

THE LEGION AND THE CENTURIATE ORGANIZATION

By G. V. SUMNER

It is generally recognized that Rome of the early Republic offers a good example of the correlation between military and political organization. The ordering of the Roman citizenry in centuries, classes and age-groups was in origin and essence a military system. The *Comitia Centuriata* was the *exercitus urbanus*—the army on parade in the Field of Mars.

But by the third century B.C. the Roman army and the centuriate assembly were manifestly two different systems, even if vestiges of their interconnection lingered on. The process whereby this differentiation had come about is, unfortunately, not so clear. The traditional accounts of early Roman history generally failed to devote much attention to questions of that order. Yet the effort to tackle and, if possible, solve this complex of problems can hardly be evaded. The answers given, or assumed, by modern historians are bound to determine how the whole history of early Rome is interpreted and represented.

The method of approach to be adopted here is that of reversing the historical process and working backwards from the relatively more certain data of the Middle Republic to the period where hypothesis and conjecture reign. It is perhaps a clumsy method. But, given the nature of the evidence, it appears to offer a better hope of illumination than an attempt to start from Servius Tullius *rex*.¹

It is appropriate therefore to begin with Polybius. He presumably gave an account of the centuriate constitution in his sixth book, but it has not survived, more's the pity. However, we do have from the same source some reasonably reliable information on Roman military organization in the period from the third to the second century B.C. That shall be our starting-point.

We need only consider the basic or standard army which Polybius talks about in his sixth book (VI, 19 ff.). It comprises four Roman legions, the two consuls commanding two legions each. At one point, Polybius puts the complement of a legion at about 4,000 infantry and 200 cavalry, adding that in time of need it could rise to about 5,000 infantry and 300 cavalry (III, 107, 10). But elsewhere he gives the figure of 4,200 infantry and 300 cavalry, rising to 5,000 or 5,200 infantry in time of crisis (VI, 20, 8–9; II, 24, 3). Nothing is said about any increase of the cavalry beyond 300. We usually treat the figure of 4,200 infantry and 300 cavalry as the standard complement, and that is probably all right, so long as we remember that the figures represent the theoretical complement, not necessarily the practical effective of any particular legion.

The legionary infantry is described as falling into four categories of men—*velites*, *hastati*, *principes* and *triarii*. In the standard complement of 4,200 there would be 1,200 *velites*, 1,200 *hastati*, 1,200 *principes* and 600 *triarii*. The *hastati* were organized in 10 *manipuli* of 120 men each, and so were the *principes*. But the 10 maniples of the *triarii* numbered only 60 men in each. As for the light-armed *velites*, they did not have units of their own, but were attached proportionately to the maniples of the *hastati*, *principes* and *triarii*.^{1a}

This basic tactical unit, the *manipulus*, had a binary structure. There were two centurions in command, also two *ouragoi* (presumably *optiones*), and two standard-bearers. Polybius says that when both centurions were on hand, the first centurion commanded the right section of the maniple and the other, ὁ δευτερος, commanded the left. But that is a bit misleading. The prior centurion was in command of the whole maniple, no matter

¹ In certain details the results of this discussion have, not unnaturally, been anticipated in earlier treatments. One may refer in particular to Eduard Meyer, *Kleine Schriften* II (1924), 195 ff.; J. Beloch, *Römische Geschichte* (1926), 283 ff.; G. De Sanctis, *Storia dei Romani* II^a (1960), 181 ff., and *RFIC* IX (1933), 289 ff.; L. Zaccan, *Atti R. Ist. Veneto* XLIII (1933–4), 869 ff.; G. Giannelli, *Atene e Roma* III (1935), 229 ff.; A. D. Momigliano, *SDHI* IV (1938), 3 ff.; A. Bernardi, *Athenaeum* XXX (1952), 3 ff.; Ernst Meyer, *Römische Staat und Staatsgedanke*³

(1964), 48 ff. These treatments represent varying combinations of evidence and hypothesis. The present discussion offers a further variation. For the sake of clarity and simplicity of exposition I have not attempted a detailed critique of earlier interpretations and controversies (for which see especially E. S. Staveley, *Historia* V, 1956, 74 ff.).

^{1a} It is not clear whether this implies 40 *velites* attached to each of the 30 maniples, or alternatively 24 *velites* attached to each of the maniples of *triarii* and 48 attached to each of other 20 maniples

whether the posterior centurion was present or absent.² Curiously, Polybius seems not to know that the manipule was constituted formally out of two *centuriae*; or, if he knows it, he does not take it into account. The prior centurion was actually the *centurio prioris centuriae*, the posterior centurion was the *centurio posterioris centuriae* (cf., e.g., Liv. XLII, 34). But the century now had no function, at least in tactical terms;³ it still had some administrative function,⁴ though there is no evidence to show that the centuries played any part in the levy after the manipular reform. The binary structure of the manipule was essentially a historical survival from the time when the century was the basic tactical unit. In the same way the manipule itself survived after it had been tactically superseded by the cohort. So the antiquarian Cincius could write, in his *De Re Militari*,⁵ 'in legione sunt centuriae sexaginta, manipuli triginta, cohortes decem'. The superseded tactical units retained a formal existence in the legion.

This characteristically Roman tendency to institutional fossilization also shows up in the names of the *hastati* and *principes*. The *hastati* are armed with the *pilum*, not the *hasta*. But obviously there must have been an earlier stage when they were *hastati* literally. The *principes*, described by Polybius as men in the prime of life, formed the second line of the legion, not, as their name would suggest, the first. Almost certainly there must have been a time when they had been literally *principes*. The third group of heavy-armed troops, the veteran *triarii*, were known also as *pilani*, and their maniples as *pili*. The term *pilani* should not be derived from *pilum*, for according to Polybius they were armed with the *hasta*. It would be very odd if they had switched back from the *pilum* to the *hasta*, which was the more archaic weapon. The modern explanation is that the name comes from *pilae*—'files'. 'Pilani are troops formed in columns,' says Walbank.⁶ Actually it would seem logical to derive *pilani* from *pilus* rather than *pila*. These two words may of course be cognate. At any rate, since *pilus* is the term for a manipule (not a century) of *triarii*, it looks as if the term *pilani* does not go back beyond the manipular reform. *Triarii* will be their earlier name.

The centuriate element in the Polybian legion, then, was merely vestigial. The sixty centurions Polybius mentions, and the sixty centuries he fails to mention, were a hangover from a past form of the military organization. And characteristically they continued to hang on in the cohort-legion of the later Republic and the Empire.

So also with the cavalry, as described by Polybius, the old order has been submerged under the new. The tactical units are *ilai*, that is, *turmae*, of which each legion has 10. So that, according to Polybius' variant statements, a *turma* must have numbered 20 or 30 horsemen according as there were 200 or 300 to a legion. Each *turma* is officered by three decurions (and three *ouragoi*), with the first decurion in command; in his absence, the command passes to the second decurion. Evidently this arrangement is similar to the command structure of the infantry manipule. The older unit, the *decuria*, has been swallowed up by the larger unit, the *turma*, just as the *centuria* was absorbed into the manipule. But the three decurions, like the two centurions, have been retained.

The manipular army of Polybius shows no significant correspondence with the organization of the Comitia Centuriata in any of its forms. It has vestiges of an earlier centuriate system, but that is all. Unfortunately, it was none of Polybius' business to trace the earlier stages of the legion's development. But the *Ineditum Vaticanum*⁷ indicates that what preceded the manipular formation was the hoplite phalanx. It implies that the maniples were introduced as a result of contact with the Samnites. If so, they must have come in during

² cf. G. Veith in J. Kromayer and G. Veith, *Heerwesen und Kriegführung der Griechen und Römer* (Munich, 1928), 318.

³ In Frontinus, *Strateg.* IV, 7, 27 ('Scipio Aemilianus ad Numantiam omnibus non cohortibus tantum, sed centuriis sagittarios et funditores interposuit') it must be assumed that 'centuriis' is used loosely for 'manipulis'. Compare Sallust, *Bj* 49, 6, (Metellus) 'inter manipulos funditores et sagittarios dispersit'.

⁴ cf. Sallust, *Bj* 91, 1, 'pecus exercitui per centurias . . . distribuerat'. R. M. Ogilvie points out to

me that the layout of excavated legionary fortresses, such as Inchtuthil, confirms the continuing administrative function of the *centuria*.

⁵ ap. Gell., *NA* XVI, 4, 6.

⁶ F. W. Walbank, *Historical Commentary on Polybius I* (Oxford, 1957), 702 (on VI, 21, 7-8).

⁷ *Hermes* XXVII (1892), 118 ff. Cf. also Diodorus XXIII, 2. E. T. Salmon, *Samnium and the Samnites* (Cambridge, 1967), 105 ff. is unduly sceptical about the evidence for introduction of manipular tactics during the Samnite War period.

the second half of the fourth century, and most probably during the last quarter, the period of the Second Samnite War.

Now Livy under the year 340 offers a mystifying account of the state of the Roman army at the outbreak of the Latin Revolt (VIII, 8, 3 ff.). The four-legion army he describes is already a manipular one, but it is oddly different from Polybius's. While the *hastati* already form the front line in Livy's legion, they are assigned to 15 instead of 10 maniples, and 20 of the men in each maniple are supposed to be *leves milites* armed with the *hasta* and javelins (*gaesa*); the rest are characterized as *scutati*, equipped with the *scutum*. Next come the *principes*, all *scutati*, and they too are in 15 maniples instead of 10. These 30 maniples of *hastati* and *principes* are classified as *antepilani*. Behind them are 15 so-called *ordines*, which are, however, divided into three parts. The first section consists of the *triarii*, veterans armed with *hasta* and *scutum*, as in Polybius. The second section is the *rorarii*, namely the light-armed (although Livy fails to give this, or any, explanation). The third is called the *accensi*, described as 'minimae fiduciae manum.' The complement of each tripartite *ordo* is given as 186, made up of 60 men and 2 centurions in each of the three sections. The legionary total is set at 5,000 infantry and 300 cavalry.

It would seem almost impossible to believe that Livy's legion ever existed in reality.⁸ No one can accept the 90 centurions of the *triarii*, *rorarii* and *accensi*; or the implied total of 150 centurions to a legion; or the organization of the *accensi* into so-called *vexilla*; or the addition of the 15 tripartite *ordines* to the 30 maniples. All this has to be adjusted, amended or simply cancelled if Livy's account is to be forced to make sense. It would be over-optimistic to suppose that the residue would have any claim to authenticity. The whole farrago appears as an antiquarian reconstruction, concocted out of scattered pieces of information and misinformation, mostly to do with the manipular army. One of its underlying features seems to be a strained attempt to establish some sort of relation between the new military order and the five categories of the census classification. In short, Livy's account should not be treated as a valid description of any form of the manipular legion. Only the details confirmed by other sources have any claim to credence.

Livy does at any rate agree with the *Ineditum Vaticanum* that what preceded the manipular army was the hoplite phalanx (VIII, 8, 3). That brings us to the question of the number of the legions. It is probable that an increase to four legions did occur at the time of the manipular reform. The manipular organization was designed to improve the flexibility of the legion, and similarly an increase, in fact a doubling, of the legions would enhance the flexibility of the army as a whole. Because the maniples were drawn up in a spaced-out battle-formation, the manipular legion presumably took up more room than a phalanx-legion of equivalent size. So it is appropriate that the phalanx-legion which preceded the manipular-legion should have been numerically larger. Underlying the manipular formation, as we have seen, was a centuriate organization, the survival of an earlier system. But if we regard the legion as consisting of 60 centuries (as stated by Cincius), there is an anomaly. A century being half a maniple, a century of the 1,200 *hastati* in the Polybian legion would amount not to 100 but only to 60 men, and the same goes for the *principes*. As for the 600 *triarii*, a century of them would number a mere 30 men. It is usual to explain this odd phenomenon by assuming that an original legion of 60 full-strength centuries in the regal period was chopped into two legions each containing 60 half-strength centuries at the beginning of the Republic.⁹ The purpose of the split was to provide a legion for each of the two consuls. This explanation does seem somewhat mechanical. Let us waive the question whether a legion of 6,000 hoplites is at all plausible for the regal period at Rome. Let us also waive the question whether two consuls *with two military commands* really were instituted at the beginning of the Republic. Let us assume, for the sake of argument, that the regal legion did have to be divided into two equal parts at that time, so that for practical purposes a century *had* to number about 50 instead of 100 men. Surely this would only have been a temporary expedient. The notion that the Romans would from then on have felt religiously bound to keep the *centuria* at permanent half-strength for 150 years or more is not practical at all.

⁸ Though A. J. Toynbee, *Hannibal's Legacy* (Oxford, 1965), I, 518, claims that Livy's description is 'authentic'.

⁹ P. Fraccaro, *Opuscula* II, 287 ff. But see E. S. Staveley, *JRS* XLIII (1953), 32, n. 18.

It is far more sensible to suppose that the *centuria* did not lose its meaning as a complement of 100 men until the manipule absorbed and superseded it. From that time it did not matter that the *vestigial* century was not equivalent to 100. This is not to say that *in practice* the century of the pre-manipular legion must always have amounted to exactly 100 men, or the legion to 6,000 men, but only that those figures represent the theoretical complement of the century and the legion.¹⁰

The four manipular legions, on Polybius' figures, gave an army of 12,000 (when augmented, about 14,000) heavy infantry, 4,800 (augmented, about 6,000) light infantry, and 1,200 cavalry. The hoplite phalanx which preceded this army must have comprised two centuriate legions with a nominal complement of 6000 heavy infantry each. Since the light infantry of the manipular legion was not enrolled in maniples, there is no basis here for determining whether it had earlier been organized in centuries. In the case of the cavalry, we have seen that the ten *turmae* of the reformed legion overlie 30 *decuriae* from the previous organization. This could imply that the cavalry complement of the premanipular legion was 300, giving a total of 600 cavalry. But that would entail a doubling of the cavalry at the time of the reform. The alternative is a cavalry complement of 60 *decuriae* per legion, which, like the heavy infantry, had to be divided into two parts when the number of legions was doubled in the reform. We shall come back to this question later.

It will be recalled that the heavy infantry categories of *hastati*, *principes* and *triarii* appear to represent survivals from an earlier stage in which the *principes* really were *principes*, and the *hastati* were really armed with the *hasta*. The pre-manipular legion presumably comprised 20 centuries of *principes*, 20 of *hastati* and 20 of *triarii*. Further, we know that the two vestigial *centuriae* of a manipule were called *prior centuria* and *posterior centuria*. This suggests that they had originally been arranged the one behind the other (rather than that one was earlier than the other). So we come to the conclusion that the centuriate legion of the hoplite phalanx was drawn up to a depth of six lines. The front line was formed by the 10 prior centuries of the *principes*, the second line by the 10 posterior centuries of the *principes*, and so on with the *hastati* and the *triarii*. We could compare this with the Spartan line-up at the Battle of Mantinea in 418, where according to Thucydides (v, 68) the average depth was 8, with a front of 448 men. The Spartan units were actually a fraction below strength, and their theoretical complement would have produced a formation 504×8 . The theoretical complement of the Roman centuriate legion, by comparison, amounted to $1,000 \times 6$ hoplites.

Further light on the legion comes from the military tribunate. Polybius (vi, 19) notes that there were 24 elected *tribuni militum* (χιλιάρχοι), six being assigned to each of the four legions. Now a curious passage of Livy (ix, 30, 3) records a law of 311 B.C. to the following effect :

ut tribuni militum seni deni in quattuor legiones a populo crearentur, quae antea perquam paucis suffragio populi relictis locis dictatorum et consulum ferme fuerant beneficia.

If Livy really wrote *seni deni in quattuor legiones*, he should, *prima facie*, be talking about the election of 64 military tribunes, 16 to each of the four legions.¹¹ But that would be manifest

¹⁰ See further below (p. 71). The process which Fraccaro's hypothesis requires us to assume is that (a) Servius Tullius created an army with a complement of 6,000 hoplites (in 60 centuries with a complement of 100 men each) and 2,400 light-armed; (b) at the beginning of the Republic this army was divided into two legions, each having a complement of 3,000 hoplites (in 60 centuries with a complement of 50 men each), and 1,200 light-armed; (c) this form of legion was still in force at the time of the manipular reform, so that there was then a straight transition to the manipular legion of 3,000 heavy-armed (with some variation in the complement of the 60 centuries) and 1,200 light-armed.

The puzzling feature in this analysis is why, in the

very long period from the founding of the Republic to the manipular reform, the Romans should have kept the legion down to a complement of 3,000 hoplites and the century to a complement of 50. Fraccaro himself (*Opusc.* II, 289) observes that a distinction is to be made between the theoretical and the effective complement of a military unit. Yet according to his hypothesis the *effective* complement of 50 for a century established ca. 500 B.C. must have become transformed into the theoretical complement, since otherwise he has no explanation why its effective complement did not return towards the original theoretical complement of 100.

¹¹ cf. for the usage Horace, *Sat.* I, 4, 86, 'saepe tribus lectis videas cenare quaternos.'

nonsense. The usual interpretation therefore makes Livy mean that a *total* of 16 military tribunes was elected, four to each legion. This is linguistically possible, but it is not easily squared with the history of the military tribunate's development. It would be better either to emend the text to *tribuni militum seni [deni] in quattuor legiones* or else to posit an error on Livy's part. In other words, Livy's information concerns the fact that the election of the 24 military tribunes, 6 to each of the four legions, as known from Polybius, actually began about 311. This would make it probable that the increase to four legions was recent in 311, and would be in line with the other indications that the four manipular legions were introduced during the Second Samnite War.¹²

Under the year 362 Livy says that then for the first time it was decided to elect military tribunes to the legions (VII, 5, 9):

et cum eo anno primum placuisset tribunos militum ad legiones suffragio fieri (nam antea sicut nunc quos Rufulos vocant, imperatores ipsi faciebant), secundum in sex locis tenuit . . .

The subject is young Titus Manlius, and there is a slight chronological difficulty since the notice is connected to the story of how he won the name Torquatus, and that episode is variously dated to 367, 361, 358 and 357. But the difference is not significant for the present discussion.

At first sight it appears as if Livy is talking about the creation of only six elective posts of military tribune. And so the passage is usually interpreted. But we should notice that Livy specifies *legiones* in the plural. Are we to assume that three tribunes were elected for each of two legions? Surely what is meant is that there were six places in each legion, and that Manlius was elected second tribune out of six in one of the two legions. So what lies behind Livy's report is the creation of *twelve* elective posts of military tribune at this time.

Now the Fasti show that in nearly every year from 405 to 367 (trad.) there were elected six military tribunes 'with consular power'. Before 405 the colleges, when they occurred, numbered three or four. It was possibly during the period 405 to 367, then, that the long-lasting figure of six military tribunes to a legion became established. In other words, from 405 to 367 there was a single *legio* with six military tribunes. By about 362 a second legion had been created, so that each of the two consuls, under the new constitution inaugurated by the Licinio-Sextian legislation, commanded a legion, and there were six military tribunes to each legion. As a result the word 'legio' acquires a new connotation. It is no longer just 'the levy', it is a military formation. The election of military tribunes with consular power was ended by a Licinio-Sextian law *ne tribunorum militum comitia fierent* (Liv. VI, 35, 5). That election, according to Livy (V, 13, 3; V, 52, 16), had been held in Comitia Centuriata. Now, a new election of 12 *tribuni militum ad legiones* was instituted, apparently after a few years during which the consuls had the appointment of these officers ('imperatores ipsi faciebant'). The election was held in Comitia Tributa (Sallust, *Bj* 63), evidently because the new military tribunes did not have *imperium*. By 311 B.C. the four-legion manipular army had been created, and so the number of military tribunes was again doubled, to 24. It may be that, as Livy again suggests (IX, 30, 3), there was a short period after the establishment of the new manipular army when the 12 military tribunes of the two extra legions were appointed at the commanders' discretion.

When the number of legions became two, the Romans may have been compelled to reduce the practical strength of the legion and its units. In the 360's they were surely in no position to create 6,000 new hoplites out of the air, or out of the earth. We may assume that at first each legion had scarcely more than 3,000 hoplites, with centuries containing only about 50 men. This, of course, is the very situation which the conventional theory imagines occurring at the beginning of the Republic. But our theory does not have to assume that the half-strength legion was a permanency. Rather, with growing prosperity and increasing population in the next 40 or 50 years, the complement of each legion could gradually rise towards its nominal figure of 6,000 hoplites in 60 centuries. Consequently, when the legions were doubled to four in the manipular reform and a total of at least 12,000 heavy infantry was required for the army as a whole, something not too remote from that figure was

¹² cf. Salmon, *Sannium and the Sannites* 232, n. 2.

already available in the existing force of two legions. In doubling the legions the Romans did not suddenly have to find double the amount of manpower.

We noted that from 405 the number of 6 military tribunes 'with consular power' is attested. In the previous 39 years the lists¹³ record 19 annual colleges, of which 8 have a membership of three and 11 a membership of four. It is not actually the case that all the colleges of three members precede those of four. The foursomes begin from 426, but there are threesomes in 422, 418 and 408. The theory that the creation of military tribunes in place of consuls was due to the need to fight on several fronts is not supported by the evidence. Up to 405 the annals fail to record any fighting on several fronts under the command of military tribunes. Indeed they record very little fighting under their command at all—namely, in only 4 out of the 19 years (418, 414, 407, 406). Most of the warfare is under the command either of dictators or consuls. What then is the reason for the variation between colleges of three and four military tribunes?

An apt explanation is that the variation is related to the levy of a given year. It is the military tribunes, we recall, who select the men at the annual levy according to Polybius (VI, 20). Some significance may be attached to the fact that the Greeks translated *tribunus militum* by χιλίαρχος, and even Varro's derivation of *miles* from *mille* (LL v, 89), whether right or wrong, is relevant. Originally a *tribunus militum* was responsible for 1,000 soldiers. So, in years when there were three military tribunes, 3,000 hoplites were to be levied; when there were four tribunes, 4,000 hoplites; just as the six military tribunes belong to a *legio* of 6,000,—or at any rate, 60 centuries.

It seems significant, too, that the military tribunes, in spite of their 'consular power', were not allowed to celebrate a triumph.¹⁴ It looks as if the election of military tribunes instead of 'consuls' implied that offensive operations were not anticipated. It is noticeable that, on two out of three occasions when the tribunes *are* militarily aggressive, according to the tradition something goes wrong. In 418 the tribune L. Sergius Fidenas is defeated by the Aequi and Labicani, and a dictator has to restore the situation (Liv. iv, 46, 5 ff.). In 414 the tribune M. Postumius Regillensis takes the town of Bolae, but is then murdered by mutinous soldiery (Liv. iv, 49, 7 ff.). By contrast the tribunes of 407 are slow to take action and as a result the garrison at Verrugo is lost (Liv. iv, 58, 3 ff.). On the whole it appears that when military initiative was planned, 'consuls' tended to be preferred to tribunes, or else a dictator was appointed if military necessities arose while tribunes were in office.¹⁵ This is not to deny that the political explanation of the consular tribunate has some validity. In fact it harmonizes with the military explanation offered here. Plebeians could hold the office, even if few did. But there was for some time a reluctance to confide serious military operations to their care.

What about the years when consuls held office during the period 443–406? Were there then military tribunes *without* consular power? There is one attested non-consular *tribunus militum*, A. Cornelius Cossus in 437.¹⁶ Unfortunately, the testimony is hard to depend on. It belongs to the notorious controversy about Cossus' status when he won the *spolia opima* by killing Lars Tolumnius, king of Veii. According to some versions, Cossus was not an ordinary, but a consular, tribune; according to others he was *magister equitum*; and according to the archaeologist and epigrapher, Augustus Caesar, he was consul when he did his deed. An interesting feature of the episode is that the duel between Cossus and Tolumnius was a fight between two cavalymen. In fact Livy (iv, 19, 1) describes Cossus rather anomalously as 'inter equites tribunus militum' (in his version the cavalry commander is the *magister equitum*, L. Quinctius Cincinnatus junior). However, as Augustus apparently insisted, Cossus, to earn the *spolia opima*, must have been a *dux* in his own right, commanding *suis auspiciis* (Liv. iv, 20, 6). On the other hand, as Livy insists back, Cossus certainly did not perform his exploit when he was consul (iv, 20, 9). Therefore he must have been either a consular tribune commanding the army and leading the cavalry, or else *magister equitum*. His consular tribunate is in fact attested for 426. But so is the dictatorship of Mam. Aemilius Mamercinus. Which means that Cossus was not *dux* in the battle, not at

¹³ T. R. S. Broughton, *The Magistrates of the Roman Republic* I (New York, 1951), 52 ff.

¹⁴ Zonar. vii, 18; cf. T. Mommsen, *Römisches Staatsrecht* I³ 128; II³ 190.

¹⁵ Up to 406 dictators are named in four of the 19 years in which *tribuni militum consulari potestate* are recorded: viz., 434, 426, 418, 408.

¹⁶ Broughton, *MRR* I, 59, cf. 65–67.

least as consular tribune. (In fact, Livy IV, 31, 2 and 5 has him left behind in charge of the City and actually nominating the dictator.) But both Diodorus and Livy make Cossus *magister equitum* in this same year 426, to the dictator Aemilius. And according to Valerius Maximus (III, 2, 4) and Frontinus (*Strateg.* II, 8, 9) it was as *magister equitum* that he won the *spolia opima*. If that is right, and it is difficult to envisage any other solution within the terms presented, the episode affords some support for Alföldi's view¹⁷ that in this early period the *magister equitum* enjoyed equal status with the *magister populi*—the dictator, so long as the aristocratic cavalry retained its pristine importance and prestige. At the least the *magister equitum* has to be regarded as a commander in his own right.

It certainly does not seem possible that Cossus was simply an ordinary *tribunus militum*. Now there is no other evidence for such officers in the period. But then it would be optimistic to expect it. Non-consular tribunes would not be recorded in the Fasti. The office of *tribunus militum* is self-evidently older than that of *tribunus militum consulari potestate*, and we can hardly avoid the presumption that in years when consuls instead of consular tribunes held office, ordinary military tribunes were appointed, probably by the consuls themselves.

There is indeed little evidence on the military tribunate before the period of consular tribunes. But Varro (*LL* v, 81) shows that it was as old as the military organization based on the three original tribes of Tities, Ramnes and Luceres. He seems at first sight to say that there were three tribunes to each tribe: 'tribuni militum quod terni tribus tribubus Ramnium, Lucerum, Titium olim ad exercitum mittebantur'. However, this interpretation is not obligatory. The moderns rightly assume that there was one *tribunus militum* to each tribe, making a total of three. This of course fits in with the establishment of a college of three military tribunes with consular power in 444. That is to say, what happened then was merely the conferring of *imperium* on the already existing institution of three *tribuni militum*. The implications of this will be considered presently.

The two annalistic accounts of the centuriate organization attributed to Servius Tullius describe a division of the *pedites* into five classes. However, we know from Festus (100 L) and from Gellius (*NA* VI, 13), who cites Cato's speech *De lege Voconia*, that originally there was only one *classis*, corresponding to the *prima classis* of later times. Those later assigned to the second, third, fourth and fifth classes were originally referred to as *infra classem*. These facts are familiar to every student of the problem, but their implications are not always confronted.¹⁸

The first, and original, *classis* is described by both Livy (I, 43) and Dionysius (IV, 16 ff.) as follows. There were 80 centuries, 40 of *seniores* and 40 of *iuniores* (the *seniores* constituting the home guard for defence of the city, the *iuniores* being assigned for military service in the field). The equipment prescribed for the first class was helmet (*galea*) round shield (*clipeus*), greaves (*ocreae*), and corselet (*lorica*), all of bronze. Their weapons were the spear (*hasta*) and sword (*gladius*). Thus the field army comprised 40 centuries of hoplites, the *iuniores* of the *classis*. In other words, a hoplite phalanx with an effective of 4,000 is indicated. We have already suggested that exactly that size of phalanx is implied by the colleges of four consular tribunes occurring during the period 426–406 B.C. We shall therefore conclude that the *iuniores* of the first class as described by Livy and Dionysius represent the *legio* of 4,000 heavy infantry of the period ending in 406 (trad.). From 405, because of the demands of the war with Veii, the number of consular tribunes was increased to six and the complement of hoplites concomitantly to 6,000.

This increase is reflected in the descriptions of the centuriate organization, with regard to the second and third classes. It can be seen that, if the Romans were to raise an additional 2,000 hoplites out of available manpower, they would very likely have to descend to an economic class inferior to the existing *classis*, and they would have to accept an inferior standard of equipment for the new men, who had to provide their own arms and armour. The same economic factor helps to explain why soldiers' pay—*stipendium*—was introduced for the first time in 406 (Liv. IV, 59, 11; Diod. XIV, 16, 5). The 2,000 new hoplites of inferior

¹⁷ Cf. *Les Origines de la République Romaine* (Entretiens Hardt XIII, 1966), 130 f., 239, 241.

¹⁸ P. De Francisci, *Primordia Civitatis* (1959),

694 ff., attempts to evade them, by an argument which concentrates on the use of the adjective *classicus* and ignores the expression *infra classem*.

census are represented by the *iuniores* of the second and third classes, who correspond precisely to the prescribed conditions. They were assigned to 20 centuries (hence 2,000 men). Their census was below that of the first class. The equipment of the second class differed from that of the first in not including the *lorica*, the corselet; clearly they could not afford it. Not having the protection of the *lorica*, the second class substituted the *scutum* for the *clipeus* as their shield. Exactly the same was true for the third class. And in addition their equipment omitted the greaves, evidently as a luxury beyond their means, because their census was still lower than that of the second class. An interesting confirmation of all this is Livy's statement (VIII, 8, 3) that the *scutum* was substituted for the *clipeus* 'postquam stipendiarii facti sunt', i.e. after soldiers' pay was introduced in 406: a statement at variance with his account in I, 43, 4 attributing the introduction of the *scutum* to Servius Tullius.

We can therefore maintain with considerable confidence that the *iuniores* of the first three classes in the so-called Servian organization actually represent the *legio* of 6,000 hoplites of the period 405-367. After that the doubling to two legions necessarily entailed a divergence between the military and the centuriate organization. Consequently the main lines of the Comitia Centuriata remained set in the form attained by 367, until the reform that was carried through after the First Punic War. This fact, that the 'Servian' system lasted down to the time when Romans began to write down their history, is a good enough guarantee that it has been transmitted with a reasonable degree of accuracy.

As is well known, the Servian Comitia Centuriata was a carefully balanced and structured system. The voting arrangements of the Assembly were such that the 18 equestrian centuries and the 80 centuries of the first class voted first and had a bare majority over the rest of the Assembly. This was evidently not accident, but design. Now if, as has been suggested,¹⁹ the 12 later equestrian centuries were added in the late fourth century (not by Servius Tullius, as the tradition says), then at least 12 other centuries must necessarily have been added at the same time. Otherwise, in the preceding phase of the Assembly the lower classes would have had a majority, and that is so extremely improbable as to be in practice impossible.

It is preferable to follow the indication provided by the legend that Servius Tullius was responsible for the addition of the equestrian centuries. Since the Servian order actually stands for the centuriate organization as constituted in the period 405-367, this would mean that the twelve centuries of *equites* were added during that time. Twelve centuries represents a very considerable increase in the numbers of the cavalry. It seems to have been made possible by the institution of the system of *equus publicus* (which of course the tradition faultily attributes to Servius Tullius or even Tarquinius Priscus). Monies for the purchase and upkeep of a public horse were provided out of funds raised from orphans and widows (Liv. I, 43, 9; Cic., *De Rep.* II, 36). This should be tied in with the information that the censors of 403, Camillus and M. Postumius, imposed taxes on orphans and celibates (Plut., *Cam.* 2; Val. Max. II, 9, 1). The facts are hopelessly distorted by Livy under the year 403. The censors are misrepresented as two extra military tribunes (V, 1, 2). The additional cavalry do get mentioned but are supposed to be men of 'census equester' volunteering to serve *equis suis* (V, 7, 4-13). Still it is noted that the Senate decided the volunteers should receive *aera*. This is no doubt a confused and uncomprehending reference to the institution of *aes equestre* and *aes hordearium*. At any rate it emerges that a far-reaching reform of the cavalry can be associated with the censorship of Camillus.

It will be recalled that the cavalry complement of the four manipular legions was 1,200. How is this to be squared with the 18 equestrian centuries of the Servian order? The answer must be that, when the cavalry was reorganized ca. 403 B.C., the old six centuries of Titius, Ramnes and Luceres *priores* and *posteriores* were taken out of the field army, and became largely ceremonial. They were retained in the political order as 'the six votes' (*sex suffragia*). They were probably the voting centuries of senators, as indicated by Cicero when he refers to 'equitatus, in quo suffragia sunt etiam senatus' (*De Rep.* IV, 2). In the early days, consequently, their membership must have been mainly patrician, and in spite of recent objections,²⁰ it is probable that they are the centuries designated *Procurum Patricium*—'in discriptione classium quam fecit Ser(vius) Tullius' (Festus 290 L).

¹⁹ A. D. Momigliano, *JRS* LVI (1966), 22.

²⁰ Momigliano, *ibid.* 16 ff.; Alföldi, *Historia*

XVII (1968), 444 ff.; Momigliano, *ibid.* XVIII (1969), 385 ff.

The new field force of 12 *equitum centuriae* must have been divided into two when the two-legion army was instituted in the 360's. It was then distributed into four groups of 300 cavalry each when the manipular army of four legions was introduced.

The form of the Comitia Centuriata we have just considered, the classical 'Servian' system, was the last one in which the organization of the legion was directly related to the political organization of the citizen body. We have now to examine questions about the earlier form of the centuriate system.

One problem which is not easily solved is, when were the centuries of *seniores* introduced? Was it when the 'Servian' order was established, at the same time as the lower classes were differentiated? Or were *seniores* assigned to distinct centuries even when there was only one *classis*, before 405 B.C.? It is, of course, difficult to be precise about phases of the centuriate organization preceding the one recorded for us in our sources.

If the election of three *tribuni militum consulari potestate* between 444 and 432 is any guide, then the *legio* of that period had a complement of 3,000 hoplites. It is noticeable that this figure is the effective of the old tribal army, based on the three tribes and the thirty *curiae* (Dion. Hal. II, 13). Now this after all was a kind of centuriate system, if the *curiae*, as we are told, each contributed 100 infantry. And the ancient cavalry was certainly grouped on a centuriate basis—the centuries called Tities, Ramnes and Luceres *priores* and *posteriores* (Liv. I, 36, 8). So it appears that a centuriate organization can be imputed to the period when the three original tribes were in effect. These points raise the question whether we are justified in regarding the Comitia Centuriata as a much later development than the Comitia Curiata. The Comitia Centuriata may have been in origin strictly an assembly of the 33 or 36 *centuries* of fighting-men (*iuniores*) of the old tribal army, whereas the Comitia Curiata was an assembly of *all* members of the *curiae*. This would explain why Republican magistrates with *imperium*, after being elected by the Comitia Centuriata, required a confirmatory vote of the Curiate Assembly (*lex curiata de imperio*). That is, the army's choice of commanders had to be confirmed by the citizen body *in toto*, since the commanders were also the chief magistrates of the state. It would follow that in this first phase the *seniores* were not included in the Comitia Centuriata.

An early stage in the progressive decline of importance of the *curiae* came when the centuries ceased to be recruited from them. This had evidently happened by the time that a *legio* of 4,000 hoplites was being raised, that is, from 426 at the latest. But it may have occurred earlier. Such may be the particular significance of the creation of the three *tribuni militum consulari potestate* who took office for the first time in 444 (trad.). Namely, that their job originally was to raise a *legio* no longer based on contingents from the *curiae*, but consisting of 3,000 hoplites enlisted on a census basis. In this work the military tribunes will have cooperated with the newly created censors. (The censors of 443, L. Papirius Mugillanus and L. Sempronius Atratinus, were already in office in 444, when they are wrongly listed in some of the sources as suffect consuls.)²¹ It was all part of the political and administrative shake-up that accompanied and followed the Decemviral legislation.²² The object of the reform was to institute an efficient hoplite phalanx. The organization of the cavalry was left intact, still based on the three old tribes. Presumably there seemed no purpose in changing it then, as it was not part of the phalanx.

Our sources' accounts of the early history of the Roman cavalry are bedevilled by the desire to attribute the 18 centuries of the finally developed Comitia Centuriata to the regal period, the time of Servius Tullius. An original 3 centuries, named Tities, Ramnes and Luceres after the tribes, are attributed to Romulus' creation. These then become *priores* when duplicated by a second group—Tities, Ramnes and Luceres *posteriores*. As a result Festus, in a passage commonly misunderstood, states that Tarquinius Priscus constituted 6 centuries of *equites*.²³ Livy, however, although he allows for increase in the *numbers* of the

²¹ Broughton, *MRR* I, 53 (with n. 2), 54 (with n. 1).

²² M. Nilsson, *JRS* xix (1929), 1 ff.

²³ Festus 452 L. The text is slightly corrupt, but the old emendation *adiectae* (for *adfectae*) makes poor sense. A somewhat simpler correction, *adfecta* for *adfectae*, will solve the problem: 'sex suffragia appelluntur in equitum centuriis, quae sunt adfecta

[e] ei numero centuriarum quas Priscus Tarquinius rex constituit': 'the six *suffragia* is the name among the centuries of *equites* for the *suffragia* which are associated with that number of centuries which King Tarquinius Priscus established'; for the sense of *adficere* cf. J. H. Oliver, *Studi De Francisci* I (1956), 129 f.

cavalry, says that Tarquinius Priscus left the *centuries* of cavalry unchanged at three. Here (I, 36, 8) he makes the rise to six centuries a later development ('quas nunc quia geminatae sunt sex vocant centurias'). But when he gets to Tarquinius' successor Servius Tullius, the increase to six centuries seems somehow to have already happened. Only the additional twelve centuries are imputed to Servius' creation :

equitum ex primoribus civitatis duodecim scripsit centurias ; sex item alias centurias, tribus ab Romulo institutis, sub iisdem quibus inauguratae erant nominibus fecit (I, 43, 9).

This sort of evidence leaves it quite uncertain when the Tities, Ramnes and Luceres *posteriores* were really added to the cavalry force. Presumably it was at a time when the old tribes still counted. It was evidently before the 'Servian' organization, and it seems likely that it was before the reforms of the Decemviral period. This would leave the beginning years of the Republic as an alternative to the later regal period for the date of the addition.

It is generally accepted that the centuriate organization laid out in our sources was not created, as they allege, by King Servius Tullius. How then did Servius come to be connected with the organization? No matter how many changes the Romans made in the Comitia Centuriata, they persisted in referring each new manifestation of the system to Servius Tullius. We find this in Cicero's *De Re Publica* (II, 39 f.), where a form of the system which could not possibly have been in effect before 241 B.C. is calmly attributed to the king. We find it in the anonymous document, *P. Ox.* XVII, 2088, which in a fragmentary text connects 'all the present-day centuries' with Servius Tullius. And we find Livy, in a justly famous passage (I, 43, 12), patiently explaining that this is a historical fallacy :

nec mirari oportet hunc ordinem qui nunc est post expletas quinque et triginta tribus duplicato earum numero centuriis iuniorum seniorumque ad institutam a Servio Tullio summam non convenire.

All this would be very curious if Servius had nothing at all to do with any centuriate organization, and even more if he never existed.

Fabius Pictor asserted that Servius conducted a census of men able to bear arms (apud Liv. I, 44, 2). There may be truth in this, though we must gravely doubt the figure of 80,000 or 83,000 or 84,700 men which is transmitted by various sources (Liv. I, 44, 2 ; Eutropius I, 7 ; Dionysius IV, 22).²⁴ Something that is not exactly transmitted by the sources may nevertheless be worth entertaining. Namely, that Servius Tullius, having registered those capable of bearing arms, proceeded to the logical next step and organized the first Roman military force that could appropriately be called an *exercitus*. In other words, it was Servius (not Romulus!) who established the centuriate organization of the army based on the *curiae* and the three original tribes.

This hypothesis will make it necessary to look at the question of the Servian tribes. According to Livy (I, 43, 13) Servius created four new tribes, equivalent to the four city regions. But, Livy adds, these tribes had nothing to do with the distribution and number of the centuries. The latter statement at least makes sense.

Certain knowledge about the new tribal system is not really forthcoming until 387 (trad.) at which time four tribes (*Stellatina, Tromentina, Sabatina, Arnensis*) were constituted out of the territory taken from Veii and the total number of tribes became 25 (Liv. VI, 5, 8). The previous total had therefore been 21. Now Livy had already stated (II, 21, 7) that in 495 'Romae tribus una et viginti factae'—'at Rome the tribes became 21' (this is the correct text in spite of the manuscript majority in favour of *una et triginta*).²⁵ The late Professor Lily Ross Taylor, with many others, has accepted the statement as fact, saying 'this apparently means that, with the creation of the Clustumina tribe out of the newly conquered land of Crustumina, the total number of tribes, urban and rural, reached twenty-one'.²⁶ She assumed that 19 tribes already existed at the beginning of the Republic,

²⁴ cf. Alföldi, *Early Rome and the Latins* (Ann Arbor, 1965), 129 f.

²⁵ See R. M. Ogilvie, *Commentary on Livy, Books 1-5* (Oxford, 1965), ad loc.

²⁶ Taylor, *The Voting Districts of the Roman Republic* (Rome, 1960), 6.

having been created by Servius Tullius. But there is nothing in Livy or any other source to that effect. Livy is positive in attributing only the four urban tribes to Servius. Fabius Pictor apparently credited the king with the absurd figure of 30 tribes, and someone called Vennonius even managed to burden him with the whole 35 (Dion. Hal. iv, 15). All this reveals is the great ignorance of our sources about the early history of the tribes.

The first rustic tribe in the *ordo tribuum*, the *Romilia* (Cic., *Leg. Agr.* II, 79; Varro *LL* v, 56), is clearly named from the *gens Romilia*. That *gens* contributes only one name to the *Magistrates of the Roman Republic*, to wit, T. Romilius Rocus Vaticanus, who is listed as consul in 455 and Decemvir in 451. Were it not for belief in Livy's 21 tribes, no reasonable person would resist the obvious conclusion that the institution of the first rustic tribe is to be dated not much earlier than the 450's. In fact, the period of the Decemvirate or immediately after appears to be the most probable time for the first establishment of the rustic tribes as political units. This can be supported by the fact that all the *gentes* which gave their names to tribes are particularly prominent at that time. Six of them are represented in the Decemvirate itself, with a Claudius, a Veturius, a Cornelius, a Sergius, a Fabius and of course the one and only Romilius. There is a Menenius as consul the year before, and a Horatius as consul the year after the Decemvirate. A little later along comes a Papirius in the first censorship, 444-3. And an Aemilius turns up in the first pair of elected quaestors, ca. 447 or 446,²⁷ reaching the consular tribunate in 438. Although some of these tribal *gentes* were of course prominent in the earlier years of the fifth century, it is not until the Decemviral period that *all* of them are prominent together, at the same time.

As for the rest of the old tribes, (*Voltinia*, *Pollia*, *Pupinia*, *Camilia*, *Lemonia*, *Galeria*, *Clustumina*), as argued by Alföldi,²⁸ they are probably derived, not from lost or obscure gentile names, but from place-names. This of course is obvious for the *Clustumina*, derived from Crustumium, and it is directly attested for the *Lemonia* and the *Pupinia* (derived from *pagus Lemoniensis* and *ager Pupiniensis*: Festus 102, 274 L). No doubt some of them had considerable antiquity as *districts*, but their organization as *tribus* of the Roman people should not precede the institution of the *Romilia* as the first rustic tribe.

If the original rustic tribes were founded no earlier than the middle of the fifth century, it may not be so easy to believe that the four urban tribes should be dated into the regal period, nearly a hundred years before. This tradition was probably, as usual, derived from misconstruction of a real fact. The fact was that the four *regiones* on which the urban tribes were based were instituted in the regal period. From this it was too easy to proceed to the assumption that the *tribus* themselves were established under the kings.

The object of this discussion of the tribes was a limited one. It was to show that Servius Tullius did not create the new system of urban and rural tribes, that the tribes he had to deal with were the three ancient tribes of Tities, Ramnes and Luceres. It has emerged that these three continued to constitute the tribal organization of the Roman people down to the middle of the fifth century. This of course harmonizes completely with our theory that the reorganization of the centuriate system belongs to that epoch.

The original centuriate organization, then, was the army of the three tribes and the thirty *curiae*. If Servius Tullius was responsible for the establishment of a centuriate organization, *this* was the centuriate organization he established. It lasted down to the middle of the fifth century. In the young Republic it may well have functioned politically as *Comitia Centuriata*, alongside the *Comitia Curiata*, and its responsibilities are likely to have been those traditionally associated with the *Comitia Centuriata*, namely the election of magistrates with *imperium* and the sanctioning of war and peace. As a military force it was not notably effective, primarily because of the archaic character of its organization. On one occasion, the battle of the Cremera (479 trad.), the Fabian *gens* apparently shouldered the whole burden of a campaign against Veii, though 'campaign' is a rather inflated term for what was in fact a war of cattle-raids (Liv. II, 50). Hoplite equipment was known and probably used by the better-off citizens in this army, but as Snodgrass has shown for the Greek armies, this does not immediately entail a thoroughgoing application of hoplite

²⁷ It is worth noting that this election represented the first appearance of the *Comitia Tributa* as an electoral body; cf. Mommsen, *Röm. Staatsr.* I³ 525.

²⁸ Alföldi, *Early Rome and the Latins* 307 ff.

tactics.²⁹ The tradition makes the cavalry at least as important as the infantry in battle. This is no doubt a tribute to the aristocratic influence on the tradition.³⁰

Around the middle of the fifth century the tribal army became obsolescent. A new system of territorial tribes was brought in, perhaps under the influence of Greek precedents. When the new tribes were set up, the Romans broke away from the principle of a tribal army. Their purpose was to create a homogeneous hoplite phalanx, and tribal divisions were apparently considered irrelevant to that. The result was a *classis* of 3,000 hoplites, uniformly armed and organized in 30 centuries, presumably with an attached force of light-armed troops. The cavalry was left unreformed in its six centuries bearing the old tribal names. The new model army was adapted for political purposes as the new form of the Comitia Centuriata, breaking away from the centuriate organization based on the *curiae*. Membership of the hoplite centuries was determined by census, and room may have been made for men too old for active service by the creation of centuries of *seniores*, although this development could have come slightly later. At any rate the new Assembly was representative of the part of the citizen body that counted, and the stage was set for the decline of the Comitia Curiata.

The hoplite *legio* was presently increased to 4,000, about the time of the Algidus victory (431 trad.), and the Comitia Centuriata was adjusted accordingly, so that there came to be 40 centuries of *iuniores* in the *classis*, and perhaps the same number of *seniores*. These arrangements can conceivably be attributed to the censors listed under 430 (trad.).

About 405 the *legio* was increased to 6,000 hoplites. The extra 2,000 were acquired by admitting men without a complete panoply. There was also a reorganization of the cavalry, with 12 new centuries superseding the old tribal centuries. This was facilitated by the institution of the *equus publicus*. The remodelling of the army naturally entailed a reform of the Comitia Centuriata, which now assumed its classical organization. This reform might be attributed to the censorship of Camillus and Postumius in 403, better perhaps to that of L. Papirius and C. Iulius Iullus ten years later. The latter censorship was apparently important enough to warrant the unique appointment of a suffect censor, M. Cornelius Maluginensis, when Iulius died in harness. Whoever the censors were, the dispositions they made constitute a fascinating political document of the times. They refused to abolish the now obsolete centuries of Titius, Ramnes and Luceres *priores* and *posteriores*. Instead they enrolled in them the patricians and the leading men of the state, and labelled them *centuriae procum patricium*. In the infantry categories they recognized a sharp distinction between the hoplites of the former *classis* and the recent supplements. And so, quite deliberately, they drew up a system of five classes in which the original *classis*, now the *prima classis*, combined with the *equitum centuriae*, had a majority of one century over the rest of the citizen body.³¹ Thus, as Livy observes, no one seemed excluded from the vote, yet all power rested with the *primores civitatis* (I, 43, 10).

After this the development is clear enough. The Comitia Centuriata remains virtually unchanged for at least 150 years, and then is largely converted into a class- and age-structured version of the tribal organization.³² Meanwhile the military system is progressively modified and reformed, and its connection with the centuries dwindles to an obscure vestige. In the 360's the army is subdivided into two legions. The structure of each legion was presumably still patterned on the centuriate system, but identity of the organizations has been ended. Then, during the Second Samnite War, the manipular reform left the centuries as historical survivals, bereft of all tactical significance in the deployment of the Roman armies.³³

University College, University of Toronto

²⁹ A. M. Snodgrass, *JHS* LXXXV (1965), 110 ff.

³⁰ Momigliano can hardly be followed in his paradoxical view that the early Roman cavalry (unlike the early Greek cavalry) was not an aristocratic preserve (*JRS* LVI, 1966, 16 ff.; *contra*, Alföldi, *Historia* 1968 444 ff.). His clinching argument—the fact that the Roman dictator was not allowed to mount a horse—is not so compelling as it may appear. The prohibition certainly implies an insistence on the primacy of infantry over cavalry. But there is no ground for assuming with Momigliano that the prohibition was laid down at the beginning of the Republic. The

logical conclusion should be that it resulted from the hoplite reform.

³¹ Cf. *Historia* XIII (1964), 125 ff.

³² Cf. *Athenaeum* XL (1962), 37 ff.

³³ I have benefited in this article from the critical comments of R. M. Ogilvie and of various sceptical auditors at the Universities of London, Oxford and Edinburgh, where a version of the paper was delivered in 1968. The impetus to the investigation came from a stimulating series of seminars held at the University of Toronto in 1967 by Professor A. Alföldi.