Quirinius conducted a census in Syria, and to try to set the relevant gospel stories in relation with these. If you were successful, you would end up with a date in years BC or AD, for example 4 BC which was long the traditional date for the birth of Jesus (since it was the year in which Herod the Great died), although most recent estimates end up with a date some years earlier.² Or you might ask what was the year in which Solomon's temple was destroyed by Nebuchadnezzar, and you might produce the result of 586 BC, on the basis of historical data which could be mustered and verified historically. As we go farther back, archaeological methods may be used even more, and with these, in examining artefacts rather than written sources, we come even closer to the physical sciences: by carbon dating, for instance, we might be able to give a precise or approximate range of dates to a building found or to a piece of writing. All this belongs to the scientific or historical approach to chronology.

Numbers of the Hebrew Kings (Chicago, 1951).

¹ For example, Jack Finegan, *Handbook of Biblical Chronology* (Princeton, 1964), is entirely empirical/historical in orientation and shows little interest in the reasons or systems of ideas which animated chronology. Similarly the articles on the chronology of Old and New Testaments in a standard work like the *Interpreter's Dictionary of the Bible* (S.J. de Vries and G.B. Caird respectively) are almost entirely historical. In the Old Testament area, these tendencies reflect the concern of scholars to produce some sort of system or hypothesis or reconstruction which will prove the historicity of the detailed dates within the Books of Kings: cf. above all E.R. Thiele, *The Mysterious*

² For example, Finegan, *op. cit.*, p. 392, considers that a date in the winter of 5/4 BC 'perhaps' best satisfies the evidence for the birth of Jesus; Caird, *op. cit.*, p. 601, settles for 7 BC plus or minus a year; G. Ogg in *Peake's Commentary on the Bible*, edd. M. Black and H.H. Rowley (Edinburgh, 1962), p. 728, favours 11 or 10 or 9 BC.

But there is also another way of looking at it. One might say that biblical chronology is a sort of myth or legend. It is a kind of ancient story-telling form, popular in the ancient world, through which people conveyed some sort of picture of their relation to the beginnings of the world, or some sort of divine plan that was working through history, or some sort of religious picture of the place of humanity within the universe.

Stories of this kind have within them information that we would call 'chronological', dates and periods between events, ages of persons when something happens, but we might not call this material historical or scientific. It is legendary chronology. Thus, for example, the Sumerian King List tells how, when kingship 'was first lowered from heaven', the first king, in Eridu, ruled 28,800 years and the next ruled 36,000 years.³ The fifth such person, 'the god Dumu-zi, a shepherd', ruled 36,000 years, and so, adding up five different cities and a series of eight kings, we have a total of 241,000 years. After that the flood swept over the earth. Then the series begins again, but the lifespans become shorter, a thousand years per person or less. Such material we do not consider to be historical or scientific: it belongs to legend. we may not be quite clear why it was important to them, or what it meant to them, but somehow there was, in ancient times, a way of thinking that was interested in the extreme ancientness of the world and the human race, and interested also in providing the exact figures for the reckoning of this. This study of these legends and of the ideas that lie behind them is a different kind of chronological work. It belongs to mythology, or to the psychology of ancient peoples, or to literary symbolism, but it certainly is not historical or scientific chronology.

There are, then, these two ways of looking at chronology, and hence the title of this lecture. For the Bible contains material that

appears to be chronological: it has plenty of dates, periods of years, ages of persons at the time of

[p.2]

some significant event, and so on; and this material can be looked at in either of these two ways. Thus, on the one hand, the first chapters of Genesis tell, in a style very like that of the Sumerian King List just quoted, of generations of persons who lived enormously long lives: Adam lived 930 years, Methuselah 969. And though these are not as enormously long as the reigns of the kings in the Sumerian list, they are still much too long to be historically or scientifically probable, to put it mildly. And after nine or ten generations they come down to the flood, which destroyed all life upon earth, exactly 1656 years after creation, in other words a total pattern very similar to that of the Sumerian list. On the other hand other parts of the Bible contain chronological material that looks much more like historical data: thus 'in the eighteenth year of King Jeroboam son of Nebat, Abijam became king over Judah; he reigned for three years in Jerusalem' (1 Kings 15.1). Such a statement may be completely accurate or may be somewhat inaccurate, but there is nothing about it that makes it wholly unhistorical or scientifically impossible. Thus, as we look at

the chronological material of the Bible, we may often find ourselves asking the question: is this

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³ The text of the list is most conveniently available in J. Pritchard, *Ancient Near Eastern Texts* (Princeton, 1950), pp.265f.

particular portion historical and scientific, or is it legendary and mythological in nature? To take the most obvious instance, 1 Kings 6.1 tells us that Solomon began the building of the temple in the 480th year after the exodus of the people of Israel from Egypt: does this belong to the category of real historical reckoning, or is it a schematic and theoretical construction? These are the questions that will concern us.

This lecture, however, will not seek to settle all these questions within the Bible—the problems would be much too numerous to handle in one single lecture—and I shall concentrate mainly on the history of ideas about biblical chronology rather than on the details of the Bible itself. Our subject, then, is not so much the total biblical material, but the attitudes to this material and the ways in which these attitudes have changed.

For the history of ideas, then, we may begin from this point: most people know only one fact about biblical chronology, namely, that James Ussher, Archbishop of Armagh, living in the midseventeenth century, calculated that the creation of the world took place in the year 4004 BC and, to be precise, on Sunday 23 October in that year.⁴ And so he did. But this fact, in so far as it is known, is generally very ill understood. If people mention it at all, they mention it as if it made Ussher into a crank, in the modern vulgar expression a crackpot, and as if Ussher in doing this was doing something peculiar or exceptional, something quite extraordinary which only a totally misguided person would undertake. If people so think, it only shows how little they appreciate the older religious and humanistic culture, and indeed, as I shall show, the older scientific culture, and how far removed the modern world is from that culture. For Ussher was in no way exceptional in believing that he knew the year in which the world was created: such knowledge was entirely normal in his time and for a considerable period after him. Ussher was only one in a long series of scholars who concerned themselves with biblical chronology, and many of them were very great scholars, indeed they included some of the greatest minds of all time. This may sound like an exaggeration, but it is not so: let me give you three names: Martin Luther, a religious genius of enormous importance; Joseph Justus Scaliger (1540-1609), by far the greatest classical scholar of his time and among the greatest there has ever

[p.3]

been; and Sir Isaac Newton (1642-1727), certainly the dominant scientific genius over a long period of the world's history. None of these men had the slightest doubt that the date of creation was knowable and was known. It was there in the Bible for anyone to read. Everyone knew this. That understanding of the universe, based upon biblical figures coupled with certain other data, was nothing unusual, but was part of the traditional culture inherited over two thousand years and more. The world was created by God, quite suddenly and completely, in a span of seven days as narrated in Genesis, and all this was—by our standards of today—not so very long ago. It is true that scholars could not agree on the exact figure; but that did not prevent them from agreeing that

⁴ On Ussher I know of no work that even tried to understand his chronological thinking other than my 'Why the World was Created in 4004 B.C.: Archbishop Ussher and Biblical Chronology', *Bulletin of the John Rylands University Library* 67, 1984-5, 575-608.

the exact figure could be known. Even if people disagreed about the precise date, a precise date could be known, and there was no doubt that the world had been created somewhere in the period from 6000 BC down to 3500 BC. There were in fact two main groups of dates. One, the earlier, had the origin of the world round about 5500 BC; the other, the later, had it just before 4000 BC or, more commonly, just after, around 3900 plus. The higher date was the eastern figure, and it was so because the eastern current of Christianity followed the figures of the Septuagint or Greek Old Testament, which had higher figures in Genesis 5 and 11; the lower was widespread in the west, especially after the. Vulgate of St Jerome familiarized western Christianity with the figures derived from the standard Hebrew text itself. Judaism, we may note, had the same tradition, though again with different (and lower) figures: this year, 1986-87, is the Jewish year 5747, i.e. 5747 from creation, which implies that creation took place in the year that by Christian dating is 3761 BC.

Let's go a little farther with Luther. For Luther, like our James Ussher here in Britain, not only published a detailed chronological work, his *Supputatio annorum mundi* (1541), in which creation was fixed at. 3960 BC, but he considered it the great merit of Holy Scripture that it enabled him to do this exactly and without doubt. One of the things, Luther said, that made it difficult to work with other history books was that they lacked a totally certain reckoning of the years. He himself, however, had not suffered from this, for he relied completely on the Bible, which furnished this reckoning precisely. Luther's *Supputatio* was immensely popular and influential, and the translation of it from Latin into German, published in 1550, had three more editions within the next ten years. Incidentally, unlike Ussher's work, Luther's chronology did not stop at the close of biblical times but continued through later and mediaeval history, right down to Luther's own lifetime.⁵

This high esteem of the chronological accuracy of scripture was developed farther. Melanchthon, Luther's companion and helper, made it into part of his doctrine of the nature of scripture. 'God willed that history should be written for us by the fathers and prophets in the best order, and with the number of the years carefully handed down', he wrote. 'This is a singular glory of the church', he continued, 'that nowhere else in the entire human race has an older series of reigns and times been found. Nor does any other people have the number of years reckoned back so certainly.' In other words, the precision and detail of the chronological data of scripture was one major reason why the divine origin and authority of scripture should be accepted at all. Its accuracy in giving information about the numbers of years in distant times, to which no human memory or reason could have access, only went to prove that it

[p.4]

was divinely inspired and equally infallible in matters of normal human history, as well as in theological matters.

⁵ Luther's text is to be found in the Weimar edition of his works, vol. 53, pp. 1-184.

⁶ Quotation from Klaus Scholder, *Ursprünge and Probleme der Bibelkritik im 17. Jahrundert* (Munich, 1966), pp. 82f. This work is extremely helpful for the entire setting and history of the questions here discussed.

This was an argument that went back a long way in time. Some ancient nations were sensitive to claims of antiquity. The Egyptians, Herodotus tells us, thought before the time of Psammetichus that they were the earliest of mankind. For the Jews the matter was a central concern, not least because Egypt was by far the greatest centre of Jewish population within the Greek-speaking world. It was exactly this problem that interested Josephus in his tract against Apion: people said that the Jews were newcomers on the scene of world history; they were without status on the cultural level of civilisation, quite unlike the Greeks. Not at all, said Josephus, the Jews have been here all the time, and, unlike the Greeks, who have a lot of different and contradictory books, the Jews have one precise and unified history, one single narrative which goes back to the creation of the world about 5000 years before. Moses himself (Jos. Antiquities 1.16) was born 2000 years back, at a time when the Greeks did not suppose that even their gods had been born, much less that the actions of mortals had been recorded. And so Josephus goes on to survey all this in detail, how for example the flood began on the 27th day of the second month in the year 2262 after the birth of Adam. The detail of biblical chronology was a matter of normal knowledge and conversation, and this continued so up to a few centuries ago.

At this point it is interesting to reflect on the differing impressions of the age of the universe. To us today, accustomed to the idea of immensely long stretches of time past, the biblical chronology seems to imply an incredibly short duration for the world. To the people of biblical times, we must suppose, the contrary was the case. A world that went back three, four or five thousand years, with a recorded story going right back to the beginning, was an amazingly longlived world, something to be proud of knowing about, something that greatly surpassed the general human consciousness of the past.

One other note about Josephus: his time from creation to flood is on the high side at 2262 years, for the Hebrew text as we now have it adds up to 1656 years for the same period. Josephus used the Greek text (or conceivably, but less probably, a Hebrew text which in this respect corresponded with the Greek), and we have already mentioned that the Greek text displayed a higher set of figures. And it is possible, though this cannot be certainly proved, that the higher figures derived from just the motive that we have mentioned: the desire to show that the Bible went back to an earlier date than the records or legends of other nations were supposed to do. In other words, the figures in the Greek Genesis were adjusted upwards, in comparison with the Hebrew (and, still more, in comparison with the Samaritan text of the Hebrew, which will be mentioned shortly), in order to make it clearer, especially in Egypt where this conflict was at its highest, that the Jewish Bible went back farther than any other comparable source.⁸

And this leads us on to our next major point: namely that this powerful and durable tradition, under which the biblical figures were understood to be chronologically precise and to furnish a basis for calculation from creation down to later events, was quite correct. It interpreted the

⁷ Herodotus 2.2

⁸ Cf. B.Z. Wacholder, 'Biblical Chronology in the Hellenistic World Chronicles', in *Harvard Theological Review* 61, 1968, 451-81.

Bible's intention rightly. This is what these biblical figures were intended to do, or some of them at any rate.

[p.5]

From the genealogies of Genesis the reader could reckon the time down to the flood; from the flood he could reckon on to the exodus, and from there to the building of Solomon's temple. The figures were meant to be exact and to be taken literally. They do not mean anything at all unless they mean actual numbers of years. Thus to say that Abraham was 75 years old when he migrated from Haran into Canaan (Gen. 12.4) means exactly that, namely that he was 75 years old at that point, and to say that Israel's stay in Egypt lasted 430 years (Exodus 12.40) means exactly that, that there were 430 years from the time they went in until the time when they came out again.

But we have to be aware of the difference between intention and historical truth. All discussion of this matter has been bedevilled by the assertion that the chronological data of the Bible, and especially those of the earlier chapters of Genesis, are 'not to be taken literally'. According to this argument, when we read that Methuselah lived to the high age of 969 years, we are to suppose that the writer did not mean 969 years but something different. Now I submit that this is obviously false. The biblical writers worked seriously on these figures, and they meant 969 years for Methuselah: that was what was special about him, he was not anything else of note: they meant 969 years for him, just as they meant 120 years for the life of Moses (Deut. 34.7) and just as they meant two years after the earthquake in Amos 1.1.

We have to distinguish between literal intention and historical, factual truth. The figures are not, to us, historically, scientifically or factually true, but they were literally intended. A year to them was the same period as it still is to us. The figures do not correspond with actual fact, that is, they or some of them are legendary or mythical in character, but the biblical writers in overwhelming probability did think that they corresponded to actual fact. When, in modern times, people began to say that these passages were 'not to be taken literally', this was really a cowardly expedient which enabled them to avoid saying that, though they were literally intended, they were not literally true. They were literally intended: they were chronological statements of numbers of years and made no sense otherwise.

Or, to put it in another way, we often say that the Bible is not a scientific textbook, and from our point of view that is of course the case; but from the point of view of the biblical writers and their public, as far as concerns the chronological data, it was intended as scientifically true, and the dates and figures do not have any use or any meaning if they were not so intended. There is just no point in saying that the children of Israel lived for 430 years in Egypt if you really mean that they lived there for 185 years or for 209.

To say this is not to deny that the figures may be also symbolic: some of them certainly are. But this is not a symbolism that departs from the literal sense, it is the symbolism of the literal

sense—to take the most obvious case, that of Enoch, who lived 365 years and then, instead of dying, was taken away by God, it is just obvious that 365 years, the number of full days in a solar year, and a period quite different in length from the lifespan of others in the same list, is 'symbolic' in some way, but the symbolism is the symbolism of the fact that Enoch lived that number of years, or, more correctly, the symbolism of the fact that the biblical writer thought that he lived that number of years, of actual years.

[p.6]

To rephrase, therefore, in better terms the idea that the numbers are 'symbolic', we might say this: that our task is to understand what is the theological function, within the texts, of the legend or fiction that these figures are true. Anyway, the entire tradition of classic religious culture treated the biblical chronological data as in a sense scientific, as material upon which the scientific computation of time could be based and into which it fitted. 'Chronology is the backbone of history', it has been said. History itself is less like science: it is more a construction of reports, intentions, suppositions, hypotheses, explanations: within it the chronology that underlies it is the most scientific element. Within the body of biblical history the structure that came nearest to being scientific was the chronology. Everyone perceived this obvious truth.

The importance of chronology for the biblical wtiters is confirmed by the very differences—already briefly mentioned above—in the figures as between the standard or 'Masoretic' Hebrew text, the Greek text and the different Hebrew text of the Samaritans. These differences affect particularly the ages of the patriarchs in Gen. 5, and thereby alter the entire chronology down to the flood. By the Masoretic text the flood occurred in 1656 AM (AM = 'Anno Mundi', i.e. by years counted from creation); by the Greek text, however, this was in 2242 or (as Josephus had it) 2262, while by the Samaritan it was much earlier, and the time from creation to the flood was much shorter, the flood falling in 1307 AM, a date followed by some other important sources. It is likely that these various sets of figures imply that in fairly late times attempts were still being made to adjust and realign the chronology of the Old Testament. This is confirmed by a work like the Book of Jubilees, which is a rewrite of Genesis-Exodus, coming from the third or second century BC. Jubilees covers the same ground as Genesis but is chronologically much more detailed and explicit. It calculates and expresses dates in jubilees—a jubilee was a period of 49 years—and the entire scheme works out in a culmination of fifty jubilees or 2450 years from creation to the entry of Israel into the land of Canaan. The Book of Jubilees agreed with the Samaritan text of the Bible in placing the date of the flood at 1307 AM. All this suggests that there was in late times an increase of chronological interest, and that at that time the last touches were added to the Book of Genesis; moreover, the special place of Enoch in the genealogy of Genesis cannot be unconnected with the Book of Enoch, a 2nd-century BC work concerned with astronomy and heavenly things.

The evidence of the New Testament points in the same direction. In Galatians St Paul, arguing that the promise given to Abraham antedated the law given to Moses, did not rest satisfied with

⁹ These words are the first sentence of Thiele's book, see n. 1 above.

the general statement that the former long preceded the latter, but cited the precise figure: 'the law, which came 430 years afterwards, does not annul a covenant previously ratified by God' (Gal. 3.17). For the purposes of his argument Paul did not need the exact number: to say 'a few centuries' would have sufficed. He put in the exact figure of 430 because he knew it very well: it was familiar and obvious to him. Moreover, no one today will doubt that in this he followed the text of the Greek and the Samaritan, both of which made the figure of 430 in Exod. 12.40 cover not only the time of Israel in Egypt but also its time in Canaan beforehand, i.e. going right back to Abraham's entry into the land. Thus St Paul both made clear his familiarity with the chronological figures of the Old Testament and also his use of a text which in this respect differed from the

[p.7]

standard Hebrew. And this is only one of several such indications in the New Testament, although it is the most striking and important.

The importance of the chronological material for understanding the mind of the men of the Bible must, therefore, not be underestimated. Nevertheless there were some strange features about biblical chronology. Firstly, although the Old Testament furnishes the materials for a chronology going back to creation (or, more correctly, working down from creation), it does not make the existence of this full chronology very explicit. Much of the material is embedded in genealogies or statements of the ages of individuals. The data is there if you care to add it up, but the cumulative figures are not given, not made express as totals as you go along. Nowhere are events expressly dated from the starting point of creation: for example, though one can by simple addition quickly reckon that the flood began in the year 1656 AM by the standard text, this total is not actually stated anywhere. Although modern Jewish dates are given in years from creation, that style of dating did not come in until long after biblical times. Thus the chronological data is carefully given, and depends on nothing more difficult than simple addition for most purposes; but you had to do the addition yourself, the Bible did not do it for you.

And still less was it clear as one read farther on into the biblical narrative, say in the period of the kings: here the books provide relative datings, which say that this king began his reign in the seventh year of that king, and the like; but there is no clearly stated absolute and systematic framework for either of the two regnal lines (of Israel and of Judah). This is one of the great paradoxes of the whole matter, namely that in the period of the kings, which some may consider to be the most 'historical' period of the Old Testament, the Bible seems not to offer a proper chronology at all. One fact however is clear: that, if you simply add up all the figures for the kings of Judah, from the fourth year of Solomon when the temple was commenced, to the end of kingdom and temple, the total is 430—significantly, the same number as the number of years that Israel spent in Egypt. This might mean that the total period was, in the minds of the biblical chronologists, factually 430 years, that is, that there were no overlaps within this listing of reigns; and the coincidence with the 430 years of the earlier period supports this. If this was thought, however, it was considerably out of step with historical fact as we now know it: for, from the

viewpoint of historical chronology, the period is now supposed to have been about 372 years, so that Solomon came to the throne in 962 BC, began the temple in 958, and it was destroyed in 586 BC. But that means that, out of the 430 years of the kingdom after the temple was commenced, there were about 58 that were not real years at all. Attempts have been made to explain this through notions of co-regencies, overlaps and the like; alternatively the explanation may lie in schematism, that is, in theoretical schemes for dates and periods, to which the factual dates have at certain points been adjusted.

In the long run, moreover, the chronological scheme of the Old Testament fades away. In the Persian period it does not exist at all, so that no one can tell from the Bible alone how many Persian kings there were or how long the Persian empire existed. The great period for the chronology of the Old Testament is at the beginning, from the creation down to Noah and the flood; later it becomes less clear and certain, and modern scholars, like their predecessors, find it necessary to attempt reconstructions more or less far-reaching.

[p.8]

The clarity of the chronology at the beginning is well symbolised by the reckoning in AM years. The Old Testament does not really reckon back to creation, it sees the chronology as God sees it, as it were: it begins with creation as if creation is known. AM years work thus in the opposite way from our BC/AD years: with BC/AD years the datum point is, as it were, somewhere in the middle. As one goes farther back, away from 1 BC or 1 AD, back to 1000 BC or 2000 BC, one accepts that one is moving farther away into the mists of prehistory; but with AM years the early times, those close to creation itself, appear as the firmest ground.

This fits in with another factor, namely, that the Bible, taken alone, does not give us a chronology, not one by which one can reckon back from post-biblical times. From the Bible, taken in itself, you cannot tell how long ago Solomon lived. Once you get back to Solomon, the biblical chronology will count back to creation; but from Solomon to Alexander the Great, or from Solomon to Christ, the Bible simply does not tell you. The New Testament itself gives at most only a very vague idea of the temporal distance that separated it from key events of the Old. To make any sort of precise entry into the biblical chronology, one has to have a synchronism from 'profane' history, a point known from Greek or Roman history or from Mesopotamian sources that is also dated in the Bible in a mode connectable with the chronological chain that goes back to creation. There is thus, since the Hebrew kingdoms, no possibility of a totally biblical or totally sacred chronology: the essential link depends, and was always known to depend, on going outside the Bible for information. Thus Ussher's chronology was never a purely biblical calculation, as he himself well knew; and the use of links with secular history was nothing new, for the gospels themselves, in so far as they furnish chronological

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¹⁰ On Matthew's genealogy, with its three sets of fourteen generations, cf. further below, p.12, and, in general, D.E. Nineham, 'The Genealogy in St Matthew's Gospel and its Significance for the Study of the Gospels', in the *Bulletin of the John Rylands University Library* 58, 1975-6, 421-44, and also in his *Explorations in Theology* I (London, 1977), pp.166-87.

indications for the birth and life of Jesus, do so by reference to the years of the Roman emperors and other such data. For James Ussher the essential synchronism was the year of the death of Nebuchadnezzar and his succession by his son Amel-Marduk. The details of this, however, can be left aside: our only point is this, the general hermeneutical one, that all biblical chronology, when practised from after biblical times, necessarily depended on non-biblical data for an entry into the biblical. There could never be any purely biblical chronology, or if there was one it would hang in the air, having no point of contact with the ground of known historical sequence. Chronology therefore worked only where there was some knowledge of Greek and Roman history—and this, of course, all traditional Christian chronologists had in some measure.

A brief word should next be said about the probable purposes and motivations that may have lain behind the chronological references and schemes of the Bible. The central motive may be expressed with the strange term protology—the opposite of eschatology—that is to say, the interest not in the future end of the world but in its beginning and the time back towards that beginning. The time from the origins to the setting up of some particular stage, the reaching of some decisive landmark, was all-important, and there is Mesopotamian evidence that supports this. This is why biblical chronology works from the beginning and is at its best and clearest at the beginning. The Book of Jubilees shows us the pattern: it was exactly fifty jubilees, 2450 years, from creation to the entry into the promised land. And this motif was well caught by Ussher. This is why his figure of 4004 BC for creation was so important to him. By his time it was known that Jesus was born in 4 BC or earlier, since Herod died in that year. His date for creation meant that

[p.9]

there were exactly 4000 years from creation to Christ. Moreover, he calculated, Solomon's temple was completed in the year 3000 from creation, so that there were exactly 1000 years from the temple to Christ, who was the fulfilment of the temple. These conclusions were just in the right spirit of the chronology of the Bible: in his general idea of the matter, Ussher was quite right.

Along with this 'protology', however, we have two other motives. The first of these was the calendar, the details of which were left somewhat obscure by the Old Testament and were much debated in later Judaism. The Book of Jubilees, the most chronologically sensitive of books, was also the book which most strongly insisted on a particular calendar, based on a solar year: on no account should the moon be taken into account, for, if it was taken into account, the calendar, so essential for sacred festivals, would be entirely wrong. Here we need only recall that Enoch lived exactly 365 years before he was taken away by God.

Finally, there may well have been an eschatological motive, an idea that the world would last some total definable period, most likely a round number, perhaps some 4000 or 7000 years. If one knew where one stood within such a period, one would know how long the world would last from one's own time. It would be conceivable that such an interest had an influence on the

formation of the Old Testament's own chronology, although the influence of 'protology' is much clearer and firmer. The later Christian continuers of the chronological tradition were often interested in the approach of the end. Luther, for example, who brought his chronology right up to his own lifetime, noted under the year 1540 AD that 'In this year the total of years since creation is precisely 5500. Therefore the end of the world is to be expected.' This because, he was sure, the total of 6000 years would never be reached, just as the total of three days had not been reached in Christ's passion and resurrection (he counted each half-day, for this purpose, as corresponding to a thousand years).

Anyway, whatever the proportions between these different interests, the chronology of the Old Testament hung together as a total system which obliquely expressed certain ideas about the world and the place of humanity within it.

Upon this foundation there followed the long chain of Christian chronologies and histories which began with a chronology. Among the most important we may mention Eusebius, Isidore of Seville, and Bede. Bede for example has all the dates worked out: the flood was in 1656 AM, the exodus from Egypt in 2493, and Christ was born in 3952 from creation; from this point one could continue into the Christian era and up to modern times. This sort of thing was standard. Indeed one cannot say, in this respect, that Ussher in the seventeenth century showed much advance in sophistication over Bede nine hundred years before him. Nevertheless the great age of biblical chronology came in the sixteenth, seventeenth and eighteenth centuries. There are several reasons for its culmination at this time. The first is the increasing precision of astronomical knowledge. Ussher himself used this. Although he was hardly a scientist at all, properly speaking, in this aspect of his work he was scientific. From his biblical figures he had determined that creation took place in the year 4004 BC. But how did he know the month and the day? He was sure that it was in the autumn, probably because the Jewish New Year falls at that time. He knew it was a Sunday, for it was the first day of the week according to Genesis. He looked in the 'astronomical tables' for the

[p.10]

autumnal equinox of the year 4004 BC, and the first Sunday after the equinox was 23rd October. It was on that day that light was created, the first act of creation. All this was quite scientific. The tables used were almost certainly the Rudolfian tables of Kepler and Brahe, and Ussher's use of them was very accurate, within half a day.¹¹

Another factor which brought chronological questions into the limelight at the time was the discovery, in 1616, of the Samaritan text of the Pentateuch. It was widely noted for its different chronological figures from the standard Jewish text; and many people thought that the Samaritan was in this respect the better. On the other hand, its mere existence raised the question if the Bible gives us the true figures back to creation, in which biblical text are they to be found? So long as the major difference was only that between the standard Jewish text and the Greek text, it

¹¹ I am indebted for this information to Professor J.D. North.

was reasonably possible to prefer the Jewish text, which was in Hebrew and in that sense could be taken as the more original of the two; and even more so after the Reformation, when the Reformers opted vigorously for the Jewish Bible as the canonical Old Testament, as against the wider canon of the Roman and Greek churches. But the Samaritan text was another, but different, text in the original language, and thus presented a new challenge. Part of Ussher's success and esteem arises from the fact that he worked purely and entirely from the traditional Hebrew (Masoretic) text, which meant that his figures fitted more or less exactly with the King James Version, which was translated on the basis of that same text and was almost universally used throughout the English-speaking world.

Another important factor was the calendar reform. The Julian year, introduced by Julius Caesar himself, was well out of step with the real year by this time, and in 1582 Pope Gregory XIII initiated the new or Gregorian year which corrected the slippage of the calendar. Everyone, whether for or against, knew about this. Ussher was against the calendar reform, and his opposition is one reason why England did not adopt the Gregorian year until 1752. To this must be added the critical work on ancient chronologies done by Scaliger in his *De emendatione temporum* (1583), by the Jesuit Petavius (1627), as well as by others. Chronological questions were a common subject of learned discussion, and men of letters could be expected to know something about them: Sir Thomas Browner for example, wrote attractively about them in his *Pseudoxia Epidemica*.

Something should be added about Newton, since he was briefly mentioned above. Along with his scientific work on gravity, optics and the like, Newton was passionately interested in theology and in chronology. He was by no means the severely rational and strictly 'scientific' person he is often imagined to have been, for he was fascinated by alchemy, and in biblical chronology his main interest lay in the 'prophetic' books in the special sense of that word, i.e. basically Daniel and Revelation. In this respect one would have to say that Ussher's procedure, which depended almost entirely on figures supposed to refer to past historical facts and was little affected by calculations of the future, was more soberly rational and scientific than Newton's was. On the other hand, Newton continued to bring up to date an aspect of biblical chronology which, as we have seen, went back as far as Josephus and into pre-Christian times. In his major chronological work, *The Chronology of Ancient Kingdoms Amended*, he strove to bring down to lower figures the chronological traditions of the Greeks and other ancient nations, so that none of

[p.11]

these should be allowed to imply a reference earlier than those known from the Bible. Only so could one be sure that the Bible went back to the earliest of all beginnings: for otherwise one would have to contend with the spectre that had troubled the entire subject: what if there had been people even before the time when, according to the Bible, the world was created?¹²

¹² On Newton's religion see F. Manuel, *The Religion of Isaac Newton* (Oxford, 1974), and on the relation of it to his chronology especially pp. 85-104.

By the later eighteenth century the tradition of biblical chronology was running into difficulties, and by the later nineteenth this had led to changes which transformed the entire picture of the Bible as most people understood it. Several factors were at work: some of them were not new, but came gradually to be taken more seriously.

Firstly, we have already mentioned the existence of variant texts, of which the Samaritan, being in actual Hebrew and of ancient repute (its alphabet was exotic and more ancient in history than that normally used by Jews), was the most powerful. Moreover, it had numerous minor differences in text from the Jewish text, but its differences in the chronology of Genesis were large, important and might seem to offer a more consistent scheme. But where did this lead? Undoubtedly God had set down in writing the true and detailed chronology right back to the beginning of time. But how could this work out if there were different texts with different figures? If one was right, then another must be wrong. One could say that the Masoretic text must be right, but for Christians that could only be a purely dogmatic decision: there was no good reason why it must be right. Differences of figures in chronology were not like other variant readings, which might be covered over by exegetical discussion: they meant a completely different total reckoning, and if one was right another must be wrong. Or, people began to say, may it be that none of them is exact or correct? If that is so, then the older idea of biblical chronology must come to be totally abandoned.

The question raised by variant texts was only reinforced by the evidence of the New Testament. For it, as already mentioned above, had taken the 430 years of the children of Israel's captivity in Egypt (Exod. 12.40) to include the period before that, right back to Abraham, a period known from other passages to total 215 years. Thus the decision about this one text made a difference of 215 years to biblical chronology and thus to the whole question of relations between creation and later events. Now Ussher tried, by interpretative skill, to maintain that Paul's 430 years from Abraham to Moses was the same as Exodus's 430 for the stay of Israel in Egypt, as the Masoretic text had it. But it was much more natural to say, as almost anyone would say today, that Paul said 430 from Abraham to Moses because he was following the Greek or Samaritan texts, which agree on using the figure in this way, and especially so because he repeatedly uses the Greek text as his authority, even in theological matters and even when it differs from the Hebrew. But if Paul, who was a totally inspired and authoritative person, actually followed the Septuagint or any other text, then that must mean that the Masoretic Hebrew is not absolutely inspired and right, since a text that differs from it may be correct. Even one such discrepancy totally destroys the possibility of a biblical chronology on the old style. Biblical chronology has to be perfect, otherwise it breaks down altogether.

The New Testament produced another series of tensions on top of this. Generally speaking, the New Testament is a much less chronologically conscious work than the Old; it seems to know more about Old

Testament chronology than it does about its own, and most of what we know about it derives from 'external' references, e.g. years of Roman emperors, client kings and governors, rather than from any clear listing of years within its own narrative. The theoretical schematism of biblical chronology is well echoed by Matthew's genealogy of Jesus, with fourteen generations each from Abraham to David, from David to the Babylonian exile, and from the exile to Christ; but a reckoning by generations gives nothing of the arithmetical precision that a biblical chronology requires. (Some have thought that one could work by taking an average length for a generation, say thirty or forty years; but this is not valid for the Matthaean genealogy, if we are to fit it with the Old Testament figures. For by these latter figures the time from Abraham to David is something like a thousand years, while from David to the exile is less than 500; yet both are taken by Matthew as fourteen generations).

In particular, however, the New Testament displayed a lack of chronological sense in its failure to show clearly how long the ministry of Jesus lasted. And, even more seriously, it could not get the four gospels to furnish an agreed order of events, except by absurd devices such as making things happen four, five or more times so as to get all the sources to fit chronologically. Now this was already known to Ussher, who stated roundly—though, to me, surprisingly—that it was Matthew who had not followed the actual order of events: one could obtain a sequence from the other three, with only minor difficulties remaining, but only if one assumed that Matthew had not tried to keep things in chronological sequence. Well, this may be so or not; but consider its consequences. The Bible is supposed to be infallible and was certainly so regarded by Ussher. But it contained within itself one book, one of the four gospels and therefore absolutely central for religion, and also the first of the four in canonical order, but a book which set down the whole life of Jesus in a sequence that was not the true sequence of events. But, you may say, this does not matter for faith, and it may well not matter. But it matters for the idea of what the Bible is like. According to common theory of inspiration, the Holy Spirit prevented all error from getting into the text of the Bible, and yet here, in a most central book, no such prevention of error has taken place. But if Matthew can have a completely erroneous sequence of events, then any other chronological indication in the Bible can be erroneous in the same respect. The inability to obtain a clear and unanimously agreed chronology or sequence from the gospels was a pointer that pointed towards an eventual loss of confidence in any or all chronological statements of the Bible.

The next problem came from the new navigation and explorations of the far corners of the world, and especially from the voyages of the Dutch. Distant peoples brought many surprises, and challenges to traditional theological views. Traditional doctrine maintained that all human beings since Adam had known something of God and also, through Adam, were aware of sin and guilt: this fact, taken to be universal, was the starting point for presentation of Christianity. But now people were to be found, totally outside the field of traditional Christendom, who, apparently, had no idea of a single transcendent god, and none of sin and guilt either. How could this be?

Such discoveries revived the spectre that had troubled Josephus long before: what about the claims of nations to have histories that go

[p.13]

back long before the times known to the Bible? Might biblical cosmology and chronology have to be stretched in order to make room for these phenomena? The key person in this operation was the same person who was central to so much of the Bible's own approach, namely Noah. After the flood, the world had been repopulated out of the offspring of this one man. Chinese civilisation was reputed to be of a high standard, and its noble ethics could come only from some divine influence; and who other than Noah could have transmitted this? After the flood, according to an influential Jesuit account, the sons of Noah had moved into China and settled there, spreading principles of divinity and natural law. 13 As Samuel Shuckford, Chaplain to George II, explained, the ark had rested on Ararat, which, according to him, was 'on the hills beyond Bactria, north of India', and this was well to the east of Mesopotamia and no great distance from the north-western provinces of China. 14 In his view, the legendary or mythical personage whom Europeans then described as Fo Hi or Fohi and as first emperor of China was no other than Noah himself. 15 But could the Chinese dynastic figures be compressed enough to fit them within the limits known from biblical chronology? One way was to invoke the Septuagint, which, as we have noted, had higher figures; it was thought that this would just allow the (supposedly) known Chinese history to fit in after the biblical flood. As Shuckford saw it, this could be done on the basis of the Hebrew text anyway: Fo Hi was understood to have lived about 2952 BC, and this was within a few years of Ussher's date for Noah. 16 Such effortful explanations were needed if Chinese civilization was to be forced into the mould of a world governed by biblical chronology.

Hindu texts, coming to be known of in the later eighteenth century, presented a different kind of problem: they, it appeared, had a chronology that went back some six or seven million years. Enormously high figures of this kind had not been entirely unknown before this time. The Sumerian King List, already mentioned above, was not known until modern times, but another and structurally similar text of Mesopotamian origin and preserved in Greek, by Berossus, was known to the early Christian chronologists and is preserved in Eusebius. Berossus counted 432,000 years from the beginnings to the flood. Christian writers found no problem with this: they rejected such figures out of hand as patently fantastic and incredible. Sir William Jones dealt with the Indian figures in a different way: he maintained that only the last section of the chronology belonged to human history, while all before that was purely mythological; the final section, amounting to only a few thousand years, fitted perfectly well with the biblical chronology. But all such expedients could not prevent the erosion of confidence that the Bible,

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¹³ See P.J. Marshall and Glyndwr Williams, *The Great Map of Mankind: Perceptions of New Worlds in the Age of Enlightenment* (Harvard, 1982), p.108.

¹⁴ S. Shuckford, *The Sacred and Profane History of the World*; I have used the 1st American edition, 'revised, corrected and greatly improved by James Creighton' (Philadelphia, 1824); the reference is in vol. i, p.82.

¹⁵ Marshall and Williams, ibid., and Shuckford, ibid.

¹⁶ Shuckford, ibid., p. 48.

¹⁷ On the Indian figures see Marshall and Williams, *op. cit.*, p. 117; R.H. Popkin, *Isaac la Peyrère* (1596-1676): his *Life, Work and Influence* (Leiden, 1987), pp.117, 128ff.

and it alone, had precise and correct knowledge of the chronology of world origins. If other chronologies were legendary or mythical, possibly the biblical one had some element of the same character. And, after all, the Mesopotamian lists down to the flood, whether fantastic or not, had a striking structural similarity to the biblical account of the same period.

In 1655 there appeared Isaac la Peyrère's book *Prae-Adamitae* (English, *Men Before Adam*, 1656), a work the importance of which has been largely forgotten until very recent years. ¹⁸ This solved many of these problems at one stroke. Adam was not the first man. He was the first biblical man, or the first Jewish man, but there had been men and women before him. Where did Cain get his wife from, when Adam and Eve had not yet had any daughter? Manifestly, from the Pre-Adamic peoples. When Cain was driven out from the presence of the Lord, why

[p.14]

did he fear that people would meet him and kill him, when he knew perfectly well that there was no one in the world but his own father and mother? Not at all, for the world was full of people who had been there before Adam was created at all. Thus all sorts of biblical puzzles and exegetical riddles could be solved: but only at the expense of completely abandoning a biblical chronology for the origin of the world. The world, and some form of humanity, had been there for ages unnumbered. La Peyrère's ideas, and their sequel in intellectual history, were a sign of how the newer knowledge of the world was beginning to transform the understanding of the Bible itself.

The last stroke, we may say, was delivered by the rise of geological science in the earlier nineteenth century. There were of course those like Edmund Gosse's father who simply condemned the new science, arguing that when God created the world, instantly and in one series of a few days around 9000 BC, he built into it all the fossils and other evidence that geologists and zoologists had used. But this was not the general reaction. Most people, even those who in other respects believed the Bible to be infallible, came to think that in its handling of the beginnings of the world it was approximative rather than precise. It told you what had happened but not exactly when. It was still essential that God had absolutely created the world, and that the first humans had grievously sinned, but the Bible no longer made it clear what the exact time sequence had been. In other words, biblical chronology in the form in which the Bible had developed it was virtually dropped overboard, and practically nobody regretted, or even noticed, the loss of it. And even those who continued to revere the traditional dates for biblical events, as calculated by Ussher or others like him, no longer had the slightest idea of how these had been worked out or of the mental world in which alone they had meaning.

¹⁸ Popkin's work (see last note) is the first modern full-length treatment; it was not seen by me until after this lecture had been delivered. K. Scholder had already made me aware of the importance of la Peyrère. There is a short but competent *mention in J.H.* Hayes and F. Prussner, *Old Testament Theology: its History and Development* (Atlanta, 1985), pp.26-7.

Incidentally, in this respect geology was much more important than the later controversies over evolution. Geology extended the time sequences enormously but people still believed that God had done the actual deeds of creating. Evolution was a different matter. People worried about evolution, but not primarily because it took a long time: they disliked it more because the idea of natural selection seemed to mean—as they saw it—that God had not really had a hand in creation at all, and that humanity was not properly separated off from animal creation: these were the issues. The opposition to evolution was not primarily on the ground of chronology. Many or most of those who were, and are, desperately opposed to evolution already believed that the world was much older than the chronology of the Bible demands. The evidence of geology was widely accepted, while the idea of biological evolution was bitterly contested. Modern 'creationists' commonly want a world with a shorter duration than evolutionary theory requires, perhaps 12,000 or 15,000 years, but this itself is already greatly beyond the bounds of biblical chronology.

This then is the general position in the modern world. But there are some paradoxes and contradictions in it. The loss of sense for biblical chronology, which we have just sketched, fell most heavily on the earliest portions of the data, especially on those in Genesis. One needed to believe the Bible in general, but not the details of Genesis. The epoch-making volume *Lux Mundi* (1889), which is usually held to mark a stage in the acceptance of a more critical approach to scripture, made exactly this difference: the gospels could be relied

[p.15]

on as completely historical, but the earlier chapters of Genesis should not be taken too literally. The picture of the biblical chronology, under which the world had only a short and finite timespan back into the past, was implicitly abandoned. The chronological materials of Genesis were no longer taken seriously, and even most biblical scholars failed to perceive that they were a very important vehicle of theological ideas and a highly pervasive element in the entire thought-structure of the Bible. By the mid-twentieth century things had gone even farther, and biblical theologians like John Marsh and J.A.T. Robinson, insisting on what they regarded as the 'biblical view' of time and of the world, were arguing that the Bible had no interest at all in 'chronological time' and sweeping aside any importance that might still be attached to the chronological passages. Thus even the mentality of biblical chronology was to be abandoned.¹⁹

The striking thing about this is that this movement of thought was not particularly a movement of 'critical' or 'liberal' or 'advanced' thinking about the Bible: on the contrary, conservative and fundamentalist thought mostly moved in exactly the same way. Few fundamentalists today suppose that they are committed to the 969 years of Methuselah's life or to the 1656 years from creation to the flood; perhaps some do, but most do not. If you ask them about such matters, they

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¹⁹ On this see my *Biblical Words for Time* (London, 2nd edn., 1969), p.28; I there mention various works that were stimulating in guiding me towards a perception of the theological or ideological importance of chronology, and among these special mention should be made of A. Murtonen's brief 'The Chronology of the Old Testament', *Studia Theologica* 8, 1954, 133-7.

usually just laugh nervously, for they have never supposed that they are responsible for such things and do not want to become responsible for them. But if the Bible is infallible, these figures must be a central part of biblical truth: for they are not just isolated and occasional phenomena, but recur again and again and are a central structural feature in the totality of scripture, But, as I say, on this issue the mainstream of so-called 'conservative' opinion took the same path as the 'liberal' understanding. Look at the Scofield Bible, the most important single document of fundamentalism, and on its first page, in its note on the first verse of the Bible, it says: 'The first creative act refers to the dateless past, and gives scope for all the geologic ages'. In other words, this is the so-called 'gap theory', which works analogously to the Pre-Adamite theory of La Peyrère: everything in Genesis is true, but in between its true statements one can squeeze in millions of years in order to stretch out the world and make room for the evidence of geology. But this is only a hidden way of saying that the biblical chronology is not true. The Bible does not tell you anything about the age of the world.

Similarly the New International Version, with New Scofield Study System, tells us on its first page: 'Scripture gives us no data for determining how long ago the universe was created'. On Gen. 5.3 it informs us that: 'Scripture does not reveal the exact date of Adam's creation', and on 11.10 'Scripture does not provide data by which the date of the flood can be discovered'. These statements, coming from 'Bible-believers', are straightforward falsities: because they no longer believe the chronology of the Bible, the editors assure their readers that the Bible tells them nothing about it. 'Conservatism' of this kind means a complete abandonment of the world-picture of traditional older Christianity.

All this, remarkably, is accompanied by a continued veneration for Ussher's own dates, which used to be printed in many Bibles at the top of the page but in many more recent versions appear only from about ch. 11 of Genesis onward. This is the same point of view: dates, even Ussher's dates, are 'speculative' in the earliest period,

[p.16]

but later on they become valid. But this is a mindless, unthinking reversal of Ussher's own point of view and that of all the older biblical chronology. For Ussher the figures at the beginning were the clearest, the most powerful, the most certain chronological evidences, and in this he was right: he understood the biblical intentions rightly. The time from creation to the flood was the most precisely understood, the most exactly defined: consider the precision of the flood narrative, which furnishes the exact day and month for a whole series of events. If the dates at the beginning of Genesis are not valid, or are 'speculative', then there is no use at all in the sort of thing that Ussher did.

But this sort of contradiction still recurs again and again: consider, for instance, the reverence that continues to be attached to the figure of 480 years from the Exodus to the start of construction of

the temple (1 Kings 6.1).²⁰ If this figure is taken to be historically accurate, that would give us an early date for the Exodus, assuming that we know the date of Solomon, which, however, as explained above, can be known only by going outside the Bible for the necessary datum point. But there is no reason at all for taking the 480 years from exodus to temple as a true historical date unless we do the same with the 1656 years from creation to flood or with the 969 years of Methuselah's life. Of all the figures in the Bible, none has more clearly the air of a theoretical and schematic figure than this 480, which is forty times twelve and combines two common schematic numbers of the Bible. The 480 years from exodus to temple has no more claim to historical accuracy than the 365 years that Enoch lived before he was taken up by God.

In chronology, then, conservative biblicism followed the liberal path, the same path it so criticized liberal scholarship for following in other matters. As somebody told me after a lecture, all the history of the Bible is true, but chronology is a different matter. The Bible reader is not bound to accept the chronology. But this means that God gave us in writing a quite misleading and erroneous chronology. Well, people may say, that doesn't matter, for chronology is not important for religion. But this is exactly the 'liberal' attitude to historical narratives: it does not matter for religion whether they are historically true or not. Unfortunately, the Old Testament makes it clear that, for it, chronology was important for religion, and the chronology was there very precisely because chronology did matter for religion and indeed was a way of communicating something that was essential for the faith of the Hebrews in biblical times; and all this is lost sight of as soon as we treat the chronology as marginal or unimportant, or else in the 'conservative' manner distort it by squeezing into it long cosmological periods that it knew nothing of.

Was biblical chronology then legend or science? There is no simple or final answer: in fact the material, and the motivation behind the material, are mixed. Some of the figures are likely to be historically true within narrow limits, e.g. in the statement of a synchronism between an Israelite and a Judaean king; but the chronology as a whole, the grand scheme behind it and the organization of it, belongs to the realm of legend, just in the same sense as does the Sumerian King List and other material of the same kind. Or, more correctly, we should say not 'legend' but 'theological schematism'. Israel inherited legends that went back to the beginnings of the world, and doubtless modified them, built them into new forms, included historical realities within them, and

[p.17]

adjusted and adapted the whole to fit with and to express certain general theological currents of thought. For us, indeed, many of these figures do not represent historical facts and are not historically true; but this does not mean that they did not think of them as historical and in a way

²⁰ Cf. for instance the strenuous efforts of J.J. Bimson, *Redating the Exodus and Conquest* (Sheffield, 1978) to prove the figure of 480 years historical and thus to date the exodus in the 15th century—efforts which are undermined by his own self-avowed assumption (p. 15) that the date is historical and his complete ignoring of the consideration of schematic and theoretical chronological material running through much of the Hebrew Bible.

as scientific: they did so think of them. But for us the understanding of the chronology is a matter for literary understanding, for the understanding of a peculiar literary form and the ideas behind it. The importance of these ideas is only reduced if we concentrate our minds on the question of proving that the figures are sometimes right.

The development of biblical chronology, then, is an important part of our intellectual history; the changes in attitudes to it have had enormous influence on people's attitudes to the Bible as a whole; and it is time that we recall ourselves to a sympathetic attempt to understand it as a literary form and a mode of theological expression.

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