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SOME BACKGROUND TO THE ROMAN CALENDAR IN GENERAL USE TODAY

Some background to our modern Roman calendar may be helpful. Here is a brief account of how our calendar came about.

1) According to legend, Rome was founded on April 21, 753 B.C. by Romulus and Remus. Romulus (supposedly) made the year to consist of 304 days, divided into 10 months of nearly equal length. Starting with the first month, they were: Martius, Aprilis, Maius, Junius, Quintilis, Sextilis, September, October, November and December. (Much later Quintilis was changed to Julius and Sextilis was changed to Augustus.)

2) The next king of Rome after Romulus, Numa Pompilius, added 2 months to the year. He added Januarius at the beginning of the year and Februarius to the end of the year. He made his 12 months to be lunar, consisting of alternately 30 days and 29 days. This made the year 354 days long, but in deference to the popular superstition that uneven numbers were more lucky, he added 1 more day. Thus his year was 355 days long.

3) This was more than 10 days shorter than the true solar year. Therefore Numa (who knew the year was 365,25 days long) ordered that for every 8 years, 90 days should be intercalated as follows:

- a month of 22 days was intercalated in every 2nd and 6th year;

- a month of 23 days was intercalated in every 4th and 8th year.

4) These intercalations were to be made between February 23rd and February 24th (very confusing), thereby dividing February into two portions every second year. Thus 8 such years would amount to (8 * 355) + 90 = 2930 days, or 366,25 days per year. This is exactly 1 day too long per year. Therefore Numa ordered that in every 3rd period of 8 years (i.e. for 8 years out of every 24 years) there were to be only 3 intercalated months, and they were to be each 22 days long. Thus for 24 years there would be: 2930 + 2930 + 2906 = 8766 days divided by 24 = 365,25 days per year.

A VERY LABOURIOUS SYSTEM INDEED.

5) These instructions were committed to the priests and they were to implement them correctly. In practice the priests manipulated this system for their own ends. In order to hasten annual elections (to get rid of an unpopular official) they would omit these intercalated months. In order to keep a popular official in office a bit longer they would arbitrarily add these intercalated months.

6) It is not surprising that the calendar of Rome ended up in chaos. And so at the time of the Decemviri (a commission of legal experts instructed to gather and to publish the oral customs of Rome for the purpose of informing the common people), around 450 B.C., the number of days in the months was altered. January was retained as the first month of the year, but February was moved from last place to second place, right after January. This continued down to the time of Julius Caesar.

7) By 46 B.C. the calendar was again in disarray. Therefore Julius Caesar instructed Sosigenes, an astronomer from Alexandria, to reform the calendar. He assumed the length of the year to be 365,25 days. For his calendar Sosigenes adopted the Egyptian year of 365 days, with the correction that every

4th year would have 366 days. The extra day was obtained by duplicating "dies sextus ante Kalendas Martias" (the 6th day before the Kalends of March), corresponding to February 24th. (You get the idea that February 24th was quite important to people back then.)

8) Caesar agreed that the year should start with January 1, and it came into force on January 1 in 45 B.C.. He ordered that uneven months (more lucky!) should have 31 days and the others 30 days, except for February. February should have 29 days for 3 years and then 30 days for 1 year.

9) Caesar Augustus, Julius' nephew, later gave the month August 31 days, taking 1 day away from February. Augustus also reduced September and November down to 30 days, instead giving October and December 31 days each (to avoid three 31-day months in a row ... July, August, September).

That is basically the calendar we have today!

10) Since the solar year is only 365 days 5 hours 48 minutes and 46 seconds long, it means that this Julian year is 11 minutes and 14 seconds too long. This means that for every 128 years the Julian calendar is 1 whole day too long.

11) And so in 1576 A.D. Luigi Lilio Ghiraldi (also called Aloysius Lilius) prepared a new calendar, but Luigi died before he could show it to the Pope. His brother then submitted it to Pope Gregory XIII, pointing out that for that year the equinox had moved away from March 21 (where it had been in 325 A.D. at the time of the Council of Nicea) and was at March 11. Pope Gregory responded quickly to the suggested reform. Thus in 1582 10 days were DROPPED from the calendar: Thursday October 4th was followed by Friday October 15th. Thereafter it was decreed that every full century not divisible by 400 should NOT be a leap year. This means that for every 400 years 3 days are dropped from the Julian calendar.

12) And that's where we are today. Now the year is STILL 26 seconds too long. This amounts to 1 day in 3323 years, nothing for us to worry about at this stage of human history.

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