

XVII.—The “Calendar of Numa” and the Pre-Julian Calendar

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This paper is summarized in the first paragraph of the Conclusion, on pp. 345 f.

The cycle of named festivals preserved in capital letters in the Roman calendars has formed the basis for the study of Roman religion ever since Mommsen published his edition of the *Fasti* in 1863.¹ His dictum assigning the festivals as a whole to the period of Numa² has been somewhat modified by the work of Wissowa³ and Warde Fowler⁴ who, on the basis of topographical evidence, brought them down to the period of the Etruscan Kings, but it is still customary to date them in the regal period and to assume that they had already at that time been assigned to fixed days of the months.⁵ The festival cycle has, therefore, been interpreted as

¹ *CIL* 1 (1863) pp. 293–412. In the second edition, published in 1893, although some additions have been made, the conclusions remain unaltered. One awaits with great interest A. Deggrasi's forthcoming publication of the calendars in *Inscriptiones Italiae*, which will bring together the scattered material discovered since Mommsen's edition was published.

² *CIL* 1².1, pp. 283 f. and 297 ff. In his paper “Die Ludi Magni und Romani” (first published in *RhM* 14 [1859] 79–87 and again in 1879 in *Römische Forschungen* 2.42–57) Mommsen seems to date the final form of the capital letter calendar in the period of the *decemviri*, to which he assigns the introduction of the pre-Julian calendar. Apparently by 1863 he had changed his mind on this point.

³ “De dis Romanorum indigetibus et novensidibus disputatio.” *Gesammelte Abhandlungen* (Munich, 1904) 185 f. He presents the same argument later in *Religion und Kultus*² (Munich, 1912) 31. In his article “Septimontium und Subura,” *Gesammelte Abhandlungen* 248 f., he states that the cults of Vesta and Janus show that the *di indigetes* as a group belonged to the city of the Four Regions.

⁴ *Religious Experience of the Roman People* (London, 1911) 94 f.

⁵ This commonly accepted point of view has not entirely escaped criticism. Dissent was voiced by Hartmann, who considered that the capital letters indicated not date, but importance, and that the definitive publication of the calendar, in which the named festivals were finally attached to fixed days, was that of Cn. Flavius in 304 B.C. Cf. Hartmann-Lange, *Der Römische Kalender* (Leipzig, 1882) 132–217, especially 133. In 1928 Leuze, in his analysis of recent discoveries, has pointed out that some of them controvert certain of Mommsen's dogmatic statements (*JAW* 227 [1930] *Bericht über die Literatur zur Römischen Chronologie (Kalender und Jahrzahl)* in den Jahren 1901–1928, 97–139, especially 120, 122, 124, 134). Soltau, *Römische Chronologie* (Freiburg, 1889) 138–140, differs with Mommsen by distinguishing between festivals which were always *feriae stativae* and those which became so during the Republic. Cf. Ginzel, *Handbuch der Mathematischen und Technischen Chronologie*

presenting a picture of the religious life of Rome in the middle of the sixth century. Until quite recently it has been generally believed that the cults of the festival cycle were all native to Rome. Modern scholarship is, however, tending to discard this belief, and to identify some of these supposedly native cults as Greek or Etruscan.⁶ If the festival cycle is to be dated in the regal period, this would indicate that Rome had been materially influenced by foreign ideas at an earlier period than has been generally supposed. It would therefore seem desirable at this point to review the evidence on which the festival cycle has been dated and to decide whether it is entirely convincing. In order to do this it will be necessary to consider the festival cycle in its relation to the history of the Roman calendar as a whole. Although a vast amount has been written on the technical chronological problems of Roman history,⁷ in most discussions of the calendar only passing reference is made to the festival cycle and it has not been treated in connection with the various systems of time-reckoning practiced among the Romans.

The history of any calendar is the history of the reforms to which it has been subjected. These are often made possible by an increased knowledge of the technological problems involved in time-reckoning. But increased knowledge alone is not sufficient to bring about the reforms. Basic changes of this type must of their very nature be abrupt, not gradual, and require special con-

(Leipzig, 1906-1914) 2.189: "Wie sich aus dem Umstande ergibt, dass die Feste jedesmal für einen Monat erst nach Neumond von den Pontifices verkündet wurden, sind die Festzeiten anfänglich alle *feriae conceptivae* gewesen." Also Leuze, *op. cit.* 120: "Es ist vielmehr wahrscheinlich, dass erst in republikanischer Zeit einzelne Feste, die vorher Wandelfeste (*feriae conceptivae*) waren (namentlich Naturfeste wie z.B. die Vinalia), auf einen bestimmten Tag festgelegt, und damit erst zur Aufnahme in den Kal. als *feriae stativae* befähigt wurden." This point of view does not seem to have made its way into the general literature. See for example the treatment of the calendar in Grenier, *Mana 2.3: Les Religions Etrusque et Romaine* (Paris, 1948) 94-133. Changes in date have, however, been suggested for a few individual festivals. For instance, cf. Wissowa, "De Feriis Anni Romani Vetustissimi," *Gesammelte Abhandlungen* 165 f., for the Equirria of March 14 (cf. his *Religion und Kultus der Römer*² 437, note 1), and Basanoff's radical reorganisation in his *Regifugium, Collection d'Études Mythologiques*, 2 (Paris, 1943).

⁶ Especially in the work of the Frankfort school. See the review articles by Deubner, *Arch. für Religionswiss.* 33 (1936) 100-136, and Turchi, "Religione Romana 1936-1940," *Bull. Comm. Arch.* 68 (1940) 203-209.

⁷ For bibliographical material, see the works of Ginzler and Leuze cited in note 5; also Bickermann, *Einleitung in die Altertumswissenschaft* (ed. Gercke and Norden, Leipzig, 1933) 3.5: *Chronologie* 16-19. References to articles not included in these will be found in the following discussion.

ditions. As one surveys the history of the calendar in the western world, one realizes that most reforms in our system have come about in one or the other of two ways. Either they have been enforced by a superior power, such as that of a dictator or a pope, or they have been part of a radical social change, such as the French revolution.^{7a} In studying the more obscure phases of the history of the Roman calendar we must therefore consider not only the evidence which bears directly on the technical problems involved, but also the circumstances in different periods which would have made calendar reform both possible and desirable.

THE FESTIVALS AND THE DIVISIONS OF THE MONTH

The internal evidence of the calendar itself provides us with a point of departure for our discussion. It is clear that the festivals with their fixed dates have been subordinated to the internal divisions of the month which are also indicated in capital letters. This is shown by the fact that only one of the forty-five festivals falls before the Nones (Poplifugia, July 5), and in no case does one coincide with the Ides. In fact, in the case of the Carmentalia, care seems to have been taken to avoid such a coincidence, for in the other two cases of repeated festivals (the Lemuria and the Lucaria), the celebrations come on successive alternate days, but the celebrations of the Carmentalia come on the 11th and 15th of January, skipping over the Ides. In several cases we know of ceremonies or festivals which fell on the Kalends or Ides, but they are omitted from the capital letter calendar, as though the Kalends and Ides had precedence.⁸ (March 1, ceremonies of the Salii; June 1, Kalendae Fabariae; October 1, Tigillum Sororium; February 13,

^{7a} The general acceptance of a reform in quarters not under the control of the original initiator is, of course, sometimes slow. Non-Catholic countries for example resisted the Gregorian reform on religious grounds, even when it might have been more convenient to accept it. It was not until the 18th century that in England the decrease in anti-Catholic feeling, at least among the upper classes, combined perhaps with the influence of the Royal Society, allowed the passing of the Bill introducing the New Style. This may also have been influenced, as my colleague, Prof. Caroline Robbins, has pointed out to me, by the increased diplomatic relations with the continent in this period. The Bill of 1752 was, however, not strictly speaking the introduction of a reform, but merely the acceptance of a reform already enforced elsewhere by a supreme authority. For a further discussion of the circumstances required for calendar reform see page 334.

⁸ This is the explanation of the situation given by Wissowa ("De Feriis Anni Romanorum Vetustissimi," *Gesammelte Abhandlungen* 167-171) and rejected by Mommsen (*CIL* 1².1.p.298).

first day of the Parentalia; March 15, *Feriae Annae Perennae*; May 15, *Sacra Argeorum*; June 13, *Quinquatrus Minusculae*; September 13 and November 13, *Epulum Jovis*; October 15, sacrifice of the October horse, and perhaps the *Ludi Capitolini*.) It is of course possible that some of these originated after the calendar had become fixed, but many of them are usually considered to be of great antiquity. It seems difficult to suppose that this arrangement is simply the result of a happy accident. We must conclude that the list of festivals on fixed days, as we have it in the pre-Julian calendar, was planned to fit into the scheme of the divisions of the month, and is therefore either contemporary with or later than the introduction of the Kalends, Nones and Ides into the Roman Calendar. This of course does not mean that some individual festivals may not be older than this.

THE INTRODUCTION OF THE LUNAR MONTH

The divisions of the month were marked by certain ceremonies carried out on the Capitoline hill. These have been recorded for us by Varro (*De L.L.* 6.27–28) and somewhat more fully by Macrobius (*Sat.* 1.15.9–20). At the time of the Kalends the *pontifex minor* was assigned the task of observing the new moon, which he reported to the *rex sacrorum*, with whom he performed a sacrifice.⁹ He then called a meeting of the people at the Curia Calabra on the Capitoline hill, and, invoking Juno Covella, announced to them when the Nones of the month would occur. The Kalends were also marked by a sacrifice to Juno in the Curia Calabra performed by the *pontifex minor*, and another to the same goddess performed in the Regia by the *regina sacrorum*. On the Nones the people assembled on the Capitoline Arx, where the *rex sacrorum* announced to them what festivals would take place during the rest of the month. From the tenses of the verbs which Varro uses we gather that these ceremonies were still being held in his day, although he explains that in former times the meeting on the Nones was attended by *rustici* who came in from the country, as

⁹ Macrobius does not state the deity to whom this sacrifice was offered (*Sat.* 1.15.10). Wissowa attributes it to Janus and from this derives the title Janus Junonius (*Religion und Kultus*² 103 f.). But in the passage in which Macrobius refers to this title of Janus (*Sat.* 1.15.18–20) the only connection between Janus and Juno seems to be that he is the god of all beginnings as she is of the beginning of the month, while the passage as a whole is concerned with Juno's patronage of the Kalends. I would therefore assume that this sacrifice was to Juno.

well as by those who lived in the city. The Nones had no patron deity, but all Ides were sacred to Jupiter and on these days the *ovis Idulis* was sacrificed to him on the Arx, having been led there along the Sacra Via.¹⁰

We see then that in Varro's day the Kalends were still marked by a ceremony in which the new moon was ostensibly observed and announced as the beginning of the new month.¹¹ There can be no doubt that by then this was only a legal fiction, like so many constitutional devices in Rome. It is equally certain that originally the Kalends really did depend on the actual observation of the new moon,¹² and that at one time the Romans used a genuine lunar month. There is, however, reason to suppose, as I shall show later, that the original Latin settlers on the site of Rome used a different type of calendar, which was not dependent on the moon.¹³ At what point then may we assume that a true lunar month, in which the Kalends marked the observation of the new moon, was introduced? Any answer to this question can only be hypothetical, but it is not an unreasonable theory that this innovation was made by the Etruscans. The connection of the Kalends, Nones and Ides with the Capitoline hill suggests the time when the Septimontium and Quirinal had been united to form the city of the Etruscan period.¹⁴ The theory of some ancient authors that the word *Idus*

¹⁰ Ovid, *Fasti* 1.56; Macrobius, *Sat.* 1.15.15–18; Pauli *Epitome* 93 L; Lydus, *De Mens.* 3.10. In another passage Festus gives us the topographical data for the *sacra Idulia*: Sacram viam quidam appellatam esse existimant . . . quod eo itinere utantur sacerdotes idulium sacrorum conficiendorum causa. Itaque ne eatenus quidem, ut vulgus opinatur, sacra appellanda est a regia ad domum Regis Sacrificuli sed etiam a Regis domo ad sacellum Streniae, et rusus a regia usque in arcem (372 L). Varro also speaks of the Sacra Via *qua sacra quotquot mensibus feruntur in arcem* (*De L.L.* 5.47).

¹¹ Since it is possible that the 6th book of the *De Lingua Latina*, in which Varro describes these ceremonies, was written before 45 B.C. (cf. Schanz-Hosius, *Geschichte der Römischen Literatur* 1.570 f.), it is possible that the pretended observation continued right up to the introduction of the Julian Calendar. If only we could determine the tense of the missing verb in the section of the *Fasti Praenestini* which describes the ceremony, we would have conclusive evidence on this point.

¹² Allen has emphasized the fact that a twelve month calendar based on true lunar observation must have preceded the pre-Julian calendar ("The Early Roman Calendar," *CJ* 43 [1947–48] 163–168). I cannot follow him, however, when he states that later a definite number of days was assigned to each month, and that this arrangement was subsequently carried over into the pre-Julian calendar. I would say that this innovation took place at the introduction of the pre-Julian calendar, when, as I hope to show, the actual observation of the moon was abandoned.

¹³ Cf. Bickermann *op. cit.* (note 7) 17: "Die lunare Zeitrechnung scheint in Rom überhaupt dem einheimischen Kalender von auswärts aufgepfropft zu sein."

¹⁴ The union of Septimontium and Quirinal is very commonly associated with the Etruscan dynasty. Inez Scott Ryberg has suggested that it took place before

might have been Etruscan in origin would indicate that they were familiar with such an association.¹⁵ There is little doubt that the Etruscan dynasty would have had sufficient authority and prestige to enforce this reform, especially since, as we shall see later, it could have been managed without serious interference with the customs of the native population.¹⁶

THE TOPOGRAPHY OF THE FESTIVAL CYCLE

It is possible then that the lunar month was introduced by the Etruscans. Such an hypothesis is supported by the evidence of topography. The locations of the festivals which were fitted into the divisions of the months to form the fixed cycle of the pre-Julian calendar show that this codification took place, not at the beginning of the Etruscan period, but much later. It is a very striking fact that the majority of the festivals were celebrated either on the outskirts of the city, or in the valley which comprises the Forum and Velabrum and widens out into the Forum Boarium. Some

the period of the Etruscan Kings at the time when the Forum burial ground was closed (Scott, "Early Roman Traditions in the Light of Archaeology," *MAAR* 7 [1929] 56 and 66; cf. Ryberg, "An Archaeological Record of Rome from the Seventh to the Second Century B.C.," *Studies and Documents* 13 [Philadelphia, 1940] 1.38). She thus introduces into the development of the city a pre-Etruscan period which she calls the City of Numa. She bases this idea, however, entirely on the evidence of the Calendar, which she accepts as purely Italic and non-Etruscan. Since it is exactly the date and nature of the Calendar which is under discussion in this paper, Ryberg's City of Numa cannot enter into my argument. Various other theories of the topographical development of the city have been propounded, in which the Forum is regarded as the original center of the city. Many of these are outlined and discussed by Lugli, *Roma Antica* (Rome, 1945) 55-62. To his list may be added Grimal, "Le Dieu Janus et Les Origines de Rome," *Lettres d'Humanité* 4 (Paris, 1945) 15-121. Interesting and persuasive as many of these arguments are, none of them seem as convincing as the more generally accepted theory which I have relied upon here. The evidence has been well reviewed by Peremans, "Notes sur les origines de Rome," *Bulletin de l'Institut Historique Belge de Rome* 14 (1934) 97-108.

¹⁵ Varro, *De L.L.* 6.28 says the word is either Etruscan or Sabine. Macrobius, *Sat.* 1.15.14-18 votes for an Etruscan derivation admitting that some prefer a Greek source. These passages are the chief basis for the assumption that the Etruscan calendar was the source of the Roman. Cf. Müller-Deecke, *Etrusker* (Stuttgart, 1877) 2.300-316; Ducati, *Etruria Antica* (Torino, 1925) 1.124-125; Grenier, *op. cit.* (note 5) 71, 77. This derivation of Idus is rejected by Walde, A.-Hofmann, J., *Lateinisches Etymologisches Wörterbuch* (Heidelberg, 1930-1949) s.v. "Idus," and Whatmough, "The Calendar in Ancient Italy outside Rome," *HSPH* 42 (1931) 162, but is accepted by Ernout, A.-Meillet, A., *Dictionnaire Etymologique de la Langue Latine* (Paris, 1939), and the tradition suggests Etruscan associations.

¹⁶ For the practical advantages of the lunar reckoning, which would have induced the Etruscans to take this step, see below, 331.

are connected with the Capitoline and Quirinal hills, one — the Tibilustrum — with the Palatine, but none at all with the other hills of the Septimontium.¹⁷

This is hardly what one would expect if the cycle belonged to the period when the settlements of the Septimontium and the Quirinal had only recently been united. It is, of course, true that these settlements could have held some of their celebrations outside their walls, but surely many of them would have been inside and would have been maintained for some time after the amalgamation.

In establishing a date for the festival cycle, the ceremonies connected with the Forum, and especially with the Regia, are the most significant.¹⁸ The use of the Forum as a burial ground until near the end of the seventh century makes it impossible that many of these festivals could have been held here before that date, nor could the Regia with the *sacraria* which it housed have been built until then. The injunction, still observed during the Empire, which forbade the *pontifices* to *adtractare feralia* or even to see a corpse, has all the earmarks of a very early taboo.¹⁹ As long as it was in effect it would have been impossible, in my opinion, for the *pontifices*, and the *rex sacrorum*, who was a member of the college of *pontifices*, to have discharged duties in an area devoted to burial.²⁰ If the

¹⁷ The topographical associations of the festivals have, as far as I know, never been discussed as a whole. The preceding paragraph is based on an article which I hope to publish shortly, in which the associations of the Lupercalia, the Parilia and the Tibilustrum with the Palatine will be discussed.

¹⁸ The festivals connected with the Forum are: Regifugium, Quinquatrus, Volcanalia, Saturnalia, Opalia, Lupercalia, and Vestalia. The four *dies Agonales* and the Opeconsivia are connected with the Regia. The connection of the Kalends and the Ides with the Regia appears to be of a secondary nature and would probably have been introduced after the ceremonies on the Capitoline had been well established. Altheim seems to have ignored the existence of the festivals which were celebrated in the Forum valley and on the Capitoline when he saw represented in the festival cycle a city consisting only of the Septimontium and the Quirinal (*History of Roman Religion* [London, 1938] 129–131).

¹⁹ Seneca, *Ad Marc.* 15.3; Tac. *Ann.* 1.62; Dio, 54.28 and 35; 56.31; Servius on *Aen.* 3.64; 6.176; 11.143.

²⁰ The importance of this point was emphasized by Pais in his discussion of the Regia and the Forum (*Ricerche sulla Storia e sul Diritto Pubblico di Roma*, Serie Prima [Rome, 1915] 384 f.). Although I would disagree with his very late date for the building of the Regia, it is true that the significance of the burials in the Forum is not always fully appreciated. For example, it seems inconceivable that the early Kings of Rome lived in a cemetery. As a matter of fact, ancient tradition assigns residences elsewhere to all of them except Numa, who is said to have moved from the Quirinal to the Regia when he built it. In spite of this, the old picture of the Regia as the original home of the King and his domestic cults is still preserved. Cf. Deubner *MDAI(R)* 36–37 (1921–1922) 17–23, and Altheim, *op. cit.* (note 18) 230. There is

burial ground, as is generally believed, extended the full length of the Forum, many of the festivals would be affected. It is possible that the Vestalia and the Volcanalia should be omitted from this group, if von Duhn is right in associating the origin of these fire cults with the cremation burials in the Forum.²¹ I would also except the Lupercalia, as I hope to be able to show that the Lupercalia was originally related to the Sacra Via before the Forum existed. This would still leave the four Agonia, the Opeconsivia, the Regifugium, the Quinquatrus, the Saturnalia, and perhaps the Opalia, under the shadow of the dead. It would seem then that we must date the codification of the festival cycle, not only after the abandonment of the Forum burial grounds, but a considerable length of time after it. We must allow sufficient time for the festivals of the Forum area first to be established, and, secondly, to become so important that they must be included among the main events of the religious year. This could hardly have happened overnight. The Romans, like most people, were afraid of ghosts,

no archaeological evidence for the existence of the Regia before the end of the 6th century at the very earliest (Brown, *MAAR* 12 [1935] 71 f.; Boethius, *Gnomon* 12 [1936] 590-594; Ryberg, *op. cit.* [note 4] 1.177-179; Lugli, *op. cit.* [note 14] 212-215). Cozzo's extremely interesting interpretation of the *pozzi* in the Forum is also weakened by his failure to take into account the Sepulcretum in which many of them occur (*Il Luogo Primitivo di Roma*, Rome, 1935). Bartoli's theory that in the 8th and 7th centuries the area of the temple of Vesta and the Sepulcretum was used simultaneously for dwellings of the living and the burial of the dead is based on the assumption that the contents of the older *pozzo* found near the temple of Vesta which consisted entirely of domestic utensils, proves that this area was inhabited ("Il Valore Storico delle recenti Scoperte al Palatino e al Foro," *Atti della Società Italiana per il Progresso delle Scienze* [Rome, 1933] 1.312-315). He offers as proof of this assumption the fact that there was no earth fill in the *pozzo*. This seems unconvincing, without more corroborative evidence. Cf. Peremans, *op. cit.* (note 14) 107. A more convincing interpretation of the Sepulcretum is, I think, to be found in the article of H. M. R. Leopold, "Le Antiche Tombe del Foro Romano e Le Origini di Roma," *Atti del IV Congresso Nazionale di Studi Romani* 2 (Rome, 1938) 257-260. He regards the Sacra Via as a very ancient road antedating the settlements on the hills and believes that the later inhabitants of the hills buried along the road. He points to the common Italic custom of burying in this location *outside* towns. For the latest treatment of the subject, see Romanelli, "Le Origini di Roma: i dati della Ricerca Archeologica," *Capitolium* (1949) fasc. 3-4, 49-64, in which Bartoli's argument is treated with some reservations.

²¹ *Italische Gräberkunde*, 414 f. It is possible that the sacrifice at the Volcanal described by Varro (*De L.L.* 6.20) is a reminiscence of the use of this spot as an *ustrinum*. The *animalia* which are put into the fire are apparently substitutes for human beings, although Kent's translation gives the passage a somewhat different meaning (Kent, *Varro, On the Latin Language*, 1.193). Leopold's theory of the origin of these cults (*op. cit.*, note 20) would also explain how they could have originated before the Forum was established.

and superstitious about graveyards. They had also, at least in the historical period, a deep sense of family continuity which resulted in a meticulous care for the graves of their fathers, or even the graves of the unknown. From the very area under discussion we may cite as examples the preservation of the *locus funestus* marked by the *Lapis Niger*, and the vases carefully reburied in the foundation of the equestrian statue of Domitian. Judgment on such a point is necessarily subjective, but I should think that as a result of these attitudes at least a couple of generations, and possibly more, would have had to pass before the Romans would have forgotten the location and the associations of the Sepulcretum. Only then would it be possible for the new cults and rites of the Forum to develop.

THE PRE-ETRUSCAN CALENDAR

This conclusion, that the festivals were not codified until a considerable time after the unification of the city by the Etruscans, is supported by a consideration of the nature of the pre-Etruscan Roman calendar and of the effect which the introduction of the lunar reckoning would have had upon it.

There is a persistent ancient tradition that the earliest Roman year, attributed to Romulus, consisted of ten months, March through December, and contained 304 days.²² Various explanations of this curious theory have been proposed. The most popular one was originally offered by Julius Pontedera in 1740,²³ again by Hartmann,²⁴ and supported with further corroborative evidence by Nilsson,²⁵ Rose,²⁶ Frazer²⁷ and Allen.²⁸ In their opinion the missing two months in the year of Romulus were not counted because January and February, the months added by Numa, were the slack season of the agricultural year, and until the Romans reached a more advanced level of civilization they were content simply to

²² Censorinus, *De Die Natali*, 20.2-3; Macrobius, *Sat.* 1.12.3; Gellius, 3.16.16; Ovid, *Fasti*, 1.27 f.; 3.99; 3.119 f.; Servius on *Georgics*, 1.43; Solinus, 1.35.36; Plut. *Numa*, 18; Q.R. 19; Lydus, *De Mens.* 1.16, p. 9 Wuensch.

²³ Cited by Ideler, *Technische Chronologie*, 2.25, n. 1, and H. J. Rose, "De Terminalibus, Regifugio, mense intercalari," *Mnemosyne* 52 (1924) 352, n. 1.

²⁴ *Op. cit.* (note 5) 1-14.

²⁵ *Primitive Time Reckoning* 90,223; "Zum Frage von dem Alter des vorcäsarischen Kalender," *Strena Philologica Upsaliensis (Festschrift Per Persson, Upsala, 1922)* 135 f.

²⁶ *Op. cit.* (note 23) 352-354. *Primitive Culture in Italy*, 90-93; "The Pre-Caesarian Calendar: Facts and Reasonable Guesses," *CJ* 40 (1944-45) 67-68.

²⁷ *The Fasti of Ovid*, 2.8-29.

²⁸ *Op. cit.* (note 12) 163.

ignore this period.²⁹ Many interesting parallels for such a system are provided by primitive peoples. There is, however, one serious difficulty with the argument. January and February are not seasons of complete leisure on the Roman farm. (As a matter of fact, a professional farmer in the Italian climate might not be entirely willing to admit the existence of any slack period in the year. Some periods are busier than others, but a farmer who plants twice in the year is never idle.) Warde Fowler tells us that from the winter solstice to Favonius (February 7) there is no hard work to be done outdoors and cites as evidence Varro (*R.R.* 1.36).³⁰ The passage cited says: "De segetibus, siqua est aqua, deduci; sin siccitates sunt et terra teneritudinem habet, sarire. Vineas arbus-taque putare." Digging drainage ditches, harrowing and pruning are all important tasks, and they are neither easy nor quickly accomplished, especially with ancient tools. From Favonius to the spring equinox is a particularly busy period (Varro, *R.R.* 1.29).³¹ One might of course argue that in the period of the ten month year agriculture was carried on less intensively than in the period from which our evidence comes. There is, however, evidence that Latium in the regal period was under very heavy cultivation,³² which presupposes a long experience in farming. Rome was, after all, settled at a time when the culture of Latium was fairly well advanced, and it is doubtful that the early inhabitants were quite as primitive as we sometimes picture them. Since this evidence suggests that another explanation for the tradition of a ten month year must be sought, we may turn to the one offered, in various forms, by Ideler,³³ Soltau,³⁴ Ginzel³⁵ and Bickermann.³⁶

These writers observed that in many cultures the earliest method

²⁹ For a criticism, though not a rejection, of this point of view see Allen, *op. cit.* (note 12) 163 f.

³⁰ *Roman Festivals*, 277.

³¹ Cf. Warde Fowler, *op. cit.* (note 30) 299.

³² Tenney Frank, *An Economic History of Rome* (London, 1927) 1-15. Frank's argument has been challenged, but, as Sherwin-White remarks, "Pliny's list of 53 *populi* of early Latium, which had disappeared in later days, is proof enough that the population was large" (*Roman Citizenship during the Republic* [Oxford, 1939] 8, citing Pliny, *N.H.* 3.68-69) and a large population, before the days of large scale importation, would require intensive cultivation.

³³ *Op. cit.* (note 23) 27-31.

³⁴ *Op. cit.* (note 5) 72-98. The association with the Hesiodic calendar seems to me improbable.

³⁵ *Op. cit.* (note 5) 2.221-225.

³⁶ *Op. cit.* (note 7) 17.

of dividing the year is based not on the movements of the sun and moon, but on characteristic seasonal phenomena, such as the leafing of the trees, the ripening of grain and the coming of the rains, or the seasonal activities of the animal world such as the various times of birth, or the migrations of birds. The regular recurrence of these events provides a rough calendar by which to guide seasonal activities. The periods thus marked off may be called "months," provided that we use the term only to denote divisions of the year. When to this system is added some observation of the stars, it becomes possible to predict the coming of annual events, if allowance is made for yearly variations, such as an unusually hard winter or an exceptionally early spring. Ten such "months" used by the Latins and the first Romans would explain the tradition of the ten month year of Romulus. Such a year, however, would have approximately the same number of days as a solar year. There is still no explanation of the tradition which attributes 304 days to the year of Romulus, and gives it months of thirty and thirty-one days. Since such a year has no relation to either the solar or the lunar year, Ginzler dismisses it as a "Künstliche Konstruktion" of the ancient authors, who were thinking in terms of the calendars which they knew and attempting to explain the ten month tradition.³⁷

The idea that a calendar based on the recurrence of the seasons and the observation of the stars was in use in Latium in an early period is supported by two pieces of evidence. Censorinus tells us (22.6) that at Alba the "months" varied in length from a March of 36 days to a September of 16, while at Tusculum Quintilis had 36 days and October 32, and at Aricia October rose to 39 days (cf. Plut. *Numa* 18, *Q.R.* 19). Obviously these are not true months, but their existence can be explained by a scheme such as I have described. The second piece of evidence is the actual practice of Roman farmers, as described by writers on agriculture. From Cato to Columella they divide the year's activities by observations of nature, mainly the rising and setting of the stars. Cato refers to the dates of the civil calendar only for matters of business such as the letting of contracts. Varro sometimes gives equivalent dates in the civil calendar for his divisions of the seasons, but only as a supplement.

A calendar of this type is a natural one for an agricultural people,

³⁷ *Op. cit.* (note 5) 2.225.

since it is directly derived from their experience and is adequate for their needs.³⁸ Their religious festivals, mainly concerned with the care of farms and flocks, would be celebrated at the appropriate seasons as they came around each year. Thus a planting festival would come not on a fixed day but when the ground was ready, a moment which would vary by a couple of weeks according to the weather. Many Roman festivals, like the *Feriae Sementivae*, always remained adjustable because of their connection with the weather, and these form the major group among the *feriae conceptivae*. Originally all the festivals were probably of this type.³⁹

I have suggested that the Etruscans introduced lunar months into Rome. Why should they have done this? It is possible that they brought the idea of the lunar year with them from the East, where it was well known, and preferred it to the Latin method of time reckoning. Certainly, for a people who are involved in trade or have contacts with other communities at any distance to the north or south of them, the lunar month is a much more practical basis for a calendar than is the observation of the stars.⁴⁰ The moon provides a short and regular period which may be easily subdivided to allow business affairs to be conveniently and efficiently organized. The phases of the moon, unlike the apparent movements of the stars or the progress of the seasons, are not affected by the latitude in which the observer lives. An Etruscan of Clusium and an Etruscan of Capua, who wished to make an appointment to meet a Roman Tarquin, could set a date by reference to the moon, and both men would be able to arrive in Rome on the same day. If, however, Tarquin had set the day by reference to the rising of Arcturus or the setting of the Pleiades, the difference in latitude of his friends' homes might upset their calculations for arrival by as much as a couple of days.

³⁸ Cf. Ginzel, *op. cit.* (note 5) 2.224; Nilsson, *Primitive Time Reckoning*, 353. Mommsen's theory that the ten month year was a business calendar, discarded when the pre-Julian calendar was introduced, is no longer accepted (*Römische Chronologie*² [Berlin, 1859] 47-54).

³⁹ Cf. Wissowa, *op. cit.* (note 9) 440, and Ginzel, *op. cit.* (note 5) 2.189. Cf. Aly, "Über das Wesen römischer Religiosität," *Arch. für Religionswiss.* 33 (1936) 59 f.

⁴⁰ Cf. Ginzel, *op. cit.* (note 5) 1.59: Die Naturstämme, bei denen sich Handel und Verkehr entwickeln, müssen bald von diesen schwankenden Zeitabgrenzungen zu bestimmteren gelangen. Die natürlichste Zeitmesser am Himmel ist für sie der Mond. . . .

THE ETRUSCAN LUNISOLAR CALENDAR

The Etruscans would of course have had to make some concessions to local traditions. Probably they would have applied to their lunar months the old Latin names of the ten seasonal "months," while introducing new names for the two which had been added. Since for farmers the spring is the most critical season of the year, they would want to see to it that the month named for the god who presided over new growth, March, would always come at approximately the same season. This could have been arranged fairly easily by deciding that March would begin with the new moon nearest to some easily observed sidereal event. Such might be the evening rising of Arcturus, since this rising can be predicted simply by observing the evening position of the Big Dipper. Thus the Kalends of March would come always in the period between the fourteenth day before and the fourteenth day after the evening rising of Arcturus. But the lunar year is 11 days shorter than the solar year. If, therefore, in one year the new moon came on the same evening as the sunset rising of Arcturus, at the end of that year a new moon would appear 11 days before Arcturus, and another one 18 or 19 days after Arcturus. The earlier one, being closer to Arcturus would determine the Kalends of March, and would start the second year of a cycle. But at the end of that year, a new moon would come 22 days before Arcturus, and another one 7 or 8 days after his rising. In this case the later new moon would mark the Kalends of March. But the earlier one would be the thirteenth new moon to have appeared since the previous March. Thus the *pontifices*, who would already have announced all the twelve named months in their proper sequence, would have to announce this month as an extra one, intervening between February, the last of the list, and March, which had to wait for the new moon closest to Arcturus. Since after a period of 8 years the new moon would again occur in conjunction with the evening rising of Arcturus, a cycle of intercalation would develop in which the extra month would always occur between February and March.⁴¹ In the cycle outlined above,

⁴¹ Cf. Ginzler, *op. cit.* (note 5) 2.238. Dwight ("The Origin of the Pre-Julian Calendar," *CJ* 41 [1945-1946] 273-275) presents an interesting and ingenious theory of intercalation, but it is based on his theory, presented in two previous articles ("The Early Roman Calendar," *CJ* 39 [1943-44] 487-490, and *CJ* 40 [1944-45] 103 f.), that the evening of the day on which the new moon was observed at sunset was counted as the first day of the month. From the statements made by the ancient authors it seems to me more probable that the next day was actually the Kalends (Varro, *De L.L.* 6.27;

the intercalated month would occur in the second, fourth and seventh years. Occasionally, however, a difficulty would arise. Suppose the Kalends of March were expected to fall 14 days before Arcturus rose (February 14 in our terminology) and the winter had been a long one. The spring planting would only just have been done and there would be none of the early growth suitable to March. In this case it would be necessary to intercalate a month, that is to say: "This coming month will not be March. March will begin this year not with these Kalends, but with the next." Thus the regular cycle of intercalation would be interrupted, but the relation to the seasons and to the actual phases of the moon would be preserved. Since the festivals were still *feriae conceptivae* they would be celebrated when the season required, in whatever month was in progress at the time, and would be announced on the Nones after which they were to occur.

It is clear that with a system of this type it would have been impossible to have fixed days for the festivals in each month as long as they retained in peoples' minds their functional relationship with the real agricultural activities of the year. This is illustrated by the fact that the festivals most closely connected with important operations on the farms remained *conceptivae* throughout Roman history. The planting festival (*Feriae Sementivae*), the beginning of harvest (*Feriae Praecidaneae*) and the beginning of vintage (*Auguratio Vindemiae*) all belong in this category.

THE INTRODUCTION OF A CYCLIC CALENDAR

We have now seen that the festival cycle could not have been codified until some considerable time after the unification of the city by the Etruscans. We have also seen how a lunisolar calendar, introduced by the Etruscans, could have managed by means of *feriae conceptivae* and irregular intercalation to satisfy the needs of the community. In order to date more closely the codification of

Macrobius, *Sat.* 1.15.9-11; Lydus, *De Mens.* 3.10 and the *Fasti Praenestini* for January 1, *CIL* 1².1.p.231). We are specifically told that the Kalends was the first of the series of days announced by the *pontifex* at the public meeting in the Curia Calabra. Since the new moon was observed and reported to the *rex* just before dark, it seems impossible that the meeting could have been held before the next morning. Thus not the day on which the new moon was first visible but the day after this must have been the Kalends, and as that day had begun at midnight (cf. Ginzel, *op. cit.* [note 5] 2.162-3), the necessity for assuming the existence of fractional days is removed. That the Kalends began in the morning in Cicero's day is shown by his reference to the Kalends of January, "quae erant futurae mane postridie" (*Ad Fam.* 7.30.1).

the festival cycle with its fixed dates we must explain how, and why, and when, this calendar was discarded.

How does one proceed when one wishes to substitute a more efficient system for a lunar reckoning which has been adjusted each year to the seasons (i.e. the solar year) by more or less irregular intercalation? To do this one must discard lunar months. But one will keep artificial months because the shorter subdivision of time is convenient. The pre-Julian calendar was obviously intended to be a lunisolar, cyclic calendar of just this type. I would therefore conclude that the old Etruscan calendar was displaced by the introduction of the pre-Julian calendar. The close relationship between the two is shown both by the number of days in the basic pre-Julian year, and by the preservation of the old ceremonies on the Kalends, in which the announcement that the new moon has been observed had become pure religious fiction. I see no reason to suppose that any other system intervened between these two stages of development. We may then identify the date at which the lunar calendar was abandoned and the festival cycle was finally codified with the date at which the pre-Julian calendar was introduced, and discuss them as the same problem. But before coming to the question of when all this happened, we must ask why should it have happened at all. As in the detection of crime, opportunity and motive must be taken into account. We cannot arbitrarily assign a radical reform of the calendar to a period without considering whether the character of the period might lead us to expect such action then.

There are three main conditions which must exist before a calendar reform can be successfully carried out. In the first place the reform cannot be repugnant to the religious convictions of the community. For example, it was largely the anti-Catholic feeling of England which for so long delayed the acceptance of the Gregorian calendar in that country. Secondly, some situation must have arisen which makes a change so necessary that the inconvenience involved will be a minor consideration. Thirdly, there must be some practical means available for the introduction and enforcement of the reform. If we can show that at some point in Roman history these conditions existed simultaneously, we can with some assurance assume that this was the date at which the pre-Julian calendar was introduced.

From the religious point of view, in an agricultural community,

the chief objection to a cyclic calendar with fixed festivals would be the impossibility of making sure that the agricultural festivals would fall at exactly the right moment in the progress of the year's work. But circumstances arose in Rome under which most of the festivals were no longer closely associated with specific agricultural activities but only with seasons.

A CHANGE IN RELIGIOUS ATMOSPHERE

Under the Etruscans, Rome gradually became a metropolis for Latium, rather than a group of settlements on a par with other Latin towns. This process is reflected by her position at the *Feriae Latinae*, and the building of the temples of Diana on the Aventine and of the Capitoline Triad. Its culmination is seen in the treaty with Carthage, signed at the end of the sixth century. Rome's wealth was still in the land, but she became a trading center for the farmers of Latium, and possibly for the people of less fertile regions. The new Forum offered an excellent place for markets to which farmers could bring their excess produce, and where they could obtain some of the goods which were now made in Rome by the craftsmen of the Vicus Tuscus. The institution of the *nundinae*, sometimes attributed to Servius Tullius, is an example of this tendency. Even after the beginning of the Republic, when Rome was fighting to maintain her position, she was still the center of an *ager Romanus* which was a good deal larger than anything the Septimontium or Quirinal settlements could have claimed.

As a result of Rome's growth into a market town, there would be an increasing tendency for Rome to hold her harvest festivals, by which markets would be determined, at approximately the same dates each year, so that the farmers would know when to plan for them. The dates would of course still be announced each year, and could be changed, but people would come to expect them to be set at the same times. The situation would be parallel to the American Thanksgiving which was *Feriae conceptivae* from the time it became a national holiday under Abraham Lincoln, until it was made *stativae* by Act of Congress in 1941, but was so consistently set on the last Thursday in November by presidential proclamation that Franklin Roosevelt's effort to shift it to the week before was regarded as a break with immemorial tradition, and failed. The dates at which the festivals for the various harvests would be held would tend to come late in the seasons so as to allow a safe margin

for variation in local conditions or uncertainties of the weather. Thus a farmer whose crop came in late would not miss his chance at the market. The *pontifices* who set the dates would find themselves in something of the position of a local Chamber of Commerce, setting the date of a county fair with regard to the economic needs of the local farmers. Since a harvest festival is by nature a thanksgiving, it could be postponed slightly after the crops were all in, without incurring danger of the anger of the gods, although this could not be done with the propitiatory ceremonies which begin operations, and therefore remain *conceptivae*.

In the same period Rome was undergoing political and social changes. The institution of the centuriate assembly indicates the rise of a class of landed gentry, who, like their descendants, derived their wealth from their estates but tended more and more to live in the city, which was the center of their political and military interests. At the same time there must also have grown up an urban group of craftsmen and tradesmen, such as those imported by the Etruscans to work on their civic improvements and to provide for the more luxurious standard of living which they introduced into Rome. These groups would of course be part of an agricultural community in the sense that their living was ultimately derived from the land, but neither of them would have the dirt farmer's immediate consciousness of the day-to-day progress of work on the farm, and of its close connection with religious rites. Thus, as a result of both economic necessity and social change, there would be a gradual dissociation in the minds of the community between many festivals and their original function. These festivals would now be associated with general periods of the year rather than with specific activities. For example, festivals which had only a general association with the spring became fixed, while the Florifertum, whose date depended on the actual state of the grain, remained *conceptivae* until a very late date.⁴²

The development which I have outlined could not have taken place rapidly. We must allow a period of several generations before it could have had a decisive influence upon the organization of the calendar. Exactly the same necessity for a lapse of a considerable period of time after the beginning of the Etruscan period

⁴² Wissowa, *op. cit.* (note 9) 198. Warde Fowler comments on the lack of relation between the festivals and the actual agricultural activities, but he sees this as the result of the introduction of a fixed calendar, rather than the condition which made its introduction possible (*Religious Experience of the Roman People*, 102 f.).

was observed in the discussion of those festivals which took place in the Forum. Thus from two different approaches we arrive at the conclusion that the final codification of the festival cycle could not have taken place early in the sixth century, but rather much later.

THE NECESSITY FOR A NEW CALENDAR

By the end of the sixth or the beginning of the fifth century, then, it might have been possible to fix the dates of the festival calendar without too much offense to religious sensibilities. But mere possibility is not enough to bring about anything as extreme as the introduction of a cyclic calendar. Peoples' minds must be prepared for it by some general and radical change in the whole social picture which makes the reform not only convenient but necessary. Just such an upheaval was taking place in Rome in the first half of the fifth century. Whether one regards this as a result of the expulsion of the Kings, as early tradition held, or prefers to consider it a more gradual process, one must still admit that in this period the constitution of the Republic was being framed, and Rome was becoming a very different place from the city of the regal period, with new needs and new interests. The development of annual magistracies, for instance, would make irregular intercalation inconvenient. A man would like to know how long he could expect to remain in office. This point is made very clear to us in the history of the Ciceronian period when the pre-Julian calendar had become utterly confused.⁴³ Furthermore, if even in the early years of the Republic, the consuls held the Fasces for alternate months⁴⁴ they would soon perceive the disadvantage of a month which depended on lunar observation and would want one with a fixed number of days. The increased activity of the comitia would soon make everyone realize the desirability of knowing exactly when festivals were to occur, so that the announcement of a festival would not necessitate postponing assemblies. The inconvenience of uncertainty on this point is illustrated when, in the late Republic, the repetition of *ludi* or the decree of a *supplicatio* was used as a device to interfere with political activities.⁴⁵ Just as in Athens the constitutional reforms of Cleisthenes must have led

⁴³ Cf. L. R. Taylor, *Party Politics in the Age of Caesar* (Berkeley, 1949) 78-80.

⁴⁴ Cf. L. R. Taylor and T. R. S. Broughton, "The Order of the Two Consuls' Names in the Yearly Lists," *MAAR* 19 (1949) 1-14.

⁴⁵ L. R. Taylor, *loc. cit.* (note 43).

to the introduction of the Prytany Calendar, so in Rome the experiences of the first half of the fifth century would have led to the introduction of the more practical pre-Julian calendar.

THE DATE OF THE PRE-JULIAN CALENDAR

Why then do we have no explicit reference from any ancient author to an event of such importance? This curious silence can perhaps be best explained if we assume that the innovation was part of a larger program and was therefore not singled out for special remark by the historians. If the reform of the calendar had been part of the legislative activity which resulted in the framing of the Twelve Tables of the Law, it might well have escaped specific comment. This assumption also satisfies the third condition necessary for successful calendar reform. The establishment of a code of law would provide the practical means of enforcing the adoption of the new calendar.

There is ample evidence to show that establishment of a calendar, mainly for religious purposes, was considered part of the functions of a legislator. In Roman tradition, Romulus and Numa, the two founders of Roman law, are both credited with introducing calendars.⁴⁶ Part of Solon's legislation dealt with sacred laws and a schedule of sacrifices (Plut. *Solon*, 25). When the laws of Athens were re-edited at the end of the fifth century, the calendar was part of the material dealt with by Nicomachus.⁴⁷ Plato includes a discussion of the sacred calendar in his *Laws* (8.828A). Cicero in the *De Legibus* (2.19 f.) provides for the setting up of a state calendar, and Caesar introduced his calendar as part of his legal reforms, although he actually enforced it by edict, not law (Macrobius, *Sat.* 1.14.13). The *Lex Coloniae Genetivae* includes a provision for the setting-up of a local calendar (Riccobono, *Fontes Iuris Romani Anteiustiniani*, 1 [Florence, 1941] 180). It seems to me improbable that the *decemviri* who drew up the Laws would have failed to deal with this topic. We know that the pre-Julian calendar was introduced at *some* point in Roman history, and I see no other period in which the circumstances would be more conducive to such action.

⁴⁶ Ovid, *Fasti*, 1.27 f.; 3.97-154; Plut. *Numa*, 18; Livy 1.19.6.

⁴⁷ Lysias 30. For an Athenian inscription of this period containing both laws and a sacred calendar, see Oliver, *Hesperia* 4 (1935) 1-32; Dow, *Hesperia* 10 (1941) 31-37.

Although, since Ideler first suggested it,⁴⁸ the majority of scholars have assigned the pre-Julian calendar to the period of the *decemviri*, the objection may at once be raised that the festival cycle cannot be dated so late because the absence of the cult of Jupiter Optimus Maximus requires that it should have been completed before the foundation of this cult.

But perhaps too much importance has been attached to this point, which Wissowa popularized.⁴⁹ When Mommsen used the *argumentum ex silentio* he dated the festivals as a whole much earlier than anyone would now consider possible, because he logically included in his evidence all the cults which were omitted from the festivals.⁵⁰ This seems to be the only way in which his argument can justifiably be applied. Either the festival cycle is older than all the cults omitted, or the omission of specific cults is irrelevant to the problem. I do not see on what principle one can pick and choose among the cults and say that the absence of this one is significant, while the absence of another is not. It is in this arbitrary selection that the weakness of Wissowa's dating lies. He was, I believe, the first to see the importance of the topographical evidence, and therefore dated the calendar in the period of the Four Regions, after the inclusion of the Quirinal within the city limits, but he apparently did not realize that Mommsen's argument must be accepted or rejected *in toto*. He ignored the absence of the other cults which Mommsen listed, and retained as significant only Diana on the Aventine and the Capitoline Triad. The introduction of these marked for Wissowa the *terminus ante quem* for the dating of the calendar. In this he was followed by Warde Fowler and the majority of later writers. Is there, however, any reason why these cults should have been included in the festival cycle? There was never any public festival connected with Diana, which would need to be recorded in the calendar. The great *Ludi* dedicated to Jupiter Optimus Maximus seem not to have been celebrated on a fixed date originally and therefore could not have been marked in a fixed calendar until, later in their history, they were connected

⁴⁸ *Op. cit.* (note 23) 2.66 f. He cites as evidence that the old calendar, dependent on actual observation of the moon, was still in use when the second board of *decemviri* entered office, the statement of Dionysius (10.59) that they reckoned the month by the moon and that the Ides of May on which the *decemviri* entered office coincided with the full moon. The irrelevance of the statement and its very specific detail make me regard this evidence with suspicion, much as I should like to accept it at its face value.

⁴⁹ See note 3 for references.

⁵⁰ See notes 1 and 2 for references.

with a specific day.⁵¹ The *epulum Jovis* may have been an original part of the Capitoline cult or may have been introduced later, under the influence of the *lectisternium*, but in any case, as it falls on the Ides of September and November, which were already *feriae Jovi*, it would not require further notice. I see therefore no reason why we should regard the institution of these cults as significant dates in the history of the calendar.

Although the period of the *decemviri* has been generally accepted as the date of the pre-Julian calendar, Beloch and Nilsson have dissented. Beloch has suggested that it should be attributed to Cn. Flavius who published the *Fasti* and the *legis actiones* in 304 B.C.⁵² His argument is based chiefly on the passage in which Macrobius describes the ceremonies of the Kalends and ascribes them to the period before Flavius' publication. Beloch assumes that this ceremony would have been abandoned as soon as a fixed calendar was introduced, because the Kalends then lost their connection with the new moon. The argument does not take into consideration several significant points. In the first place the Romans habitually maintained ancient customs which had long lost their real function. Furthermore, Varro's description of the ceremony shows that it was still being practised even in his day when the pre-Julian calendar had become hopelessly confused. In addition to this, the other references to Flavius show clearly that he did not make any innovations in the calendar but made available to the public information which had up until then been in the hands of the *pontifices*.⁵³ Before this a knowledge of the calendar and an

⁵¹ This interpretation of the history of the *Ludi Romani* and *Ludi Plebei* was formulated by Mommsen (*Röm. Forsch.* 2.42-57) and is generally accepted. It is based partly on his theory that the games were originally votive, and were derived from the triumph. In order to arrive at his date for their becoming fixed, however, he interprets Livy's (1.35.9) description of them (*sollemnes deinde annui*) as referring to successive stages in their development, and argues that the second stage cannot have preceded the period of the *decemviri*, because they are not recorded in the calendar. (In this article he had not yet dated the festival cycle to the earlier period. Cf. note 2.) I hesitate to accept the silence of the calendar as evidence. The interpretation of Livy's phrase seems strained and does not agree with the definition of *sollemnis* given by Festus. The latter distinguishes between *sacrificia stata*, which come on fixed days, and *sacra sollemnia* "quae certis temporibus annisque fieri solent" (466 L). Thus the games could have been annual and have been held always at the same season, while not being attached to a fixed date, very much like the *feriae conceptivae*. For different interpretations of the games see Budinger, *SAWW* 123 (1891) 44-47; and Piganol, *Recherches sur Les Jeux Romains* (Paris, 1923) 75-91.

⁵² *Griechische Geschichte* (Berlin, 1927) 4.2.256-271.

⁵³ It would appear to be this point which Cicero is emphasizing to Atticus when he insists that Flavius lived later than the *decemviri* and adds "quid ergo profecit

understanding of its intricacies must have been a prerogative of the governing class in whose interests, for the most part, the pre-Julian calendar had been devised. The general public would still have depended on the announcements of the *pontifices* for their information. Beloch objects to the period of the *decemviri* also on the grounds of possibility. He asks "Und sollen wir denn glauben dass ein Kalender der auf den Mond keine Rücksicht nahm, in Rom schon zu einer Zeit eingeführt worden ist, wo in den ganzen übrigen Welt, von Aegypten abgesehen, noch kein Mensch an ein reines Sonnenjahr dachte?"⁵⁴ But the pre-Julian calendar was not a pure solar year, for which the Romans had to wait until 45 B.C., and the Athenians had already devised in the Prytany calendar a system of reckoning which, while rather clumsy, was certainly independent of the moon. Furthermore the Romans may perhaps have been poor astronomers, but they were no fools and could work out on empiric grounds a rule-of-thumb method, even when they did not understand the underlying principle involved. For example, they were probably poor physicists, but they were far from despicable engineers.

Nilsson, in his discussion of the calendar, sees in the festival cycle the "Calendar of Numa," which he describes as based on a purely lunar month dependent on actual observation of the phases of the moon.⁵⁵ He regards the Kalends, Nones and Ides as a later innovation, forming part of the pre-Julian calendar, which was introduced at the same time as the cult of the Capitoline Triad. The preceding discussion will have shown why I regard as impossible this treatment of the festival cycle and the dissociation of the Kalends from the true lunar calendar. The connection with the Capitoline Triad seems equally improbable. Nilsson's argument here is based on his assumption that the divinities of the Kalends and Ides were Juno Regina and Jupiter Optimus Maximus, who, with Minerva, formed the triad worshipped in the Capitolium on the southern end of the Capitoline Hill. This, however, is not so.

quod protulit fastos?" (*Ad Att.* 6.1.8). For Flavius' activities, see also Livy 9.46; Cicero, *De Orat.* 1.186; *Mur.* 25; Pliny, *N. H.* 33.17; Pomponius, *Dig.* 1.2.2.6.

⁵⁴ *Op. cit.* (note 52) 257.

⁵⁵ "Zur Frage von dem Alter des Vordärischen Kalenders," *Strena Philologica* (Upsala, 1922) 131-136. It is perhaps worth noting that Nilsson here accepts Warde Fowler's date for the "Calendar of Numa" but expands the scope of the argument by claiming that there are no "Jupiterfeste" in it. Warde Fowler limits his statement to the cult of the Capitoline triad (*loc. cit.*, note 4), correctly, since the Vinalia Priora, Poplilugia, Meditrinalia, and Larentalia were *Feriae Iovi*.

The goddess of the Kalends is Juno Covella, and the ceremonies of the Ides were conducted on the Arx at the northern end of the Capitoline Hill.⁵⁶ Moreover, if the triad were associated with the month we might reasonably expect to find Minerva presiding over the Nones, but as a matter of fact the Nones have no deity, and Minerva is nowhere associated with any part of the calendar.⁵⁷

Nilsson also brings in as evidence a passage from Macrobius which is used sooner or later in all discussions of the calendar (*Sat.* 1.13.20–21). The subject of the passage is the first use of intercalation in Rome. Macrobius reports several theories. Licinius Macer attributed it to Romulus, Valerius Antias to Numa. Aside from the doubtful reliability of these sources, one may probably discount these dates as purely legendary. Junius Gracchanus, however, claimed Servius Tullius as the first king to intercalate. Tuditanus reported: *decemviros, qui decem tabulis duas addiderunt, de intercalando populum rogasse*. Cassius Hemina agreed with him. Fulvius claimed that the consul M'. Acilius did the same thing in the year 191 B.C., but Varro objected to this when he reported the existence of a law inscribed on a bronze column by the consuls L. Pinarius and Furius (472 B.C.) *cui mensis (mentio MSS) intercalaris adscribitur*. Although none of these statements is concerned with the introduction of a new calendar, it is usually assumed that behind one of them lurks a reference to the new system of intercalation employed in the pre-Julian calendar. The problem is to decide which.⁵⁸ The consensus of scholarly opinion has voted for Tuditanus and the *decemviri*. Nilsson, however, states that this

⁵⁶ See pages 323.

⁵⁷ The only connection hinted at between Minerva and methods of time reckoning is the mysterious *clavus annalis* (Livy 7.3; Festus 49 L.). It seems probable, however, that this was not really a device for reckoning years, but had rather an apotropaic character. For a recent discussion, see K. Hanell, *Das altrömische eponyme Amt, Skrifter Utgitta av Svenska Institutet i Rom*, 2.8 (Lund, 1946) 125–140.

⁵⁸ Pais solved the problem raised by this law very simply, by denying that it, and other laws involving intercalation, ever existed, mainly on the grounds that intercalation was always under the control of the *pontifices* and that no legal action would be required to provide for it ("Le Leggi sulla intercalazione Pinaria-Furia, Decemvirale ed Acilia sono esistite?" *Ricerche sulla Storia e sul Diritto Pubblico di Roma*, Serie Prima [Rome, 1915] 1.181–214). For criticism of this point of view, see Kreller, *Zeitschrift der Savigny-Stiftung für Rechtsgeschichte*, 45 (1925) 598–600. Lenel, in his discussion of Lambert's attack on the authenticity of the Twelve Tables, says that a calendar does not belong in a law, and therefore rejects Mommsen's theory that the calendar formed part of the Tables (*Zeitschrift der Savigny-Stiftung für Rechtsgeschichte*, 26 [1905] 504 ff.). In this he may be correct, but one would think that the official adoption of a new calendar would need to be authorized by a law.

is impossible, because in a calendar based on actual observation of the moon, intercalation cannot be handled on regular legal principles. The passing of a law dealing with intercalation, he maintains, implies the existence of a cyclic calendar and therefore proves that the pre-Julian cyclic calendar already existed before the *decemviri* proposed their law. This statement seems to me somewhat arbitrary, since we know nothing of the content of the law in question. It might quite possibly be concerned, not with the method of intercalation, but with the granting of authority to intercalate. The very reasonable suggestion made by Ideler⁵⁹ and disseminated by Mommsen,⁶⁰ that in this law the *decemviri* introduced the pre-Julian calendar, is dismissed by Nilsson without further discussion as unjustified. Since, however, the most striking feature of the new calendar would be its provision for regular intercalation, I see no reason why the law by which it was authorized should not have been described as *de intercalando*.

The passage of Macrobius might then be interpreted thus: Leaving Romulus and Numa to legend, intercalation was first practiced by an Etruscan king. His method survived, as witnessed by the *lex Pinaria Furia*, until a new system was introduced by the *decemviri*. To the consulship of M'. Acilius we may ascribe a law granting the *pontifices* authority to intercalate at their own discretion.⁶¹ (This of course does not mean that they had not already done so, but only that they now could do it legally.) This sequence of events fits in exactly with the history of the calendar as I have outlined it above.

Nilsson's dating of the pre-Julian calendar has been more favorably received than Beloch's. The most important use to which it has been put, as far as I know, is Hanell's application of it to the constitutional history of the early Republic, in his extremely interesting book *Das altrömische eponyme Amt*.⁶² In his discussion of the consular *Fasti* he argues convincingly that since they are a method of time reckoning, they must be closely related to a calendar.⁶³ He explains the fact that they begin in the year of the

⁵⁹ See note 48.

⁶⁰ *Römische Chronologie* (Berlin, 1859) 30 f.

⁶¹ It is customary to identify the *lex Acilia* with the grant of authority to the *pontifices* referred to by Censorinus (20.6), Solinus (1.43), and Ammianus (26.1.12). The identification seems probable. Cf. Marquardt, *Römische Staatsverwaltung*² (Berlin, 1885) 3.286.

⁶² See note 57 for complete reference.

⁶³ *Op. cit.* 98. Cf. A. Degraasi, *Inscriptiones Italiae*, 13.1 (Rome, 1947) XIII.

dedication of the Capitoline temple on the grounds that this year was the occasion of the introduction of the new calendar, not of the beginning of the Republic.⁶⁴ In this point of view he finds support for his main thesis, that the tradition of the expulsion of the kings is of late date, and the change from monarchy to republic was a gradual development, rather than a revolution. It would be beyond the scope of this paper to enter this complex historical problem, but I may point out that, even if Hanell were to accept the period of the *decemviri* as the date of the pre-Julian calendar, his argument would not necessarily break down. If one is going to introduce the method of distinguishing years by means of a list of the magistrates who held office in each year, it will obviously be useful to extend the list of magistrates as far back as possible. The sixty years or so between the dedication of the Capitolium and the *decemviri* would be just about the span that could be covered with reasonable accuracy from the memory of men alive at the latter date. On the other hand, if Hanell's theory that the major crisis in early republican history occurred in 450 B.C., not in 510 B.C., he has actually provided an argument in favor of the later date for the calendar by eliminating from the previous course of events any situation calculated to produce calendar reform.

Hanell accepts Nilsson's date for the calendar and he also adduces further arguments in its favor. He interprets the innovation as the outcome of Greek influence, probably from Delphi, transmitted by the Etruscans.⁶⁵ The theory that the pre-Julian calendar is based on a Greek system was first developed by Ideler,⁶⁶ who, however, maintained that the embassy which was sent to Athens to study the Laws brought it back with them. Ideler assumed that the Roman calendar which intercalated a total of 45 days in a four year cycle was derived from the Greek eight year cycle (the Octaeteris) which intercalated a total of ninety days. But the arithmetical coincidence by which the numbers involved in the Roman system are just half those in the Greek system does not necessarily imply a direct connection, since it is the inevitable result of the laws of nature. The lunar year and the solar year *do* differ by a total of almost exactly ninety days in eight years and any system of intercalation intended to reconcile them must arrive at

⁶⁴ *Op. cit.* 115.

⁶⁵ *Op. cit.* 98 f., 113 f.

⁶⁶ *Op. cit.* (note 23) 65 f. (cf. Mommsen, *loc. cit.*, note 60). The same source is suggested by Macrobius (*Sat.* 1.13.8-14). But cf. Ginzel, *op. cit.* (note 5) 2.249 f.

some subdivision of this number. In all other respects the pre-Julian calendar differs markedly from the Greek one.⁶⁷ It dispenses entirely with the connection with the phases of the moon which was preserved at Athens until the Metonic cycle was adopted. It intercalates 22 or 23 days within the month of February instead of a complete month in a normal position in the third, fifth and eighth years. If there is Greek influence here, it is in the form of reaction rather than imitation. One might imagine that the embassy to Athens was impressed by the advantages of reckoning years by eponymous magistrates, and by the convenience of the Prytany calendar which ran on in an uninterrupted cycle. On the other hand, they would have been equally impressed by the remarkable inconvenience of the double dating required by the simultaneous use of the Prytany calendar and the lunar year. They would therefore have tried to devise for themselves a cyclic calendar which would incorporate the advantages and reject the inconveniences which they had noticed in Athenian practice. The break with the observation of the moon and the introduction of fixed days for the festivals would indeed have been radical, but no more so than many ideas which were being aired in Rome in the middle of the fifth century. They would, however, be far too radical to be the imitative result of the *direct* Greek influence to which Hanell would attribute them, and which we might expect in the Etruscan period.

CONCLUSION

In the preceding discussions I have tried to establish the following points:

1. The festival cycle with its fixed dates must have been codified after the introduction of the lunar month by the Etruscans.
2. The topographical evidence requires us to allow a considerable period of time between the beginning of the Etruscan period and the completion of the festival cycle.
3. The organization of the Roman calendar prior to and during the Etruscan period would have made fixed festivals unnecessary.
4. The circumstances under which fixed festivals would become possible developed in Rome in the same period as the circumstances which made the introduction of a cyclic calendar desirable, at the end of the sixth century and the beginning of the fifth.

⁶⁷ On the Athenian calendar see Pritchett and Neugebauer, *The Calendars of Athens* (Cambridge, 1947) 1-14.

5. The festivals were codified with fixed dates as part of the pre-Julian calendar.

6. The festival cycle and the pre-Julian calendar are to be dated together in the period of the *decemviri*.

If these conclusions are correct, certain problems in connection with the festivals become less difficult. The existence of the Cerealia in the regal period, assumed on the basis of its presence in the calendar, appears to be inconsistent with the statement of Dionysius (6.17) that the annual sacrifices to Ceres, Liber, and Libera were vowed by Postumius in 496 B.C., when he vowed the temple of these gods. But the only associations of the festivals are with this temple. If, therefore, we can regard the calendar as later, we can take Dionysius' evidence at its face value, and assume that the Cerealia was first celebrated in 493 B.C. when the temple was dedicated. The Saturnalia is in the same situation. Its presence in the calendar has been the only reason to cast doubt on the statements of Livy (2.21.2) and Dionysius (6.1.4) that the festival was founded at the dedication of the temple in 497 B.C.

The qualities of the days which form part of the calendar have not entered into the discussion so far, since it is obvious that they could not have been assigned to specific days until after the festivals had become fixed. But it would certainly be difficult to explain why under the kingship more than half the days in the year should have been kept available for meetings of the comitia (*dies comitiales*). Provision for so much political activity seems much more likely to have resulted from the experience of the early republic.

The interpretation of the festival cycle as a whole also seems to be facilitated by assuming that it represents republican Rome rather than a more primitive community. If one considers the number of priesthoods, the variety of social groups, the religious, political and military institutions which are all represented by the festivals, one sees that the society in whose interests this calendar was designed is far from simple. So complex an organization suggests a length and variety of experience more characteristic of Rome in the mid-fifth century than at any earlier period in her development.⁶⁸

⁶⁸ I should like to acknowledge my indebtedness to my colleagues, T. R. S. Broughton and W. C. Michels, for their invaluable help on many of the technical problems involved in this paper.