

terms without meaning in Mongol, directly adopted or imitated from the Chinese, *Ga*, *Yi*, *Bing*, *Ting*, etc. (4) By the five Cardinal Points: East, South, Middle, West, North. Thus 1864 was the first year of a 60-year cycle:—

1864 = (Masc.) <i>Wood-Rat</i> Year	= (Masc.) <i>Blue-Rat</i> Year.
1865 = (Fem.) <i>Wood-Ox</i> Year	= (Fem.) <i>Blue-Ox</i> Year.
1866 = (Masc.) <i>Fire-Tiger</i> Year	= (Masc.) <i>Red-Tiger</i> Year.
1867 = (Fem.) <i>Fire-Hare</i> Year	= (Fem.) <i>Red-Hare</i> Year.
1923 = (Fem.) <i>Water-Swine</i> Year	= (Fem.) <i>Black-Swine</i> Year.

And then a new cycle commences just as before.

This Calendar was carried by the Mongols into all their dominions, and it would appear to have long survived them in Persia. Thus a document issued in favour of Sir John Chardin by the *Shaikh-ul-Islám* of Ispahan, bears the strange date for a Mahomedan luminary of "The year of the Swine." The Hindus also had a 60-year cycle, but with them each year had an independent name.

The Mongols borrowed their system from the Chinese, who attribute its invention to the Emperor Hwang-ti, and its initiation to the 61st year of his reign, corresponding to B.C. 2637. ["It was Ta-nao, Minister to the Emperor Hwang-ti, who, by command of his Sovereign, devised the sexagenary cycle. Hwang-ti began to reign 2697 B.C., and the 61st year of his reign was taken for the first cyclical sign." *P. Hoang, Chinese Calendar*, p. 11.—H. C.] The characters representing what we have called the ten coefficient epithets are called by the Chinese the "Heavenly Stems"; those equivalent to the twelve animal symbols are the "Earthly Branches," and they are applied in their combinations not to years only, but to cycles of months, days, and hours, such hours being equal to two of ours. Thus every year, month, day, and hour will have two appropriate characters, and the four pairs belonging to the time of any man's birth constitute what the Chinese call the "Eight Characters" of his age, to which constant reference is made in some of their systems of fortune-telling, and in the selection of propitious days for the transaction of business. To this system the text alludes. A curious account of the principles of prognostication on such a basis will be found in *Doolittle's Social Life of the Chinese* (p. 579 *seqq.*; on the Calendar, see Schmidt's Preface to *S. Setzen; Pallas, Sammlungen*, II. 228 *seqq.*; *Prinsep's Essays, Useful Tables*, 146.)

["Kubilai Khan established in Peking two astronomical boards and two observatories. One of them was a Chinese Observatory (*sze t'ien t'ai*), the other a Mohammedan Observatory (*hui hui sze t'ien t'ai*), each with its particular astronomical and chronological systems, its particular astrology and instruments. The first astronomical and calendar system was compiled for the Mongols by Ye-liu Ch'u-ts'ai, who was in Chingis Khan's service, not only as a high counsellor, but also as an astronomer and astrologer. After having been convinced of the obsolescence and incorrectness of the astronomical calculations in the *Ta ming li* (the name of the calendar system of the Kin Dynasty), he thought out at the time he was at Samarcand a new system, valid not only for China, but also for the countries conquered by the Mongols in Western Asia, and named it in memory of Chingis Khan's expedition *Si ching keng wu yüan li*, *i.e.* 'Astronomical Calendar beginning with the year *Keng wu*, compiled during the war in the west.' *Keng-wu* was the year 1210 of our era. Ye-liu Ch'u-ts'ai chose this year, and the moment of the winter solstice, for the beginning of his period; because, according to his calculations, it coincided with the beginning of a new astronomical or planetary period. He took also into consideration, that since the year 1211 Chingis Khan's glory had spread over the whole world. Ye-liu Ch'u-ts'ai's calendar was not adopted in China, but the system of it is explained in the *Yuen-shi*, in the section on Astronomy and the Calendar.

"In the year 1267, the Mohammedans presented to Kubilai their astronomical calendar (*wan nien li*, *i.e.*), the calendar of ten thousand years. By taking this denomination in its literal sense, we may conclude that the Mahomedans brought