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## Art. III.—Ptolemy's Chronology of Babylonian Reigns conclusively vindicated; and the Date of the Fall of Nineveh ascertained; with Elucidations of connected points in Assyrian, Scythian, Median, Lydian and Israelite History

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Journal of the Royal Asiatic Society of Great Britain & Ireland / Volume 18 / January 1861, pp 106 - 149

DOI: 10.1017/S0035869X00013654, Published online: 14 March 2011

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### How to cite this article:

R. E. Tyrwhitt (1861). Art. III.—Ptolemy's Chronology of Babylonian Reigns conclusively vindicated; and the Date of the Fall of Nineveh ascertained; with Elucidations of connected points in Assyrian, Scythian, Median, Lydian and Israelite History. *Journal of the Royal Asiatic Society of Great Britain & Ireland*, 18, pp 106-149 doi:10.1017/S0035869X00013654

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ART. III.—*Ptolemy's Chronology of Babylonian Reigns conclusively vindicated; and the Date of the Fall of Nineveh ascertained; with Elucidations of connected points in Assyrian, Scythian, Median, Lydian and Israelite History.*  
By the Rev. R. E. TYRWHITT, M.A.

[Read April 21, 1860.]

#### PART I.

THE matter of the ensuing essay may be regarded as two-fold. First, we undertake to vindicate the chronology of Ptolemy's Canon for the first 212 years of that table of reigns at Babylon; that is to say, from the first of Nabonassar to the third year of the nine which the table gives to Cyrus. Next, we propose to show that Nineveh was taken, and, with that capital, the proper Assyrian empire was overthrown, by the Babylonians and Medes, in the year B.C. 608. In connection with this latter subject are treated several important historical topics; the expeditions of Nekho, king of Egypt, first, in B.C. 609, against the falling Assyrian, and, secondly, in B.C. 605, against the growing Babylonian power; the complete establishment of the Babylonian supremacy by Nebukhadrezzar, in the years from B.C. 606 to B.C. 604; the true relationship, unconsciously attested by Herodotus, between the Medes and the Scythians for twenty-eight years; that is, as will be shown, for twenty-two years before and for six years after the fall of Nineveh; the true dimensions of the war which, according to Herodotus, Cyaxares, king of the Medes, waged with Alyattes, king of the Lydians; the entire trustworthiness of Herodotus's Median chronology; and, a criticism showing the probable Herodotean date of the conquest of Cræsus and his Lydians by the Medes under Cyrus the Persian. Lastly, in the second part of this paper, we argue, that it is not inconsistent with that absolute deference which we profess to the astronomical verdict, "That the eclipse of the sun predicted by Thales, was one which happened in B.C. 585,"—to believe, as we do at the same time, that the solar eclipse which terminated the war between the Medes under Cyaxares and the Lydians under Alyattes, was the one which happened in May, B.C. 603.

I. The first part to be submitted of this plan is the vindication, which we regard as conclusive, of Ptolemy's Canon.

But before we enter on the considerations by which we undertake

to show that during its first 212 years the computation of time in this catalogue of reigns at Babylon may be thoroughly trusted (because it agrees with a totally independent Hebrew measurement of the length of the same period),—we cannot but notice a theory offered to readers of our Society's Journal, which would entirely subvert the ordinary views of the connection between Hebrew and Greek chronology, so far as that view rests upon the authority of the Canon.

It is contended that the solar eclipse of January the 11th, B.C. 689, marks the fourteenth regnal year of Hezekiah, king of Judah, and the third regnal year of Sennacherib, king of Assyria; whereas the ordinary computation places Hezekiah's fourteenth year about twenty-four years earlier, or about the year B.C. 713.

As to the contemporaneousness of Hezekiah's fourteenth and Sennacherib's third year, this is a *separate* question; on which, however, I will here offer something, to reconcile (if it be admitted) the apparent inconsistency of the Hebrew and of the Assyrian account of the interval between the capture of Samaria by the forces of Sargon, and the invasion of Hezekiah's kingdom by Sennacherib. This interval, according to our Hebrew histories, was that between the sixth and fourteenth of Hezekiah's years; but, according to the chronicles of Sargon and of Sennacherib (as hitherto interpreted), it was the interval between the first year of Sargon, who reigned certainly not less than fifteen years, and the third year of Sennacherib, when that king first invaded Hezekiah's dominions. But this Assyrian account, which at first sight gives us but a proximate value of the interval, making it at least ten years longer than the apparent Hebrew estimate, does really enable us to fix the precise date of Sennacherib's invasion of the land of Judah, at the twenty-second year, instead of the ninth current, after the fall of Samaria. For Sennacherib's annals show, that in the first year of his reign, having expelled Merodakh Baladan (who, by the aid of the people of Susiana, had, for the last six months, as it would seem, re-established himself in Babylon), he left Belib, his viceroy, in Babylon; also, that in the fourth year of his reign, he deposed Belib. Now, according to Ptolemy's Manual List of Babylonian Reigns, nineteen full years elapsed between the new-year's day of the first of Mardokempadus, which was the first of Sargon, and the new year's day of the first regnal year of Belibus, who reigned three years: therefore, the interval between Sargon's accession and Sennacherib's is nineteen years, or more by four years than the fifteen for which alone, as yet, Sargon's annals have been found; while the interval from the fall of Samaria to Sennacherib's invasion of Hezekiah will be twenty-two years current.

My own *conjecture* here is, that the contemporary chroniclers, in their annual registers of the doings of the kings of Judah, counted two reigns of Hezekiah, of which the first terminated and the second began in that figure of a death and resurrection, his sickness in the fourteenth year after his first accession (when he was told by God to put his house in order, for that he should die) and his miraculous recovery on the third day to a new life and reign of fifteen years. Next I suppose, that whereas the invasion of Sennacherib took place in the fourteenth year of the *second* reign (or in about the twenty-seventh year counted from Hezekiah's first accession), those who compiled our books from the contemporary annals, confounded the one fourteenth year with the other; putting the sickness of Hezekiah and Sennacherib's invasion, both in the same year,—that is, the *first* fourteenth. I would also, but with less confidence, suggest that the embassy from Merodakh Baladan, mentioned in the Second Book of Kings and in Isaiah, to congratulate Hezekiah on his recovery, and probably to negotiate a league against the king of Assyria, may have been a different embassy from that of the princes of Babylon mentioned in the Second Book of Chronicles, to inquire of the wonder which had been wrought in Hezekiah's land; for this wonder I would explain to be, not the going back of the sun when Hezekiah was sick, but the destruction of 185,000 men in the camp of the Assyrians, without stroke of man, in a single night, at the time of Sennacherib's invasion.

These remarks, however, on the discordance been the Hebrew and both the Assyrian and the Ptolemæan date for Sennacherib's invasion, are no part of the task of vindication which I have undertaken, and to which we now return. The theory subversive of the credit of Ptolemy's Canon maintains, that the solar eclipse of 11th January, B.C. 689, marks that fourteenth regnal year of Hezekiah, king of Judah, when he was sick, and God gave him *a sign* (to assure him of recovery, and of the deliverance of Jerusalem from the king of Assyria), bringing back the shadow on the sundial of Ahaz ten steps or degrees. Now to establish, in a conclusive manner, the credit of the early part of Ptolemy's Canon of reigns, is to destroy this theory; for, according to the Hebrew annals, combined with the Canon, the sickness of Hezekiah would be (as we have said) in about B.C. 713, more than twenty years before the eclipse.

But we must offer briefly some preliminary objections to the theory.

First, we object, that, after all, the author admits that the large eclipse of the sun, visible at Jerusalem on the 11th of January, B.C.

689, did (according to the exactest calculations hitherto made) *not* happen precisely at that time in the forenoon, which the theory requires, but about a quarter of an hour earlier.

Another objection we make is, that, at best, the eclipse, under the accompanying conditions which the theory supposes, could effect at most but *one* of the *two* tokens offered to the choice of Hezekiah. "Shall the sun and the shadow on the dial go forward, or shall it go back?"—is the offer of God by the Prophet: but the supposed machinery could only make the shadow go back. Moreover, this machinery of the eclipse and its accompaniments, is a *natural means*; whereas the *sign*, to be truly an earnest from God (as it is represented to have been) to assure Hezekiah that he should be healed of his mortal malady on the third day, and that Jerusalem, in time of need, should be delivered from the king of Assyria—ought to be a work of God's not less supernatural than raising the dead, or than the destruction which afterwards befell Sennacherib's army. The *use* and moral *purpose* of a miracle, that is, a display of the supernatural power of God, is that of an indisputable *token* that God is really dealing with us, and will make good his promises. "Except ye see signs and wonders (says our Lord) ye will not believe." That a miracle, to assure Hezekiah and his people, was really wrought on this occasion, there exists, we believe, an Egyptian attestation, confirming the testimony of the Hebrew Scriptures.

According to the Hebrew record, this Act of God was a decree by which the rotation eastward of this earth, with all that accompanies it and gravitates towards its centre, was interrupted and reversed, so far to westward, that, to the complement of hours or of minutes belonging by God's pre-existing law of nature to the particular period of daylight in which the command was given, a certain smaller number of hours or of minutes was added,—this addition being the space of time occupied by the earth while it was thus moving, at whatever speed, to westward; and, likewise, while it was recovering its former most advanced position to eastward, after having been released to obey its former accustomed law. Such was the token which the God of Israel gave to his anointed (a type for the time of the great and true anointed one), that it was himself who, by his prophet's voice, promised life, a greater matter than movements of any, or all, of the heavenly bodies. But this we have to say, that in an account provisionally reported out of their annals by Egyptian priests to Herodotus, and, though it has been little heeded, preserved for future generations by the Greek contemporary of Ezra and Nehemiah, we have evidence of the fact recorded by older Hebrew

writers, which indeed was open to the observation of neighbouring nations, as well as of Israel. In the count of years and record of events continually kept from the most ancient times in Egypt, there were said to be two days noted in which the sun moved not as usual, from east to west, but from west to east; being, we believe, two days recorded in Hebrew scripture. Of these, the first, at the bidding of the general of the Israelite army, Joshua (a type in name as in function), was prolonged by the space of perhaps 12 hours; though, on this first occasion, the rotation of the earth with the moon its satellite seems to have been stopped only, not reversed. But on the latter and better remembered day, surpassing the first, at his prophet's prayer, God fulfilled his promise, and gave Hezekiah the token which he had chosen of the two which had been offered to his option,—not only the earth did not roll on, it rolled back for a space before it returned to finish its daily course.

We have all seen the movement of a steamship, or of a train of railroad carriages, accelerated, slackened, or reversed, at the will of one whose skill and whose unaided strength, could not, with all the materials required, construct the thing he thus commands. If the word of the ship-captain, "Stop her," "Back her," is promptly obeyed by an agency invisible to the passengers, shall the command of the Maker of the heavenly host be less potent, as to a planet whose ordinary movement is but his appointment?

But we own that the Egyptian contemporary record is not known to exist for either of these two days. We think, however, that in a story which Herodotus hands to us, from Egyptian priests his informants, we have a medium through which the more accurate accounts are discernible. "They declare" (do the Egyptians and their priests, says he) "that from their first-mentioned king (Menes) to this last-mentioned monarch (Sethos), the priest of Phthah, was a period of 341 generations. Such, at least, they say, was the number both of their kings and of their high priests during this interval . . . in which entire space, they said, no god had ever appeared in a human form. Nothing of this kind had happened either under the former or under the later Egyptian kings. *εν τοις νυν τουτοις τῷ χρονῳ τετρακίς ἑλεγον ἐξ ἡθεων τὸν Ἥλιον ἀνατεῖλαι*, (Lepsius considers Böck to have plainly proved that for *ἀνατεῖλαι*, must be read *αναστῆναι*), *ενθα τε νυν καταδυσεται εντευθεν εἰς επανατειλαι, καὶ ενθεν νυν ανατελλει εντανθα εἰς καταβηναι*. Egypt was in no degree affected by these changes. The productions of the land and of the river remained the same, nor was there anything unusual either in the diseases or the deaths."

The difference between the report of Herodotus, or of his infor-

ments, on the one hand, and the original records on the other, we suppose to be, that they referred to two occasions; while he says, *τετρακις*, "four times—the sun went from his own place; twice rising where he now sets, and twice setting where he now rises." However, on the occasion in the days of Hezekiah king of Judah, (a contemporary of that Sethos priest of Phthah, who ruled Egypt without an army at the time of Sennacherib's invasion)—there were in fact exhibited *two* out of the four phenomena which were somewhat incorrectly reported to, or understood by, Herodotus. On that occasion it might have been said, with little exaggeration, that the sun *set once* where he now rises and *rose once* where he now sets. In fact the sun went from west to east ten degrees, as if he had risen in the west and was about to set in the east. On the other, more ancient, occasion the *same* two-fold phenomenon would have been presented, had the wonder in heaven been really what it seems to have been hastily supposed, *an exact counterpart of the more recent occurrence*. But, in fact, on that occasion, "The sun stood still, and the moon stayed;" the rotation (that is) of earth and moon ceased; yet neither did the moon gravitate nearer to the earth, nor did the earth fall from its former distance, one whit toward the sun. Edward Greswell in his *Fasti Catholici*, who did not suggest but has confirmed us in our opinion, (which we find to be Calmet's also,) remarks upon Herodotus's account, thus, "If the tradition had run in these terms, that, between such and such limits of time, the sun had been twice seen to be rising, *when* it should have been seen to be setting, and twice had been observed to be setting *when* it should have been seen to be rising;—a more concise and yet a more correct representation of the actual matter of fact, as it must have been witnessed on each occasion at Heliopolis in Egypt, could scarcely have been imagined." He goes on to contend that the tenor of the actual account that the sun had twice risen *where* it ordinarily sets, and had twice set *where* it ordinarily rises" is no valid objection to his interpretation of Herodotus. Of course we are aware that others interpret Herodotus's story differently; as Sir G. Wilkinson citing Mr. Poole's *Horæ Hebraicæ* in G. Rawlinson's *Herodotus*; see, too, the controversy between Von Gumpach and Lepsius in the *Transactions of the Chronological Institute*. For ourselves we insist much upon the fact (which the connection in Herodotus's narrative intimates, that his informants were telling him of Sethos invaded by Sennacherib, when they were led to speak of the behaviour of the sun-god, who though he never appeared in human form, had departed from his ordinary course in the sky on more than one occasion in their history. For the sign in the sun was given, at

Hezekiah's request, only fourteen years before the invasion of Sethos by Sennacherib ; and it may have been recorded at the spot, or near to it, where the invasion was recorded.

To our own mind, a very conclusive objection to the theory that the solar eclipse of 11th January, B.C. 689, produced the retrograde movement of the shadow which Hezekiah beheld in the fourteenth year of his reign, is *the very nature of the consequences* which the admission of it implies, though these are unflinchingly accepted by its author. But to one of the arguments by which he supports his theory, we will here insert our reply.

The argument is, that B.C. 689 did really coincide, in part, with some portion of Hezekiah's fourteenth year, because (according to a calculation, based upon the Jewish observance of the Mosaic law under the Syro-Macedonian kings, as recorded by Josephus,) it would appear that, in the year B.C. 689 commenced a seventh year, which was a sabbath for the land, and, in the year B.C. 688 a pentecostal year, or Mosaic year of jubilee ; while, on the other hand, two such successive years, in which the people of Hezekiah neither ploughed, nor sowed, nor planted, are indicated as contemporary, by a second sign which God gave to Hezekiah at Jerusalem, by a message that the prophet Isaiah forwarded to the king in the temple, promising him the deliverance he had been there praying for. For, as usual, to the promise was appended a token of its credibility. It was added, "And this shall be a sign unto thee ; Ye shall eat this year such as groweth of itself ; and the second year, that which springeth of the same : and in the third year, sow ye and reap and plant vineyards, and eat the fruit thereof : And the remnant that is escaped of the house of Judah shall again take root downward and bear fruit upward. . . ." It is fair to add, that it was promised, at the same time, that if he had already menaced the city, in person as well as by Rabshakeh, the king of Assyria should not approach it again ; but by the way that he came by the same he should return. And it is related, that the angel of Jehovah smote the Assyrian host the following night.

That *so great* a fulfilment of the promise happened immediately, may be thought to lessen the weight of the last of the objections which are now to be made to the argument derived from God's second sign to Hezekiah.

The objections are preliminary. Before entering into the calculation which would place the commencement of an ordinary sabbatic year in B.C. 689 (the year of the eclipse), and that of a pentecostal year in B.C. 688, we observe, first, that according to the Assyrian annals,



which we think reconcileable with the Hebrew account, this second sign to Hezekiah was given, not in the fourteenth year after his accession, the year of his sickness and recovery (or, as we call it, his figurative death and resurrection), but in the fourteenth year after this re-mounting of the throne, that is (as is shown by the Assyrian and the Canon's joint account of the interval between the capture of Samaria and Sennacherib's first invasion of Palestine), in the twenty-seventh year of Hezekiah. Therefore, if so—and *if the theory that B.C. 689 marks the year of Hezekiah's sickness be true*—this second sign was not given, and Sennacherib's defeat did not happen, before B.C. 675. On the other hand, if we have placed Sennacherib's invasion rightly in Hezekiah's twenty-seventh year, but the theory against which we contend, be inadmissible, in that case the giving of the sign of the three years and Sennacherib's defeat, are both to be placed in B.C. 700; and the third year, when all would be peace at home and abroad, was the last year of Hezekiah's reign, B.C. 698.

But it seems demonstrable, from their Scriptures of the period, that the Jews, at the time of the captivity, had not observed the sabbatic year for the last seventy times seven years; and it appears that they quite disregarded the Mosaic law, which required them to release the Hebrew bondsman in the sabbath year.

Lastly, we object that the second sign to Hezekiah, of the three years—interpreted as it has been by former commentators, and as it is now to the support of our author's theory—is no *Divine* assurance. It needed no prophet, in the forty-ninth year of a pentecostal period, to tell the people (if religiously observant of the Mosaic law) that as they had not ploughed last autumn, so they would not plough next autumn; but that, the autumn following they would be hard at work. We shall be nearer the true sense if we thus paraphrase the announcement of the sign that was offered in the twenty-seventh year of Hezekiah:—"Last autumn, O ye people of Judah, as ye know," (perhaps for fear of the Assyrians,) "your lands were neither sown nor planted;—even so shall it be, saith Jehovah, in the autumn now approaching" (in spite of the blow ready to fall upon the Assyrian army). "But by the time of the next return of that season, all hindrance will have ceased. Ye will sow and plant in perfect peace, as in the happy years of old. Then let the event convince you, that Jehovah will likewise cause your remnant of a nation to multiply; his vine, which he brought out of Egypt and planted in this land, to take root downward and again bear fruit upward!"

From these objections to a New Theory of the Chronological Connection between Hebrew and Greek historians, pass we now to

Ptolemy's Catalogue of Reigns. This chronological epitome for its first two centuries and more,—from Nabonassar to Cyrus,—the lately disinterred monuments of Assyrian history (through their decipherers) enable us to vindicate, by means of the Hebrew annals, while *these* are, in turn, vindicated, for their contemporaneous chronology, by the Catalogue of reigns, with the number of years in each, at Babylon.

This chronological Manual of Ptolemy's was first known as preserved by Syncellus in two shapes, whereof the less deformed he calls the "astronomical" and "mathematical Canon:" perhaps, because while it takes away from some reigns to give the theft to others, it still has respect for numbers, leaving the sum of the years from Nabonassar to Alexander the Macedonian uninjured. But the worse deformed, which he calls the Ecclesiastical Canon, not only goes much further in the depravation of particulars, but is regardless of conformity in *totals* with the genuine Manual of Ptolemy. This was afterwards found unadulterated in a trustworthy quarter, a before unpublished fragment of a commentator on Ptolemy's works, the astronomer Theon. It is after Theon's copy of it, then, that we vindicate the Canon, and give a portion of it below.

Hitherto, for the early part of it, from Nabonassar to Cyrus, or, at the least, from Nabonassar to the great Nabukhadrezzar, this inestimable chronological epitome (derived, we doubt not, long before Ptolemy's time, from contemporary Chaldean records,) appeared to stand alone, inviting attack because unsupported. From the time of Cyrus downward, Greek and Roman historians confirm its names and numbers; and upward, from Cyrus to Nebukhadrezzar, the Holy Hebrew writings, and the fragments of the Chaldean historian Berosus, have appeared to such judges as Usher in the seventeenth, and Clinton in our nineteenth century, to tally with it and fully confirm it. Thus it has furnished modern scholars with a chronological connection between the Hebrew annals and the Greek historians. Yet the basis of this view of the connection, being a combination of Ptolemy's Canon and of Berosus's testimony with that of the Hebrew writers, is by others regarded as having little solidity in it: for, (as has been said) the authority of no less a part of it than the Alexandrian astronomer's first table of the numbers of years in reigns which preceded the one under which he lived himself, has been disputed for the earlier portion. But (besides those preserved in the Hebrew canon of Scripture) records, contemporary with the early reigns of Ptolemy's catalogue, exist among the Assyrian and Babylonian cuneiform memorials; and (through the wonderful labours of the discoverers, decipherers, and translators of them) they already give

light to historical students. By aid derived from this unexpected source, we are able to establish the accuracy of the computation which Ptolemy confided in, for the first 212 years of it, which are also the last 212 years of the chronologically connected Hebrew annals :—for the 212th year of the Canon is the third year after the capture of Babylon by the Medes and Persians under the command of Cyrus, when the seventieth year of the prophet Daniel's captivity and service under the masters of that capital came to its end. This 212th year of Nabonassar coincides nearly with the year B.C. 536,—beginning about ninety hours only later.

The Assyrian monarch Sargon (mentioned once by the Hebrew prophet Isaiah, his contemporary) has transmitted to us his history by a palace, which he built at the spot called now Khorsabad, fifteen miles from the site of Nineveh Proper. From the stone-writ annals of the royal builder here disinterred, and now deposited in Paris at the Louvre, the learned in the character and language inform us, that Samaria (of which we knew, from Hebrew history, that the siege had been undertaken, the year but one before, by Shalmanezzer, king of Assyria) was taken, and its inhabitants carried off captive by the Assyrians, in the first regnal year of Sargon. Here, then, is a synchronism between the history of Assyria and the history of Judah ; for Samaria, as we know from the Hebrew annals, was taken by the Assyrians in the sixth year of Hezekiah, king of Judah. But from the chronicle of the first fifteen years of his reign, which Sargon has left us, it further appears, that the first regnal year of Sargon was also the first year at Babylon of the reign of a certain Merodakh Baladan, who, after he had reigned twelve years in Babylon, was driven out of that capital by Sargon, in the twelfth year of Sargon's reign. Now, this Merodakh Baladan, who reigned twelve years at Babylon, as Sargon's vassal king, is immediately recognized in Ptolemy's catalogue of reigns at Babylon, in the only king of the whole series who is recorded to have reigned twelve years, and his name is written in our copy of the Canon ΜΑΡΔΟΚΕΜΙΑΔΟΣ (*Mardokempadus*). The first element in this name is clearly the first element in the name Merodakh Baladan, being the name of a well-known Babylonian deity. It has been proposed to substitute Λ for Δ in the latter element of the name *Μαρδοκεμπαδος*, in order to bring that portion also nearer to *Baladan*. We would rather suppose that a Λ has been dropt before the Δ, having been mistaken for a useless second Δ ; and in like manner we suspect that a Δ has below in the Canon been dropt before the Λ in *Ναβυκοδασσαρος*, the name indicating *Nebukhadrezzar*. But there seems to be as little reason to doubt that

Mardokempa(l)us and Marodakh Baladan are one and the same king, as there is to doubt that Naboko(d)assar and Nabukhadrezzar are one and the same king. And if so, we have here gained an important synchronism between the table of Babylonian reigns and Assyrian history; for the first year of Mardokempadus is the first year of Sargon. But if so, we have also a synchronism between the Babylonian table and Hebrew history; for, since we have learnt that the first of Sargon is the sixth of Hezekiah, it follows that the first of Mardokempadus is the sixth of Hezekiah.

So now we are enabled to test Ptolemy's Catalogue or Manual Table of Reigns at Babylon, by a list of contemporary reigns at Jerusalem, which may be extracted from the Hebrew historians. Taking *parallel periods* from our two witnesses, both below and above this point of junction (the first year of Mardokempadus, and the sixth of Hezekiah), we shall be able to ascertain whether the same length is assigned by both computations. But we may be assured beforehand that the result of our experiments will be the manifestation of a perfect harmony between the two; for it is easy to observe first, by the Ptolemæan Canon, that Mardokempadus has for the year of his accession, the twenty-seventh year of the series, counted from the first of Nabonassar, or the "vague" year which began on the 19th of February B.C. 721; then from the margin of an English Bible, it may be gathered that Usher also (starting only from the probable synchronism between the third year after the end of the reign of Nabonadius by the Canon, and the seventieth year of Daniel's captivity) placed the capture of Samaria and the sixth of Hezekiah in the same year B.C. 721.

But let us make the experiment. Let us take first a period starting from this point of junction in the Hebrew and the Babylonian annals, the first year of Mardokempadus and the sixth of Hezekiah. Lower down in the Ptolemæan first table of reigns at Babylon, stands the reign of the famous Nebukhadrezzar, whose first regnal year is the 144th year of the table, and of the series called the years of Nabonassar,—that king, from whose accession (or rather from the new-year's day next preceding it), the Babylonian chronologers,—Ptolemy's predecessors—began their reckoning. Between the two new-year's days, then, of the first of Mardokempadus, and of the first of Nebukhadrezzar,—or (to use the Egyptian phraseology of Ptolemy, who was of Alexandria, in treating of this series of years of the uniform measure of 365 days and no more), between the two firsts of Thoth, from which Mardokempadus's and Nebukhadrezzar's reigns are respectively dated (that is, between the 19th February, B.C. 721, and the 21st of January, B.C. 604),

the interval is 117 years of uniformly 365 days a-piece. The same interval may be expressed by enumerating the ten reigns and two spaces without a king, into which it is divided in the Canon, thus,

$$12 + 5 + 2 + 3 + 6 + 1 + 4 + 8 + 13 + 20 + 22 + 21.$$

Now the space of time thus measured in Ptolemy's Canon, or rather Ptolemy's first Canon or first Table, may also (as it seems) be measured by the Hebrew annals; since it appears to be marked off, in these by the same beginning, the sixth year of Hezekiah (which, as we have seen, was the first year of Mardokempadus), and by the same termination, the fourth year of Jehoiakim, which, according to the prophet Jeremiah, was the first of Nebukhadrezzar. Let us then find the length of this interval; from the beginning of the sixth of Hezekiah to the beginning of the fourth of Jehoiakim, by the Hebrew annals. It is the sum of the years of the *entire reigns* of the kings who intervened between Hezekiah and Jehoiakim (that is Manassah, Amon, Josiah and Jehoahaz), added to two *fractions of reigns*, namely, twenty-four years, the remainder of Hezekiah's reign after the lapse of his first five years, and the portion of Jehoiakim's reign preceding his 4th year. It is the sum of  $55 + 2 + 31 + \frac{1}{4} + 24 + 3$  or  $115\frac{1}{4}$  years; or rather 115 years; for Jehoahaz's reign of  $\frac{1}{4}$  year is most probably again reckoned in the adjacent reigns. We have thus in the Hebrew computation a measurement of apparently the same space, shorter by two years than that of the Canon. Yet 115 and 117 years are so nearly the same lengths of time that the general trustworthiness both of the Canon and of the Hebrew Chronology might fairly be inferred.

But the two years excess of the one measurement, or defect of the other, can be shown to be no inaccuracy on either side.

(1.) First, the difference between 115 civil years of the Hebrews (which were circles of the agricultural seasons, that is, natural solar years), and 117 Babylonian calendar years of 365 days a-piece without intercalation, is *not* (what we have called it) a difference of two solar years; but of one such year and  $336\frac{1}{2}$  days or almost exactly one year and eleven months.

(2.) Next it may be shown from Hebrew Scripture, where the thirty-seventh year of the captivity of Jeconiah, son of Jehoiakim, at Babylon, is made to coincide with the first regnal year of Evil-Merodakh, that the fourth regnal year of Jehoiakim (who reigned in all eleven years), did not really coincide with that forty-third year above the new-year's day of E.N. 187, the year in which Evil Merodakh succeeded Nebukhadrezzar according to the Canon; that is, it did not really coincide with E.N. 144; though we have hitherto been contented to assume that it did, because the Canon makes this forty-

third previous year the first regnal year, or year of the accession of Nebukhadrezzar, while both Jeremiah and Daniel count the fourth of Jehoiakim for the first of Nebukhadrezzar. In truth, the fourth of Jehoiakim *more nearly* coincides with the forty-fourth year previous to the new-year's day of the year in which Evil-Merodakh succeeded; that is, it more nearly coincided with E.N. 143 than with E.N. 144.

But further, this fourth year of Jehoiakim began at the same season of the year in which his first began. Now his first began three months at least (which was the length of the intervening reign of his brother Jehoahaz), after that battle of Megiddo, in which Josiah, his father, was slain. Therefore, his fourth year began near about the end of the season for warfare in the field, that is, it began in the autumn. Indeed, we know it began after that campaign in his third year in which he was made to surrender first to the Babylonians. Thus, it began before the commencement (which was 22nd January, B.C. 605), of that year of the Canon with which it most nearly coincides, E.N. 143, the forty-fourth year before the new-year's day of Evil Merodakh's year of accession to the Babylonian throne. Clinton (supposing the battle at Megiddo to have been fought in May), places the commencement of the years of Jehoiakim in August. We might, therefore, say, that the Hebrew computation of 115 years, from the beginning of Hezekiah's sixth, ends at about 21st August, B.C. 606, rather than at the 21st of January, B.C. 604, the termination of the 117 years which we counted, in the Canon of Babylonian reigns, from the beginning of the first of Mardokempadus. We suspect, however, that Jehoiakim's regnal years are years of the Hebrew civil calendar.

However, we may provisionally reduce the apparent difference of twenty-three months between the two computations, by seventeen, leaving an apparent difference of six months between them.

(3.) But thirdly, even this six months (or more, if Jehoiakim's years began later than August 21st), may be no inaccuracy on either side. It may express the fact that the new year's day of the first year of Mardokempadus, or the 19th day of February, B.C. 721, preceded the commencement of Hezekiah's sixth year by six months or more. For Hezekiah's regnal years, as well as Jehoiakim's, seem to have commenced in autumn. Certainly, Hezekiah's first year had been some time current, when, on the first day of the first month (Nisan), or about the vernal equinox, he re-opened the doors of the house of the Lord to cleanse it and to renew the service, which, under Ahaz, had been discontinued.

When we said it might be proved from Hebrew Scripture, that the fourth year of Jehoiakim coincided more nearly with the forty-

fourth than with the forty-third year of the Canon, prior to the new-year's day of the first of Evil-Merodakh (though, indeed, it began perhaps not less than five months earlier than that forty-fourth previous year);—we intimated a fact, which may easily be derived,—and has, by Clinton, been derived—from the Hebrew books; that, because the people of Judah considered Nebukhadrezzar's reign to commence with the new year of their own king Jehoiakim next ensuing after the first capture of Jerusalem, by the army of Nabopolassar king of Babylon, under the command of his son Nebukhadrezzar, in the third year of Jehoiakim, they made Nebukhadrezzar's reign, or supremacy, to commence (as it did over themselves) while his father was yet alive; forty-four years and more than three months (if not, as Clinton's date for the commencement of Jehoiakim's regnal years would make it, forty-four years and five months) instead of forty-three years, before the 11th of January, B.C. 561, the new-year's day of the first year of Evil-Merodakh.

Now, this leads us to observe, as to the famous seventy years captivity of the children of Judah and Benjamin at Babylon, (which coincide with the first seventy years of Daniel's yet longer career under Chaldean Medes and Persian sovereigns in that capital),—that, according to the Hebrew view of Nebukhadrezzar's reign, it lasted from the first year of Nebukhadrezzar to the first year of Cyrus. Having then justified Ptolemy's Canon for a period of  $115\frac{1}{2}$  solar years, counted from 19th February B.C. 721 to the autumn of B.C. 606, let us next test the accuracy of the same document by comparing the measurement it gives of this further period with the measurement which the Hebrew annals furnish. The observations which we have already made will enable us to justify the Canon thoroughly, and, of course, to obtain a reciprocated testimony in favour of the accuracy of the Hebrew chronology.

A sufficient demonstration, we repeat, has been offered of the correctness of the computation of time in the Canon for 115 natural years, from the beginning of the sixth year of Hezekiah king of Judah, (six or seven months after the new-year's day of the first year of Mardokempadus king of Babylon), down to the autumn of B.C. 606, the beginning of the fourth year of the reign of Jehoiakim king of Judah, and (according to the Hebrew view) the beginning likewise of the reign of Nebukhadrezzar king of Babylon;—a point, however, certainly more than twelve, perhaps as many as seventeen, months earlier than 21st January, B.C. 604, the new-year's day of E.N. 144, the first of Nebukhadrezzar by the Babylonian or Ptolemæan reckoning. In fact, the beginning of the fourth of Jehoiakim, in autumn B.C. 606, is a point in the year E.N. 142, that is, in the last year but one of the

reign assigned by the Canon to Nabopolassar, Nebukhadrezzar's predecessor—and, as both Berosus and a cylinder of his own inform us, his father. Now, the next length of time, of which the measure in the Canon is to be tested by its measure according to the Hebrew reckoning, starts from *this* point, *not* from the beginning of that year of Nabonassar's æra which the Canon counts for the first of Nebukhadrezzar's reign, namely the year 144: for the Hebrew length of seventy years captivity at Babylon commences with the fourth year of Jehoiakim. So that, out of twenty-three months, the excess which we found at first in the Ptolemæan reckoning of the length of the space from the beginning of Mardokempadus to the beginning of Nebukhadrezzar, seventeen months according to Clinton, or somewhat less (if Jehoiakim's regnal years be Hebrew civil years, beginning with the month Tisri about the autumn equinox) have to be transferred to the period of the Canon now secondly under examination.

To this transferred item of seventeen or sixteen months we must add forty-three years, assigned in the Canon to Nebukhadrezzar, two years assigned to Evil-Merodakh, four years assigned to Neriglissar, and seventeen years assigned to Nabonedus, Labynetus, or Nabonadina (stepfather apparently and regent for Belshazzar), the last of the Chaldæan (or, as the Canon calls them, the Assyrian) kings of Babylon. The sum of these items,  $1\frac{5}{12}$  (or  $1\frac{1}{2}$ ) + 43 + 2 + 4 + 17, is sixty-seven years, and five or at least four months. Then follows the reign of nine years assigned to Cyrus: whereof if we transferred even the whole first year to the sum of years just gathered out of the Canon, as parallel to the seventy years which the Hebrew writers count from the first of Nebukhadrezzar to the first of Cyrus, still that sum so augmented would appear to be less than the Hebrew seventy-years by one year and seven or eight months.

But there is no inaccuracy here on either side. Every year is counted in the Canon, and there is no enlargement of the interval in the Hebrew reckoning. We learn from the prophet Daniel, who served the Chaldæan, the Mede, and the Persian, that a Mede Darius, son of Ahasuerus, reigned first at Babylon after the capture of the city by the Medes and Persians; while Josephus (who certainly might, if he chose, have obtained, at least from the Jews of Babylonia, the best information on the subject,) states positively, that the Mede reigned *two* years. These years are not *dropt* by the Canon, but they are added to the ensuing reign of the victorious Cyrus, just as the last sixteen or seventeen months of the aged and politic Nabopolassar's reign are added to the ensuing years of the reign of his victorious son Nebukhadrezzar by the Hebrew annalists. It is the *name* only,



of Darius, son of Ahasuerus, which has disappeared in the greater splendour of that of Cyrus; even as the name of Belshazzar is lost in that of Nabonedus, the one which immediately precedes the name of Cyrus in the Canon. If so, the third year of Cyrus according to the Canon—or the year of Nabonassar's era 212, which began 4th January, B.C. 536, is the true ending-point in the Ptolemæan computation of that period of 70 years, whereof the Hebrew writers tell us. Now, if to the sum before obtained, of sixty-seven years and four or five months, are added two years for Darius the Mede's reign at Babylon, and eight or seven months out of the first year of the ensuing reign of Cyrus, according to the Hebrews (that is, of the third year of Cyrus according to the Canon), we get seventy years in the Canon answering to the Hebrew seventy which reach from the fourth year of Jehoiakim to the first year of Cyrus.

Nevertheless let us look yet more closely. These seventy years of the captivity of Judah began, as we have seen, in autumn B.C. 606, and, therefore, must end in autumn B.C. 536. The first year of Cyrus (or third in the view of those who passed over Darius the Mede) being, according to the Canon, the year of Nabonassar 212, began on the 4th of January, B.C. 536; and seven months of it had elapsed by the 4th day of August. Add seventeen days for solar time lost, at the rate of six hours a year in seventy years of Nabonassar, in the Babylonian or Ptolemæan register of "vague" years; and we have about 21st August, B.C. 536, for the end of the seventy years by the Canon. Now, a little (perhaps a month) later in the first year of Cyrus than this, the narrative of Ezra dates the first act of restoration in the land of Judah,—that is, *the first act of the seventy-first year*; I mean that fresh gathering of the exiles (who, on their first return from Babylon under the commission of Cyrus, had scattered to the several ancient homes of their aged men, or of their fathers in the land of Judah), when they again united together as one man to set up the altar of daily burnt sacrifice at Jerusalem, *on the first day of the seventh Mosaic month*, that is Tisri, the first of the civil year.

Here, then,—first having remarked that the seventy years captivity seem to be, like the regnal years of Jehoiakim and Hezekiah, Jewish civil years beginning with the Mosaic month Tisri; and withal having expressed the suspicion, in passing, that the regnal years of all the kings of Judah were also years of the civil calendar, though under the Persian empire the Jews counted the regnal years of the great king by the Mosaic calendar; we defer the inquiry whether the civil calendar at Samaria did not begin with the eighth month, to which Jeroboam had transferred the feast of tabernacles, and we sum

up what we have done hitherto in justification of Ptolemy's Canon. We have found, that from the first year of Mardokempadus to the third of Cyrus, according to the Canon,—that is, from the twenty-seventh year to the 212th of the æra of Nabonassar, or during its last 186 years, the portion of the Canon which we undertook to vindicate tallies accurately with the Hebrew computation of the length of the same interval.

Something yet remains to do. Usher or Clinton could have shown *how* the first twenty-six years of the 212 (that is, the years from the new-year's day of the first year of Nabonassar, to that of the first of Mardokempadus) coincide with as many regnal years of kings of Judah and Israel, *previous* to the fall of Samaria and the sixth year of Hezekiah, king of Judah ;—or (more accurately) *previous to a point of time earlier than these dates by six or seven months*. The chronologers, who rightly identify the third year of Cyrus according to the Canon, which omits the name of Darius, son of Ahasuerus, with the first year of Cyrus, according to Daniel, Ezra, and Josephus, whose calculation allows a reign of two years previously to Darius the Mede, were able (whether they have done it or not,) to fix the particular year of the reign of Pekah, king of Israel, at Samaria, and the particular year of Jotham, king of Judah, the grandfather of Hezekiah, at Jerusalem which was parallel to the first of Nabonassar, at Babylon, by the Canon. But no illustration of either Babylonian, or Hebrew, or other contemporary history, resulted as yet from the just observation. Now, however, through the labours of those to whom we owe the acquisition, decipherment, and translation of manifold monumental inscriptions pertaining to the Assyrians, Babylonians, and Persians, fragment after fragment of the contemporary annals of those nations comes to light, occasionally enabling the mere bystander to offer a useful suggestion. Information out of the store in the Hebrew records supplies to the explorer of Assyrian and Babylonian history the means of establishing that important synchronism, already conjectured by Sir H. C. Rawlinson to exist between Tiglath-Pilezer's first regnal year in Assyria, and the first of Nabonassar on the throne of Babylon. This synchronism, moreover, is a result which seems to prove that the first twenty-six years of the Canon are as accurately computed as we have shown the next 186 to be. If so, our task in behalf of the Canon is accomplished.

Extracts from the annals of Sargon, king of Assyria, enabled us to begin our work of vindication, and now an extract from those of Tiglath-Pilezer the second, king of Assyria, enables us to complete it. We are told of the annals of Tiglath-Pilezer (which were

defaced in the times of Sargon, or Sennacherib, and are preserved by Esarhaddon's having used the slabs on which they are written for building materials) that they extend, in a fragmentary manner, over a period of seventeen years. In the register of his campaigns is an invasion of Babylon in his first year, of which we should like to know more ; and a campaign in his eighth year, which we are about to make use of. In it he came in contact with the Hebrew kingdoms whose capitals were Samaria and Jerusalem, and thus we obtain a synchronism between the Assyrian and the Hebrew annals, which helps us to the other synchronism we mentioned, between the Assyrian and the Babylonian annals in the commencement of the reigns of Tiglath-Pilezer in Assyria, and of Nabonassar at Babylon. Tiglath-Pilezer records, that, in the eighth year of his reign he defeated Rezin, king of Damascus, took and destroyed his city, received tribute from a king of Tyre, a queen of the Arabs, and a king of Samaria, whom, with a negligence not unsuitable to him, he calls by the name of that Menahem, king of Samaria, who had paid tribute to his own predecessor, Pul, king of Assyria. Now this expedition of Tiglath-Pilezer is easily recognized in Hebrew history, which records the catastrophe of Rezin and of his once powerful capital Damascus ; telling us, moreover, that Ahaz, king of Judah, after having suffered terribly from the confederate kings, Pekah, son of Ramaliah, king of Israel, and Rezin, king of Damascus ; also from the Edomites and Philistines ; had invoked Tiglath-Pilezer with heavy gifts, and with the homage of a servant and a son, while the Assyrian king, disregarding the interests of Ahaz, for his own sake came up against the confederates, whose further aggrandizement he effectually arrested ; for he took Damascus, put king Rezin to death, and carried the population captive to Kir. From Pekah, king of Israel, also he took Ijon, and Abel-beth-Manachah, and Janoah, and Kedesh, and Hazor, and Gilead, and Galilee,—all the land of Naphtali, and carried them captives to Assyria. This disaster appears to have been not unnaturally followed soon by the conspiracy against Pekah, who was assassinated by Hoshea.

Now, according to the Hebrew account, which makes the first year of Pekah's reign of twenty years in Samaria to be the last regnal year of Uzziah, king of Judah, whose son Jotham reigned sixteen years, and his son Ahaz another sixteen years, before Hezekiah, son of Ahaz, began to reign in Jerusalem, it appears that Pekah began to reign  $1 + 16 + 16 + 5$ , or altogether thirty-eight years, and was slain by Hoshea,  $38 - 20$ , that is, eighteen years complete, or probably nineteen years current, before the commencement in autumn B.C. 721, of the sixth year of Hezekiah.

If now we may interpret the Assyrian record of Tiglath-Pilezer's expedition against Rezin and Pekah, to signify that Tiglath-Pilezer began to reign eight years before the death of Pekah; it will follow, that he began to reign in autumn B.C.  $721 + 18 + 8$ , or B.C. 747. Now, by the calendar followed in the Babylonian or Ptolemæan Canon of reigns, the new-year's day next preceding, (which began at noon on the 26th of February, B.C. 747), is the new-year's day of the first regnal year of Nabonassar at Babylon, which regnal year is the twenty-sixth year before Mardokempadus's reign. Therefore, Tiglath-Pilezer, king of Assyria, and Nabonassar, king of Babylon, by a comparison of the Hebrew annals with those of Tiglath-Pilezer, are shown to have begun to reign in the same year, that is,  $14 + 2 + 5 + 5$ , or twenty-six years of the Canon before the contemporary kings Sargon, king of Assyria, and Mardokempadus, king of Babylon.

Again, it is worthy of observation, that, if Tiglath-Pilezer reigned no more than seventeen years, the nine which remain for Shalmanezar and (possibly or conceivably) for one or more kings beside Shalmanezar between the end of the seventeenth of Tiglath-Pilezer and the beginning of the first year of Sargon, correspond in number, and within the fraction of a year in position, with those nine years (parallel with the last three of Ahaz and the first six of Hezekiah at Jerusalem), which the Hebrew records assign to Hoshea, the last king that reigned at Samaria. For this correspondence may suggest an explanation of the fact, that *another* previous nine years of the kingdom of Samaria is left without apparent mention of an occupant of the throne between Hoshea's assassination of Pekah and the noted commencement of his reign. It may be conjectured that *Hoshea reigned for two spaces of nine years a-piece; as Hezekiah, according to our supposition, was held to have reigned twice.* Indeed, a former reign of Hoshea is intimated in one place, where his first regnal year is made contemporaneous with the fourth of Ahaz, though this date is improperly designated the  $(16 + 4 =)$  twentieth of Jotham, who really reigned but sixteen years. This former reign of Hoshea extends from the death of Pekah, king of Samaria, to the end of the reign of Tiglath-Pilezer, king of Assyria, whose deputy Hoshea may have been. After Tiglath-Pilezer's death, Hoshea appears to have commenced a more independent reign: but Shalmanezar came up from Assyria, and made him tributary. He was then detected in treasonable communication with Sevekh, the Ethiopian king of Egypt, while, at the same time, his yearly gift to the king of Assyria remained unpaid. The Assyrian, therefore, imprisoned him, and began a siege of Samaria, which, after lasting three years, or three summers, ended by the capture of the city in the first year of Sargon, king of Assyria. We will only add,

Κανὼν Βασιλειῶν.			List of Reigns
βασιλείων Ἀσσυρίων καὶ Μήδων	ἐτη	συναγωγή	Of Kings Assyrian and Mede.
Ναβονασσάρου	ιδ	ιδ	of Nabonassarus
Ναδίου	β	ις	of Nadius (or Nabius)
Χινζιρου καὶ Πώρου	ε	κα	of Khinzirus and Porus
Ίουγαίου	ε	κς	of Iógæus (or Ilúlēus)
Μαρδοκεμπα(λ)δου	ιβ	λη	of Mardokempa(1)dus (or M dakh Baladan)
Ἀρκιάνου	ε	μγ	of Arkianus
ἀβασιλεύτου πρώτου	β	με	of a first space without a kin
Βηλίβου	γ	μη	of Belibus
Ἀπροναδίου	ς	νδ	of Apronadius (or Aparanadi
Ριγηβήλου	α	νε	of Rigébélus (or Erigebalus)
Μεσσιμορδάκου	δ	ιθ	of Mesessimordakus
ἀβασιλευτου δευτέρου	η	ξζ	of a second space without a k
Ἀσσαράδινου	ιγ	π	of Assaradinus (or Isarindinu
Σαοσδουχινου	κ	ρ	of Saosdúkhinus

as to the passage which makes Hoshea begin a reign of nine years in the twelfth of Ahaz, inconsistently with the texts which make Hezekiah's first, fourth, and sixth years agree in part with Hosea's third, seventh, and ninth, that this text seems to make his nine years' reign end with his imprisonment before the siege of Samaria.

As to the difficulty found in the fact that the king of Israel, the ally of Rezin, in the eighth year of the reign of Tiglath-Pilezer, is named Menahem by the Assyrian annalist, we are convinced that the true explanation is, that the annalist made here a mistake, as Sir C. H. Rawlinson supposes. The mistake is not so great as the one in the Hebrew Second Book of Kings, whereby the fourth year of Ahaz, king of Judah, as we have remarked, is called the twentieth of his father Jotham, who reigned, in fact, but sixteen years. The mistake of the Assyrian chornicler as to the name of the king of Israel is plain from the Hebrew account. Having ousted the usurper Shallum and avenged the death of the last king of the house of that Jehu who appears to have been the earliest tributary of Assyria on the throne of Israel, the true Menahem made himself king, and when Pul, king of Assyria, came against him, he gave that monarch 1000 talents of silver to be confirmed on the throne, and so reigned ten years. After him his son Pekahiah reigned two years, and then Pekah, son of Remaliah, having slain Pekahiah, and reigned twenty years, was slain by Hoshea after his defeat by Tiglath-Pilezer, and, as it seems, shortly after that shock to his credit among his subjects. Consequently Menahem had been dead nearly twenty-two years when Tiglath Pilezer came up against Damascus and Samaria. Whether a gift had been yearly paid to the king of Assyria since Pul confirmed Menahem on the throne, or little intercourse had been carried on meanwhile,—the Assyrian annalist, if not the monarch himself, might readily mistake the king who had appropriated the succession of Menahem, for Menahem himself; or, in other words, might easily be ignorant of the political changes which had happened at Samaria.

In concluding this part of our subject, we submit, that by confronting the evidence of the Hebrew annals and of that epitome of the Babylonian which Ptolemy's Canon, or the first of his Tables, presents, the entire trustworthiness of both witnesses, in respect of the computation of time, has been incontrovertibly established, for the period taken into consideration; and, that an outline has been obtained of the parallel position of the Assyrian and Babylonian kings from B.C. 747 to B.C. 608, when the proper Assyrian empire ended with the fall of Nineveh. To shew this parallel position, and to make our argument in behalf of the Canon more intelligible, we give the table on the opposite page.

## PART II.

WE have seen now, how two or three facts, recovered from Assyrian history, render the Hebrew annals available, by the comparison of their measurements, to establish the chronological accuracy of Ptolemy's *Manual Table of Reigns at Babylon* for its first 212 years. The facts, thus serving, were but these two, that Damascus was taken and destroyed by the Assyrians in the eighth year of the reign of Tiglath-Pilezer (the second) king of Assyria; and that Samaria was taken and its people carried off by the Assyrians in the first year of the reigns of Sargon, king of Assyria, and of Merodakh Baladan or Mardokempadus, king of Babylon.

It was for a different use that we cited this fact of Assyrian history,—that the first three years of Sennacharib, king of Assyria (who in his third year invaded Hezekiah), coincide with the three years viceroyalty of Belib at Babylon. Another fact we were able to add to the stock of what is certain of that history; that the first year of Tiglath-Pilezer in Assyria coincided with the first year of Nabonassar at Babylon in the year B.C. 747.

We further placed the fall of the last of the proper Assyrian kings (with that of his capital Nineveh) in B.C. 608 or E.N. 140. This date, of an event so important, we have now to establish briefly, and in so doing we hope to throw light on several important connected topics. We shall show, from the unconscious evidence of Herodotus, what was the relationship between the Medes and the Scythian host from Europe, for twenty-two years before, and for six years after, the fall of Nineveh. We shall point out a hitherto missing Herodotean date for the capture of the Lydian capital with its last monarch Cræsus by the Medes under Cyrus. The expeditions which Nekho, king of Egypt, conducted, first in B.C. 609 against the falling power of Assyria; next in B.C. 605 against the Babylonians, we shall treat of, in conjunction with the matter of the Babylonian supremacy which was established by Nebukhadrezzar, after the fall of Nineveh. We shall show the *true* dimensions of the war, which Herodotus regarded only as waged by Cyaxares, king of the Medes, against Alyattes, king of the Lydians; finally, it shall be shown, that the solar eclipse with which this war ended, may be taken for that of May B.C. 603, without the less deference for the astronomer who tells us, that the eclipse predicted by Thales was in B.C. 585.

The date for the fall of Nineveh which Clinton (the great English chronologer of our age) has given us,—namely, B. C. 606, or E. N. 142,—is certainly somewhat too low, because (as we have shown, and as he admits) the fourth year of the reign of Jehoiakim, son of Josiah, at Jerusalem,—and the captivity at Babylon of Daniel with that first lot which Nebukhadrezzar transplanted of the people of Judah,—began not later than the autumn equinox in the same year, B. C. 606. For it is obviously in the highest degree improbable, that Nineveh and Jerusalem were both overpowered by the confederate Babylonians and Medes in the *same* summer.

It has been shown, that the fourth regnal year of Jehoiakim, and first of his vassalage to the Babylonian, in lieu of the Egyptian, is by Hebrew chroniclers counted the first year of his conqueror's reign; and that, agreeably with this view, they give forty-four years, and five or four months, to the reign of Nebukhadrezzar, instead of the forty-three years assigned to him by Ptolemy's Manual Table, and by Berossus. They esteem him king (and *second in the kingdom* he was), while his father Nabopolassar was yet alive, immediately after he had taken, and to some extent had plundered, their city;—beginning thereby to bring to pass those woes which, at the time of his predecessor Merodakh Baladan's embassy to Hezekiah,—in about the year B. C. 712, or E. N. 36,—the prophet Isaiah had foretold.

When we pronounce it *not to be believed*, that Nineveh and Jerusalem fell, both under the same victor, in the same campaign, we do not say, that Nebukhadrezzar, who had commanded the Babylonians for his father, when Nineveh was taken (as Astyages, or Ahasuerus, appears to have commanded the Medes for Cyaxares), may not have effected his conquests in the summer of B. C. 606 (the latter half of Jehoiakim's third year of reign at Jerusalem), with great rapidity. He may have been little hindered by any Egyptian forces that, perhaps, remained west of the River Euphrates, within the states that had transferred their allegiance from the falling king of Assyria to Pharaoh Nekho in B. C. 609; when, about May, attempting to bar the passage of the Pharaoh's army, Josiah, king of Judah, was defeated and slain. *Two* campaigns in succession, conducted by Nebukhadrezzar against Nekho, between the Euphrates and the Egyptian border, are recorded by Hebrew writers. *The first*, in which Jehoiakim, king of Judah, yielded to Nebukhadrezzar, was (as Daniel tells us) in the *third year* of Jehoiakim; that is, in the summer of B. C. 606. It was in the *next* year, or (as Jeremiah tells us), in the fourth year of Jehoiakim, that Nebukhadrezzar gained his great victory over Nekho at Karkhemish on the Euphrates. This place was the



butt at which Nekho, four years before, had aimed, when Nineveh was yet untaken. Nekho was returning hence for Egypt when, at Riblah in the land of Hamath, he made prisoner of Jehoahaz, who, for three months, by the gift of the people, had sat on his father Josiah's throne, and now apparently met Nekho with homage. Further on, at Jerusalem, Nekho made Jehoiakim his under-king and tributary, carrying off Jehoahaz into Egypt. If, then, after his victory and Josiah's death at Megiddo in B. C. 609, Nekho had won Karkhemish, this state may have remained allied or subject to him till the day of the battle in which he was defeated there on his second expedition in B. C. 605. Nebukhadrezzar may have left it in his rear untouched when, in the latter half of the third year of Jehoiakim, he marched upon and took Jerusalem. Just so, after the Babylonian retired, did Nekho, next year, leave Jerusalem behind him, when—to recover his share of the Assyrian spoils, and perhaps to relieve Karkhemish—he advanced against his Babylonian competitor to the Euphrates. His army is described, on this second occasion, as coming up out of Egypt like his own overflowing Nile. Besides his own people, the children of Mizraim, he brought with him, or he was in Asia joined by, other Hamite forces, children of Kush and children of Phut. He had Lydians with him too,—succours probably sent from Sardis by Alyattes, king of Lydia, to join him at Karkhemish. But there Nebukhadrezzar met him, “in the north beside the River Euphrates at the head of all the families of the north;” that is to say, the same allied nations that had overthrown Nineveh. The like success attended the northern army now, in the battle with Nekho. After his victory, Nebukhadrezzar appears to have again traversed, as he had the year before, the whole of Syria,—to have pursued his enemy into Egypt,—and even to have penetrated into that country. However, news reached him of his father's death, and arrested his career. For it is to Nebukhadrezzar's campaign, *in the fourth year of Jehoiakim*, king of Judah, when, in the summer of B. C. 605, he won the great victory at Karkhemish;—it is *not* to his campaign in the third year of Jehoiakim, when in B. C. 606 he first subdued Jerusalem,—wresting *this*, and doubtless *other* Asiatic dependencies, from the king of Egypt,—that the account refers (preserved from the lost Chaldean history of Berosus) of a war which Nebukhadrezzar, at the head of his father's (Nabopolassar's) army, waged with the revolted “satrap” of Egypt, Cœle-Syria and Phœnicia. Nebukhadrezzar's permanent conquests were all that portion of the former Assyrian empire which Nekho had hoped to render dependent upon Egypt, when he joined or intruded into the coalition of the Babylonians, Medes, and other nations against

Nineveh. Berosus relates, that the conqueror returned to Babylon hastily,—crossing the desert with a small escort, while the bulk of his army, with a heavy train of spoils and captives, followed the ordinary line of march. Neither the Egyptians, nor even the Babylonians, are known to have this year visited Jerusalem. Having been left by the Egyptians in the rear,—a ready prize, if their king effected the purpose of his rapid advance upon Karkhemish,—and king Jehoiakim not having by openly befriending them provoked his new master to punish him, Jerusalem may have been passed by Nebukhadrezzar both as he pursued his enemy into Egypt and on his return homewards.

Thus the reign of Nebukhadrezzar, as measured by Chaldean annalists,—that is, his sole supremacy upon his father's death,—opened triumphantly in the fifth year of Jehoiakim, king of Judah, in B.C. 604 or E.N. 144. Then it happened, most fitly, that our God vouchsafed to his eyes in sleep that vision of the four empires (from first to last in a certain sense Babylonian) which, when the king had forgotten it, Daniel was enabled first to recall to the king's mind as a sign from God, or token that the truth was about to be delivered, and next to interpret. The king beheld a mighty image composed of four successive metals, as he viewed it, from head to foot; but having its head of the most precious, gold.

Such was the majesty and splendour of the throne of Babylon, when Nebukhadrezzar succeeded his father on it. Babylon had taken the place of Nineveh. But, *how long since?* Clinton's date, of B.C. 606, we have said, is too low, because it was certainly sooner in B.C. 606 than the autumn equinox, when the Babylonian general had wrested the kingdom of Judah from the king of Egypt. Had Nineveh yielded to the Babylonians and Medes, even early in that year, there would have been too much requiring the presence of the victorious leaders at the fallen capital, to allow of another joint expedition during the same year. Or, if it was expedient to march at once with divided forces, the Medes against Alyattes, king of Lydia, and his allies from the west, the Babylonians against the Pharaoh Nekho upon the Euphrates, still it is unlikely that the successes of the latter, and their general's ardour, would have possessed them *so soon* of a place *so distant* as Jerusalem.

But if B.C. 606, as we contend, is too *late* a year to have witnessed the fall of the Assyrian capital, the year B.C. 609, or at least the spring of that year, is certainly *too early*. It was then that Nekho led from Egypt his first expedition against Karkhemish, on the Euphrates, and by the way at Megiddo defeated and slew in battle

Josiah, king of Judah, who, at the head of all his forces, would not be dissuaded from his purpose to bar the Pharaoh's passage. For the defeat of Josiah, it is certain, happened three years and three months (that is, the space of the brief reign of Jehoahaz, son of Josiah, joined to the years of the vassalage to Egypt of Jehoiakim, son of Josiah) *before* the conquest of Judah, in B.C. 606 by the Babylonians. Now, Nekho's expedition (as Clinton has observed,) was undertaken against "the king of *Assyria*," against "a house that *made war with him*," a description which cannot designate Nabopolassar, king of Babylon and his house, as some recent writers have decided, placing the capture of Nineveh not later than the first year of Nabopolassar's reign at Babylon, namely, B.C. 625. The Hebrew writers do not describe Nebukhadrezzar, or Evil-Merodakh, or Belshazzar, as kings of Assyria, therefore, they do not mean Nebukhadrezzar's father by their description of the potentate Nekho marched against, whose cause Josiah, king of Judah, espoused, "the king of Assyria." Nor could Nabopolassar be regarded by Nekho as the representative of a "house that made war with him." For the kings of *Babylon*, hitherto, the predecessors of Nabopolassar, had been vassals of the kings of Assyria. But the kings of *Assyria* had been continually at war with Egypt. We know of such wars in the reigns of Sargon, Sennacherib, and Esar-haddon; and we think it probable, that the Scythian expedition, which, according to Herodotus, Nekho's father, king Psammetikhus, averted, marks an effort on the Assyrian side, (as Psammetikhus's capture of the Philistine Azotus, after twenty-nine years' blockade, indicates an effort on the part of Egypt,) *during the wars to which Nekho more particularly referred* in his message to Josiah. The fact that our God's vengeance, which Hebrew prophets had foretold, was at this time on the point of execution upon Nineveh, seems to have been a truth of which Nekho somehow was convinced; and Josiah, who ought to have been expecting it, could not have been bound by the terms of his dependence upon Assyria (if he, like some of his predecessors, was still a dependent,) to do *more* than sit in his capital, or, if attacked, to resist the enemies of Assyria within his own borders. Nekho (who had succeeded to the throne of Egypt not more than a year before,) was summoned (whether, like a vulture, by the *scent* of the distant prey, or somehow else,) to join the other ravening birds that were about to devour the expiring empire. Full of his enterprise, he warned Josiah, "What have I to do with thee, king of Judah? I mean not to attack thee, but the house that warreth upon me, and God hath bid me to make haste."

He had *need* to make haste, if he meant to take part in the danger of the conflict, and to earn his share of the gains which awaited the conquerors of Assyria. If we suppose that Nineveh was now already besieged, and believe the tale of Ktesias, that it was blockaded for two years before it was taken, we may understand years current, and place the capture in B.C. 608, even as early as the month of May. At that season of the year, the River Tigris, which from September to January is low, has swelled to its highest annual level. An extraordinary fall of rain may also have happened in the mountains, adding more than the season's increase to the strength and volume of the tributary river Khösr, and enabling it (like a pioneer of the besiegers) to break the dams which barred its entrance into the city, on its way to the Tigris, near the eastern wall. That *water* was really instrumental, as related by Ktesias, in the taking of Nineveh by the Babylonians and Medes, is confirmed by the expression of the prophet Nahum "the gates of the rivers are open, and the palace is destroyed." But of the walls contiguous to the Tigris, our Society has been informed, in a paper read to a Meeting, and printed in the Journal, that (as regards the admission of the river) they are as perfect as ever, there being, in fact, no trace of a rupture on the side of the Tigris which can be attributed to that river. Our informant, Captain Felix Jones, of the Indian Navy, conducted, it is known, a scientific survey of the site and vestiges of the Assyrian cities. But Nahum's expression "the palace is destroyed," may foretell the burning of the palace over his head by the besieged Saraksh.

Thus far we have found that B.C. 606 is too low, and B.C. 609 is too high, a date for the capture of Nineveh; and between these two points we have been led to fix upon B.C. 608 rather than B.C. 607, as the true date. But the argument we rely upon *chiefly*, to show that the Assyrian capital was taken in B.C. 608, may be stated thus: Jeremiah the prophet, utters this decree of "The Most High," (who "ruleth in the kingdom of men, and giveth it to whomsoever he will,") that Judah and the neighbouring nations should serve the king of Babylon seventy years, and, after the seventy years should be accomplished, the God of Israel would punish the king of Babylon and the country of the Chaldeans: that great kings and great nations should subdue them, that what they had done to others should be recompensed to themselves, and, in the end, they should become a perpetual desolation." *When* then, did these seventy years of Chaldean empire begin? Not with the fourth year of Jehoiakim, king of Judah, and that first captivity of Jews at Babylon, in which Daniel shared; for, in that case, the period would end (along with the seventy years

of Jewish captivity), in the third year after the capture of Babylon by the Medes and Persians under Cyrus; when the successful Persian General, becoming king, (in succession to Darius, son of Ahasuerus the Mede), sent off Zorobabel, and such of the Jews as chose to offer themselves, to rebuild the temple of Jehovah at Jerusalem. In other words, the seventy years of Chaldean supremacy could not have begun so late as B.C. 606, or it would have ended in B.C. 536; whereas, in fact, Babylon was taken, and her supremacy (*titular*, as well as *real*), totally ceased in B.C. 538. But if the supremacy of Babylon ended in B.C. 538, its seventy years duration must have begun in B.C. 608; and as this is about two full years earlier than the *earliest* (that is, the *Hebrew*) date, for the commencement of Nebukhadrezzar's glorious reign, it is a date which can only mark the succession (not of the Medes, as writers have generally followed the erroneous views of Herodotus's contemporaries in supposing), but, of the Babylonians, to the imperial pre-eminence of Nineveh, on the overthrow of that great seat of empire. Nineveh, therefore, was taken in B.C. 608, and the space of time from its siege and capture to the like siege, and capture of Babylon by the Medes and Persians, constitutes the period allotted by our God, the God of Israel, for the supremacy of Babylon: just as from the first appearance of Nebukhadrezzar at Jerusalem, and from the first pillage of the temple and transportation of Jews to Babylon, the space that intervened to the first return of the transported under Zorobabel, and the first restoration of Divine Worship, by the rebuilding of the altar for daily sacrifice at Jerusalem, was seventy years.

In the source of the matter of the present paper, an unprinted work, entitled "Esther and her lord identified in the Persian annals," (where I have shown that Esther is Atossa, queen of Darius, son of Hystaspes, and I have sketched Darius's history to the end of his seventh regnal year), I have had occasion to point out, that the time which elapsed from Nebukhadrezzar's final siege and capture of Jerusalem, to the final siege and capture of Babylon, by Vindaфра the Mede, in the reign of the son of Hystaspes, was according to prophecy a desolation of seventy years to yet unavenged Jerusalem.

With reference to our conclusion that the Babylonian supremacy began, and, consequently, that Nineveh must have fallen, in B.C. 608, an argument might be produced to show that the fact is distinctly attested in Hebrew Scripture. But into this argument, which depends on the genuineness of the name "Jehoiakim," in the first verse of the twenty-seventh chapter of Jeremiah, we cannot enter here. The text, as it stands, intimates that the seventy years of power, given by God

to Babylon, commenced in the first year of Jehoiakim; that is, in a year which ended in autumn, B.C. 608. Now that the same seventy years ended on the capture of Babylon, by Cyrus, in B.C. 538, E.N. 210, may be intimated in Daniel's statement, that *in the first year of Darius the Mede's reign*, he applied himself to our God, in behalf of himself and his captive brethren, with confession and prayer, *after having understood that the number of the years, of which Jehovah had spoken to Jeremiah, to finish the desolation of Jerusalem, was seventy years*. Daniel had not learnt,—what appeared in time,—from God's revelations to Jeremiah, that there were *three periods, of seventy years a-piece,—not one only*, to be accomplished. One such period was plainly ended in the first year of the reign of Darius the Mede; namely, that assigned to the Chaldean empire of Nebukhadrezzar, of his son, and of his son's son; and Daniel, who saw this, must have counted that period from B.C. 608, or, more correctly speaking, from the fall of Nineveh, in E.N. 140. Two other periods, each of seventy years likewise, were as yet incomplete; one of them (coeval with Daniel's own captivity, and mentioned in Jeremiah's letter to the transported at Babylon), having yet two years to run. The other (which, as we learn from the prophet Zechariah, was yet enduring in the second year of Darius, the Persian, son of Hystaspes), wanted now twenty-one years of its completion, being the period of the desolation of Jerusalem and the sanctuary therein; for this desolation, dated from the destruction of the city and temple by Nebukhadrezzar.

Sufficient reason seems now to have been offered for our belief, that Nineveh was taken by the Babylonians and Medes, in the year B.C. ( $538 + 70 =$ ) 608; that is, in the year E.N. ( $210 - 70 =$ ) 140; and towards the close of the first year of Jehoiakim, son of Josiah, king of Judah. But to fortify our conclusion, let us go on to examine the process whereby Clinton, to whom so much deference is due, was led to fix this event, in B.C. 606, and in the third year of Jehoiakim. Clinton conceived, that he was sustained by the testimony of Herodotus; and his representation of the matter may be stated thus: "Nineveh was taken in the reign of Cyaxares, son of Phraortes the Mede, *after* (say, *immediately after*) twenty-eight years of a Scythian domination, which commenced *after* (say, *immediately after*) the accession of Cyaxares. Now, this accession (says he) was in the year B.C. 634, and since B.C.  $634 - 28 =$  B.C. 606, the capture of Nineveh may be placed in this latter year: the same year in which before August, and while the third year of Jehoiakim was still current, Nebukhadrezzar appeared at Jerusalem." But the testimony of Herodotus, even when understood and put together as by Clinton, really fixes the capture of

Nineveh *a year lower* :—that is, in B.C. 605, the year following Nebukhadrezzar's first conquest of Jerusalem, when, at the head of his father's forces and "all the families of the north," after defeating Nekho, king of Egypt, on the Euphrates near Karkhemish, he over-ran Syria a second time, and apparently carried devastation into Egypt. Herodotus tells us, that Cyaxares, son of Phraortes, became king ( $40 + 35 + 29 + 8 + 36$ , or, altogether 148 years, before the reign of Xerxes, son of Darius ; that is, according to Ptolemy's Canon, before the year E.N. 263, which is, B.C. 485. Now,  $B.C. 485 + 148 = B.C. 633$ . This, therefore, is the year according to Herodotus, in which Cyaxares, son of Phraortes, came to the throne. Herodotus's particulars which we have summed up into 148 years, are these :—the reign of Cyaxares himself, including the twenty-eight years of the Scythians in Asia, forty years : the reign of his son and successor, Astyages, thirty-five years ; the reigns of two successors of the dethroned Astyages (or, as Herodotus took them, the one reign of Cyrus) twenty-nine years ; the reign of Cambyses, son of Cyrus, including the first seven months of the Magian's usurpation, eight years ; and the reign of Darius, including the eighth and last month of the Magian whom he slew, thirty-six years. These particulars, prefixed to the year of the first of Xerxes, B.C. 485, make, as we have said, the year B.C. 633, to be the first of Cyaxares. If Clinton makes the first of Cyaxares to be B.C. 634, it is *by deserting his own witness* Herodotus, and by following other authority for the length of reign of Cyrus, or the interval between the reign of Astyages, and that of Cambyses the conqueror of Egypt. This he represents as having lasted not twenty-nine but thirty years. Now he would certainly have owned, that the date for the fall of Nineveh obtained in his own way by deducting Herodotus's twenty-eight years of the Scythians, from B.C. 633, (the real Herodotean date for Cyaxares the Mede's accession,) that is, that B.C. 605 is *not* the true year of the catastrophe, but *below* it. But, if so, the true date of the fall of Nineveh cannot be obtained from Ptolemy's Canon, by the help of Herodotus ;—at least *according to Clinton's process*.

One element in the process of calculation there is, whereon we have observations to offer, which we think important. It is the *length of that Scythian domination, in the time of Cyaxares, son of Phraortes, which delayed the overthrow of the Assyrian empire*. That the years of the Scythians in Asia were twenty-eight, Herodotus tells us in two widely-divided passages of his great work, and a variety of expression in regard of the number (which he terms "eight and twenty years" in one place, and in the other "years thirty all but two,") seems to assure us, that our present copies do not misrepresent his measurement.

The *thing measured*, however, is not described in both passages of his history in the same manner. In his fourth book, he calls it the absence of the Scythian warriors from their own country in Europe ; in his first book, it is termed the Scythian dominion in Asia. Of the length of time, however, that this dominion endured, *another* estimate is discernible in Herodotus's story. For though, in one part, by giving us the lengths of the Median reigns, (of Deiokes, 53 ; of Phraortes, 22 ; of Cyaxares, 40 ; and of Astyages, 35 years,) from the commencement, as he counted it, of Median independence, to what he held to be the Persian conquest, he enables us to say, that the Median dominion lasted 150 years ; yet, about twenty-four chapters afterwards, he tells us expressly that "besides" or "more than" (*παρὲς ἤ*) that is, "*exclusively of*" the years during which the Scythians ruled in the time of Cyaxares, the Medes had the dominion for 128 years. Now, though our author was by no means a clever arithmetician, it is unnecessary to accuse him here of miscalculation. Rather, we have here a valuable piece of original information which he has reported, heedless, or unconscious, of its apparent discrepancy with the other numbers that he had in like manner obtained and reported. If so, the new statement (when compared with what the historian had told before) intimates that 150—128, or twenty-two years, was the time, not twenty-eight years, during which the Medes succumbed to the Scythians. And we are led to think that the twenty-eight years are rather the measure of the Scythian *absence in Asia*, as Herodotus represents the matter in one place, than the measure of their *dominion abroad*, as he puts it in the other. But this suspicion as to a point in Herodotus's *Median* history is confirmed, and appears to be the very truth, by the light of his previous *Lydian* history. He had told us *there*, that Cyaxares the Mede, whose reign of forty years includes the Scythian twenty-eight, waged a war for *six* years, with Alyattes, father of Cræsus, king of Lydia, on account of certain *Scythians* who had taken refuge with Alyattes ; and in the war he appears to have been aided by the Babylonians, while Alyattes was supported by the Cilicians ; whose many wars with Assyrian monarchs are noted in the disinterred annals of those great kings. *Six* being the *exact difference* between twenty-eight and twenty-two, we are now convinced, or confirmed in the idea, that twenty-eight years was the measure of the *whole space of time* that the Scythians of Europe were absent in their Asiatic wars, and that, during the first twenty-two years, the Medes submitted to their insults and exactions, while, on the contrary, during the last six, they were pursued by the Medes and Babylonians, but were backed by the Lydians and Cilicians. It is also easy to perceive, that the Scythians, whose arrival in Asia delivered Nineveh



for a time, were a host of Assyrian mercenaries, and that the six years' war which (with the Lydians and Cilicians) they sustained against the Babylonians and Medes, must have followed the fall of Nineveh.

As to the purpose of the Scythian entry into Asia, critics have already remarked, that it cannot (in consistency with the dates given) be attributed, as by Herodotus, to a desire of pursuing the Cimmerians, whose country in Europe, north of the Euxine or Black Sea, they had occupied; causing thereby the first step we know of in that progress to the west which carried the sons of Gomer, from whom the modern Cymry seem to be descended, to the Cimbrian peninsula and into the British Isles. Like other wealthy empires in their decay, the Assyrians, finding it difficult to resist the rising power of the Medes, notwithstanding the defeat and death of Phraortes, father of Cyaxares, called in a barbarian army to fight their battles and to enable them to keep their dependents in submission. For a long space of time those barbarians, "besides the regular tribute," says Herodotus, (which was due to the Assyrians,) "exactd from the several nations additional imposts, which they fixed at pleasure," (on their own account); "and further, they scourd the country, plundering every one of whatever they could. At length, Cyaxares and the Medes invited the greater part of them" (that were in Media, at least,) "to a banquet, and made them drunk with wine, after which they were all massacred." (Some, however, it is admitted, fled to Alyattes, king of Lydia.) "The Medes then recovered their empire." "They took Nineveh, and conquered all Assyria, except the province of Babylon." "After this Cyaxares died." Such, with one or two added expressions, is Herodotus's report of an account coloured, we believe, after the fall of Babylon, by the Medes.

We know more particularly, from Chaldean sources, that Nabopolassar, the Assyrian viceroy at Babylon, having first joined with him the Medes, taking a daughter of their king, (that is, as Herodotus would teach us, of Cyaxares,) to be wife of his son Nebukhadrezzar, made war with the king of Nineveh, and that the allied forces (the Medes, apparently, commanded by Astyages or Ahasuerus, son of Cyaxares, and the Babylonians by Nebukhadrezzar,) took Nineveh; its king, (or, perhaps, the Scythian general,) Saracus, or Sarakhsh burning the palace over his head.

Then, as Herodotus has taught us to perceive, a war ensued between the victors and Alyattes, king of the Lydians, among whose forces the remains of the Scythian mercenaries of Assyria were now included. This lasted till, on the occasion of the sun being eclipsed during a great battle in the sixth year, peace was concluded between

the Asiatic belligerents; Alyattes, it is said, giving a daughter in marriage to Astyages, son of Cyaxares, and (it appears) the surviving Scythian warriors quitting Asia for domestic wars in Europe.

The eclipse, which thus terminated the Scythian wars in Asia, and made peace between the Lydians and the Medes, has been called *the eclipse of Thales*, because, in the days of Herodotus, it was believed by his countrymen to be one which their Ionian philosopher had predicted. It has been identified by various authors with one in B.C. 610, one in B.C. 603, and one in B.C. 585. But if our argumentation hitherto has been well based and well conducted, by which, having previously vindicated the early chronology of Ptolemy's Manual Canon (*κανων προχειρος*), we have proved that Nineveh was taken in B.C. 608; and we have concluded that, of the twenty-eight years spent in Asia by the Scythians, twenty-two preceded and six followed the fall of that city;—it will be manifest that the eclipse which stopped the battle between the Lydians and the Medes was (as the chronologers Clinton and Hales believe,) the one which happened, as astronomers tell us, in the morning of the 17th of May, (or, speaking by the Roman Calendar, the forenoon of the 18th of May,) B.C. 603.

If so, the first campaign of the war of the Medes with Alyattes, it will appear, was carried on in that very year, B.C. 608, in which the Babylonians and Medes took Nineveh. Hostilities may have commenced in an endeavour, on the part of Alyattes and his allies, with the relics of the Scythians, to relieve the besieged capital. They may have crossed Mount Taurus, and reached the Upper Euphrates, with a friendly purpose to the besieged, as the year before, desiring to win what he could from the beleaguered enemy, Nekho had advanced from Egypt to Karkhemish, on a lower part of the river.

Again, if our criticism be just as to the division of the eight-and-twenty years of the Scythian stay,—for, according to it, this barbarian host arrived in aid of the Assyrians, twenty-two years before the fall of Nineveh, and disappeared from Asia six years after that event,—it will appear, that it was in the fifth year before the accession of Nabopolassar to the dependent throne of Babylon, and in the tenth year of the reign of Josiah, king of Judah, when the Scythians delivered Nineveh from the Medes, who, under their new king Cyaxares, were hoping to avenge the late defeat and death of Phraortes, father of Cyaxares. It was also the twentieth year before the accession of Nekho in Egypt, when, however, his father Psammetikhus had already (according to Herodotus) reigned thirty-four years. Again (if a date which we shall offer as that of Herodotus

for the overthrow of the Lydian Crœsus, son of Alyattes, be correct,) it was in the sixth year before the accession of Alyattes, king of the Lydians, when his father, Sadyattes, had been already six years on the throne, and a yet longer interval had elapsed since the Cimmerians, driven from their homes by the Scythians, had entered Asia, and there, like the Gauls at Rome, had captured the Lydian capital Sardis, all but the citadel. For B.C. 625, the first year of Napolassar + 5 years, and B.C. 639, the first year of Josiah - 9 years, and B.C. 610, the first year of Nekho, son of Psammetikhus + 20 years, and B.C. 553, the year after the capture of Sardis by the Medes under Cyrus + 14, the years of the reign of Crœsus, son of Alyattes + 57 years, that Alyattes reigned, + 6 years, the latter half of the reign of Sadyattes, in whose father's reign Sardis was sacked by the Cimmerians,—amount all four to the year B.C. 630, which is twenty-two years before B.C. 608, the date which we have ascertained for the capture of Nineveh.

The view now obtained of the relations between the Scythians and the Medes, during the reign of Cyaxares, son of Phraortes ; reconciles the apparently conflicting estimates of the length of the Median rule, which Herodotus has been supposed to give, and on which so much has been conjectured ; while it agrees perfectly with the conclusions which we before obtained, as to the fall of Nineveh and the establishment of the Babylonian power under Nebukhadrezzar, son of Nabopolassar. It moreover *confirms the conclusion, to which Herodotus's testimony leads us*, that Cyaxares began to reign in (or near about) the year B.C. 633. For Herodotus's story of Cyaxares supposes, that, *after* the date at which (on his father Phraortes's falling in battle with the Assyrians,) he succeeded to the command of the Medes, and *before* the date of the defeat which he sustained from the Scythians, an interval of not less than three campaigns elapsed. He had meanwhile renewed his father's war with the Assyrians ; he had gained a battle ; he had approached the walls of Nineveh, before the Scythians, fresh from the mountain gates of Caucasus, appeared, an army and not a horde ; for it is expressly related that their women were left behind in their own country. The Scythians quickly overpowered Cyaxares, and made him tributary : that is, *to Assyria*. Afterwards their detachments appear to have overspread both Media and other regions of Asia. They advanced even into Palestine, where Josiah sat on the throne of Judah, to punish the distant Psammetikhus, king of Egypt, who had on that side overstepped the border claimed by the Assyrians.

We now see clearly, what we intimated before, in our view of the

establishment of the power, to which, on his father's death, Nebukhadrezzar succeeded,—that the war which Herodotus has recorded, of Alyattes against the Medes and Babylonians in the north, was connected with that which the Hebrew Jeremiah, and the Babylonian historian Berosus, have recorded of Pharaoh Nekho against the Babylonians and their allies in the south. The war of Alyattes was intended, perhaps, at first, to relieve Nineveh, while that of Nekho was dictated by old animosity. Yet, from the date of Nekho's second march to the Euphrates, in B.C. 605, the hostility of both became a great combination of forces against the Babylonians and Medes, like that later one against the Medes and Persians, which consisted of the Lydians under Cræsus, the Egyptians under Amasis, and the weakened Babylonians under Nabonedus. We have observed that Nekho had Lydians, as well as children of Cush and Phut, in his army at Karkhemish, when, Nineveh having fallen since he first extended his frontier to the Euphrates, on his second expedition thither he was defeated by Nebukhadrezzar in B.C. 605. In the following year, B.C. 604, Nebukhadrezzar, whose father was now dead, had the dream at Babylon, which Daniel recalled to his memory and interpreted. Again, in the next year, B.C. 603, being engaged along with the Medes against the Lydians and their allies, it appears from Herodotus, he negotiated a peace in the north, on the occasion of the eclipse. Perhaps, Jehoiakim, king of Judah, who, originally Nekho's vassal, remained, we know, three years true to his new lord, Nebukhadrezzar, was this year encouraged by Nekho to revolt, in some degree at least, on the ground of the war with which the Babylonians were still distracted against Alyattes. If so, he must have revolted before he was reached at Jerusalem by the news of the peace which the eclipse of May the 17th caused to be agreed upon. In any case, his revolt at this time indicates the wisdom of the Babylonian in seizing the opportunity to make peace with the Lydians and Cilicians.

If the historian's work may be called a map of the bygone acts and fortunes of states and individuals, we may describe what we have now done, if successful, as a contribution in aid, by which we have placed in its true parallel position and real bearing on contemporary events that Herodotean period, the twenty-eight years of Scythian war in Asia. This position, extending, as we have shown, from the twenty-second year before, to the sixth year after, the fall of Nineveh, is alone evidence of the character in which those barbarians played a part in the wars on the opposite confines of the tract of vassal kingdoms over which the last Assyrian kings strove to maintain the dominion acquired by their predecessors in so many invasions and

victories. That character is still more apparent, after the capture of the Assyrian capital, in the wars which the victorious Babylonians and Medes, on the one side, and, on the other, the Egyptians, the Lydians and the Cilicians waged, over the Assyrian inheritance.

Further, (as we have slightly suggested already,) the capture of Nineveh having been found to stand in B.C. 608, by evidence quite conclusive, as we think, and independent of Herodotus's testimony, while the twenty-second year before that event, the first year of the Scythians, is therefore fixed to B.C. 630, we have gained *an unexpected confirmation of the accuracy of Herodotus's Median chronology*, according to which the accession of King Cyaxares (described apparently as having happened two or three campaigns only before the Scythians came in aid of Nineveh,) is fixed in B.C. 633. For, if we may accept the computation of regnal periods up to the accession of Cyaxares, we have good reason to accept it also for the two preceding reigns of Deiokes and Phraortes, though we may suspect that Deiokes (whether Arab, Armenian, or what not,) was really a vassal of Assyria, appointed king of the Medes by Sargon, in B.C. 708.

If now we are authorized to accept Herodotus's Median chronology, at least up to the accession of Cyaxares, son of Phraortes, in B.C. 633,—it follows, that the dethroned Astyages was succeeded,—not indeed by Cyrus himself (as Herodotus had been led to believe)—but by another Median king (apparently his own son) twenty-nine years before the accession to the then Perso-Median throne, of the Persian conqueror of Egypt Kambyzes son of Cyrus. That is, Astyages was dethroned in B.C.  $(529 + 29 =)$  558, or E.N.  $(219 - 29 =)$  190,—which year was counted the second of the reign of Neriglissar, king of Babylon. With this date of the fall of king Astyages is connected *the Herodotean date which we promised to point out, for the overthrow by the same great leader, commanding for Astyages's successor, of Crœsus, king of the Lydians.*

Our conclusion, that we may confidently follow Herodotus in counting E.N. 190, or B.C. 558, for the first regnal year of Astyages's successor (whom we take to be Darius, son of Ahasuerus the Mede) is strongly confirmed, by a fact which Mr. Bosanquet has adduced, and with which I was first made acquainted by a paper of his in a volume which he most kindly sent me of the Transactions of the Chronological Institute.

Xenophon tells us of a city, where, at the time "*when the Persians were taking from the Medes their empire,*" a phenomenon happened, which, as commentators have supposed, was really a total eclipse of the sun. The place being known, astronomers have been called upon to tell

the particular eclipse. The place, when the Greek division of the younger Cyrus's army encamped there, on their retreat up the left bank of the Tigris, was a deserted city, a little above the confluence of the Zapatas with the Tigris. It was called Larissa, and had a pyramid of stone adjoining it. As undoubtedly the Zapatas (distant fifty parasangs, or 1500 stades, from the city Opis, which stood on the Physkus river above its junction with the Tigris), was the Greater Zab, so likewise undoubtedly Larissa, with its pyramid, was the old Assyrian Calah, now Nimrūd, the mine from which Mr. Layard has extracted so many precious relics of the arts, and records of the royal achievements, of Assyria. Xenophon's account of the city is composed in part of what he saw himself, in part of what he appears to have picked up on the spot during the five eventful days which had elapsed since the army first reached the Zab. Part of this hearsay must have concerned the present; part was a tradition of the past. "This great deserted city on the Tigris, named Larissa, had been of old tenanted by the Medes. Of its wall the breadth was five and twenty feet, the height a hundred, the compass two parasangs, and it had been built of potter's clay bricks (*πλινθοις κεραμιαῖς*). Under it was a basement wall (*κρηπίς*) of stone, the height of twenty feet. This city the Persians' king,—when the Persians were taking from the Medes their empire,—besieged, but could not in any way capture. But a cloud that had covered the face of the sun caused it to disappear until the men evacuated it; and so it was taken. Beside it was a pyramid of stone, the breadth of one *plethrum*, the height of two. On this were many of the barbarians, fled from the neighbouring villages."

Such is Xenophon's account of Larissa. Higher up the Tigris the army, at the end of its next march (a distance of six parasangs), came to a great deserted wall close to a city, which, whether equally solitary or not, was named Mespila. Xenophon's account of it is, "The Medes once used to inhabit it. The basement of the wall was of chiselled shell-stone, *λιθου ξεστου κογκυλιατου*, fifty feet in breadth and fifty in height. On this had been built a brick wall fifty feet broad and 100 high, and its circle's compass was six parasangs. Here Medeia, wife of the king, was said to have taken refuge, when the Medes lost their empire by the Persians. This city the king of the Persians besieging could not capture, either by time or by force. But the God of heaven (or *Zeus*, as Xenophon names him) strikes stupid (*εμβροντητους ποιει*) the inhabitants, and so it was taken."

It would appear then, that, about fifty years after the conquest of Assyria by the Babylonians and Medes, both Nineveh and Calah, having been occupied by the Medes (but perhaps only as a Baby-

Ionian dependency,—for Nebukhadrezzar had officers under him named *satraps*),—were besieged by the forces of Cyrus, when the Persians (and according to Herodotus the disaffected Medes) under his command, deprived Astyages of his throne. Otherwise we must think that Xenophon has put “Medes” for “Assyrians,” not only in his account of the cities on the Tigris, but where he makes the left hand bank of the river from the confluence of the Physkus upward to be “land of *Media*,” and the wall, which appears to have run from the Tigris, opposite the mouth of the Physkus nearly to the Euphrates, the “wall of *Media*.” But the new, and apparently Aryan, names of Mespila and Larissa, given to the Assyrian cities,—with the fact that Herodotus calls the country between Armenia and Kissia the land of *Matienians*,—seem to forbid such imputation against Xenophon’s accuracy. If, then, the inhabitants of Larissa, when besieged by the army of Cyrus, did really escape under cover of a solar eclipse, we may readily believe that this was the eclipse which, according to the astronomers on whom Mr. Bosanquet relies, happened on the 19th of May, B.C. 557; for of this, according to Hansen’s Tables, the dark shadow, not more than thirty miles broad, passed directly over Nimrúd, the Calah of the Assyrians and Larissa of the Medes.

Now, when we have apologized for being led by the ancient existence of the name in Thessaly to conjecture that Larissa was an appellation given by Aryan-Medes to the re-occupied Calah; inasmuch as (*Larsa* being, according to Sir H. C. Rawlinson the Chaldæan name given in the inscriptions to the modern Senkereh), the name might indicate a Chaldæan occupation of the Assyrian city, or, at least, one made by a portion of the aboriginal inhabitants of the country where the Aryan-Medes made themselves supreme, we will proceed.

If, in Xenophon’s account of the siege of Larissa, the eclipse of May, B.C. 557, be really referred to, we have another surprising confirmation of the accuracy of Herodotus’s Median chronology. Already we have seen his date for the accession of Cyaxares, B.C. 633, confirmed by a date deduced from a different source, that of the Scythian invasion in B.C. 630. Now we find, that, whereas he makes E.N. 190 or B.C. 558 the first regnal year of Astyages’s successful competitor, the siege of a city belonging either to Astyages or to Astyages’s Babylonian allies, Larissa, lasted till 19th May, B.C. 557. The reign of Astyages’s successor would be counted from the year of his revolt, or, at least, the year of his first victory, and the war may well have lasted two years. If the two battles recorded by Herodotus in which

Astyages was defeated, and in the latter of which (at Agbatana, as Herodotus seems to intimate), he was taken prisoner by Cyrus, were both fought in B.C. 558, and that flight of the Median queen to Mespila of which Xenophon speaks followed the capture of Astyages, the sieges of Mespila and Larissa would naturally belong to B.C. 557, the year of the eclipse. We may even suspect that *Media* the nation (not *Medæa*, a queen), being conquered, fled to her neighbour.

Having shown above that Herodotus's date for the overthrow of Astyages, or for the first year of the defeats in which the reign of Astyages terminated, B.C. 558, is correct, we proceed, now, to extract from his evidence a date for the fall of the last Lydian king, Cræsus, son of Alyattes. Of this event, which was intimately connected with the fall of Astyages, Herodotus, whose chronological information was precise and accurate, has left the date obscure,—probably from an inadvertence in such particulars which must have been part of his character.

But he gives us clearly to understand, that, after the overthrow of Astyages, Cræsus was roused, at last, from a grief for the loss of his son Atys, which had engrossed him for two full years previously. Why is this measure of the engrossing grief of Cræsus given, and calculated, too, not from his *accession*, but from the *end* of his reign? If Herodotus had no purpose in telling it, there was a reason for the calculation in the narrative which he had heard. But he tells us that Cræsus,—now aroused and meditating war with the conqueror of Astyages,—consulted the Delphian and other oracles, formed an alliance in Greece with Sparta the leading state, and obtained promises of co-operation from Labynetus or Nabonedus, king of the Babylonians, and from Amasis, king of the Egyptians. These preparations made, he crossed the river Halys, which divided him and his vassals from the Median empire; conquered the White Syrians of Pteria in Cappadocia; and, on the arrival of Cyrus, fought an undecisive battle with him. Then intending a second campaign next spring he retired within his own border to his capital, where,—after he had disbanded his forces and had sent messengers to Nabonedus, to Amasis, and to the Lacedæmonians, requiring their forces to be with him at Sardis in the fifth month to come, Cyrus appeared, with all his forces, defeated the Lydians, besieged the city, and, after fourteen days, took it with Cræsus captive. Further, Herodotus tells us, that the Delphian god replied to the reproaches of Cræsus, that he had obtained a delay of the inevitable event for three full years; so that the Lydian had become Cyrus's bondsman three years *later* than he had been predestined. Now, as we asked of the measure of Cræsus's apathy of grief, just so



we ask again of this measure of the delay of his overthrow; *for what purpose* is it given? The apology for Apollo, whoever originally made it, must have rested on a *fact*, of which Herodotus undoubtedly was informed, though he has neglected to give it prominence,—that from the time when Cræsus was roused at last from his two years of apathy, and consulted the Delphian oracle, to the date of the capture of Sardis, there intervened the space of three years. If, then, Cræsus's two years' grief for Atys was reported to be his inactive employment while Astyages was fighting for his throne in B.C. 558, and while Mespila and Larissa were besieged in B.C. 557,—the three full years between his awaking and the fall of Sardis will be the years B.C. 556, 555, and 554. Sardis, which according to Herodotus, fell in late autumn or early winter, must have been captured, according to his information, most probably at the latter end of the year B.C. 554; that is, E.N. 194; possibly in B.C. 553.

This calculation is supported by the Parian marble; for the first of *Apollo's* three years, B.C. 556, is exactly the date obtained from the marble, for the embassy of Cræsus to the Delphian oracle. The mutilated date of the marble in Selden's time, was restorable with certainty, (in English) thus, "[two hundreds, one fifty], four tens and two years before" the year of the marble itself. Thus it was originally equivalent to 292 + B.C. 264, that is, B.C. 556, the first year of the fifty-sixth Olympiad. Again, the co-operation agreed to by Amasis and Nabonedus, which Cræsus invoked in B.C. 554, when he returned from his campaign beyond the Halys, is consistent with Ptolemy's Canon of Babylonian reigns, where, to Nabonedus, for his first regnal year, the year, E.N. 193 is assigned; which year began the 9th of January, B.C. 555, and was the second of the three years which Apollo claimed to have gained for Cræsus.

Thus, since Herodotus tells us also that Cræsus reigned fourteen years in all, we may conclude that his *last five* were the first five counted by Herodotus's authority to the successor of Astyages,—extending from B.C. 558 to B.C. 554,—while his *first nine* were the *last* nine counted by the same authority to Astyages himself. Of these nine, the *first six years* will be the *last* six of the reign of the great Nebukhadrezzar, king of Babylon,—who mediated the peace, in the days of Alyattes father of Cræsus, after the eclipse in May B.C. 603. The first year of Cræsus appears to have been the third of the Egyptian Amasis his ally—who apparently began his reign as a vassal of Nebukhadrezzar's. Related with one another, and with the great king, by intermarriage,—Astyages and Cræsus, perhaps, still venerated the Babylonian throne, while it was occupied by Evil-Merodakh by

Neriglissar, and for less than a year by Laborosoarkhod son of Neri-glissar, the predecessor of Nabonedus; and, if so, their policy was *opposed* to the idea of a new supremacy in Asia, which may have been one of the objects of the discontented Medes, when they rebelled against Astyages.

Having found, as we promised, a Herodotean date for the fall of the Lydian monarchy in the end of the year B.C. 554, we have only to observe further on this head that the dates of accession of the kings Cræsus, Alyattes, and their predecessors, may now be determined,—according to the view of Herodotus's informants—by prefixing the length of their reign, or reigns, to the year B.C. 553 (E.N. 195), that is, to the twenty-fourth year preceding the first regnal year of the Persian Cambyses.

One other topic remains. The astronomical information, for which the writer is indebted to Mr. Bosanquet, concerning the date of the eclipse that closed the siege mentioned by Xenophon of Larissa, confirms, as we have seen, the dates which we have extracted from Herodotus for the overthrow, not only of Astyages, king of the Medes, but of Cræsus, king of the Lydians—those first two strides whereby the Persian conqueror Cyrus advanced to the subversion of the supremacy that, after the fall of Nineveh, had devolved upon the throne of Nebukhadrezzar, and on the nation of the Chaldeans at Babylon. We have now to vindicate our identification of the eclipse recorded by Herodotus, to have closed the Lydian war with the Medes, in the reign of Alyattes. Led by the date of the capture of Nineveh, which we were enabled to fix principally by the aid of the Hebrew annals, and further led by the admissions of Herodotus (which our cross-examination of his evidence elicited), concerning the wars in which the Scythians from Cimmeria were long engaged in Asia, we were able confidently to affirm what the chronologers, Clinton and Hales believed, that the eclipse, which terminated Alyattes's war with the Medes, was the one, which, by astronomical calculation, happened in the forenoon of the 18th of May, B.C. 603, by the Roman calendar, in which the twenty-four hours begin at midnight, or on the 17th of May if with astronomers we divide the rotation of the earth at mid-day.

It is quite incorrect, if I mistake not, to suppose that the solution of the controversy as to the date of this eclipse is an *astronomical question*. It is, indeed, for astronomers, not only to foretell, but to recall eclipses, or by aid of certain facts recorded of a particular past eclipse, to find other facts which have not been recorded of it. Certain *chronological* and *geographical* limits they must borrow or assume for granted; and evidence is gladly gathered as to the *size* of the past eclipse at the place where it is recorded to have been observed, in

order to solve the problem, "with *which* of the past eclipses, on their list, it is identical ;" and, consequently, what was its exact *date* and duration ; or, to find approximately (if this is not recorded) the *geographical position* of the observers. For the eclipse, which, according to Xenophon, enabled the defenders of Larissa to abandon the place unobserved, a *date* is given by the historian, namely the time "when the Persians were depriving the Medes of their supremacy," which time, according to Herodotus, was somewhere about B.C. 558. The *place*, where, under cover of the eclipse, the garrison then escaped, is also indisputably Nimrúd, about eighteen miles south of the modern city Mosul. The *degree of darkness* is related to have been great ; for it is said that the intervening body by which the sun was obscured, "caused the city to disappear" from the besiegers. The whole solar disk, in fact, is asserted to have been covered by a "cloud"; therefore if the intervening object was really the *moon*, the eclipse must have been *total*. Taking these recorded circumstances for facts, astronomers authorize Mr. Bosanquet to assert, and we must as reasonable persons believe, that the eclipse is one which happened in May B.C. 557.

The materials, however, for finding the particular past eclipse of the sun, which, according to Herodotus, stopped the battle and led to peace between the Lydians and the Medes, are much less precise. For ourselves, indeed, we affirm, that, by a long train of chronological argument, we have found the year B.C. 603 to be the date of the campaign which the eclipse interrupted, and we only ask astronomers to tell us the month, the day, and the hour when the eclipse in that year was seen. Herodotus does not tell us where the battle-field lay, and calculators have been left to assume, that it was somewhere on a line due east of Sardis towards Media, or, rather, a line running from Sardis south-eastward. Perhaps, indeed, it may have been as far south as Karkhemish on the Euphrates. As to the degree of darkness, the only indication of the size of the eclipse, those who assume it to have been total, assume, I think, too much. The armies (as I take it) were not *afraid of "the dark,"* but of the diminution which they saw befall a luminary which most of them, certainly the Phrygians, the Magians, and even the Aryan Medes, worshipped as divine.

*If it was the darkness* which produced the effect upon the armies which is matter of history, it might properly be remarked, that the almost total eclipse of the sun, which was witnessed in England on the 15th of March, A.D. 1858, produced no such darkness as could possibly have much shaken the nerves of two great hosts of men. It might *then* be inferred, that the eclipse in question must have been total in the place where the battle was begun ; for an eye-witness, writing of a total eclipse observed in Norway in 1833, is quoted thus : "As long

as the least bit of the solar disk was visible there was a diminution of the light, though not absolute darkness ; but the moment the disk was completely covered by the moon, darkness was as suddenly produced as when, in a room, the last candle out of several is put out."

But if the gloom of a total eclipse might interrupt a battle, we think the memory of it would not suffice as a ground for concluding a permanent peace. Besides, if the difference of darkness be great between that of the total eclipse in 1833, in Norway, and that produced in England in 1858, which he who writes this (judging from what he saw the while at Dinan, in Brittany), thinks must have been far less portentous than the filthy blackness of a sudden thick fog in London, such as fell on that city, for an hour or more, in the early afternoon of the 17th of last January (1860) ;—on the other hand, his own experience enables him to affirm, that there is also a vast difference in a spectator's impressions between that which was received from the eclipse of 1858, in the faint sunshine and clouded sky of England or Brittany, and that which a large solar eclipse, beheld from a low latitude, in the cloudless, blazing sky of summer, will naturally produce upon a heathen multitude. We are convinced of the great difference when, with our recent recollection, we compare our remembrance of an eclipse in A.D. 1844 or 1845, at Jooriah Bunder, in Kattyawar, of Western India, a place nearly on the northern tropic.

As translated by Geo. Rawlinson, Herodotus says :—"As the battle was growing warm, day was on a sudden changed into night." He mentions no terror, but adds simply this :—"The Medes and Lydians, when they observed the change, were alike anxious to have terms of peace agreed on." In another place, referring to the same eclipse, he calls it "the occasion when the day was changed suddenly into night." It is likely, that this part of the story had lost nothing by being frequently repeated,—if it was not altogether derived from newer instances of the sun's eclipse, before it reached the time in which Herodotus lived. But the great darkness, we insist, is not necessarily indicated by the sequel, which did not admit of exaggeration. Remembering how the inhabitants of Jooriah Bunder were poured out of the town, and filled the distance between our tent and the walls, with the din of the religious proceedings in a neighbouring temple, as the sunshine became moon-like pale, we would rather say, that the sun having been blazing bright and hot in a clear sky, a superstitious horror seized the worshippers of this lord of day in both armies, when, lifting their eyes from the battle, they beheld his disk eaten into and almost devoured by the black object which the body of the moon appeared.

We have said, that when an astronomer is required to identify an eclipse which the history of ancient times records, certain chronological boundaries must limit his selection ; and in the present case, for our own part, we would limit him to the space of the single year B.C. 603. But, the chronology of this part of ancient history having been considered obscure, a wider field of choice has been supposed to be necessary, being the fifty years from B.C. 630 to B.C. 580 ; and during this space we are told, that only three eclipses were total in that part of the world to which the history of Cyaxares, son of Phraortes the Mede, and Alyattes, son of Sadyattes the Lydian, belongs ; namely, the eclipses of B.C. September 610, May, 603, and May, 585. Each of those eclipses has been pitched upon by older or more recent astronomers as the one which led to peace between the Lydians and the Medes. Historians, therefore, and chronologers have usually made their option between the eclipse of B.C. 610, (which Mr. Grote and other recent writers prefer,) and that of B.C. 603, which Hales and Clinton select, and which we ourselves have found to suit unsought. But Mr. Bosanquet, and others, now contend for that of May, B.C. 585, which is affirmed to be the date received traditionally by Pliny, Clemens Alexandrinus, and Solinus ; while the ablest living astronomers give answer that the eclipse of that date is the only one which could have been *total* on the line between Lydia and Media ; and, moreover, is the only one which could have been foretold by an astronomer of that early time ; referring here to a tradition which Herodotus has transmitted from his own time, that Thales of Miletus had foretold the eclipse which led to peace between the Lydians and the Medes.

To the second of these three arguments we have already given an answer, which shows that the actual political result of the eclipse might have followed from a large partial, no less than from a total eclipse. To the first argument, derived from the authority of Pliny, of Clemens Alexandrinus, and of Solinus, we answer, that though we should admit, as, indeed, we are ready to admit, that their several dates do all really refer to the same eclipse of B.C. 585, still their tradition is not shown to be ancient nor independent. It is, in all probability, nothing more than a *conclusion*, founded on the tradition which existed among the Ionians in Herodotus's time, that their famous sage, Thales, had predicted the eclipse so memorable for having occasioned the termination of the great war. Now, this tradition may have been merely an easy misrepresentation of the fact, that the eclipse, so famous for the critical juncture at which it happened, and for its important consequences, *enabled* Thales afterwards to predict, on the old scene, another eclipse, optically, more remarkable, but of no political conse-

quence. In this conjecture we have found that Dr. Hincks has anticipated us, though we did not borrow the idea.

We have professed to answer but two of the three arguments by which it is proved that the eclipse that ended the war between the Lydians and the Medes, was the eclipse of May, B.C. 585. However, in reality, we have also given an answer to the other proof,—the one derived from the tradition of Thales's prediction, and from the fact (cited from Professor Airy,) that the evening eclipse of May 28, B.C. 585, presents a facility for prediction which the others do not; leading to the belief that, by aid of the *Saros*, (or Chaldean period of eighteen years, ten days, and eight hours nearly,) Thales might have predicted that particular evening eclipse from the observation of the morning eclipse of B.C. 603, May the 17th. Considerations referring to the age of Thales incline ourselves, as they probably inclined Pliny's authority to think, that if Thales predicted any solar eclipse, it was the one of B.C. 585. For if the philosopher was living to advise Cræsus not earlier than Nabonedus's reign (or regency) at Babylon, which began in B.C. 555; (and this is implied by a story to which I attach no particular credence, but repeated, like that of the prediction of the eclipse, by Herodotus)—he certainly is less likely to have predicted the eclipse of B.C. 603, than that of B.C. 585. But the first, and the date of it, must have been well remembered in the days of Thales, and may have helped this Ionian philosopher, as Mr. Airy, and also Dr. Hincks point out,—to predict another eclipse in B.C. 585. This, when it occurred, was naturally supposed to exhibit exactly the same appearances which had been beheld by the Medes and Lydians in B.C. 603. The total darkness which accompanied the predicted eclipse was ascribed to its predecessor, and this one was also represented as having been foretold, instead of having *enabled Thales to foretell* the other. We have already given Herodotus's account of the eclipse which interrupted the fight between the Medes and the Lydians, omitting only (what, as translated by Geo. Rawlinson, we here conclude by subjoining) the words connecting the eclipse with Thales:—"This event had been foretold by Thales the Milesian, who forewarned the Ionians of it, fixing for it *the very year in which it actually took place.*" The prediction, then, was not very precise, if Herodotus has not feared to do it justice. According to the idea above cited of the method used, the calculation may be thus represented:—Olymp. xlv. i. (still *current*) + 18 years = Olymp. xlviii. 3 (*before its close*) = the Olympic year of the eclipse to come. Or, thus, E.N. 145 + 18 = E.N. 163, the year of fresh eclipse.