

Simulating the Roman family experience

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Microsimulation provides a powerful approach to deepen the Roman historian's understanding of family and kinship--a matter of intellectual interest well beyond the field of classics. The Roman family has exerted a formative influence on the modern study of kinship. Latin supplied the basic terms for the anthropological study: agnate, cognate, patria potestas, avunculate and so on. But the influences run far deeper than that, if only because the founding fathers had a training in Roman law. 'That is why the study of kinship today is replete with legal terminology and concepts'. It also explains 'the constant references back to Roman law, the source of most of the ideas' (Fox 1967: 16). The impact of Roman law can be traced through several generations of leading anthropologists. Lewis Morgan and some of his most prominent successors found paradigms there both for the patriarchal family and for a highly elaborated terminology of kinship. He believed that 'the Roman is the most perfect and scientific system of consanguinity under monogamy which has yet appeared' (1877:485). But he also thought that in Rome 'paternal authority passed beyond the bounds of reason into an excess of domination' (1877: 466). In short, it was the limiting paradigm of patriarchal authority. Morgan believed that his evolving forms of kinship would provide insights into 'the daily life of the human family in the different epochs' (1877:491). Two generations later, Radcliffe-Brown, in his famous paper on the mother's brother (the avunculate), succinctly stated the connection between a society's kinship classification and behaviour: 'In most primitive societies the social relations of individuals are very largely regulated on the basis of kinship. This is brought about by the formation of fixed and more or less definite patterns of behaviour for each of the recognized kinds of relationship' (1952: 18). Like Morgan, Radcliffe-Brown looked to ancient Rome to define basic types of kinship system: 'In a system of father-right...a man is largely dependant on his patrilineal lineage and therefore on his father's brothers, who exercise authority and control over him, while it is to them that he has to look for protection and for inheritance. Father-right is represented by the system of patria potestas of ancient Rome' (1952: 14). More recent standard works in the field have returned to the Roman system for a model of patrilineal society (Fox 1967: 51, 116).

In a clear case of circularity in the intellectual tradition, the anthropological studies of kinship systems have now been cited by classical scholars for authoritative illumination of Roman social behaviour (Bremmer 1976, Bettini 1991). This is a dubious enterprise, because both patria potestas and the elaborate kinship classification were legal constructs relevant only in certain circumstances. When the Roman jurist Paul (ca. 200 C. E.) gave the classic enumeration of the 448 types of Roman kin, he explicitly stated that this knowledge was intended for lawyers concerned with inheritance and guardianship (Digest 38.10.10 pr.). To deduce general social attitudes and behaviour from this specialist knowledge of legal abstractions is unwarranted. For ordinary Romans in everyday life the impact of the paradigms and classificatory system depended, among many other things, on who among their kin was living at particular times of their lives. In the absence of parish or census records outside the province of Egypt (a very

special case, as we shall see), microsimulation offers the most effective tool for understanding the kin universe within which the legal rules and cultural paradigms could be brought into play.

Input. The classical historian never has the luxury of sound quantitative data or a quantifiable series of documentary evidence over time. Consequently, the input for the simulation must necessarily involve educated guesswork about mortality and fertility. Repeated attempts have been made to establish mortality rates in the Roman empire on the basis of various kinds of empirical evidence, from funerary epitaphs giving age at death to analysis of skeletal remains in Roman graveyards to the household census returns for Roman Egypt in the first two centuries C. E. The treatment of this data has become more sophisticated (Frier 1982, 1983), yet the critics of empirical approaches remain skeptical (Hopkins 1965, 1987; Parkin 1991). Nevertheless, there is general agreement on both sides that, as a premodern, urbanized population with some unhealthy sanitation habits (Scobie 1986), the Romans are likely to have experienced quite high mortality rates in line with an average life expectancy at birth of twenty to thirty years (Hopkins 1965). The best empirical data from the household censuses of Roman Egypt, problematic though they are, suggest an average life expectancy in the bottom half of this range (Hopkins 1980: 319; Frier ???). For the simulation we have used Coale-Demeny model life table 3 West, which falls into the middle of the range of the probable ($e_0=25$ for females).

For fertility there is absolutely no direct empirical evidence, however poor. Yet, because the empire's population underwent no dramatic change during the first two centuries C. E., the fertility must have been such as to produce a nearly stationary population over the long term. Modelling on the assumption of a stationary population, we have set the Parity Progression Ratio to yield a Gross Reproduction Rate of 2.6.

Whereas the epitaphs are generally useless for deriving mortality rates because certain age groups were more likely than others to have their ages at death stated, the thousands of commemorations can be used to arrive at typical ages at first marriage for men and women. The most plausible explanation for the shift from commemoration by parents to commemoration by spouse around age thirty for men and age twenty for women is that Roman men married in their late twenties or early thirties and women in their late teens or early twenties (Saller 1987, Shaw 1987). The senatorial elite, both men and women, probably married some five years younger than the rest of the urban population (Syme 1987). It is this group that has left the impression that Roman women married in their early teens (Hopkins 1965). The simulation has been programmed to assume remarriage of widows under fifty and widowers under sixty, in accordance with the Augustan legislation that penalized celibacy under these ages.

The slight evidential base for the Roman simulation calls for caveats. First, the epitaphs come from the urbanised areas of the western empire and represent a substantial segment of the population but a minority. Second, insofar as the inputs are best guesses, the numbers in the Roman table cannot be treated as an exact replica of ancient realities. It is important to be aware of which parts of the output are most sensitive to our guesses (especially about fertility) and to place correspondingly less confidence in them. One of the strengths of the simulation is that it allows us to develop such an awareness by modelling the population on various demographic assumptions within the range of the

probable. The results suggest, for instance, that none of the following conclusions would be significantly altered by using somewhat lower mortality rates (say, Coale-Demeny 6 West with e_0 of 32.5 for women, the highest life expectancy suggested in recent studies, Duncan-Jones 1990: ch. 6). In this connection, given the scant evidence, it would seem prudent to rely on the simulation for the universe of close kin, on the grounds that the more distant the relationship the greater the variability of the numbers depending on assumptions about fertility. Third, even though divorce was easy and common in Rome before the establishment of Christianity in the early fourth century, it cannot be satisfactorily incorporated into the model, since (unlike mortality and fertility) divorce is a cultural phenomenon on which there are no natural constraints. We know of Romans who remained with one spouse for life and others who divorced and remarried three or four times; we have no way to judge which was more common (Bradley 1991, ch. 7; Treggiari 1991, ch. 13). Divorce and remarriage would reduce the number of full-siblings and increase the number of half-siblings given in the table. This uncertainty should be kept in mind as questions are formulated, but it does not pose an insurmountable problem, since Romans were sometimes prepared to gloss over the difference between full- and half-siblings, even in matters of inheritance (e.g., Cicero, *Pro Cluentio* 21, where a uterine half-brother is called simply 'brother' and instituted heir). Despite these caveats and uncertainties, the simulation is invaluable for acquiring a sense of the consequences of the interaction of demographic features unfamiliar to us today: high mortality, late male/early female marriage, and child-bearing spread over a longer period of the life course.

Parents and children. Morgan, Radcliffe-Brown and many others have identified the *paterfamilias* as the characteristic feature of Roman families. In law the *pater* retained his nearly absolute power (*patria potestas*) over the members and property of his *familia* for life. Because this paternal power normally ended only with the father's death, and not upon his children being married or reaching an age of majority, it is essential to know the probability of a Roman having a living father at certain points in his or her life. In law the *paterfamilias* was the only relative who had the right to interfere in a man's or woman's decisions about whom to marry and the terms of the *dotal* exchange. Although in reality the arrangements were more complex (Treggiari 1991, chs 2-3), it is still significant that only half of the women marrying at age twenty and only a quarter of the men marrying (or women remarrying) at age thirty would have had a living father. To claim on the basis of the law that Romans submitted to marriages arranged by their fathers would be a partial truth with little bearing on the lives of most.

Much has been made of the monopoly of property rights of the *paterfamilias* whose mature adult sons were unable to own any assets (see Saller 1986), but far more common were children who lost their fathers and inherited their patrimonies under the age of puberty (arbitrarily fixed in law at fourteen years for boys and twelve for girls). Roman law and custom separated the duties of nurturing and patrimonial management for under-age heirs: mothers were expected to raise them, but were generally barred from administration of the estate, for which male guardians were appointed. Guardianship of children has been largely neglected by social historians of Rome, but in antiquity it received much attention from the jurists and moralists, and for obvious reasons. The simulation suggests that perhaps a third of Roman children lost their fathers before

puberty: guardianship was a pervasive need and its implications for the wider economy and society deserve further study.

The office-holding elite in Rome started their careers around the age of twenty-five. Although Roman offices were not heritable, emperors and others hoped and expected that sons would follow their fathers to high office. In the imperial era elections and appointments to these offices required the support and influence from the older generation. The table shows that most men in the central years of their careers between ages twenty-five and forty could not have relied on fathers; therefore, patrons were correspondingly more important in the process of political and social recruitment of the elite (Saller 1982). It is reasonable to suppose that these patrons had no strong reasons to discriminate in favour of their deceased colleagues' sons rather than their other young, ambitious protégés. Unable to rely on fathers for the most part, the most successful senators' sons would have been those from entrenched families with multiple connections and political assets (Hopkins 1983: ch. 3). Any satisfactory explanation of the notable failure of senatorial families to continue their lines in high office must be complex and should take into account a prospective senator's changing kin universe--changes which can be judged only with the aid of simulation.

At the same time as the late age at marriage for men increased the chance of the death of fathers while their children were still young, the earlier age at marriage for women meant that they were more likely to survive their husbands and to assume primary responsibility for child-rearing. At the age of fifteen a child was nearly 20% more likely to have a mother alive than a father. This demographic background heightens the significance of the Roman mother's role in disciplining and socialising her children (Dixon 1988). Although the patriarchal stereotype of the Roman family focuses on the father's authority, in fact Roman writers referred to mothers and fathers alike in connection with authority, respect and corporal punishment.

Siblings. *Pietas*, the core Roman family virtue of dutiful devotion, was a reciprocal bond primarily between parents and children, and secondarily between siblings. Brothers were expected to provide mutual support, in early life in the form of guardianship and then political support later in life. A brother over the age of twenty-five was conventionally chosen to act as guardian for a brother or sister who inherited before the age of puberty, but the simulation shows that only a small fraction of orphans (1%) would have had a brother old enough to assume the responsibility at the time of the father's death. Most often guardians had to be found elsewhere (see below).

The Roman empire encompassed many cultures, the diversity of which can be no better illustrated than by a glance at relations between adult brothers and sisters. The Romans in Italy were known in antiquity for exogamy. As a Greek accustomed to endogamy, Plutarch (ca. 100 C. E.) wondered: 'Why do [the Romans] not marry women who are closely akin to them?' As a possible explanation, he asked: 'Since they observed that women by reason of their weakness need many protectors, were they not willing to take as partners in their household women closely akin to them, so that if their husbands wronged them, their kinsmen might bring them succour?' (*Moralia* 289D-E) After her father's death a Roman freeborn woman enjoyed remarkable independence in law with regard to property rights and decisions about marriage and divorce, but the use of those freedoms was affected by the woman's blood kinsmen who might offer protection, as

Plutarch remarked, and had an interest in her property (Pomeroy 1976). To judge from Roman authors, the male kinsmen close enough to count here would rarely have extended further than father, brothers and uncles. As the simulation indicates, the situation of women varied from family to family and through the life course in a way that requires qualification of general statements about male kin. A divorcée at age twenty-five was likely to have one or another male relative to look to for help, but at the age of forty many women must have been without father (91%), brother (54%) or uncle (80%). Later in the life course adult sons could have taken up the protective role.

In contrast to the exogamous Romans, Egyptian communities under Roman rule were endogamous to a degree unparalleled in other historical societies. An analysis of scattered census returns for 172 Egyptian households revealed that 15-21% of the 113 marriages were between full brothers and sisters (Hopkins 1980, see most recently Shaw 1992). Of course, by any comparison 15-21% is remarkable, but to know whether a sibling was the preferred marriage partner the 15-21% should be put in perspective by asking how likely an Egyptian male of marriageable age was to have a younger sister (almost without exception the brother-husband in such marriages was older). A rough calculation based on the proportion of families in high mortality conditions having both a son and a daughter at the time of the father's death yielded an estimate that a suitable sibling would have been available to perhaps half of the Egyptians, of whom a third married him or her (Hopkins 1980: 304, n. 3). The simulation permits some refinement of that calculation by framing the question in terms of marriageable age rather than death of the father: what proportion of Egyptian men at age twenty-five would have had a younger full sister to marry? According to the simulation, no more than 34% of men at age 25 would have had such a sister, and that number may exaggerate the true proportion for two reasons: 1) divorce reduced the number of full siblings in a way that cannot be accounted for in the simulation; 2) the 34% includes some brothers with only one marriageable sister between them. In short, the refinements of simulation suggest that a majority of young Egyptian men with suitable sisters married them--a preference more pronounced than Hopkins suggested.

The simulation also provides guidance to the consequences of brother-sister marriage for the kin universe of the couple's children. Of course, without the simulation it would be possible to say that the number of their kinsmen would have been half the number of those related through an exogamous marriage since mother's and father's kin would have been the same, but the simulation suggests just how impoverished that kin universe must have been. For instance, fewer than half the children of brother-sister marriages would have had a living uncle, a significantly smaller proportion than the two-thirds of offspring of exogamous marriages.

Uncles. Anthropologists have laid great emphasis on the distinctive positions of uncles in the kinship system. Radcliffe-Brown argued that father's brother and mother's brother took their contrasting characteristics from those of the father and mother, respectively, and that a patrilineal system would produce stern, authoritarian paternal uncles in contrast to indulgent maternal uncles. These distinctive roles have been postulated for Roman society (Bremmer 1976, Bettini 1991). The paternal uncle (*patruus*) is indeed stereotyped as a severe disciplinarian in Roman literature, and in law is treated as a standard choice to be guardian. Both associations derived from early

Roman law in which the rules for inheritance of property were strongly agnatic, giving the patruus a close interest in his brother's children. On the other hand, the mother's brother, the avunculus, does not appear as a clearly defined role. If the Roman mother was a disciplinarian like the father (Dixon 1988), then Radcliffe-Brown's logic of extension of sentiments would lead us to expect no sharp opposition between patruus and avunculus.

The simulation provides us with guidance in thinking about how the uncles' roles might have been manifested in practice. The patruus may have been the obvious selection to be the guardian of a fatherless child, but in fact only a minority of children (39% at father's death) would have had one: without paternal uncles or much older brothers, most under-age heirs must have needed guardians who were not agnatically related. This demographic constraint helps us to make better sense of the voluminous juristic writings about the appointment to, and exemption from, guardianship insofar as the task could not simply devolve to close male kin in most instances. Furthermore, the practical impact of any structural opposition in the roles of patruus and avunculus must have been diluted by the fact that only a small minority of children (17% at father's death) would have had both a patruus and an avunculus to choose between for particular needs. This in turn may partially explain why the evidence for individual testation and funerary commemoration does not fall into distinctive patterns for paternal and maternal relatives (Saller and Shaw 1984).

Radcliffe-Brown's assertions about the relation between kinship classification and distinctive social roles may tempt historians to indulge in an overly structural interpretation of family practices in the Roman empire. The Roman testator, divorcée or orphan did not act in accordance with an elaborate classification system of 448 types of kin, but was rather like Levi-Strauss's bricoleur who had to make do with whatever kin were available to him or her. The simulation is invaluable in understanding how the incomplete assortment of living relatives changed through the Roman life course.

Table 3.1.b: Female, 'ordinary', Level 3 West: Proportion having living kin

	EXACT AGE OF EGO (YEARS)														
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70
Husband	.	.	.	0.00	0.59	0.92	0.96	0.95	0.95	0.95	0.94	0.93	0.71	0.51	0.33
Parent	1.00	0.99	0.95	0.89	0.81	0.70	0.58	0.45	0.30	0.19	0.10	0.05	0.02	0.00	0.00
Father	1.00	0.87	0.76	0.62	0.49	0.37	0.25	0.15	0.08	0.04	0.01	0.00	0.00	.	.
Mother	1.00	0.90	0.81	0.71	0.62	0.53	0.44	0.35	0.24	0.16	0.09	0.04	0.02	0.00	0.00
Sibling	0.62	0.85	0.83	0.82	0.81	0.79	0.76	0.73	0.69	0.65	0.60	0.54	0.47	0.37	0.27
Brother	0.43	0.62	0.62	0.61	0.58	0.56	0.53	0.50	0.46	0.41	0.36	0.31	0.25	0.18	0.13
Sister	0.43	0.63	0.63	0.62	0.60	0.58	0.56	0.52	0.48	0.44	0.40	0.35	0.30	0.23	0.17
Child	.	.	.	.	0.26	0.73	0.83	0.85	0.85	0.84	0.82	0.80	0.78	0.75	0.70
Son	.	.	.	.	0.14	0.47	0.60	0.64	0.65	0.64	0.62	0.59	0.56	0.52	0.47
Daughter	.	.	.	.	0.14	0.49	0.61	0.65	0.66	0.65	0.63	0.60	0.57	0.53	0.49
Grandparent	0.80	0.67	0.52	0.36	0.22	0.12	0.05	0.02	0.00	0.00	.	.	.	.	.
Grandfather	0.42	0.29	0.18	0.10	0.05	0.02	0.01	0.00	.	.	.	.	.	.	.
Grandmother	0.68	0.56	0.43	0.30	0.18	0.10	0.05	0.02	0.00	0.00	.	.	.	.	.
Maternal grandfather	0.33	0.23	0.15	0.08	0.04	0.02	0.01	0.00	.	.	.	.	.	.	.
Paternal grandfather	0.15	0.09	0.04	0.02	0.01	0.00	0.00	.	.	.	.	.	.	.	.
Maternal grandmother	0.52	0.42	0.33	0.23	0.15	0.09	0.04	0.02	0.00	0.00	.	.	.	.	.
Paternal grandmother	0.33	0.24	0.16	0.09	0.04	0.02	0.01	0.00	.	.	.	.	.	.	.
Grandchild	.	.	.	.	.	.	.	.	0.04	0.25	0.45	0.60	0.69	0.73	0.74
Grandson	.	.	.	.	.	.	.	.	0.03	0.16	0.33	0.47	0.58	0.62	0.64
Granddaughter	.	.	.	.	.	.	.	.	0.02	0.16	0.33	0.48	0.57	0.63	0.64
Aunt/uncle	0.94	0.92	0.89	0.86	0.81	0.75	0.66	0.55	0.42	0.30	0.18	0.09	0.04	0.01	0.01
Aunt	0.77	0.74	0.70	0.65	0.60	0.54	0.46	0.37	0.28	0.19	0.11	0.06	0.03	0.01	0.00
Uncle	0.77	0.73	0.68	0.63	0.56	0.49	0.42	0.32	0.22	0.14	0.08	0.04	0.02	0.01	0.00
Maternal aunt	0.56	0.53	0.50	0.47	0.43	0.38	0.32	0.27	0.20	0.15	0.09	0.05	0.02	0.01	0.00
Paternal aunt	0.48	0.44	0.40	0.35	0.31	0.26	0.20	0.15	0.10	0.05	0.02	0.01	0.00	0.00	0.00
Maternal uncle	0.55	0.51	0.48	0.44	0.39	0.33	0.28	0.22	0.16	0.10	0.06	0.03	0.01	0.00	0.00
Paternal uncle	0.49	0.44	0.40	0.35	0.30	0.24	0.19	0.13	0.08	0.04	0.02	0.01	0.00	0.00	0.00
Nephew/niece	0.00	0.01	0.03	0.10	0.27	0.46	0.59	0.68	0.70	0.71	0.71	0.70	0.69	0.68	0.66
Nephew	0.00	0.00	0.02	0.07	0.19	0.35	0.48	0.57	0.60	0.61	0.60	0.59	0.57	0.55	0.52
Niece	0.00	0.00	0.02	0.07	0.19	0.34	0.48	0.57	0.60	0.60	0.59	0.58	0.57	0.55	0.52

Note: . indicates no occurrences in simulation; 0.00 indicates less than 0.01

Table 3.1.f: Male, "ordinary," Level 3 West: mean age of living kin

Kin	EXACT AGE OF EGO (YEARS)														
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70
Wife	.	.	.	.	.	.	21.7	25.1	29.1	33.1	36.6	39.2	44.0	48.7	53.2
Parent	30.8	35.7	40.4	45.1	49.7	54.2	58.7	62.7	66.6	70.5	74.3	78.3	82.5	86.0	88.9
Father	35.0	39.9	44.7	49.6	54.3	59.0	63.8	68.3	72.7	77.3	81.6	86.7	89.4	91.6	.
Mother	26.6	31.5	36.4	41.2	46.1	50.8	55.6	60.2	64.5	68.9	73.3	77.9	82.1	85.5	88.9
Sibling	4.3	6.2	10.0	14.7	19.6	24.6	29.5	34.4	39.3	44.2	49.1	53.8	58.4	62.8	66.9
Brother	4.4	6.2	10.2	14.8	19.7	24.7	29.5	34.5	39.4	44.2	49.0	53.8	58.3	62.6	66.8
Sister	4.2	6.1	9.9	14.6	19.5	24.5	29.4	34.3	39.2	44.2	49.1	53.9	58.5	62.9	66.9
Child	.	.	.	.	.	.	0.9	2.7	5.4	8.8	12.4	15.9	19.5	23.8	28.4
Son	.	.	.	.	.	.	0.9	2.7	5.4	8.8	12.4	16.0	19.5	23.7	28.4
Daughter	.	.	.	.	.	.	0.9	2.7	5.4	8.8	12.4	15.9	19.5	23.9	28.4
Grandparent	57.1	60.8	64.4	67.6	70.4	73.6	76.7	80.5	82.6	87.3	92.4	.	.	.	.
Grandfather	61.5	65.6	69.4	73.0	75.9	79.7	82.6	93.8	.	.	.	.	.	.	.
Grandmother	54.5	58.6	62.5	66.0	69.4	72.9	76.2	80.3	82.6	87.3	92.4	.	.	.	.
Maternal grandfather	59.0	63.2	67.3	71.1	74.8	78.9	82.6	93.8	.	.	.	.	.	.	.
Paternal grandfather	66.6	71.2	75.4	79.7	84.3	87.6	.	.	.	.	.	.	.	.	.
Maternal grandmother	51.3	55.6	60.0	63.8	67.9	71.7	75.4	79.7	82.6	87.3	92.4	.	.	.	.
Paternal grandmother	59.2	63.4	67.4	71.5	75.0	78.9	82.8	88.8	.	.	.	.	.	.	.
Grandchild	.	.	.	.	.	.	.	.	.	0.6	1.0	2.3	3.7	5.3	7.2
Grandson	.	.	.	.	.	.	.	.	.	0.6	0.9	2.3	3.8	5.4	7.2
Granddaughter	.	.	.	.	.	.	.	.	.	.	1.0	2.3	3.7	5.3	7.2
Aunt/uncle	29.4	34.2	38.9	43.6	48.1	52.5	56.7	60.5	64.2	67.6	70.8	73.8	76.7	79.0	80.7
Aunt	29.6	34.4	39.2	43.9	48.4	52.8	56.9	60.7	64.3	67.7	70.7	73.6	76.2	78.2	79.7
Uncle	29.3	34.0	38.7	43.3	47.8	52.2	56.4	60.3	64.0	67.6	71.0	74.3	77.5	80.2	81.7
Maternal aunt	25.7	30.5	35.3	40.1	44.9	49.4	53.9	58.0	62.0	65.7	69.0	72.1	74.9	77.5	79.7
Paternal aunt	34.0	38.9	43.7	48.4	52.9	57.4	61.4	65.4	69.1	72.7	76.2	80.7	84.5	88.6	.
Maternal uncle	25.3	30.1	34.8	39.6	44.3	48.9	53.5	57.8	61.9	66.1	69.8	73.3	77.2	79.3	81.7
Paternal uncle	33.9	38.7	43.4	48.1	52.6	57.1	61.3	64.9	68.5	71.7	75.1	78.4	79.0	88.0	.
Nephew/niece	0.9	2.1	2.2	2.4	3.3	4.5	6.2	8.2	10.9	14.2	18.1	22.2	26.5	31.0	35.5
Nephew	0.9	2.8	2.5	2.5	3.4	4.6	6.2	8.3	11.0	14.3	18.1	22.2	26.5	30.9	35.4
Niece	.	1.1	1.9	2.3	3.1	4.4	6.1	8.1	10.9	14.2	18.1	22.1	26.5	31.1	35.7

Note: . indicates no occurrences in simulation; 0.0 indicates less than 0.1