of practical numeration on which such a system of terms is always founded.[2] The South American Indians, the Koussa Caffres and Hottentots, and the natives of New Holland, all of whom are said to be unable to reckon further than the fingers of their hands and feet,[3] cannot, as we do, include in their notion of a year the fact of its consisting of 365 days. This fact is not likely to be known to any nation except those which have advanced far beyond that which may be considered as the earliest scientific process which we can trace in the history of the human race, the formation of a method of designating the successive numbers to an indefinite extent, by means of names, framed according to the decimal, quinary, or vigenary scale.

But even if we suppose men to have the habit of recording the passage of each day, and of counting the score thus recorded, it would be by no means easy for them to determine the exact number of days in which the cycle of the seasons recurs; for the indefiniteness of the appearances which mark the same season of the year, and the changes to which they are subject as the seasons are early or late, would leave much uncertainty respecting the duration of the year. They would not obtain any accuracy on this head, till they had attended for a considerable time to the motions and places of the sun; circumstances which require more precision of notice than the general facts of the degrees of heat and light. The motions of the sun, the succession of the places of his rising and setting at different times of the year, the greatest heights which he reaches, the proportion of the length of day and night, would all exhibit several cycles. The turning back of the sun, when he had reached the greatest distance to the south or to the north, as shown either by his rising or by his height at noon, would perhaps be the most observable of such circumstances. Accordingly the τροπαὶ ἠελίοιο, the turnings of the sun, are used repeatedly by Hesiod as a mark from which he reckons the seasons of various employments. "Fifty days," he says, "after the turning of the sun, is a seasonable time for beginning a voyage."[4]

The phenomena would be different in different climates, but the recurrence would be common to all. Any one of these kinds of phenomena, noted with moderate care for a year, would show what was the number of days of which a year consisted; and if several years

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[2] *Arithmetic* in *Encyc. Metrop.* (by Dr. Peacock), Art. 8.   [3] Ibid. Art. 32.

[4] Ἤματα πεντήκοντα μετὰ τροπὰς ἠελίοιο
    Ἐς τέλος ἐλθόντος θέρεος.—*Op. et Dies*, 661.