

STATISTICAL METHOD AND INHERITANCE OF THE CONSULATE UNDER THE EARLY ROMAN EMPIRE

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A SENATOR'S LIFE under the early Empire certainly offered its comforts, but will hardly have been without perils. The history of this period, on record mainly from the pens of senators, is replete with accounts of political trials, exiles, executions, and forced suicides, all by imperial fiat. Still, the cases explicitly mentioned must represent only a portion of the politically motivated persecution of senators, for an emperor's *saevitia* was preferably adumbrated by the deaths of a few luminaries, leaving both the full extent and the exact circumstances of such persecution unclear. It is thus difficult to gauge accurately the degree to which emperors were responsible for political oppression of the senate. Only for the reign of Claudius do we have exact figures. Suetonius and Seneca both report that 35 senators and (respectively) 300 or 221 *equites* lost their lives, either by command of or with the subsequent consent of the emperor.¹

Based on these numbers a rather interesting, albeit hypothetical, estimate of imperial persecution of members of the senate in the period from Tiberius through Domitian might be offered. Let us first assume that the measures taken by Claudius are representative for this period.² We

We should like to thank the anonymous reader of this journal for helpful criticism; our thanks are, above all, due to Michael Peachin for the great pains he took in translating a highly technical paper.

The following works will be cited by author's name alone: G. Alföldy, *Konsulat und Senatorenstand unter den Antoninen. Prosopographische Untersuchungen zur senatorischen Führungsschicht* (Bonn 1977, *Antiquitas* R. 1, Bd. 27); K. Hopkins, *Death and Renewal* (Cambridge 1983, *Sociological Studies in Roman History* 2); G. Menges, *Grundriss der Statistik Teil 1: Theorie* (Cologne and Opladen 1968); J. Pfanzagl, *Allgemeine Methodenlehre der Statistik 1: Elementare Methoden unter besonderer Berücksichtigung der Anwendungen in den Wirtschafts- und Sozialwissenschaften*⁶ (Berlin and New York 1983).

¹Suet. *Claud.* 29.2; Sen. *Apocol.* 13. See also D. McAlindon, "Claudius and the Senators," *AJP* 78 (1957) 279–286; B. Baldwin, "Execution under Claudius: Seneca's *Ludus de morte Claudii*," *Phoenix* 18 (1964) 39–48.

²The picture given by our sources would seem to allow such an assumption. On the cases of political persecution of senators in the early Empire see (aside from the literature mentioned above, n. 1): D. McAlindon, "Senatorial Opposition to Claudius and Nero," *AJP* 77 (1956) 113–132; B. Baldwin, "Executions, Trials, and Punishment in the Reign of Nero," *Past & Present* 22 (1967) 425–439; B. W. Jones, *Domitian and the Senatorial Order. A Prosopographical Study of Domitian's Relationship with the Senate, A.D. 81–96* (Philadelphia 1979) 31 ff.

may also suppose a senate comprising ca 600 members, and further that a 25-year-old entering quaestor would have a life expectancy of roughly 30 more years (Hopkins 147). Statistically then, it could be argued that during the first century A.D. every eighth senator had to reckon with a violent end, and this by imperial mandate. But there were yet other risks inherent in the career of a senator which added to this toll on senatorial lives. Death in battle, death as a result of disease contracted while on campaign, and exile were frequently the cost of a senatorial *cursus*. Quantifying these, however, is impossible. Given these various perils to the existence of a senator, the relationship of senators to the emperor was, for the philosopher Epictetus at least, clear: "No one fears Caesar himself, but death, exile, confiscation of property, imprisonment, or loss of rights" (*Diss.* 4.1.60).

While these numbers are impressive, they are not without problems. The data upon which the calculations rest are hardly extensive, nor is their representativeness for this period demonstrable. Hence the mathematical procedure is open to question. Moreover, the quantitative method applied prevents any investigation that allows consideration of the basic specific givens underlying the documented facts. For example, the political persecution fell not so much to the lot of senators as such, but instead affected members of competing branches of the imperial family, or the descendants of venerable Republican families. Only when such differentiating considerations are brought to bear on the simple statistical evidence can an accurate evaluation of the actual situation be attempted. Paradoxically, these same differentiations lead to the relativization of the raw statistical evidence.

Political persecution is, of course, an exciting topic, more so possibly than that of political careers. But we should now like to leave the excitement of executions, having used that *exemplum* to demonstrate briefly the fragility of statistics with regard to the study of antiquity. The question here will be the inheritance of the consulate. Keith Hopkins (working with Graham Burton) has attempted, in his stimulating book, to use statistics to examine the composition and structure of the senate, and particularly to study the consulate. His analysis of the consulate under the Principate, and the resulting conclusions regarding political succession among the elite, will here come under close scrutiny. The following will employ provisionally the same statistical methods as did Hopkins. But having tested the validity of his hypotheses, we shall then examine some of the basic aspects of statistical method in their application to the social structure of the senatorial class during the early Empire.

Central to and chief target of Hopkins' analysis of the social reproduction of the political elite is the traditional notion that senatorial status was inheritable (123 ff., esp. 126 ff.). Alföldy's notion of a *de facto* inheritable consulate under the Antonines is subjected by Hopkins to a crossfire of

theses and calculations.³ Yet the most important criticisms of Alföldy had already been presented in a review by G. Burton.⁴ These same arguments are taken up in *Death and Renewal*, and brought to bear upon the evidence of the entire period from 30 B.C. to A.D. 235. Hopkins thus comes to the conclusion, and this is the essential point of the book, that there was no such thing as inheriting either membership in the senate or the consulate.

Three factors, according to Hopkins (122 ff.), were to blame for the drastic failure or the disappearance of most consular families under the Principate: imperial persecution; low fertility in conjunction with a high death rate; and withdrawal from political activity because of social, political, or economic pressures. Hopkins attempts, principally by means of statistics, to demonstrate the non-inheritability of the consulate, stressing in particular the last of the three factors just mentioned. The ratio of succession to the office amongst consular families, according to Hopkins' calculations, shows that the sons of *ordinarii* more frequently obtained the office than did the offspring of *suffecti*.⁵ This fact is then taken *prima facie* to militate against an inheritable consulate. Thus, the logical conclusion is that the sons of ordinary consuls were more likely to follow in the political footsteps of their fathers, and that, given the generally low succession rate of most consular families, it could be assumed *a priori* that many a consul's son will have avoided a political career.

However, it is only at first glance that Hopkins' statistics demonstrate what he claims for them.⁶ For the fundamental differentiations in succession rates of eponymous and suffect families, which he developed and then used for his whole line of argument, rest upon calculations which neglect some statistically essential factors. If these factors are taken into consideration and quantified, the results would seem to demolish the gross differentiations in succession rates proposed by Hopkins. Indeed, the non-inheritability of the consulate cannot be demonstrated statistically.

³Hopkins 126, n. 9; 157, n. 50; and 165, n. 58, against Alföldy, and *id.*, "Consuls and Consulars under the Antonines: Prosopography and History," *AncSoc* 7 (1976) 263-299.

⁴JRS 70 (1980) 203-207. See also Hopkins 126, n. 9.

⁵Burton, in his review of Alföldy (above, n. 4, at 205), suggested that sons of *ordinarii* succeeded their fathers in the office nearly three times more frequently than did the sons of *suffecti*.

⁶Indeed, many of the numbers put forward by Hopkins might cause an eyebrow to rise. For example, depending on W. Eck ("Sozialstruktur des römischen Senatorenstandes in der hohen Kaiserzeit und statistische Methode," *Chiron* 3 [1973] 375-394), who examines the period 31 B.C.-A.D. 270, Hopkins calculates a total number of senators at ca 8,000. He then compares these with the (ca) 1,872 consuls that he identified during the years from 30 B.C. to A.D. 235 in order to obtain a ratio of consuls to senators who never reached the consulate (see 135, n. 21). Eck's 8,000 and Hopkins' 1,872 may both be correct; however, Hopkins neglects 36 years' worth of senators which Eck does not, and therefore the stated ratio is inaccurate.

THE PITFALL OF THE *IGNOTI*

We shall, by way of example, control Hopkins' calculations with the evidence gathered for the period A.D. 138–180 by G. Alföldy.⁷ The decisive hindrance to calculating the ratio of political inheritance from *ordinarii* and

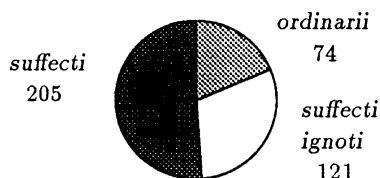


Fig. 1. Total sum of consuls for the years A.D. 138–180: approximately 400 (emperors and *cons. II* not included).

suffecti is the simple incompleteness of evidence. Of the approximately 400 consuls from this period (not taking into account imperial consulates or *consules II*),⁸ 279 (ca 70%) are known by name, and amongst these are all of the 74 ordinary consuls of the period (Fig. 1). From these 279 known

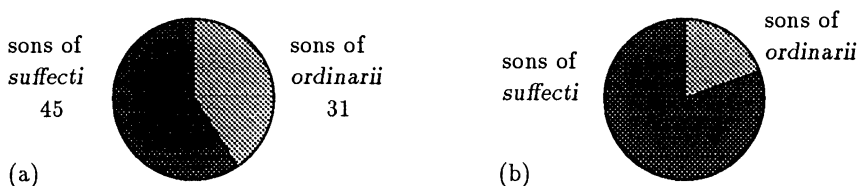


Fig. 2. (a) Attested ratio of socio-political reproduction approximately 2:3. (b) Theoretically expected ratio of socio-political reproduction approximately 1:4.

consuls, 76 sons of consuls can be identified: 31 are the sons of *ordinarii* and 45 the offspring of *suffecti* (Fig. 2). Still, we lack the names of ca 30% of the complete list, which means in turn that ca 37% (roughly 121 men) of the *suffecti* are lost to us (Fig. 1), and so too their family connections.

⁷Hopkins' quantitative analyses rely in main on the evidence assembled by A. Degraffi, *I fasti consolari dell' impero romano* (Rome 1952). The material presented by Alföldy was not considered (see Hopkins 128, n. 10.)

⁸Any calculation of the number of unknown consuls depends upon that of unknown *suffecti*, which is difficult to determine. We accept the estimate offered by Alföldy (20) of ca 400 consuls (without emperors and *consules II*) in the period A.D. 138–180. The 279 named people constitute those persons whose names are entirely preserved, or whose names can be restored with some certainty. Alföldy names 292 known consuls, which includes some who are attested only fragmentarily.

These *ignoti* are precisely the problematic group for a calculation of the inheritance structure of the consulate. Since they are unknown to us, we must admit that they might have been: a) sons of known or unknown consuls; b) fathers of known or unknown consuls; c) men with neither immediate consular forbears nor descendants. Hopkins, however, brashly disposes of the problems caused by this "incomplete evidence." He simply considers these *ignoti* as irrelevant to the determination of the inheritance from *ordinarii* as versus *suffecti*. This stance is based on the supposed probability that within the category of these *ignoti* there should have been proportionally just as many sons of ordinary and suffect consuls as in the group of known *ordinarii* and *suffecti* (Hopkins 198 ff.). The result would be that we could assume 27.2% of the 121 *ignoti* to have been sons of consuls—the same percentage as we find among the 279 attested consuls. A ratio of 31 : 45 as inheritors respectively from ordinary and suffect consuls is then to be supposed. In spite of the very little that can be said with confidence regarding the *ignoti*, all of whom were suffects, it does at least seem clear that Hopkins' assumption that the group of known men should be representative is misguided. He neglects two decisive facts, the first concerning our source tradition, the second demographics, and in so doing invalidates all the rest of his calculations.

Our source tradition is heavily biased, recording much more regularly the sons of consuls, both suffects and *ordinarii*, than those of non-consular parentage. These scions of consuls were much more likely to achieve an ordinary consulate, and thus without exception to be known to us, than were those men whose fathers were not so distinguished. Less distinguished men were much more likely to receive the honour of a suffect consulate, but thereby to fall into the inscrutable group of *ignoti*. For example, 76 of the 279 known consuls were sons of consuls (i.e., 27.2%) (Fig. 3). Of these, 44

	<i>ordinarii</i>	<i>suffecti</i>
31 sons of <i>ordinarii</i>	27	4
45 sons of <i>suffecti</i>	17	28
	44	32

Fig. 3.

reached the prestigious ordinary consulate (i.e., 59.5% of the 74 positions available). On the other hand, the remaining 32 sons of consuls represent a significantly lesser percentage (15.6%) of the 205 known suffects (Fig. 4). Thus, among the attested *ordinarii* there are four times as many sons of consuls as among the attested *suffecti*. If we assume these figures to be representative, then the hypothetical number of consuls' sons

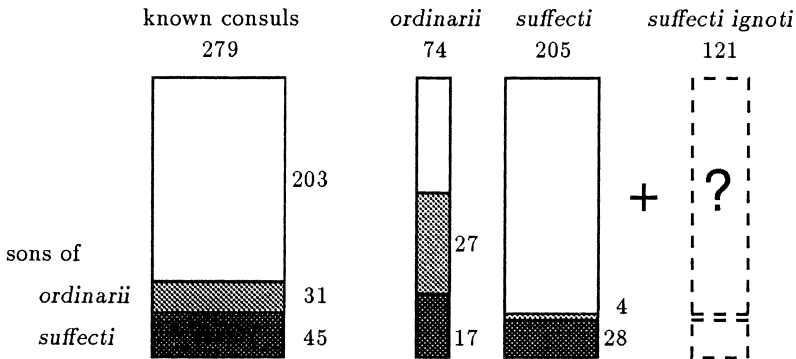


Fig. 4. Proportion of consuls' sons among consuls.

among the 121 unknown suffecti should likewise be ca 15.6%, or roughly 19 men.⁹

But the problem of employing the available evidence in order to reconstruct a hypothetical structure for what now is lost is yet more complicated. Indeed, even as regards the division of the number of unknown sons of consuls just calculated, the ratio of 31:45 (sons of *ordinarii* as opposed to *suffecti*) cannot be employed. We must once again take into account the different success rates of the progeny of the two different types of consuls. Of the 31 sons of *ordinarii* from the Antonine period who achieved the consulate, 23 became immediately *ordinarii*, while 8 had to satisfy themselves initially with the suffect consulate.¹⁰ Alföldy, in one of the most revealing and interesting portions of his book, was able to demonstrate that these latter sons could count on eventually reaching the same heights as their fathers. In all eight of these cases where they failed to achieve in the first instance the same rank as their fathers, being forced to satisfy themselves provisionally with the suffect consulate, there were mitigating circumstances. That is, in the year when each of these men reached his *aetas minima*, and might therefore have expected the office, either an emperor or another more venerable man is found in the office. And rather than await the next available eponymous consulate, our men settled for the most prestigious of the suffect posts in the same year, i.e., that of the second *nundinum*. In compensation, four of these men would later hold a second, and this time ordinary, consulate. Of the other four sons

⁹Such an exact calculation of a known but not transmitted group might seem upon first glance to be senseless. However, this is a typical sort of calculation of the stochastic method of analytic statistics. The groups expressed here in numbers of men should simplify the calculations that follow. The exact numbers, however, are not decisive, and in what follows we shall be concerned with the relative dimensions.

¹⁰Alföldy 88 ff. We refer generally in what follows to his arguments.

of *ordinarii* who had been initially deprived, one died and another disgraced himself irreparably before the time when the second (eponymous) consulate might have been granted. And as regards the other two, we simply lose track of them and thus cannot account for their failure to reach the status of their fathers. It is, however, possible that they too died or ruined their own chances for the office before promotion could come.¹¹

If we quantify this evidence, it would then seem that for whatever reasons, only each tenth son of an ordinary consul was unable to match the achievement of his father. These four men represent less than 2% of the known suffect consuls. About one-third of the sons of suffect consuls (17 of 45, or 37.8%) were able to reach the eponymous office, while the majority had to satisfy themselves with the same post as their fathers had received. These men held a significant number of the suffect consulates (28 of 205, or 13.7%) (Fig. 4). It is thus clear that the differing statuses of fathers affected the careers of their sons. And if we then relate these figures regarding the different success rates of the sons of consuls to the group of unknown consuls, we should expect among the latter approximately two sons of *ordinarii* and possibly 17 sons of suffects. Thus, rather than the attested 31 sons of *ordinarii* and 45 sons of suffects, we should reckon with a corrected reproduction quota of respectively 33 and 62 sons who would reach the consulate—a ratio of nearly 1:2 rather than 2:3 on the basis of the available evidence.

This calculated difference in the ratios of political reproduction also demands further correction, thus bringing us to the problem of demographics; the sons of suffect consuls had to face a higher rate of death before reaching the consulate than did the sons of *ordinarii*.¹² This is due first of all to the simple fact that the sons of ordinary consuls were promoted sooner, most indeed achieving the office with only the *aetas minima*, i.e., at the age of 32 or 33. The sons of suffects, on the other hand, could not necessarily count upon promotion, to either a suffect consulate or the eponymous post, immediately upon reaching the minimum age required. Hence, many of them must simply have died before they could take up the post that would

¹¹This is the more probable when we consider that a period of 20 or more years frequently passed between a first and second consulate, during which time the candidate might well die. On this point see the evidence collected by Alföldy 108. According to Hopkins 148, Table 3.12 (compare Fig. 5), statistically something like one half of the 40-year-olds might expect to reach the age of 60 (and from 30 to 50 years, just barely two-thirds).

¹²A slightly facetious remark by Burton in his review of Alföldy, as will be demonstrated below, is not so far off the mark: "... that the wives of ordinary consuls were more fertile than the wives of suffect consuls or that the mortality rate among sons of suffect consuls was higher than among the sons of ordinary consuls" (above, n. 4, at 205).

eventually have been their due.¹³ And although this situation and its effects cannot be exactly quantified, it is possible to delineate a clear trend. The problems here are to determine the average age difference between ordinary and suffect consuls, or that of their sons, upon achieving the office, and the death rate among the sons of *suffecti* as they awaited appointment.

Given the paucity of information in our sources concerning the age of candidates upon assuming the consulate,¹⁴ the following attempt at a quantification of this age difference and its results must from the beginning be recognized as educated guesswork. Nonetheless, this attempt will reveal various important factors overlooked by Hopkins, factors whose possible extent reveals the complexity and inadequacies of statistical argumentation as regards the entire complex of the topic being handled here.

The general rule seems to have been that the sons of *ordinarii* assumed their consulates with the *aetas minima* of 32 or 33, the patricians among them invariably at this age owing to their particular status.¹⁵ Of the 31 sons of ordinary consuls from the Antonine period, approximately two-thirds were patricians, and a number of the remaining third may well have been of the same status.¹⁶ The system of advancement described above, whereby

¹³The importance of the possibility of dying before reaching the office can be indirectly derived from our sources. During the reign of Antoninus Pius alone, we know of three suffectus who died during their terms in office: Ti. Licinius Cassius Cassianus, *cos. suff.* 147; Sex. Pedius Hirrutus, *cos. suff.* 158; and an unknown suffect consul from 161. See Alföldy 162, 172, and 174 respectively.

¹⁴Only for a few *cursus honorum* (we have such for 69 consuls, just barely 17% of the total) do we possess any kind of data regarding age. See J. Morris, "*Leges Annales* under the Principate," *Listy Filol.* 87 (1964) 316–337; Alföldy 35 ff. and Table 327 ff. (with 50, n. 43).

¹⁵This is particularly so for the Antonine period. Alföldy (37 ff. and 57 ff.) was able to demonstrate that patricians attained almost universally the ordinary consulate, or if they did not it was because some more important person, often an emperor, forced them into a suffect consulate. It would be astonishing if the privileges of this group had been observed only in this regard, while, however, promotion to the consulate should not have occurred, where possible, at the minimum age. On the careers of patricians, see Morris (above, n. 14) 332 ff.

¹⁶The percentage of patricians among the consuls of the Antonine period and also in the late second and early third centuries is high. Hopkins seemingly underestimates this trend—E. Champlin in a review of Hopkins calculates that about 40–50% of the *ordinarii* of this period were patricians (*Phoenix* 40 [1986] 232). And according to our calculations, even this is probably too low. Hopkins (138, n. 26) notes merely a marked decline in the number of consuls from (even newly elevated) patrician families—from 53% under Augustus to 18% under Nero according to the numbers given by M. W. Hoffmann Lewis, *The Official Priests of Rome under the Julio-Claudians. A Study of the Nobility from 44 B.C. to 68 A.D.* (Rome 1955, PAAR 16) 171 ff. Hopkins does not, however, consider in this respect the later period. Any exact calculation of the number of patricians who held office is difficult, particularly because patrician status is frequently so difficult to spot. Note, e.g., the remarks of Alföldy (38 and 160) regarding C. Aufidius

the sons of ordinary consuls sometimes were fobbed off initially with a *suffect* consulate (five of these surely patrician and three surely not), indicates that these men could usually expect their consulate *anno suo*. So, the exalted social status of the father resulted not only in the son's achievement of the office, but also in the speed with which he rose.

A similar sort of advancement is not, however, evident for the sons of *suffecti*. The few cases where age upon assumption of office can be determined, point to a rather later achievement of the consulate. The *cursus* of these sons of *suffecti* seem to have brought them to the office generally at the age of 40 to 43 (Alföldy 41 ff. and esp. 48). Given what has just been said, it looks as though sons of *suffect* consuls achieved the office something like five to ten years later (probably closer to ten) than the sons of *ordinarii*.

Hopkins, with his life expectancy-tables, provides us with the statistical instrument that allows us to determine the percentage of those less privileged men who probably died while awaiting, beyond the *aetas minima*, their consulates (Hopkins 146 ff.). His table of life expectancies supports the notion that of 100 quaestors who took office at the age of 25, ca 77 reached the age of 40 (Fig 5).¹⁷ Thus in the 15 intervening years, we would have a death rate of about 23%. The natural toll for the decade between ages 30 and 40 would thus be 17%, and that for the decade between 40 and 50 years 24%. It should be noted that such additional factors as political persecution, plague, or death in warfare are not reckoned with here; and the last two of these must have been, at least during the reign of Marcus Aurelius, with its constant military crises and devastating plagues, real dangers.¹⁸ Hence the assumption of a higher death rate, say

Victorinus, *cos. suff.* 155 and *cos. ord.* II 183. The status of such men is frequently to be determined only as a function of the omission of certain steps in their careers. On this point, S. Brassloff, "Patriziat und Quästur in der römischen Kaiserzeit," *Hermes* 39 (1904) 618-629; H.-H. Pistor, *Prinzeps und Patriziat in der Zeit von Augustus bis Commodus* (Diss. Freiburg 1965) 79 ff.; W. Eck, "Beförderungskriterien innerhalb der senatorischen Laufbahn, dargestellt an der Zeit von 69 bis 138 n. Chr.," *ANRW* 2.1 (Berlin and New York 1974) 158-228, at 173 ff.

¹⁷A very interesting attempt has been made to determine the average life expectancy in the Roman Empire on the basis of a heretofore neglected passage in Justinian's *Digest*—B. Frier, "Roman Life Expectancy: Ulpian's Evidence," *HSCP* 86 (1982) 213-251. See also Frier's "Roman Life Expectancy: The Pannonian Evidence," *Phoenix* 37 (1983) 328-344. In any case, one should probably assume that the life expectancy of members of the upper classes will have been longer than that of the average man. This would be due, at least in part, to the ability of the rich to provide themselves with superior medical care.

¹⁸In spite of the threatening diagnosis of an "Everest fallacy" by Hopkins (41), we venture to offer proof of this: M. Claudius Fronto, the governor of Moesia Superior and the three Daciae *ad postremum pro r. p. fortiter pugnans ceciderit* (*CIL* VI 1377; in A.D. 170). On the plague during the campaign on the Danube in A.D. 168, see *HAMA* 14.5. And on the plague during Marcus' reign *ibid.* 13.5: *et multa quidem milia pestilentia consumpsit multosque ex proceribus, quorum amplissimis Antoninus statuas conlocavit.*

Survivors to exact age (in years)	25-year- olds	30-year- olds	40-year- olds	50-year- olds
		(per cent)		
25 (quaestors)	100			
30 (available for praetorship)	93	100		
40 (available for consulship)	77	83	100	
50	59	63	76	100
60	38	41	49	65

Fig. 5. Table of life-expectancy (with average life-expectancy at birth: 30 years). Adapted from Hopkins Table 3.12 (148).

approximately 20%, for the sons of suffect consuls while awaiting their consulates, because of their advanced age at promotion and due to the intervening dangers, must be roughly accurate. Therefore the suggested 62 sons of suffects who made it to the consulate were the survivors of what must have been originally a larger group. And at the only possible point in time for comparison, i.e., the *aetas minima* of 32/33 years when the sons of *ordinarii* took the consulate, that larger group must have consisted of 78 men who, however, must subsequently have suffered a death rate of ca 20% (16 men) to give us the 62 survivors who indeed achieved their consulates.

Given this basis, with the structural differences in the ages and careers of sons of *ordinarii* and *suffecti* hypothetically adjusted, it is now possible to offer a tentative comparison of the chances of political success of the two groups. The resultant numbers for comparison of political reproduction among *ordinarii* and suffect consuls are respectively 33 and 78 sons. If one projects this relationship against the ratio of existing ordinary and suffect consulates (74:205), then the actual relative ratio of offspring of ordinary and suffect consuls can be expressed as 9:8. But this mathematically derivable difference in the ratios of political reproduction of the two groups is insignificant.

OTHER PITFALLS

Nonetheless, there must still be doubt as to whether the various calculated results regarding the assessment of our original question (whether the consulate was inherited, or whether the significant difference between succession rates among ordinary and suffect consuls *a priori* negates an inheritability of the office) are altogether probative. This seems to us altogether to overestimate the weight that the statistical evidence can bear. First, in spite of all the proofs just offered, the figures were based on an exceedingly

limited quantity of evidence, and thus questionable methods were given rein in order to reconstruct hypothetically a meaningful sum total of the Antonine consuls. Moreover, it must simply remain questionable whether the consular aristocracy, such a multifarious and illustrious social grouping, can at all be painted in such exact mathematical strokes. Many factors of influence can either in no way be quantified, or completely elude the art of statistics.

The chronological imbalance of our tradition for the consuls of the second and early third centuries creates problems of incalculable magnitude. For the period from A.D. 138 to 161 roughly 83–85% of the consuls are known. But for the years following until 180, we have only 45–55%.¹⁹ And if we note that these numbers include all of the *ordinarii*, then the percentage of known suffectus plunges dramatically. As a result of these differences in the source tradition, our knowledge of familial relationships among long-standing consular families, at least during the Antonine period, is far superior to that which we possess for newly risen families of provincial origin. The generations of fathers and grandfathers of the first group can be traced back through significantly better attested chronological strata, whereas the imaginable family histories in Rome of those only recently come to the consulate must, for the period from the middle of the second century, reside, as regards statistics, in prosopographic obscurity. The statistical levelling of the tradition thus suggests, in a most precarious way, a chronological balance of the data. In the end, it also calls into question methodologically any attempt, such as that above, at correction.²⁰

Another problem arises with respect to the differing *cursus* of ordinary and suffect consuls. The number and duration of military or administrative posts in the provinces will have had not only an effect on the risk of death for potential candidates for the consulate, but also repercussions on their reproductive behaviour in the broadest terms. A prospective suffect consul, who could look back on years of service in the provinces, will have experienced rather different circumstances of life from those of the young patrician who had hardly to cross the *pomerium* in pursuit of his career. We know nothing as to the possible consequences regarding the age at which he married, and little as to whether future suffectus were regularly accompanied

¹⁹ Alföldy 13 ff. The percentages vary according to the proportion of known pairs of consuls. This discrepancy in our tradition was known to Hopkins as well, whose Table 3.1 (129) shows that the number of known consuls in the second century sinks from 83% (A.D. 97–130) to 57% (A.D. 161–192). He concedes this point, but does not consider its implications for the problem he is discussing.

²⁰ The historical tradition is also an important reason for the discrepancy which Hopkins notes between “ascent” and “descent” among consular families in the second and early third centuries. See Hopkins 134 ff. and especially Tables 3.5 (137) and 3.6 (139). See also Hopkins 144.

by their spouses in the provinces.²¹ Were there additional health risks for the wives and children? What were the possibilities of remarriage upon the death of a wife? Was there perhaps a "colonial leak?"²² Such questions raise serious doubts as to the appropriateness of statistical method for the determination and quantification of socio-historical correlations and rates of reproduction, particularly in the face of such meagre data.

This criticism, however, is brought to bear not only because of the doubtfulness of the intrinsic conditions of the employed statistical media. Even more serious gaps and errors become apparent with an examination of the formulation of the given question as regards its socio-historical scope. The reduction of social inheritance among consular families to the father-son relationship entails a serious distortion of the social realities. And indeed these relationships, which can frequently be determined only on the basis of onomastic practices, are still in many cases not absolutely verifiable.²³ The frequency and consequences of adoption,²⁴ as well as status transmitted via the female line²⁵ are difficult to trace among the Roman aristocracy, and certainly evade statistical scrutiny. Hopkins' method flounders on all these important facets of the social life of the Roman elite.

The numbers that Hopkins offers as regards the consulate under the Empire fail in another essential way. Hopkins calls attention to the chronological variations in the documented societal rates of reproduction. He prefers to tie these variations to political changes rather than to fluctuation in

²¹On this see A. J. Marshall, "Roman Women and the Provinces," *AncSoc* 6 (1975) 109-127.

²²L. de Blois, "The Third Century Crisis and the Greek Elite in the Roman Empire," *Historia* 33 (1984) 358-377, at 363, has recently noted the possible demographic effects of years of military service on the Empire's borders. There is a demographic leak not only because of the deaths of so many young men, but also (and even more so) because of the consequences of the limited reproductive possibilities of men in service and the women left behind (these resultant upon the disturbance of the ratio of men to women). On this see especially L. de Blois, "Het Romeinse leger en de politiek in de eerste eeuw voor Christus," *Tijdschrift voor Geschiedenis* 94 (1981) 177-193, at 181, who makes reference to A. M. van der Woude, *Demografische ontwikkeling van de noordelijke Nederlanden 1500-1800* (Haarlem 1980, *Algemene Geschiedenis der Nederlanden* 5) 103-168, and especially 154-156 on the demographic decline in Holland in the period 1650-1750. See also P. A. Brunt, *Italian Manpower 225 B.C.-A.D. 14* (Oxford 1971) *passim*.

²³Generally on this, Eck (above, n. 6) 385 and Alföldy (84 ff.), who deals with various dubious cases (e.g., 85, n. 51; 101, n. 13, etc.). Hopkins (127 ff.) thought to solve the problem of the cases of dubious relationship in that he "... systematically erred on the side of assuming that similarly named consuls were directly related to each other." But can simplification truly stand as a method?

²⁴Various examples are offered by Alföldy 101, n. 13. As to the so-called testamentary adoption and its effects on nomenclature, see R. Syme, "Clues to Testamentary Adoption," in *Epigrafia e ordine senatorio* 1 (Rome 1982, *Tituli* 4) 397-410.

²⁵See especially Champlin (above, n. 16), 231-233. Hopkins' methodological explanation for ignoring the phenomenon (48 ff.) is entirely unsatisfactory.

fertility (Hopkins 138 ff.). Yet, these political developments as the context for social success, as it so obviously occurs in the inheritance of the consulate, are not pursued. Hopkins obstructed for himself the path to such an investigation, however, from the very beginning. This results from his periodization, whose 8 divisions (only the periods A.D. 18–36, 70–96, 131–160, 193–235 are in fact examined) do not allow investigation of individual reigns or other periods which were of particular importance, especially against the background of the emperor-senate relationship, for the development of the socio-political structure and status succession of the senatorial class. Changes and peculiarities are not made evident by this form of statistics, but are rather thoroughly obfuscated.²⁶

Even if we possessed full data for the consuls, a statistical approach could still hardly illuminate the historical development of the socio-political structure of the consulate. Only a case-by-case analysis of biographical data and political connections could reveal the laws, i.e., imperial policy, that governed the filling of such positions. An example will clarify.

Under the Flavians the consulates, in so far as they were not held by Vespasian or his sons, were distributed on the basis of purely familial or political considerations. After his final victory, Vespasian rewarded various of his allies and relations with the office. And as W. Eck has demonstrated,²⁷ Domitian followed his own policy, which attempted to take account of venerable families by means of consular appointments. Even ordinary consulates were held by men with no direct relationship to the emperor. The two occasions on which Domitian increased the number of consuls also had political causes. Both after his rise to power in A.D. 81, and after the suppression of Saturninus in 90, the emperor rewarded those who remained true to him. And in the former instance there will have been the need to reconfirm the appointments for 82 already made by Titus.²⁸

The criteria used by emperors in filling the consulate were simply varied, comprising factors of personal connections, questions of power, and the politics of the day. And all of these can only be elucidated by detailed examination of the people involved and the political situation at the time. The consulate was never a static institution that could be achieved by way of definite rules. Differing conditions or exigencies for obtaining the office are evident, but can hardly be expressed quantitatively and then formulated

²⁶Hopkins 130 ff. describes the choice of his periods as, "chosen on purpose, not at random" (131). But his stated goal, to examine dynasties, can hardly be fulfilled by a study which begins now at the start of a reign but next in the middle of an emperor's term. Nor does Hopkins attempt any conclusions based on these periods.

²⁷W. Eck, *Senatoren von Vespasian bis Hadrian. Prosopographische Untersuchungen mit Einschluss der Jahres- und Provinzialfasten der Statthalter* (Munich 1970, Vestigia 13) 60 ff. See also Jones (above, n. 2) 27 f.

²⁸Eck, *loc. cit.*; Jones, *loc. cit.*

statistically for the entire Principate. Hopkins employs statistical methods for the examination of limited periods, but then applies the results to the entire Principate. This procedure neglects the historical differences and developments. In order to prove or refute a theory intimately bound to a particular period of time, for example the inheritability of the consulate in the Antonine period, this is inappropriate.²⁹

PITFALLS REVISITED

Hopkins' attempt, then, to employ statistical method in order to illuminate the consulate and its socio-political function within the societal and power structure of the Empire cannot be said to have succeeded, even as regards statistics. His investigation commits its first methodical error in the initially selected "statistical quantity" as the basis for the following statistically formulated questions. In order to have a proper statistical quantity one needs, "a group of cases . . . which all have the same combination of characteristics, whose 'statistical shadows' are identical."³⁰

Precisely this similarity is lacking in the group "consuls from 30 B.C. to A.D. 235." For we are dealing, in fact, with two distinct groups—*suffecti* and *ordinarii*—each with distinct group characteristics, which Hopkins simply conflates. Since these characteristics, specific to each group, affect the problem both directly (e.g., the status-based privileges of the patricians) and indirectly (e.g., the effects of different career types, etc.), it is no longer possible, as Hopkins attempts, to determine possible discrepancies in political reproduction between the two groups. For only the application of clear identification characteristics and their proper separation from predicative characteristics will permit the design of a set which allows a proper statistical approach.³¹ But as regards the "sacred" triad of statistics for the determination of statistical units—comprising material, spatial, and temporal identification characteristics³²—Hopkins defines insufficiently not only the material but also the temporal category of his data.

²⁹In any case, even according to Hopkins' tables (Table 3.6, 139), which could themselves stand some improvement, there would appear to be a more significant inheritance of status in the Antonine period than at other times.

³⁰Pfanzagl 11: "... eine Gruppe von Fällen . . ., die alle die gleiche Merkmalskombination aufweisen, deren 'statistische Schatten' identisch sind." He further remarks, "entscheidend ist . . . ob es möglich ist, alle relevanten Umstände im 'statistischen Schatten' zu berücksichtigen." See also J. G. Peatman, *Introduction to Applied Statistics* (New York and London 1963) 10.

³¹Menges 62; Pfanzagl 11 ff.; G. Galot, *Cours de statistique descriptive* (Paris 1965, Statistique et programmes économiques 6) 3 ff.

³²Menges 61. He continues, "Wenn auch nur ein Identifikationsmerkmal (sachlich, zeitlich oder räumlich) fehlt, ist die jeweilige statistische Einheit für die Beschreibung ganz wertlos und für die Stochastik nur bedingt verwendbar." See also Pfanzagl 36 ff. and A. C. Rosander, *Elementary Principles of Statistics* (Princeton 1957) 15.

It is true that he divides the period under investigation into eight blocks; but these are not in any way defined by comprehensible criteria. Moreover, the periods that he selects are both too long and of differing lengths (15–47 years). Next, only every other period is examined, and thus these periods resist further investigation as well as verification.³³ Their testimony is therefore suspect.

The fact that Hopkins neglects the element of time is in another way devastating to his argument. An examination of the social reproduction of consuls is, in essence, a demographic problem; and mortality, fertility, and marriage, all absolutely central to demographic analysis, are in the first instance affected by processes depending on time.³⁴ Observing this dependence of demographic events on time (here especially the risk of dying before completing a *cursus* leading to the consulate) is crucial for an analysis of inheritance of social or political status. Quite simply, the different lengths of time necessary to pass through the *cursus* and reach the consulate affect the actual rate of success of a group of like-aged potential candidates for the office. Here the tenet of population statistics is worth noting: "Age is the central demographic variable."³⁵

The points that thus far have been discussed have to do with the basic formal requirements of statistical method. But there are further problems with Hopkins' handling of the empirically won data. The fragmentary evidence that has survived, which provides only a part of the total data necessary for the investigation, should not be considered representative of what originally existed; nor should it be seen as a random sample since "a random sample is not one that happens to have survived through accident."³⁶ Before any accurate statistical study can be conducted, the extant data must be compared to the probable totality of evidence that once existed and, if necessary, corrected on this basis—that is, it must be controlled as against its "statistical shadow." In this regard, a data base that is (presumably) similar to the complete original must be established and then worked up on a stochastic basis, viz, according to the laws of probability, with those data

³³Note how Hopkins (127 ff.) justifies and then proceeds with his method.

³⁴G. Feichtinger, *Demographische Analyse und populationsdynamische Modelle. Grundzüge der Bevölkerungsmathematik* (Vienna and New York 1979) 5 ff. and 13 ff.; W. Winkler, *Demometrie* (Berlin 1969) 27 ff.; L. Henry, *Démographie. Analyse et Modèles* (Paris 1972); P. Flakämper, *Grundriss der sozialwissenschaftlichen Statistik Teil II: Besondere Statistik I: Bevölkerungsstatistik* (Hamburg 1962) 197 ff.; R. Pressat, *L'Analyse Démographique. Concepts—Méthodes—Résultats*² (Paris 1969) 75 ff.

³⁵Here Feichtinger (above, n. 34, 6) translates, in essence, Pressat (above, n. 34) 75: "Une des variables essentielles en démographie est le temps."

³⁶R. Floud, *An Introduction to Quantitative Methods for Historians*² (London 1979) 163.

that we have.³⁷ In the case at hand, that of the sons of Antonine consuls, several such necessary corrections could be made (see above, 64 ff.).

Hopkins' decision to consider only every second or fourth known consul for the sake of "intellectual economy" shakes the very foundations of statistical method. Statistics, as "the science of reaching a decision based on incomplete information" (Menges 25) and employing stochastic procedures, depends mainly on the so-called law of large numbers. That is to say, the entire discipline rests on the empirically derived notion that only an ever increasing number of examined cases can guarantee a likewise increased exactitude of the testimony derived therefrom (Menges 35 ff., Pfanzagl 142). It is methodologically invalid to limit what is examined and what has not been demonstrated to be representative to a few hundred cases for the sake of simplicity. In fact, Hopkins' chief error is, first, to have mistaken a non-random sample (the fragmentary source tradition) for a random sample, next, to have taken a random sample from this phantom random sample, and then to have built his argument on this.³⁸

It thus remains the fate of the ancient historian to navigate between the Scylla of insufficient data, which leads him to concentrate only on the few better documented cases, and the Charybdis of compulsion to generalize. And the use of statistics as a method of verifying general statements cannot extract him from this quandary. Rather, this intensifies the problem, since the analytical use of statistics requires first a thorough classification of the data and secondly a clear definition of the question at hand. Both of these steps require *a priori* an inner differentiation and meaningfulness on the part of the sources, and they also "absorb" a significant amount of information (Menges 61 ff.). The simple presence of a consul's name in the *fasti* provides no clue to a number of aspects relevant to such an investigation. It is true that the man can normally be classified as to his social status and can generally be located chronologically. Still, Roman nomenclature cannot replace the information offered by a birth register. Other identification characteristics which would be necessary for such a study (e.g., origins, age, marital status, *cursus*, family relations) are dependent on additional information, which indeed appears only in some cases. But if the data for a

³⁷Pfanzagl 186 ff. G. Pereira Menaut, "Probleme der globalen Betrachtung der römischen Inschriften," *BonnJbb* 175 (1975) 141-164, demonstrates, for example, the possibility of determinating the representativeness of the inscriptions of a regional corpus by comparison with an independent control group—the mass of all the finds subsequent to the corpus.

³⁸On the correct statistical procedure with such non-random samples and the possibilities for using these, see R. Floud (above, n. 36) 17 ff. See also Pfanzagl 139 ff., and esp. 141; E. P. Billeter Frey and V. Vlach, *Grundlagen der statistischen Methodenlehre* (Stuttgart and New York 1982) 137 ff. (with further literature).

suitable classification of the source material by identification characteristics are not available, then any descriptive or analytic statistical procedure will rest on shifting sands. The attainment of predicative characteristics and modalities which provide a differentiated picture of the group under examination and which point out the interrelationships and which hence might provide additional information, is simply impossible. Thus the main task of statistical examination remains unfulfilled.

Precisely this problem cropped up in the brief quantitative sketch of persecution of senators during the first century A.D. given at the beginning of this article. Aside from the questionable determination of an average risk to life for a senator, statistics can hardly shed more light than that which we have from the ancient sources on the fact that during the reign of Claudius 35 senators lost their lives. What can be derived from the fact that 6 of the 22 men were consuls under Claudius (i.e., those of the years 44–46)? The statistical compilation of the simple number of victims has no real value for answering this or other questions. Without additional information, all that this evidence can provide is an illustrative scenario of dubious suggestiveness. To attain a profile of the impact of the persecutions on the group, which would be the logical second step of a statistical investigation, remains, however, reserved for traditional analysis of the sufficiently attested cases. The analytic accuracy of statistical method is always dependent upon the available data base; and for the questions here posed, this method proves to be a dull instrument.³⁹

There is yet another difficulty involved in examining statistically the inheritance of the consulate. Psychological factors and personal motivations, as they affect this problem, are inherently hardly to be grasped statistically and thus cannot be incorporated in the "statistical shadow."⁴⁰ Indeed, precisely in the analysis of social role behaviour and attitudes, particular phenomena which would be statistically relatively meaningless might be highly indicative. In the present context this applies especially to the repeated *praxis* of initially (*anno suo*) granting the sons of *ordinarii* a suffect consulate, this when the expected eponymous post had to be given to a person

³⁹On the other hand, an analysis of the victims of the terror of the year 1794 during the French Revolution based on the register of executions, where there are entries on social class and profession, provides a sort of "sociogram" of those victims, and thus makes a contribution to the class nature of the Revolution. See D. Greer, *The Incidence of the Terror during the French Revolution: A Statistical Interpretation* (Cambridge, Mass. 1935). Also in this regard, see R. Louie, "The Incidence of the Terror. A Critique of a Statistical Interpretation," *French Hist. Stud.* 3 (1964) 379–389, and, with a sort of summation, W. O. Aydelotte, "Quantification in History," *AHR* 71 (1966) 803–825. This last article, from the pen of a master at quantitative analysis, just goes to show (even for the historian who is not schooled in statistical method) in exemplary fashion the possibilities and boundaries of statistical method for questions in the humanities.

⁴⁰Pfanzagl 12; Aydelotte (above, n. 39).

of greater importance, but later allowing them to hold the more prestigious post (see above, 65 f.). Statistically this situation could at best be formulated in this way: some candidates reached the ultimate status of their fathers only by means of a two-step process. The particular significance of this phenomenon, which would permit conclusions as to the inheritability of and promotion to the office, is not however to be grasped. An appropriate interpretation of the situation is rather possible only by means of the "great heresy" in statistics, namely to resort to "a few not necessarily representative examples."⁴¹

DIGGING OUT: EXPLORING EXPLANATIONS

Numbers and statistics provide no ready answers to historical questions; they depend upon judicious interpretation. The senatorial career structure worked out by Hopkins, with its increasing paucity of positions as one moved higher up the ladder, and its function as an instrument of power and discipline for the emperors, is surely to some extent correct. However, a rigid system of harsh competition for the individual senator on his way to the top, as Hopkins would like to present it via a pyramid-like career structure, is, at least on statistical grounds, hardly to be proved.⁴² The lesser offices of the senatorial *cursus* were always relatively easy of access, the office of praetor being the first that presented any difficulty.⁴³ The eighteen positions as praetor, common from the Flavian period on, should probably have allowed people usually to achieve even this office without much trouble, particularly since a number of potential candidates on the way to the office must have

⁴¹Aydelotte (above, n. 39) 812.

⁴²It has already been mentioned above (62, with n. 6) that for the period from 30 B.C. to A.D. 235, Hopkins incorrectly assumes that from a total of ca 8,000 senators (the correct number is less than 7,000), there were roughly 1,872 consuls. Indeed here as well, we must again assume that from the total number of senators, possibly about a fourth or even as much as over a third of the possible aspirants died before reaching the minimum age for tenure of the consulate. On this Hopkins Table 3.12 (148). For a comparison of the number of positions as consul available and the number of potential candidates, once again some kind of temporal differentiation is necessary.

⁴³This, though modified by the unknown number of adlections, is in the main a result of the large number of junior senatorial posts, but also of the fact that some of these could be neglected by patricians completing their *cursus*. See Morris (above, n. 14) 317 ff. As regards the praetorship (there were usually 12 to 18 places open at a given moment—Morris 323), one might ask whether the election of the year A.D. 60, contested because of three extra candidatures (these supernumeraries, interestingly enough, were subsequently compensated with legionary commands) *acriore ambitu*, was properly characterized as a competition (Tac. Ann. 14.28; Suet. Nero 15). In the Flavian period, though, the time of repeatedly contested elections to the office of praetor came to an end. See R. J. A. Talbert, *The Senate of Imperial Rome* (Princeton 1984) 19 ff. For the Antonine period such situations are not attested.

died (ca 7% according to the tables of life expectancy) (Fig. 5).⁴⁴ Only promotion to the consulate, which during the Antonine period might be achieved by roughly every second senator who had reached the appropriate age (Alföldy 126), indicated a selection from the theoretically larger circle of candidates. Nonetheless, even here we should not speak of competition amongst the senators, since ultimately the chance of promotion, as has been demonstrated by numerous prosopographical studies, was determined by lineage and previous service to the emperor. A glance behind the curtain of statistics and numerical calculation of the possibility of promotion here also allows insights into the significantly more differentiated mechanisms of promotion under a long-term perspective.

To interpret the relation of two potential candidates for one consulate as a sharp competition makes paradigmatically clear the questionable nature and the dubious suggestiveness of the supposed objectivity of statistics. In fact, such a system of promotion ought rather to raise the question of the problem of structural incompetence due to the insufficient mechanisms of selection. Is it not an astonishing aspect of Roman politics that positions of leadership under the Empire had always to be filled from a markedly small pool of young senators? Competition or promotion of incompetence—the same numbers support contradictory conclusions.⁴⁵

If Hopkins wishes to suggest a system of competition based on the numbers, then he must postulate as the point of departure for his own theories a conceptual framework that he himself has rejected and whose advocacy by other scholars he repeatedly has censured (129, n. 12), namely that the ambition of every senator was aimed at attaining the consulate. Yet we know, with the exception of a very few cases attested in the literary sources, absolutely nothing regarding the personal motives and goals of individual senators. We do not know whether a given senator might, at all costs, strive for the office, whether he might voluntarily be content with a less responsible political career, or whether he might satisfy himself with some other sort of life altogether. The “competitive” structure of the senatorial career will,

⁴⁴Hopkins Table 3.12 (148). Eck's determination (above, n. 6, 393) that, “noch fast 90% aller jungen Senatoren, die die Quästur hinter sich gebracht hatten, die Prätur schafften, nämlich etwa 18 von 20” is not altogether convincing because it does not take account of the mortality rate between tenure of quaestorship and praetorship. The rate of success ought, in fact, to have been practically 100%.

⁴⁵One might attempt to reconcile the astonishing fact of such a meagre selection of candidates by considering that these posts entailed only nominal duties (and on this basis also the brief periods of service might be explained). Nor were any specific qualifications necessary. And even in an area so inhospitable to failure as that of major military commands, there was also a pool of candidates that exceeded the available positions by only about two to one. See G. Alföldy, “Die Generalität des römischen Heeres,” *BonnJbb* 169 (1969) 233–246, esp. 237 f.

with the exception of a few periods in the first century, undoubtedly have allowed any senator who was willing to perform the requisite imperial service the possibility of satisfactory advancement, at least as regards the *cur-sus honorum* of the city of Rome. If one wished graphically to represent the competitive structure of the senatorial career, then surely a trapezoid would be preferable to Hopkins' pyramid (149 ff.).

In order to explain the lesser degree of political succession, as he sees this documented by his calculations, Hopkins has resort to a phenomenon that cannot be grasped statistically, which he calls "political withdrawal." This thesis, namely that the sons of consuls (and particularly the sons of suffect consuls) in large numbers forsook a political career, hardly finds a foothold in the sources.⁴⁶ Still, lack of evidence does not *a priori* preclude the existence of a phenomenon. But the crucial momentum and the argumentative premise for the thesis of withdrawal, i.e., the specious discrepancy in the rate of political succession between *ordinarii* and *suffecti*, rests, as shown above, on shifting sands. Social and economic motives for such an action seem also hardly likely. From Augustus through Hadrian we have numerous attested cases of emperors offering financial assistance to impoverished senators so that they might remain in the order. Nor does the silence of our sources for the period after Hadrian imply that the practice had become defunct; indeed we hear of financial aid in holding various offices during the second and third centuries.⁴⁷

The chief argument against the hypothesis of "political withdrawal" as a widespread social phenomenon amongst the senatorial class is surely to be deduced from the importance of collective social norms of the Romans. The modern notion of social compulsion is particularly apt for describing a system so marked by the public nature of both social and private life, so influenced by a differentiated system of personal relationships and a traditional system of values. Only with this sort of social pressure as a background can the thinking of the Romans as to social status as we know it (e.g., especially the inheritability of membership in the *ordo senatorius*) be grasped. The same holds true for any understanding of the imperial policy of financial support to impoverished senators. Precisely this kind of social pressure will largely, if not entirely, have deterred senators and sons of consuls from practising "political withdrawal."

Hopkins' suggestion that particularly the sons of consuls who came from provincial families will have withdrawn from political life (196) is especially

⁴⁶ "Political withdrawal" is not altogether precise as employed by Hopkins. In essence it seems to imply those senators who simply declined altogether to pursue a political career. For evidence on the varied motives that could in the broadest sense be classed as "withdrawal," see Talbert (above, n. 43) 23 ff.

⁴⁷ F. Millar, *The Emperor in the Roman World* (London 1977) 297 ff.

implausible. The expectations of their fellow hometown citizens will have fallen heavily on the shoulders of these social climbers—to remain at Rome, to build up and use their political connections there in the service of their *patriae* as *patroni*.⁴⁸ It is hardly thinkable that the political ambitions of newly prominent provincial families would have been quenched by the first generation risen to pre-eminence.⁴⁹ And in spite of all, “political withdrawal” as a form of behaviour does not rule out any possible inheritability of the consulate, since this latter notion can hardly mean that a quasi-causal regularity of political inheritance is here implied. Nor is this sort of absolute institutionalization of an inheritable consulate proposed by Alföldy (85 and cf. 126 ff.).

CONCLUSION

Statistical analysis can neither prove nor disprove that the consulate was or was not hereditary. A shortage of evidence is not the only problem involved, for the idiosyncrasy of the phenomenon precludes such a generalizing approach. The very attempt to define the concept of inheritability, which would also be an appropriate beginning for a quantitative analysis, founders on the fact that such a variety of behaviour patterns and values, which cannot be grasped quantitatively, are here involved. But if an adequate statistical formulation of the problem fails, then any further analytical procedures will lead nowhere. As we have demonstrated, these are questionable enough for discussion of the present topic when one considers the incompleteness of the evidence. Moreover, the lacunose nature of the available data has its own dynamics, for with each examined generation the gaps in the (theoretically) calculable processes of inheritance increase geometrically. The analytic instruments offered by statistical method, which might allow a reconstruction of the missing data on the basis of controllable criteria, proved to be in this case all but useless because of the insufficient differentiation of the evidence, because of the simple lack of sufficient data, and because the problem cannot be operated upon statistically so as to produce results of adequate significance. Only such corrections would allow us to gain an arithmetical basis for a comparison of the different political success rates of the sons of ordinary and suffect consuls.

What sort of testimony, then, could the numbers gained by the process described above ultimately offer for the initial question? Another

⁴⁸On the importance, function, and inheritability of patronage relationships, see now R. P. Saller, *Personal Patronage under the Early Empire* (Cambridge 1982), esp. 176 ff. and 186.

⁴⁹As to the ambitions of the leading provincials regarding a *cursus honorum* with its crowning glory, the consulate, see Plut. *Mor.* 470c, and also 814d.

scholar, dealing with similar problems, has decried that "one is rarely on solid ground when dealing with statistics in the ancient world."⁵⁰ And we too think that the applicability of statistical method to answer questions regarding social behavior in the Roman world remains to be demonstrated.

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⁵⁰Z. Yavetz, *Plebs and Princeps* (Oxford 1969) 8.