

## THE DATE OF CONFUCIUS' BIRTH

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The date of Confucius' birth has been the subject of doubt and dispute for more than two thousand years. Some have even doubted that we know anything whatever about his dates. But there is too much historical evidence concerning him to justify such scepticisms. Some time, probably before 110 B.C., the great historian Sz-ma Tsien<sup>1</sup> visited the house of Confucius, which had become his temple. There Sz-ma Tsien saw Confucius' robes and bonnet, his lute, his chariot, and the documents about him<sup>1</sup>. The latter probably included the genealogical register of his descendants, which the historian quotes<sup>2</sup>. He wrote the first life of Confucius, making it Chapter XLVII of his great history, the *Shzh-ji* or *Historical Records*. This house had been occupied by the descendants of Confucius since the Sage's death. About it had grown a village of Confucian teachers and pupils—the first university in China<sup>3</sup>.

The date of Confucius' death is well known, the fourteenth year of Duke Ai of Lu, the fourth month, the day *ji-chou*, which was the same as the fourth of March, 479 B.C.<sup>4</sup> That date is not only found in the *Historical Records*<sup>5</sup>, but also in the very early continuation of the *Spring and*

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<sup>1</sup> Cf. É. Chavannes, *Les Mémoires Historiques de Se-ma Ts'ien* (book hereafter denoted by the abbreviation *MH*), Vol. V, pp. 429, 435. This book is a partial translation of Sz-ma Tsien's *Shzh-ji* or *Historical Memoirs* (book hereafter denoted by the abbreviation *SJ*).

<sup>2</sup> *MH*, V, 430-434.

<sup>3</sup> *MH*, V, 429.

<sup>4</sup> Throughout this paper there is used the Gregorian calendar now in use. For the purpose of an anniversary, it is better to use only one calendar, in which judgment I am glad to have the approval of the Camden Professor of Ancient History and Principal of Brasenose College, H. M. Last.

To convert Gregorian dates into the corresponding Julian ones: between 502 and 600 B.C., add six days; between 302 and 500 B.C., add five days.

<sup>5</sup> To find the European dates corresponding to a Chinese one, I have used P. Hoang, *Concordance des Chronologies Néoméniques Chinoise et Européenne*, 1910, "Variétés Sinologiques", No. 29 (book abb.: Hoang). I have tested this splendid work by its dates for some fifty-odd solar eclipses in Han times, some of which had not been identified by its author, and have found it always correct to within a minimum of three days.

These errors of a few days do not, however, invalidate its equations between Chinese and European dates. The ancient Chinese indicated the days by a well-known

*Autumn*<sup>1</sup>, a work which is said to have been written by the disciples of Confucius, in order to continue his history down to his death. This continuation more probably formed part of the original *Spring and Autumn*, which was actually a fifth-century B.C. chronicle of the State of Lu<sup>2</sup>, with which Confucius probably had little to do. This entry is very early and I see no reason to question it.

cycle of sixty names, which cycle was repeated over and over, quite regardless of the months or years. Consequently a name from this cycle, if transcribed correctly, is like the last two digits of a Julian day number—it can be in error only by a large amount, in this case by sixty days or a multiple thereof, and not by a smaller amount. Unless there is likely an error of at least two months, these cyclical days provide an accurate equation with European calendars.

The ancient Chinese calendar attempted to begin a new month with the new moon, and yet to keep the months at approximately the same place in the solar year. Since Han times (200 B.C.) and earlier, when solar eclipses had come to be considered as serious visitations from Heaven, the time of conjunction between sun and moon (at which times, only, eclipses occur) had been attempted to be set on the last day of a month, so that no month would begin with an eclipse. It is uncertain whether such an attempt was made in the lifetime of Confucius.

It is very likely, however, that in the time of Confucius the length of the month was calculated, and no longer were months begun merely when a new moon was seen. *Analects* III, xvii, says: "(Duan-mu Tz) Dz-gung wished to dispense with the live sacrificial sheep offered in the Ducal Ancestral Temple at the announcement of the first day of the new month". There had thus been a time when the beginnings of new months had not been fixed by a rule, and when, consequently, each new month had to be announced to the ancestors, just as births, accessions, etc., continued so to be announced. But before, or by the time of, Confucius, the months had begun to be fixed by some plan such as that in a saros (which cycle was known in Babylonia quite early), so that it was no longer necessary to announce the months to the ancestors. Jeng Hsüan (lived A.D. 127-200) states, "In [the state of] Lu, beginning [in the time of] Duke Wen (626-609 B.C.), they no longer observed [the moon to discover when to announce] the first day of a new month."

Since the movements of the moon are more difficult to calculate than those of any other conspicuous heavenly body (they are not even yet completely calculable), it is not surprising that mistakes were occasionally made in predicting when a [lunar] month should begin. The Chinese accordingly watched for solar eclipses on the last and first days of the month, because thereby they could correct their calendar.

The errors in Hoang's calendar arise from his inability to know in all cases exactly what day was actually set to be the first day of a month. Since, however, Chinese months were based on astronomical facts, and the occurrence of eclipses would constitute a public warning that the calendar was out of step with the heavens, Chinese months never differed more than a few days from what they should have been. We may rely upon the exact correctness of Hoang's equations between European calendars and Chinese cyclical days, even though he may be a few days in error concerning the first day of an ancient month.

<sup>1</sup> Cf. J. Legge, *The Ch'un Ts'ew, with the Tso Chuen*, Vol. V of his "Chinese Classics", p. 844<sup>a</sup>=846.

<sup>2</sup> The fact that Confucius is here called "Kung Chiu", using his given name, which was avoided as disrespectful when used by a pupil or a junior, even in the *Analects*, is evidence that this entry could hardly have been made by a disciple of Confucius. The original *Spring and Autumn* was probably cut short by the early Confucians, in order to make it end shortly before the death of Confucius and thus attribute it to him.

Far otherwise is the case with the date for the birth of Confucius. The primary sources appear hopelessly contradictory. For their discussion we need to translate and interpret them individually.

Sz-ma Tsiên, writing about 100 B.C., is quite uncertain on what day Confucius was born. He, however, twice states that the Sage was born in the twenty-second year of Duke Siang of Lu, which date corresponds with 551 B.C.<sup>1</sup> He also declares that Confucius was in his seventy-third year when he died in 497<sup>2</sup>, which date agrees with a birth in the Duke's twenty-second year.

This birth is not mentioned in the *Spring and Autumn*. Two early commentaries upon it, called the *Gung-yang* and the *Gu-liang Traditions*, however, provide dates which are different from that in the *Historical Memoirs* and from each other. These two books (they may have both originally been the same book, which suffered mutilation and loss) probably date from the first half of the third century B.C. The records therein are worth careful study along with the corresponding passage in the *Spring and Autumn*, to which they are attached.

The *Spring and Autumn*, in its account of the twenty-first year of Duke Siang (552 B.C.), states, "In the ninth month, on the day *geng-sü*, the first day of the month, there was an eclipse of the sun. In the winter, the tenth month, on the day *geng-chen*, the first day of the month, there was an eclipse of the sun."<sup>3</sup>

The *Gung-yang Tradition* for the same year repeats the two above-quoted sentences from the *Spring and Autumn*, and adds, "In the *eleventh* month, on the day *geng-dz*, Master Kung (Confucius) was born."<sup>4</sup>

The *Gu-liang Tradition* for the same year likewise repeats these two sentences from the *Spring and Autumn*, adding, in continuance of the events in the *tenth* month, "On the day *geng-dz*, Master Kung (Confucius) was born."<sup>5</sup>

<sup>1</sup> Cf. *MH*, V, 289. The same date is given in Sz-ma Tsiên's "Table of the Twelve Nobles", *SF*, Chap. 14. This chapter was not translated by Chavannes.

<sup>2</sup> *MH*, V, 425.

<sup>3</sup> Cf. Legge, *op. cit.*, p. 487=498.

<sup>4</sup> *Chun-tsiu Gung-yang Juan Ju-su*, 20: 8a, from the "Sz-bu Bei-yao" ed. of the "Shah-san Jing Ju-su". In his *Combined Concordances to the Ch'un-ch'iu, Kung-yang, Ku-liang and Tso-chuan*, "Harvard-Yenching Institute Sinological Index Series", Supplement No. 11, Vol. I, p. 295, William Hung has placed this sentence from the *Gung-yang Tradition* in the text of the *Spring and Autumn* itself, without indicating the fact that it is lacking in the present text of that book. His theory is that the two *Traditions* copy the ancient text of the *Spring and Autumn*. But the name for Confucius used in this passage, "Kung-dz", is not what would have been written by a historian in the time of the Sage. He would have used the Sage's personal name, as is done in the *Spring and Autumn*'s record of the Sage's death. "Kung-dz" is the designation used by the early disciples of the Sage. Hung's attribution of this record to the *Spring and Autumn* is almost surely mistaken.

<sup>5</sup> *Chun-tsiu Gu-liang Juan Ju-su* (same ed. as in the previous note), 16: 3a.

Our ancient sources thus provide three different dates for the birth of Confucius: 551 B.C. (in the *S'f*); 552 B.C., month xi, day *geng-dz* (the *Gung-yang*); and 552, month x, *geng-dz* (the *Gu-liang*). This discrepancy has prevented subsequent historians from fixing the date of Confucius' birth.

The first circumstance that strikes one in these datings is the statement in the *Gung-yang Tradition* that the tenth month began with a *geng-chen* day and that Confucius was born in the *next* month on a *geng-dz* day. For that was clearly impossible. *Geng-chen* is the seventeenth day in the Chinese cycle of sixty days, while *geng-dz* is only the thirty-seventh day. Hence, *geng-dz* must have been in the *same* (the tenth) month, if that month really began with a *geng-chen* day. *Geng-dz* cannot have occurred in the eleventh month. Something is obviously wrong in the *Gung-yang Tradition*.

This error was obvious to any intelligent Chinese who examined the passage, for the cyclical series was, and still is, in constant use. The preservation of so obvious an error, however, seems to indicate that there must have been some very strong reason for such a strange tradition. It makes us believe that we are dealing with a genuine record of Confucius' actual birth, if only we can discover what is wrong with it and correct it. Confucianism emphasized the faithful transcription of texts. "The Master said, 'I can still remember when a clerk would leave blank spaces (in transcribing an illegible text) . . . Now, alas, such things are no more,'"<sup>1</sup> Underlying the obviously impossible statement in the *Gung-yang Tradition*, there must have been a correct record of Confucius' birth.

The second circumstance that strikes us as strange is the sequence of two solar eclipses in successive months recorded in the *Spring and Autumn*. Some Chinese astronomers in the Middle Ages protested that such a sequence is impossible. The reply was made that the *Spring and Autumn* was written by Confucius, hence must be correct; moreover, there are occasionally similar records in subsequent histories.

To-day we are fortunately able to calculate eclipses and need not depend upon possibly incorrect records. It is indeed possible that two solar eclipses may follow one another at an interval of one lunation. But if both are visible eclipses, they are invariably partial and are located at opposite poles, one being visible in the north polar region or thereabouts, and the other in the south polar region, or vice versa. It is impossible for two visible solar eclipses to be seen in China at consecutive new moons. Then the record in the *Spring and Autumn* is itself in error. Possibly the mistake in dating Confucius' birth arises from this circumstance.

The eclipse in the tenth month is stated to have occurred on a *geng-chen* day. It is, however, possible that *geng-chen* is itself an error. Now, there are only two other of the ten branches that might easily be mistaken for

*geng* 庚, namely *jia* 甲 and *guei* 癸. For *chen* 辰, *sü* 戌 is a possible mistake. *Guei* does not combine with *chen* or *sü*, hence we must look for eclipses on one of the four days: *geng-chen*, *geng-sü*, *jia-chen*, and *jia-sü*<sup>1</sup>.

Now in the period of twenty years, ten years before and ten years after the presumed date of this eclipse, there was *only one* prominent eclipse of the sun visible at Lu on any one of these four cyclical days<sup>2</sup>. This eclipse occurred on the fourteenth of August, 552 B.C., a *geng-sü* day in the ninth month of Duke Siang's twenty-first year<sup>3</sup>. This was the first of the two eclipses recorded in the *Spring and Autumn*. It was a fairly large eclipse, beginning at 1.12 p.m., reaching a magnitude of 71 per cent. (totality = 100 per cent.) at 2.32 p.m., and ending at 3.48 p.m., local time<sup>4</sup>. An eclipse of 75 per cent. magnitude is generally considered conspicuous, so that it could not escape notice. This eclipse almost reached that condition.

There was no solar eclipse visible in Lu in the tenth month. The error in the *Spring and Autumn* is then a dittography, possibly due to misreading a probably difficultly legible word. *Sü* can easily be mistaken for *chen*<sup>5</sup>.

<sup>1</sup> These are days 17, 47, 41, and 11 of the sixty-day cycle. The eclipses occurring on these days are easily discovered by using the table in Th. von Oppolzer, *Canon der Finsternisse*, "Denkschriften der kaiserlichen Akademie der Wissenschaften" No. 52, Wien, 1887. The number in the Chinese cycle is found by dividing his Julian day numbers by sixty and adding fifty or subtracting ten from the remainder.

<sup>2</sup> There were two other solar eclipses visible on such days in that period, but neither one was large or lasted long enough for us to expect it to have been noticed.

On October 17, 547 B.C., there was a sunset eclipse on a *geng-chen* day. At Lu it began at 5.15 p.m. local time and ended at 5.32 p.m., when the sun set. The moon's shadow entered only 28/100 of the sun's diameter across the sun's disk, an amount not sufficient to cause a perceptible diminution of light. Unless, in clear weather, with no trees or hills to obscure the sun at the horizon, someone happened to be watching the sun during those seventeen minutes, this eclipse would have been missed. One should not expect it to have been seen except by a person who could predict it—something not possible in China until about the third century A.D.

On March 10, 562 B.C., another *geng-chen* day, there was a sunrise eclipse (6.12 a.m.) at Lu. This eclipse covered only 2 per cent. of the sun's diameter at sunrise and almost immediately ended—a mere touch of the moon's umbra at sunrise. Such an eclipse could hardly have been seen.

<sup>3</sup> Hoang equates this date with the second day of the ninth month, not the first day. He is following his theory of the way the Chinese calendar was made, and is here obviously in error by one day. Hoang recognizes this fact on p. 3 of his *Catalogue des Eclipses de Soleil et de Lune relatives dans les Documents Chinois*, "Variétés Sinologiques" No. 56. Hoang did not feel justified in allowing for empirical errors made by ancient royal astronomers, because discrepancies between his calculations and Chinese records might have been due to errors of transcription.

<sup>4</sup> The calculation of these eclipses was made by the tables in P. V. Neugebauer, *Astronomische Chronologie*—which is an improvement on Oppolzer. The latter is not sufficiently accurate to locate the region in which an ancient eclipse was visible.

<sup>5</sup> I have shown that the eclipse of June 20, 1 B.C. (Julian), which occurred on a *ren-sü* day, was actually recorded as having occurred on a *ren-chen* day—the same misreading of *chen* for *sü* as in this case; cf. *HFHD*, Vol. III (in process of publication), Chap. XI, App. II, ii. Since winter automatically began with the tenth month, "in the winter" means no more than "tenth to twelfth month" and has no separate value for the date.

<sup>1</sup> *Analecti* XV, xxv.

Once that error was made, the rest of the record follows automatically. Both *Traditions* were thereafter misled by an error in the text they were explaining.

The correct recording, moreover, gives us confidence in the fundamental correctness of Hoang's calendar. Confucius was born, according to the two *Traditions*, on a *geng-dz* day in the tenth or eleventh month of the Duke's twenty-first year. Since *geng-sü* is the forty-seventh day of the cycle and *geng-dz* is the thirty-seventh day, Confucius was born fifty days after the eclipse, that is, in the tenth Chinese month, on the third of October, 552 B.C. There was no *geng-dz* day in the eleventh month.

It is now clear how the two discrepant recordings in the *Gung-yang* and the *Gu-liang Traditions* arose. Both of them, because of their faithful copying of the record in the *Spring and Autumn*, made the mistake of placing a solar eclipse in both the ninth and tenth months. Their author or authors had no means of calculating eclipses and so of correcting their source. The *Gung-yang Tradition*, moreover, knew that Confucius was born in the month following that beginning with a solar eclipse, so mistakenly placed that birth in the eleventh month, in spite of the fact that thereby it wrote nonsense by locating a *geng-dz* day in an impossible month. This circumstance, moreover, lends great reliability to the fact underlying the *Gung-yang's* record—that Confucius was actually born on a *geng-dz* day in a month following one inaugurated by an eclipse. The *Gu-liang Tradition's* record is then correct<sup>1</sup>. The calculation of the visibility of eclipses and the use of historical calendars has enabled us to decide definitely, and with very little chance of mistake, between these two recordings—something not previously possible.

What now can we say about the date of Confucius' birth in the *Historical Records*? Sz-ma Tsien states that Confucius was in his seventy-third year when he died. Since we must now base our reasoning upon the way that age is counted by the Chinese, it is necessary first to explain this counting.

It is frequently stated that Chinese count ages differently from occidentals, adding one or two years to their age. Such a statement betrays misunderstanding of the Chinese language. In the classical Chinese style, the phrases "seventy-three years old" and "in the seventy-third year of age" are usually written exactly alike, as *nien tsi-shzh-san* or *tsi-shzh-san sui*. The reader is expected to know which one is meant in any particular case. It is

<sup>1</sup> The *Gu-liang Tradition's* present record may actually be an emendation from a record originally the same as that in the present *Gung-yang Tradition*. This change would have likely been made in Han times to indicate the superiority of the *Gu-liang* over the *Gung-yang*, when, between 91 and 70 B.C., the *Gu-liang Tradition* was in eclipse because Dung Jung-shu had disapproved of it. Cf. *Tsien-Han-shu* 88: 23 b (ed. of Wang Sien-chien, the *Han-shu Bu-ju*). On the other hand, the present reading of the *Gu-liang Tradition* may well be original.

quite possible to write these phrases differently and unambiguously, but that is not usually considered necessary. In the present spoken language, ages are practically always stated in a phrase using the classical style, as evidenced by the omission of a "numery adjunct" with the number of years. Hence, when a man says he is *tsi-shzh-san sui*, we have no right to say that he *must* mean he is seventy-three years old, just because *we* state ages that way. He may equally well mean he is in his seventy-third year—a usage we sometimes, indeed, employ in English.

As a matter of fact, a person's age in Chinese is almost always specified in the same manner as are the years in a king's reign. We do not wait until after a king has reigned for a full year before we say it is his first year. So we should not expect the Chinese to say that a child who has lived a day more than ten years is *shzh sui*. Of course he is *shzh-yi sui*, which means, "in his eleventh year".

In ancient China, ages were specified in terms of ordinal elapsed years. A man who had lived just more than seventy-two full years was said to be *nien tsi-shzh-san*, i.e., to be "in his seventy-third year". To-day the fashion has changed slightly. Instead of counting elapsed years, people count calendar years. So a babe born in November is, in December, in its first year, and, in January, it is in its second (calendar) year. There is nothing strange that a babe only three months old should be living in its second calendar year. The Chinese do not add one or two years to their age—they state ages quite as sensibly as we do. Only they follow a slightly different practise.

Now if Confucius was born on the third of October, 552 B.C., by the fourth of March, 479 B.C. there would have elapsed seventy-two years, five months, and one day, i.e., he was in his seventy-third year. So Sz-ma Tsien's statement of Confucius' age is quite in harmony with what the two *Traditions* say about the date of Confucius' birth<sup>1</sup>. He very likely took this length of life from the genealogical records he saw in Confucius' house, in which he also found the ages of Confucius' descendants<sup>2</sup>.

But Sz-ma Tsien was himself an astronomer. Upon looking at the two *Traditions*, he, of course, immediately recognized the difficulties we have noted. He could not correct those errors and had no better dating. So he

<sup>1</sup> This actual agreement of Sz-ma Tsien's length for Confucius' life and the date in the two *Traditions* was recognized as early as the first century. In a note to the *Dzo-juan* for Duke Siang, year XXXI (*Chun-tsiu Dzo-juan Ju-su*, 40: 112, in the same ed. as that in Note 4, p. 141). Kung Ying-da (lived 574-648) quotes a note by the famous scholar Jia Kuei (lived A.D. 20-101) to the *Spring and Autumn* for the twenty-first year of Duke Siang, saying, "This passage states when [Kung] Jung-ni (Confucius) was born. In the sixteenth year of Duke Ai, the fourth month, the day *ji-chou* [March 4, 479], he died, which was in his seventy-third year". (This note has otherwise been lost.)

<sup>2</sup> Cf. *MH*, V, 430-433.

merely counted back from the year of Confucius' death to the seventy-third year previous—and reached the twenty-second year of Duke Siang (521 B.C.) He, however, failed to take into consideration the circumstance that Confucius might equally well have been born towards the end of the Duke's twenty-first year. So there is no contradiction between the length of Confucius' life in the *Historical Records* and the date of his birth in the two *Traditions*.

With the understanding of Chinese countings of age and the records available to us, we accordingly conclude that the third of October, 552 B.C. is almost surely the actual date of Confucius' birth. In 1949 we may accordingly celebrate the 2500th anniversary of his birth.