

“Gregorius Calendarifex”

The Quern-Dust Calendar — Ragnall MacilleDhuibh

WHEN Julius Caesar instituted the Julian Calendar in 46 BC, he decreed that the year should have 365 days, with an extra day every four years to cope with the fact that the earth actually takes about 365 days and 6 hours to revolve around the sun (or the sun around the earth, as was believed then).

The trouble was that the solar year is a little shorter than this — 365 days, 5 hours, 48 minutes and 46 seconds. Caesar’s leap year every four years was an over-compensation. The result was that the calendar slipped about 11 minutes annually and lagged a whole day behind for every 134 years that went by. At the beginning of the Christian era the solstices, for example, fell on the 25th of June and December, the equinoxes on the 25th of March and September. But by AD 89 they were on the 24th, by AD 223 on the 23rd, by AD 357 on the 22nd, by AD 491 on the 21st, and so on, till by AD 1563, the time of the Reformation, they had reached the 13th.

This can help us understand the dates of some of our festivals. Historians have often pointed out that we do not actually know at what time of year Christ was born, and that Christmas simply represents a continuing tradition of a festival of the winter solstice. According to the ‘Concise Oxford Dictionary of the Christian Church’, the earliest mention of Christmas being celebrated on 25 December is in the Philocalian Calendar, which represents Roman practice in AD 336. But if it was held at the solstice, it must date still further back, to the period before AD 89 when the solstice still fell on 25 December.

Again, the feast of St John the Baptist is the traditional midsummer festival, when a community bonfire was lit, in Gaelic *tein’ Fhéill Eathain*, St John’s Fire. As I pointed out long ago on this page, St John seems to have gradually taken over the festival from the god Manannan, and in the Western Isles both figures were equally associated with it down to the nineteenth century. It seems very plausible to see a pagan deity presiding over the summer solstice. And we can say that, since the feast of John the Baptist is 24 June, this date must have been fixed by the fathers of the Church in the period around AD 89–223 when the solstice fell on that day.

By way of contrast, the legend of St Michael the Archangel, the dragon-slayer of Revelation 12: 7–9, who is commemorated on hill-top sites spread across Europe from Monte Gargano in Italy through Mont Saint Michel in Brittany to Ardmichael in South Uist, is full of elements that cannot be explained by Christianity alone, and at first sight his day, 29 September, seems suspiciously close to the autumnal equinox. But its origins must lie in something else, because the date of the equinox slipped forward from the 25th to the 13th, not back to the 29th.

In fact, equinoxes were not as easy to calculate as solstices, and this can be seen from the history of Easter, the most important of all Christian festivals. The Council of Nicaea (AD 325) determined from examination of scripture that Easter should fall on the first Sunday after the first full moon after the spring equinox, but never at the beginning of the Passover. Unfortunately this demanded the impossible — the accurate determination of a date that assumed a precise knowledge of the movements of sun, earth, and moon. What is more, unlike Ramadan of the Moslems (which begins when the appearance of the ninth new moon of the lunar year has been notified by two witnesses to a judge), Easter must be calculated weeks in advance, because the festivals of Lent have to be celebrated on the correct days during the seven preceding weeks. This year, Shrove Tuesday is 7 March, and Easter Day is 23 April.

At Nicaea it was decided that the equinox then fell on 21 March, which was not a bad estimate. The Church stuck to this arbitrary date for over a thousand years, but in the sixteenth century, with the rise of Protestantism and the advance of scientific knowledge, it was felt that something must be done. Caesar’s calendar had to be adjusted in line with reality — but how?

The solution was provided by a commission appointed in the 1570s by Pope Gregory XIII, drawing mainly on the work of an obscure physician and astronomer from southern Italy called Luigi Lilio. There were two problems — getting the calendar back on track, and keeping it there.

It was decided that the solstices and equinoxes should be on the 21st of the month, as decreed at Nicaea. That meant losing ten days. One of Lilio’s options for achieving this was simply to have no leap years at all for forty years. Another was to remove all ten days at once. Boldly, the Commission decided to recommend the latter — the Church’s credibility was at stake, and it had to move quickly.

As for keeping the calendar on track, one of the options was to omit a leap year every 134 years. But Lilio hit upon something neater. Thinking about that number 134, it struck him that it is very close indeed to being a third of 400. Three leap years, therefore, could be omitted every 400 years. This could be done in a way that would be very easy to remember by concentrating on the years ending 00. 1600 should be a leap year, he thought. 1700, 1800 and 1900 should not be leap years. But 2000 — yes, this year — should be a leap year. And so on.

It was a brilliant solution. Of course, 134 is not an exact third of 400, but the error can be corrected by dropping an extra day once every 3,300 years, so we won’t have to worry about that until AD 4870 or thereabouts.

Lilio actually died before his plan could be presented to the Commission in 1576, but it was brought forward by his brother Antonio, and it won the day. Pope Gregory was enthusiastic. The new calendar was introduced in the form of a bull, which he signed in February 1582. He was 80 years old (the same age as the present Pope) and there was to be no delay. The ten days would be lost in October 1582. There were few great festivals that month; 4 October, the feast day of St Francis of Assisi, would be followed by 15 October. St

Denis of Paris was lost on the 9th, which was certainly unfortunate, and St Edward the Confessor, an obscure king of England, on the 13th — that was about all. Finally, one other change was made — the date of the New Year, which in most countries was officially 25 March, was instead fixed at 1 January.

In his book 'The Calendar', David Ewing Duncan says that Lilio's plan was admired for its simplicity, elegance and avoidance of controversy. Dropping ten days wholesale was simple and even elegant, but hardly uncontroversial. In my own view, foregoing 29 February over forty years would have been a lot more painless. The way the Gregorian Calendar was introduced reeks of two things beloved of politicians — a quick fix and a show of power.

It's not surprising, therefore, that it met with a mixed reaction. There had been little warning. The most loyal Catholic states — Italy, Portugal, Spain — managed to meet the deadline. France took a little longer, perhaps piqued about St Denis, and complied in December. Belgium and the Catholic states of the Netherlands just made it, the day after 21 December being made 1 January. So they lost Christmas. Germany was a patchwork of states; the Catholic ones complied, the Protestant ones did not, and in Frankfurt a mob rioted against the Pope.

Hungary complied in 1587. Scotland was in turmoil and in no mood for thinking about calendars — Queen Mary was a prisoner in England, and was executed in that same year. Queen Elizabeth was in favour but the Archbishop of Canterbury was not, and in 1588 the Armada buried Euro-friendliness for generations to come. In 1600 Scotland made one small change by beginning the year on 1 January; from then until 1752, if you rode across the Border between 1 January and 25 March you travelled backwards in time.

Since there was no such thing in 1582 as a popular press, and calendars were a tool used by intellectuals, the reaction is hard to judge. There was, certainly, a pamphlet war. Protestants claimed that farmers no longer knew when to plough their fields and that even the birds were confused about when to sing and when to fly away. An Italian countered that a nut-tree in Gorizia had obediently blossomed ten days early. A German astronomer ranted that the Pope was stealing ten days out of everyone's life. But if sixteenth-century Italy, France and Spain were anything like eighteenth-century Scotland, people managed pretty well with an Old Style and a New Style, and everything settled down after a bit on one date or the other. Sometimes it's nice to have a choice.

Of course, what was now out of joint was the people's traditional wisdom. That is the point about the nut-tree in Gorizia. The feasts of the Church might be kept exactly as before as far as the clergy were concerned, but being ten days ahead of nature they were now useless as seasonal predictions of weather and crops. The accumulated wisdom of the centuries had been discarded.

Curiously, it was left to Protestants to defend the old saints' days. A German theologian fumed that Gregory was the Antichrist and his calendar a Trojan horse designed to trick real Christians into worshipping on the wrong days. *Gregorius Calendarifex*, he called him, 'Gregory the Calendar Maker'. In 1611 the English poet John Donne took up the theme. "Both the peace of the Church, and Civill businesses have bene egregiously troubled," he wrote. "Nor hath heaven it selfe escaped his violence, but hath ever since obeyed his appointments: so that *S. Stephen, John Baptist, &* all the rest, which have bin commanded to worke miracles at certain appointed dates . . . do not now attend till the day come, as they are accustomed, but are awaked ten daies sooner."

Euroscepticism remained supreme in Britain for another 140 years. Reform attempts in 1645 and 1699 were blocked by the Church of England and by those who claimed the Old Style to be the true style of God. It all sounds wearily familiar. Voltaire remarked that 'the English mob preferred their calendar to disagree with the Sun than to agree with the Pope'. By 1700 all Europe had complied except Scotland, England, Sweden and Russia. The Europhiles were those who had to do business with Europe from day to day. And some wag wrote: "Why England doth not th' years' known error mend / When all else do, no man can comprehend."

Next time I will show how, by a huge irony, the Gregorian Calendar was finally brought to Britain by an aristocratic yobbo whose cure for the troubled Highlands in 1745 was genocide.

- The last 'Quern-Dust Calendar' (14 January) was inadvertently titled 'Christmas shopping, old style', which was also the heading of the article published here on 17 December 1999. The correct heading should have been 'The beginnings of time'.

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