seventeenth century, the rate of decline was slow in comparison with that shown by the general population during recent decades.

7. Save for epidemics and infectious diseases, little is known about causes of death prior to the nineteenth century. In earlier centuries, tuberculosis threatened children and young adults far more than adults over 50 years of age. Smallpox, frequent among children, was a rare disease for young adults and more or less absent among persons over 40. The diseases to which older adults succumbed were mostly so ill-defined that the reports are of little use in tracing the changes over time.

8. The main changes in cause-mortality for older adults can probably be better inferred by projecting backwards from the data for the present. Thus taking the quarter-century between 1931-3 and 1957-8, in which mortality was very substantially reduced in England and Wales, the numbers of deaths registered for the great killers of our time, cardiovascular-renal diseases and cancer (group (*a*) in Table 12), increased while the importance of all other causes (including tuberculosis, diabetes, anaemia, etc.) diminished considerably.

TABLE 12

England and Wales, annual mortality per 1,000 persons by sex and age

	1931-33	*1957-59*	*1931-33*	*1957-59*
	Age 50-54			
	Men		*Women*	
(*a*) cardiovascular and cancer	3·9	6·7	3·9	4·0
(*b*) all other causes	9·4	2·9	5·7	1·45
	13·3	9·6	9·6	5·45
	Age 55-64			
	Men		*Women*	
(*a*) cardiovascular and cancer	9·6	15·55	7·95	8·3
(*b*) all other causes	14·1	6·45	9·4	2·7
	23·7	22·0	17·35	11·0
	Age 65+ . . .			
	Men		*Women*	
(*a*) cardiovascular and cancer	44·35	58·15	40·4	45·3
(*b*) all other causes	41·5	24·2	33·2	13·9
	85·85	82·35	73·6	59·2

9. In the more distant past, it is likely that the group (*a*) diseases played an even smaller role than in England in 1931-3. In addition, since in earlier centuries the population contained a substantially smaller proportion of older persons, the group (*a*) diseases may well have made relatively little impression on the minds of contemporary physicians. But it is these diseases, and the development of new prophylactic and therapeutic methods for dealing with them, which will determine the possibility of further increases in life expectancy in developed societies in the future.

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6

EUROPEAN MARRIAGE PATTERNS IN PERSPECTIVE

J. HAJNAL

The uniqueness of the European pattern

THE marriage pattern of most of Europe as it existed for at least two centuries up to 1940 was, so far as we can tell, unique or almost unique in the world. There is no known example of a population of non-European civilization which has had a similar pattern.

The distinctive marks of the 'European pattern' are (1) a high age at marriage and (2) a high proportion of people who never marry at all. The 'European' pattern pervaded the whole of Europe except for the eastern and south-eastern portion.

Let us consider data for 1900.[1] The European pattern extended over all of Europe[2] to the west of a line running roughly from Leningrad (as it is now called) to Trieste. The European pattern may be seen in Table 2 below. On the other hand, the countries east of our imaginary line are shown in Table 3. Several of the Slav countries in Table 3 displayed quite a different marriage

TABLE 1

Selected European countries in 1900: percentages single at selected ages

(Single population as per cent of total population in age group)

Country	*Men* 20-24	25-29	45-49	*Women* 20-24	25-29	45-49
'European pattern':						
Belgium	85	50	16	71	41	17
Sweden	92	61	13	80	52	19
'Eastern European pattern':						
Bulgaria	58	23	3	24	3	1
Serbia	50	18	3	16	2	1

Note: Figures relate to territories as of 1900. For source see Table 2.

[1] 1900 is a convenient date for several reasons. By this time there are data in suitable form for substantially the whole of Europe, the political frontiers are more convenient for the present purpose than they became after the 1914-18 War, post-war data are influenced by the casualties of the war which created an abnormal surplus of women, etc.

[2] It was most inconvenient not to have a term for the area where the European pattern obtained and I have felt free (when there is no possibility of misunderstanding) to use 'Europe' to denote this area. It is awkward to exclude Eastern Europe from Europe and it might be thought more accurate to use terms like 'Western Europe', and 'Western European pattern'. However, since these concepts had to be referred to so frequently, brevity was a great advantage. Europe in our restricted sense is in fact the area dealt with in many a history of Europe.

pattern from the European one. Let us call theirs the Eastern European pattern.

The volume of data in Tables 2 and 3 is hard to digest and, as a beginning, it is better to select a few countries for comparison. We may (Table 1) contrast say Belgium with Bulgaria, or Sweden with Serbia. (Alliteration is as good a principle of selection as any other.)

Table 1, like the succeeding tables, shows the proportion of the population who are still single in certain age groups. The numbers remaining single at 45–49 may be taken to indicate the numbers who never marry at all. In the European pattern (Belgium, Sweden) a substantial proportion remain single throughout life, in the Eastern European countries almost none. The proportions single at 20–24 and 25–29 are indications of the age at marriage. Here also the contrast is clear. For example, by age 20–24 some three-quarters of women are still single in the European pattern, while in Eastern Europe three-quarters are married in this age group.

TABLE 2

Europe (except Eastern Europe) around 1900: percentages single at selected ages

(Single population as per cent of total population in age group)

Country	Men			Women		
	20–24	*25–29*	*45–49*	*20–24*	*25–29*	*45–49*
Austria	93	51	11	66	38	13
Belgium	85	50	16	71	41	17
Denmark	88	50	9	75	42	13
Finland	84	51	14	68	40	15
France	90	48	11	58	30	12
Germany	91	48	9	71	34	10
Great Britain	83	47	12	73	42	15
Holland	89	53	13	79	44	14
Iceland	92	66	19	81	56	29
Ireland	96	78	20	86	59	17
Italy	86	46	11	60	30	11
Norway	86	54	11	77	48	18
Portugal	84	48	13	69	41	20
Spain	81 (*a*)	34 (*b*)	6 (*c*)	55 (*a*)	26 (*b*)	10 (*c*)
Sweden	92	61	13	80	52	19
Switzerland	91	58	16	78	45	17

Notes: Political boundaries as of 1900.

Data based on censuses taken in 1900 and 1901 except for Ireland (1891) and Italy (1911). (By these variations in date it was possible to achieve consistency in the age groups used except for Spain.) Age groups for Spain: (*a*) 21–25 (*b*) 26–30 (*c*) 46–50.

Source: Institut International de Statistique, *Annuaire International de Statistique*, Vol. I, 'Etat de la Population (Europe)', La Haye, 1916.

The reader may satisfy himself by the study of Tables 2 and 3 that this contrast is not due to an arbitrary selection of countries. Table 2 shows all[3] the countries sharing the European pattern arranged in alphabetical order. Any of them would have done equally well for purposes of illustration. There are many differences between the marriage patterns of various western European countries, but there is a distinct cleavage between any of them and the Eastern European pattern of Bosnia, Bulgaria, Romania, Russia or Serbia (Table 3).

[3] Some small areas (Luxemburg, Faroe Islands etc.) have been omitted.

The cleavage is especially marked for women. For example fewer than 5 per cent of women remained single around their 50th birthday in Eastern Europe, whereas in Table 2 the figure is nowhere below 10 per cent and often above 15 per cent. In the European pattern unmarried life for an adult woman was accepted as a normal (if perhaps exceptional) alternative to marriage. In Eastern Europe this alternative scarcely existed.

TABLE 3

Eastern Europe around 1900: percentages single at selected ages

(Single population as per cent of total population in age group)

Country	Date of census	Men			Women		
		20–24	*25–29*	*45–49*	*20–24*	*25–29*	*45–49*
Greece	1907	82	47	9	44	13	4
Hungary	1900	81	31	5	36	15	4
Romania	1899	67	21	5	20	8	3
Bosnia	1910	63 (*a*)	31 (*b*)	6 (*c*)	23 (*a*)	6 (*b*)	2 (*c*)
Bulgaria	1900	58	23	3	24	3	1
U.S.S.R.[4]	1926	51	18	3	28	9	4
Serbia	1900	50	18	3	16	2	1

Notes: Age groups: (*a*) 21–24, (*b*) 25–30, (*c*) 41–50.

Source: Same as Table 2, except U.S.S.R. figures taken from United Nations, *Demographic Yearbook, 1949–50*, Table 6.

There are, of course, intermediate possibilities between the European pattern of Table 2 and the Eastern European situation—for example, in Hungary and Greece.[5] (The countries in Table 3 have been arranged in descending order of the figures in the first column.) The populations included within the boundaries of a sovereign state are not necessarily homogeneous. It would be a worthwhile study to trace the variations on the fringes of the area where the European pattern prevails. Significant departures from the European pattern may probably be found not only as one proceeds eastward but on the southern edge of Europe as well. Parts of southern Italy or Spain are more like Greece than like Belgium or Sweden.

How far would a more recent date than 1900 have yielded a different picture? Any date up to about 1940 would have left unchanged the basic contrast between the general European pattern and Eastern Europe. Indeed most of the figures for individual countries would have been substantially the same,[6] except for Eastern Europe where the revision of frontiers after the 1914–18 War altered drastically the composition of the territories for which statistics are available. Also in some areas 'modernization' may have brought about some shift away from the traditional and towards the European pattern.

[4] For European Russia in 1897, the percentages single were as follows:

	Men	*Women*
20–29	42	23
40–49	4	5

[5] Intermediate patterns have also been characteristic of the United States.

[6] The major exception is France where there was a considerable reduction in the percentages single among women over the first three decades of this century. Indeed the reduction was already proceeding in the latter half of the nineteenth century. France, in this respect as in the reduction of the birth rate, seems to have anticipated at a leisurely pace changes which elsewhere in Europe were to take place much later. See Bourgeois-Pichat, below, Pt. III, p. 489.

In the last two decades much of Europe has experienced something like a revolution in marriage habits. People marry more and earlier than in former days. The percentages remaining single, especially among women under 30, are now far lower than in the earlier 'European pattern' illustrated in Table 2 and the numbers remaining unmarried throughout life are being greatly reduced and may in several countries fall below 5 per cent in the near future. The 'European pattern' seems to be disappearing.

Non-European civilizations are like Eastern Europe, or more so. Percentages single are very low by European standards, at least for women; in the age group 20–24 there are often fewer than 20 per cent single. (For men the contrast with Europe is less clear.) Very few women remain single throughout life (not infrequently 2 per cent or less) and for a man to remain a bachelor is not much more common. Figures for many of the larger countries in Africa and Asia are reproduced in Table 4. The countries are listed roughly in order from west to east.

TABLE 4

Africa and Asia: percentages single at selected ages

(Single population as per cent of total population in age group)

Country	Date of census	Men			Women		
		20–24	25–29	45–49	20–24	25–29	45–49
Morocco (Moslems)	1952	59	28	2	8	3	2
Algeria (Moslems)	1948	68	37	5	23	10	2
Tunisia (indigenous population)	1946	73	46	6	29	13	4
Egypt	1947	69	35	2	20	6	1
Mozambique	1950	54	23	4	17	7	3
Mauritius	1952	72	33	5	24	12	5
Turkey	1935	49	24	3	18	6	3
India (inc. Pakistan)	1931	35	14	4	5	2	1
Ceylon	1946	80	43	8	29	12	3
Thailand	1947	61	24	4	30	11	3
Malaya (Malays)	1947	54	17	2	7	2	1
Formosa	1930	52	19	4	15	4	0
Korea	1930	33	10	1	2	1	0
Japan	1920	71	26	2	31	9	2

Note: All figures relate to territories as of the dates stated.

Sources: Morocco, Algeria, Tunisia, Mauritius—United Nations, *Demographic Yearbook 1955*, Table 12.

Mozambique—Portugal, Provincia de Moçambique, Repartiçao Tecnica de Estatistica. *Recenseamento geral da população em 1950*. Vol. III, 'População nao civilizado' (Lourenço Marques, Table 2 1955) pp. 12–13.

Other countries—J. Hajnal, 'The Marriage Boom', *Population Index*, Vol. 19, No. 2 (1953).

There are considerable difficulties about comparing figures such as those in Table 4 with European data. In the first place the family as an institution has different characteristics in different cultures and it is not possible to define 'marriage' in a unique way for statistical purposes in all countries. Clearly the term 'married' has a different meaning in a country such as India where child marriage is traditional from that which it has in a European setting. For the

purposes of this paper marriage means roughly entry into a union which is regarded as appropriate for the bearing and rearing of children in the society in question. Such a definition will be meaningful in very many societies.

For many areas the available data on marital status unfortunately may not represent anything even remotely corresponding to the definition just sketched. For India it would clearly be preferable to have data where only those were classified as married who had completed the second marriage ceremony ('gauna' ceremony) after which consummation takes place. Even after that it seems customary in some areas for the girl to return to her parents' home for months or even more than a year so that she only joins her husband permanently some time later. In Indian data people are counted as married who, for our purposes, should not be so classified. The opposite difficulty occurs in many cases. Sometimes official statistics count as married only persons who have been declared married by the civil or ecclesiastical authorities, whereas the people themselves take little notice of the requirements of these authorities. In some societies there are several accepted forms of marital union, only some of which are classified as marriages in the census. The precise scope of census classifications even as intended by those in charge of planning the census is often unclear; unimaginative imitations of European classifications have often been used in societies where these were inapplicable. How the definitions were applied as the enumeration was carried out is even more dubious.

In many instances (e.g. Ceylon and Japan) the proportions of persons single if the true facts were known would undoubtedly be even lower than those given in Table 4. Marital status data for Latin American countries and the Caribbean area have been largely useless because so many people who, on our type of definition, ought to be counted as married have been treated in the statistics as unmarried.[7] More accurate and meaningful data than are yielded by the official censuses are sometimes available in special studies (e.g. the Trinidad survey described by Braithwaite and Roberts). Information on the numbers of women who have borne children may also be used in several countries to show that the marriage pattern cannot be of the European type.[8]

A further difficulty is that figures on age distribution are known to be highly inaccurate in many countries. What is worse, information on age and marital status may not be independent, i.e. there may be a tendency for census

[7] There is a recent review of the available information by Mortara. (Details of works mentioned may be found in the list of references at the end of this article.)

[8] A collection of data of this kind may be found in United Nations, *Demographic Yearbook 1955*, Table 17. The accuracy and meaningfulness of marital status data for European countries is, of course, not always above suspicion. For example, if consensual unions were taken into account the percentages single would be lower than those given in Tables 1 and 2. For nineteenth-century Sweden a relatively high illegitimacy rate and references in the literature to consensual unions ('Stockholm marriages') suggest that the effect might be substantial. Fertility data may be cited to show that correction for this effect would still leave a wide gap between the European figures and others. For European countries the fertility data should relate to a period before the widespread use of fertility limitation. The following comparison of age specific rates based on all births, legitimate and illegitimate, shows clearly the differences between Sweden and Bulgaria in the proportions of women living in unions of all kinds at ages under 30. (At higher ages differences in the percentage of widows have to be taken into account in interpreting such data.)

Fertility rates per 1,000 women (of all marital conditions)

Age group	15–19	20–24	25–29
Sweden 1871–5	9	106	207
Bulgaria 1901–5	24	289	312

(Data from Kuczynski, *The measurement of population growth*, p. 123.)

enumerators to put down a woman as being above a certain age if she is married, but to treat her as younger if she is unmarried.

The fact that most of the figures in Table 4 are for recent dates must also be remembered. For our present purpose the proper contrast would be provided by figures which described non-European countries as they were before their social structure began to be modified by changes derived from Europe. If we had statistics going further back in time (e.g. for nineteenth-century Japan) the contrast with Europe might well be greater in several cases than Table 4 suggests.

No survey of the information for small pre-literate societies appears to exist. However, it would seem that in the large majority of these, marriage, for women at any rate, is early and universal.

When all the qualifications about the data have been made, there can be no doubt that our original generalization remains. The European marriage pattern is unique for all large populations for which data exist or reasonable surmises can be made (e.g. it may be surmised that those Chinese populations for which we have no data are similar to those for which figures exist). Europeans have married very much later than others and far more of them have remained unmarried throughout life. In non-European civilizations there are scarcely any single women over 25. It is not, of course, intended to suggest that non-European civilizations do not show wide variations in the pattern of their marriage rates. But all the varieties that exist are separated by a distinct gap from the European pattern.

The eighteenth century

> The reason why four Women out of six do not bear children every year is that they cannot marry because of the discouragements and difficulties in their way.
>
> RICHARD CANTILLON: Essai sur la nature du commerce en général (1755).

If the European marriage pattern is unique, it is natural to ask, 'when did it arise?' Curiously enough, this question seems scarcely to have been asked, let alone adequately answered. The suggestion has occasionally been made that late marriage is characteristic of urban-industrial societies while agricultural countries have early marriage. The suggestion is certainly unfounded. Eighteenth-century Scandinavia can hardly be described as urban or industrialized.

The question about the origins of the specifically European marriage pattern ought to be answered by historians well versed in Europe's economic and social history back into the Middle Ages, as well as experienced in handling such statistical material as can be reconstructed for periods earlier than the eighteenth century. A demographer accustomed only to deal with modern data cannot go very far.

What follows is really only a survey of the most easily accessible territory. There may well be much more material, even of a statistical nature, in places where a demographer would not be able to look for it.

The first step is to see how far back into the past the specifically European pattern can be traced. The type of data used in Tables 1-4 unfortunately does

not go very far. Censuses with cross-tabulations of age and marital status do not go back even in Europe before about the middle of the nineteenth century except for some Scandinavian materials. For Norway and Denmark we can go back to the end of the eighteenth century, and for Sweden the cross-classification of age and marital status has been reconstructed back to 1750. (For the Scandinavian data, and nineteenth-century data for other parts of Europe, see Hajnal (Pop. Index, 1953).) There is also some information from marriage registration. Marriage in Scandinavia in the eighteenth century may well have occurred earlier and there may have been fewer remaining single throughout life than in the nineteenth century, but there can be no question that marriage habits conformed to the European pattern and not to the pattern common to the rest of the world.

Nor indeed would one expect anything else. Historians on the whole appear to have taken it for granted that marriage patterns in Scandinavia and indeed throughout Europe in the eighteenth century were of the same general type as later. The changes in the marriage habits which have been looked for have been changes in the opposite direction, namely towards more and earlier marriage as a possible explanation for the spurt in population growth.

Much more information could probably be extracted from the early censuses or enumerations. When the European pattern prevails this fact will usually be clear from any data on the distribution of the population by marital status, even without cross-classification by age, since the gap between the marital status distribution characteristic of Europe and those of other civilizations is substantial. Of course, if no cross-tabulation of marital by age is available, it will not be possible to deduce whether the proportion remaining single throughout life is high or whether it is only late marriage which is responsible for a high percentage of unmarried persons.

Unfortunately most of the published information before 1800 on distributions of populations by marital status relates to cities. Cities, however, are far from being closed populations. The distribution of their populations by marital status is influenced not only by their marriage habits but also by migration. European cities in particular have frequently shown signs of this by having a surplus of unmarried persons and especially women (in former days many of these were servants). This phenomenon occurs throughout the centuries back to the Middle Ages. The right inference to draw from a high proportion of single women in a city is often not so much that urban life discourages marriages but that cities provide opportunities for single women to earn a living and single women, therefore, go to live there.

However, some information is available from a number of counts covering rural populations in the eighteenth century. A review of this material has been placed in an Appendix to this paper. All of it, as far as it goes, suggests the general conclusion that the European pattern originated before the eighteenth century.

For studying marriage in the eighteenth century, we are not confined to data on the distribution of the population by marital status. The distribution of marriages by age, and the mean age at marriage calculated from it, provide perhaps the most natural approach. We may begin with the series for Venice

published by Beltrami.[9] These figures are mean ages at marriage for all marriages without distinction between first and later marriages.

	Men	*Women*
1701–5	29·9	28·8
1720–4	31·0	29·8
1740–4	31·4	29·3
1760–4	31·6	28·1
1780–4	31·7	28·0

To interpret figures on mean age at marriage[10] we must inquire what mean ages should be regarded as characteristic of the European pattern, and what levels would indicate a non-European pattern. There is little direct information on the distribution of marriages by age for countries where the marriage pattern is non-European. Such countries in many cases have no system of marriage registration at all or else the registration system covers only an inadequate portion of the marital unions, as explained earlier. Even where the registration system covers the bulk of marriages, statistics of age are often unreliable since many people do not know their ages. However, information on the age at *first* marriage[11] may be obtained by indirect calculation from the proportions of single persons in successive age groups. Calculations of this sort suggest that a non-European pattern implies that the mean age for marriages of single women is below 21. According to the European pattern the mean age for the marriages of single women must be above 23, and has in general been above 24.

It is much more difficult to specify limits for the overall mean age of marriage of women, i.e. if the marriages of widows and divorced women are included. (In European populations in the eighteenth century and earlier, there are for all practical purposes no marriages of divorced persons.)

If we assume that the mean age at first marriage is at most 21·0 years and make rather extreme assumptions about the proportion of marriages which are remarriages and about the mean age of the bride at such marriages[12] it seems likely that the overall mean age at marriage in non-European societies could hardly exceed 25 years. The subject needs investigation.

Probably the overall average age at marriage of women would in fact almost always be below 24 and indeed usually below 23 years in societies exhibiting a 'non-European' marriage pattern. As an actual example, the following data for Serbia may be quoted.

	Mean age at marriage of single women	*Mean age at marriage (all women)*
1886–95	20·0	21·7
1896–1905	19·7	21·3

In societies with a European pattern the overall mean age at marriage of women is sometimes as low as 24·5 (Italy 1911–14), but usually a good deal higher.

Going back to the eighteenth-century Venetian data, we can now say that they are clearly of European type. The number of marriages in which the age of the spouses was not given is remarkably low for eighteenth-century Venice. However, in parish registers of that period, statements of age are generally not given or are too incomplete to be of much use. There are, therefore, very few studies making use of age statements at marriage registration. According to one study[13] the age of the participants was stated in the records of 63 of 83 marriages celebrated in 1664–9 and 1693–5 in the village of Someren in the Netherlands. The average age of the bridegroom was 27 years 4 months, that of the bride 26 years 8 months.

Another Dutch study (by van Nierop) takes us back another century. It is based on the registers (civil, not ecclesiastical) of the city of Amsterdam and covers 11,597 marriages contracted in 1578–1601. In 9,247 marriages the bridegroom was a bachelor and 8,052 of them stated their ages, though only 4,664 did so without adding some indication that the information was approximate. There were no bridegrooms under 18. The percentage distribution of the stated ages (including approximate ones) was not unlike the distribution of the ages of bachelor bridegrooms in England and Wales in 1891–95:

	Amsterdam 1578–1601	*England and Wales 1891–5*
18–19	2	2
20–24	51	47
25–29	34	34
30 and over	13	17
	100	100

[9] See Beltrami, p. 181. The original distributions (by single years of age) are given in the Appendix, Table 12. The marriage rates on p. 183 of Beltrami's book for the age group 14–59 go back right up to 1601. They are a good deal higher in the seventeenth century than in the eighteenth and this suggests that more people married and married earlier in the seventeenth century than in the eighteenth. Beltrami's book contains much additional information which would lend itself to further analysis (e.g. indirect standardization of marriage rates for age, or analysis of the accuracy of age statements).

[10] The crude mean age at marriage (i.e. the average of the ages at which marriages are contracted in a given year or years) can be a very misleading index when calculated for a year or a few years in periods of rapidly changing marriage habits such as much of Europe has experienced in the last three decades. The mean ages at marriage cited in this paper are almost all based on data for substantial stretches of time. Moreover, our interest is not in the study of small changes. The difference between the European and non-European marriage patterns is a wide one. For our purposes, doubts about crude mean ages at marriage can safely be set aside.

[11] The mean age at *first* marriage for men is the mean age at marriage of all men who are single before marriage including those whose brides are widowed or divorced. Similarly the mean age at *first* marriage of women refers to all marriages of single women, including those who marry widowers or divorced men. A method of computing mean ages at first marriage from proportions single is explained in Hajnal, 'Age at marriage and proportions marrying' (1953), Appendix III.

[12] The two factors (the proportion of remarriages and the mean age at remarriage) are not independent. A lower age at first marriage for women, a greater age difference between bride and bridegroom and higher mortality are all factors which make it possible for widow marriages to constitute a higher percentage of marriages in non-European societies than in nineteenth-century Europe; but these same factors lower the average age at which widows remarry by comparison with European standards. Divorce also increases the proportion of remarriages, but divorced women remarry at a younger average age than widows. Within recorded European experience the proportion of marriages in which the bride was a widow has apparently not exceeded 20 per cent and has usually been below 15 per cent. 40 seems a high average age for widows marrying (40 was the mean age of widows marrying in England and Wales at the beginning of the century). If we take 20 per cent for the proportion of remarriages and 40 for the average age at remarriage we obtain an overall mean age at marriage of 24·8, since

$$21 \times 0{\cdot}8 + 40 \times 0{\cdot}2 = 24{\cdot}8$$

Approximately the same figure is reached if we increase the proportion of remarriages to 25 per cent, but assume that the average age of the bride at such marriages is only 36 years, or assume that the proportion of remarriages is 30 per cent, but the average age at remarriage 34 years, etc.

[13] I have not seen the original paper by Sassen. The details quoted are from Mols (Vol. III, p. 137). Mols' monumental work provided an invaluable guide to the sources for the preparation of the present paper.

Unfortunately van Nierop made no analysis of information about the brides; she felt the bridegrooms were more interesting.

In general, however, in marriage registers of the eighteenth century and earlier, statements of age are not given or are too inaccurate to be of much use. This difficulty can be overcome by the laborious procedure of matching each marriage certificate with the baptismal certificates of the spouses so that their ages can be determined directly from their date of birth. The earliest study in which statistics on age at marriage were obtained by this method may well have been that published by Roller[14] in 1907. It relates to the small town of Durlach in Bavaria (Germany). The mean ages at *first* marriage were as follows:

	Men	*Women*
1701–20	28·7	26·5
1721–50	27·4	25·4
1751–80	27·6	25·6
1781–1800	26·6	25·1

For comparison it may be added that the average age at first marriage in the whole of Bavaria in 1896–7 was 27·4 for men and 24·9 for women. There is thus no substantial change from the eighteenth century.

In the pioneer study by Morrell (1935) of the registers of two English parishes (North Elmham in Norfolk and Wedmore in Somerset) ages at marriage were obtained by the matching of marriage and baptismal records. This study is also remarkable in going back to the sixteenth century. The overall mean ages at marriage (including remarriages) were as follows:

	North Elmham 1561–1606	*Wedmore* 1634–45
Men	27·6	27·9
Women	24·5	24·6

The numbers of marriages upon which the averages are based is not given, but it seems likely from other information that this number exceeded 150 in each parish. It is not clear whether it was possible to establish the age of the spouses for all the marriages taking place in the stated periods.

In recent years the technique of matching records has been applied in a number of studies. Such work can be greatly assisted by modern data processing equipment and is likely to be undertaken on an increasing scale, so that, in a few years, much more information on the age at marriage in the seventeenth and eighteenth centuries should be available. The series given in Table 5 relates to an Italian village and covers a period of 2½ centuries. It is the product of an extensive study whose focus is on human genetics. The project is under the direction of L. L. Cavalli-Sforza who has very kindly made available the data reproduced in Table 5. It will be seen that the mean ages at marriage fluctuate (partly on account of small numbers), but no trend appears.

The matching of parish records was also the technique employed in the well-known study of the French village of Crulai in Normandy published by Gautier and Henry in 1958. No change appears within the period covered,

[14] I have not myself seen Roller's study. The figures on age at marriage are taken from Mombert, *Bevölkerungslehre*, p. 118. Mols (Vol. II, p. 268, note 3) suggests that they were obtained by the matching of marriage and baptismal records.

TABLE 5

Marriages in village of Riana (Parma diocese), Italy

Year	*No. of marriages*	*Average age of bridegroom* ± *S.E.*	*Average age of bride* ± *S.E.*
1650–99	30	33·2 ± 1·4	25·4 ± 1·2
1700–49	29	34·3 ± 1·8	30·4 ± 1·5
1750–99	10	32·2 ± 2·8	29·1 ± 2·1
1800–49	12	33·8 ± 2·6	30·2 ± 2·2
1850–99	49	32·8 ± 1·1	27·8 ± 1·0

Notes: Restricted to marriages where both bride and bridegroom are born in the village.
The table refers to all marriages (including remarriages).
S.E. means standard error.

namely 1674–1742. The mean age at *first* marriage was 26·6 years for men and 25·1 years for women.[15] For another French parish at a somewhat later period (1760–90) Girard obtained mean ages at first marriage of 27·4 for men and 26·2 for women. These figures compare with 28·3 and 24·1 respectively for the whole of France in 1851–5. We may also refer to a figure of 24·75 years for the mean age at first marriage for women in Paris in the eighteenth century. Bourgeois-Pichat (1951)[16] states that it is based on 'recherches directes dans registres de l'état à Paris'.

Some very interesting information on the average age at marriage in seventeenth- and eighteenth-century England is given in J. D. Chambers' monograph on *The Vale of Trent* (1957).[17] The basic data are not parish registers but 'allegations' of marriage for Gloucestershire and 'certificates' of marriage for Nottinghamshire. Only those who wanted a quick or quiet wedding, without the formalities of the usual procedure, are included and the poorer classes are under-represented. We are not told what percentage of all marriages is covered and the accuracy of age statements is not discussed. Presumably remarriages are included, not only first marriages. Chambers uses medians not means. Occupational groups are distinguished. This study gives by far the earliest significant information on differences between the marriage habits of social groups.[18] The Gloucestershire data go back to 1637. The median ages at marriage show no trends over time. They could come very well from nineteenth-century or twentieth-century European data.

Some further mean ages at *first* marriage may be added from an unpublished

[15] The figures are based on 272 marriages of bachelors and 216 marriages of spinsters respectively. These are marriages where the date of birth of the spouses, and hence their age, could be established. For the marriages of persons where the baptismal certificate was not found (presumably in almost all cases these persons were not born in the village) approximate ages at marriage were computed as far as possible from the ages at death. The means calculated from these approximate ages are somewhat higher than those given above.

[16] He quotes a publication entitled *Recherches Statistiques sur la ville de Paris et le département de la Seine*, Paris, Imprimerie Royale, 1829. Bourgeois-Pichat's article also contains an indirect calculation broadly confirming this figure of 25 years as the mean age at the first marriage of women for eighteenth-century France. See below, Part III, p. 484.

[17] See below, Part II, p. 327.

[18] Unfortunately the next earliest study, relating to Bari in Italy in 1750, was not published in adequate detail (see De Meo 1934).

paper by Paul Deprez.[19] These are based on genealogies of Flemish rural families and subject to possible selection bias, perhaps in favour of the inclusion of those who left more offspring. Such a tendency would presumably lead to underestimating the age at marriage. No information is available on the representativeness of the genealogies in regard to the social composition of the population. Here are the mean ages at first marriage of persons born in the periods stated:

	1680–99	*1700–19*	*1720–39*	*1740–59*	*1760–79*
Male	25·3	25·9	26·4	26·7	24·1
Female	23·9	24·2	25·1	25·1	23·1

Another type of data sometimes available for the eighteenth century is the classification of deaths by age and marital status. One way of using this information is to compute the percentage of deaths of women dying over say 50 years of age. This gives an estimate of the percentage permanently remaining unmarried. In the study of the French village of Crulai, which has already been mentioned, there were in the period 1750-1800 224 burials of women over 50. 198 were of married or widowed women, 4 were single and in 22 cases the marital status cannot be determined. The percentage of single women among women dying over 50 may thus have been as low as 2 or as high as 11·6 (according to whether we assume that all or none of the 22 were single). More likely the truth lies somewhere in between.[20] In any case the percentage seems to have been low by nineteenth- or twentieth-century standards even for France (which had the lowest proportion in Europe of women remaining single throughout life). Apart from the possibility of accidental variations, it is necessary to keep in mind the effects of migration. Some women from Crulai may have become nuns and died in a convent away from the parish. Other single women may have emigrated to a city, for example as servants. The distribution by marital status and age of deaths in 1715-44 in the parish of Saint-Sulpice in Paris was published by Deparcieux (1746). Of the women dying over 50, 15 per cent were single and of the men no fewer than 20 per cent; Deparcieux remarks that there were many servants in the district.

For Pomerania the distribution of the deaths of persons over 25 by marital status is recorded by Süssmilch[21] for the nine years 1748-56. There were in all over 40,000 deaths of persons over 25. 10 per cent of the female deaths and 13 per cent of the male deaths were of single persons. Since the lower age limit here is 25, so that some of the deaths took place at ages when marriage is not yet too rare, these percentages are rather low by later European standards. However, they are far too high (especially in the case of women) for any non-European population.

To sum up, the European pattern in age at marriage can be traced back in many countries to the first half of the eighteenth century or even earlier. There

[19] Delivered at a conference in Nottingham, 14 December 1960. For a later account by Deprez using these data, see below, Part III, p. 608.

[20] Similar results to those of Crulai on the women dying single were obtained from another parish for the end of the eighteenth century by Girard.

[21] Vol. I; Appendix, Table 12.

is no record anywhere[22] of a non-European early age at marriage. (There is some suggestion in the data that fewer people remained single throughout life in the eighteenth century than after 1850.)

The aristocracy

> The unmarried Ladies and Gentlemen in this City, of moderate Fortunes, which are the great Bulk, are unable to support the Expence of a Family with any Magnificence . . . they, therefore, acquiesce in Celibacy; Each Sex compensating itself, as it can, by other Diversions.
>
> CORBYN MORRIS: Observations on the Past Growth and Present State of the City of London. (1751)

Before the latter half of the seventeenth century, there is almost no statistical evidence on marriage, at least so far as unselected data (i.e. covering all inhabitants of an area) are concerned.

A continuous record going back earlier is available for selected upper class groups, and above all the aristocracy. Table 6 gives data from a study of the British peerage by Hollingsworth (1957).[23] The figures relate to the legitimate children of kings, queens, dukes and duchesses. In genealogical records of this type it is possible to trace the vital events (marriage, birth of children, death) occurring throughout an individual's life. It is most useful to analyse the data by 'cohorts', i.e. to consider individuals born in successive periods, and study their marriages (as against the more customary method of studying the marriages occurring in successive periods). It is thus possible to consider the numbers remaining single of the survivors at successive ages. Two ages have been selected for Table 6.

The story told by Table 6 is a remarkably clear one. The first two lines represent a marriage pattern quite different from the later 'European' one, but

TABLE 6

British peerage study

Period of birth	*Men* Per cent still single at 20	*Men* Per cent still single at 50	*Women* Per cent still single at 20	*Women* Per cent still single at 50
1330–1479	70	9	42	7
1480–1679	79	14	45	6
1680–1729	93	23	75	17
1730–79	97	21	76	14
1780–1829	100	22	89	12
1830–79	100	20	80	22

Source: Hollingsworth (1957) p. 14. The numbers on which percentages and average ages at marriage were based are not given. At birth there seem to have been between 120 and 200 of each sex in each cohort, but of course the number of marriages was smaller, especially in the early cohorts.

[22] It has been suggested by Connell (1950) that early marriage was characteristic of eighteenth-century Ireland. A special Irish marriage pattern developed in the decades after the famine, with very late marriage and high percentages remaining unmarried. Connell's theory that there had been a shift towards earlier marriage in the decades before the famine is unsupported by any statistical evidence worth considering. Even before the famine the age at marriage in Ireland was, however, probably similar to that in other North-West European countries as shown by the percentages single recorded at the census of 1841. (See Hajnal, 'The Marriage boom' (1953), p. 95, Note 6.) For Connell's view, see below, Part III, p. 423.

[23] See below, Part II, p. 354.

something like that found, for example, in Bulgaria, at least so far as age at marriage is concerned. The population remaining permanently single is higher than in non-Western societies. From the third line of the table onwards the picture is a typically 'European' one.

The mean ages at first marriage show the same drastic change[24] as we pass from the Middle Ages to the eighteenth century.

Period of birth	1330–1479	1480–1679	1680–1729	1730–79	1780–1829	1830–79
Men	22·4	24·3	28·6	28·6	30·5	30·0
Women	17·1	19·5	22·2	24·0	24·7	24·2

We turn now to the records of what should, perhaps, be termed a republican aristocracy, the ruling families of Geneva. Their demographic characteristics have been studied in a monograph by Henry (1956). The figures for the earliest groups (especially among women) seem to show traces of a former 'non-European' marriage pattern. As Table 7 shows, the change from an earlier to a 'European pattern may have occurred at roughly the same time as among the members of the British peerage; but too precise a comparison should not be attempted.

TABLE 7

Ruling families of Geneva

Period of birth	*Per cent single of those who die over 50*		*Mean age at first marriage*	
	Men	*Women*	*Men*	*Women*
1550–99	9	2	27·2	21·4
1600–49	15	7	29·1	24·6
1650–99	15	25	32·6	25·7
1700–49	29	29	31·6	26·3
1750–99	19	31	31·5	24·0
1800–49	22	25	29·4	22·7
1850–99	15	17	29·2	24·7

Source: Henry (1956) pp. 52 and 55.

Notes: The computation of the percentage dying single is complicated by the fact that some persons are lost from observation while young (e.g. owing to emigration). This difficulty is far greater for the men than for women and Henry calculated two series of estimates by making allowance for this factor in two ways. The figures given above for men are the averages of the two series. The mean ages at marriage given for women include not only the daughters of the 'ruling families' covered by the study, but also the brides (if single) of the men in the ruling families.

Sampling fluctuations need to be kept in mind: The estimated numbers of women dying over 50 in successive cohorts were: 60, 91, 177, 133, 89, 52, 96. The standard errors of the mean ages at marriage vary between 1·0 and 1·7 for the men, between 0·8 and 1·2 for the women. In earlier cohorts the number of marriages of spinsters occurring at ages over 35 and indeed over 50 appears very high.

Peller in his study of the European aristocracies[25] analysed his material in a manner less suitable for our present purpose. His data suggest that in the continental European aristocracies a 'non-European' pattern persisted far longer than in the British peerage. The families studied by Peller retained a position of

[24] This change in marriage pattern is also observed in a recent article by Stone, a sociological study of marriage in the English nobility. I only got to know of Stone's article after this paper was completed.

[25] See above, p. 87.

substantial feudal privileges and a distinct manner of life far longer than their British counterparts. The very highest layers of the French aristocracy, the 'Ducs et Pairs', also preserved a pattern of very early marriage, distinct from the customs of the majority of the French population, right into the eighteenth century, as recently shown by Henry and Levy. Indeed the comparison with British conditions was noted by at least one contemporary observer, the son and heir of the Duc de la Rochefoucauld who visited England in 1784 at the age of 18. His charmingly romantic view of marriage in England deserves quotation:

> 'Husband and wife are always together and share the same society. It is most uncommon to see one without the other. . . . They always look perfectly harmonious; the wife especially looks so contented that it always gives me pleasure. . . . I am not sure whether having to live constantly with one's wife makes it necessary to marry at a much later age, but I am inclined to think so. In England, to have a wife whom you don't care for must make life a misery. An Englishman, therefore, makes a greater effort to get to know his bride before marriage; she has the same desire and I believe that this is why marriage before the age of twenty-five or twenty-eight is rare. Perhaps another reason for this is because it is usual to set up house immediately after marriage. The young couple never stay with their parents. . . . English husbands have an advantage over us of which they sometimes avail themselves, namely divorce.'[26]

The analysis of the genealogies of some families in Württemberg (Germany) presented by Rümelin (1926) can also be included in this section. The occupations recorded show that the families involved belonged largely to the more prosperous urban sections of society (the agricultural population is hardly represented). The selection effects which may bias genealogical data collected on account of the interest of descendants (for example, selection in favour of families which have numerous offspring) were mentioned above.

The precise nature of the records is not described in Rümelin's paper and

TABLE 8

Age at first marriage according to genealogical records of a family in Württemberg (Germany)

Century	*Men*		*Women*	
	No. of cases	*Mean age at marriage*	*No. of cases*	*Mean age at marriage*
16th	51	25·3	34	21·4
17th	134	26·3	68	20·8
18th	116	28·9	90	24·0
19th	91	31·1	94	25·3

Source: Rümelin (1926), Tables 3a and 12a ('Family L').

There is no explanation why there are so many more cases for computing the male ages than for the female ages.

[26] François de la Rochefoucauld, *Mélanges sur l'Angleterre*. The quotation is from an extract translated in Francesca M. Wilson, *Strange Island*, London (Longmans, Green and Co.), 1955, p. 124.

there is no discussion of completeness or accuracy. Data from the one group of records which includes material on women's age at marriage going back to the sixteenth century are summarized in Table 8. The men in this genealogy were largely salaried professionals, in particular civil servants and clergymen.

There are hints in Table 8 of a non-European marriage pattern in the earlier centuries. No weight can be attached to this fact, but if original records of the type used by Rümelin are still in existence[27] they might be promising material for an analysis on modern lines.

It is, of course, entirely possible that, before the modern era, the aristocracy and the upper classes generally married much earlier than the bulk of the population. (In the nineteenth century, the aristocracy, at least in England and Scandinavia, married later and less frequently than the population as a whole.) We now consider the scanty data available for unselected populations in the Middle Ages.

The Middle Ages

Good Sirs, since I was twelve, some years ago,
(Thanks be to God that I am still alive)
Of husbands at the church-door I've had five.

CHAUCER: Wife of Bath's prologue
(Modern version by W. van Wyck)

A few urban administrative documents (mainly taxation lists) which permit a marital status classification of the adult population are available even for the fourteenth and fifteenth centuries. The marital status classification must be made on the basis of indications in the original records which were intended for other purposes (e.g. taxation) and the indications of marital status are therefore more or less incomplete (e.g. in the case of servants or adult children living in their parents' home). Moreover, the age distinction between children and adults may have been unclearly specified when the lists were compiled and, in any case, must have been of dubious accuracy.

For the reasons mentioned earlier, data of this kind for cities would be difficult to interpret on account of the effects of migration, even if the records were fully complete and accurate, and it was known exactly how they had been compiled.

As an illustration, Table 9 summarizes what is perhaps the most promising series of this kind. It relates to Zürich in Switzerland which has for many centuries been one of the most important commercial centres of Europe. In the seventeenth century lists of all the inhabitants were periodically drawn up by the clergymen. Some of these were analysed in the last century by Daczynska. More recently medieval taxation lists which contain indications of marital status have been studied by Schnyder. The tax levied in 1357 was a property tax only, but in 1467 there was a head tax as well as a property tax. The head tax applied to all persons aged 15 and over, so that in theory the figures for 1467 refer to a clearly defined age category. The data for 1637 are for the population aged 16 and over.

The general picture in Table 9 is very roughly constant through the centuries. The proportions single among women are high; but there is every reason to suspect a high rate of migration into the city which was a tiny enclave in an overwhelmingly rural population. (The age distribution in 1637 gives clear indication of immigration from the teens onwards.) The great excess of women over men suggests that the balance of immigration was particularly great for women. Large numbers who are single are thus no proof of abstention from marriage. The very small numbers of widowers and even widows in the Middle Ages (though not in the seventeenth century) are surprising in view of the very high urban mortality of the time. If correctly recorded they imply very high rates of remarriage. But very high rates of remarriage for the widowed with very large numbers remaining single make an odd combination. Could it be that the distinction between a widowed and a single person was not always recorded? The number of married persons is in analyses of records of this type deduced from the number of couples listed together; the distinction between the widowed and the single depends upon the recording of a fact which is not usually relevant to the administrative purposes of the listing, but which may emerge, for example, owing to the presence of children.

The data for isolated medieval cities are thus of little value for our purpose.[28] Similar difficulties apply with even greater force to various fragments of data available for the early Middle Ages, at least in the form in which they are available so far in published work. A survey of these materials has been made by J. C. Russell (1958), who draws various conclusions from them which seem to me to be largely unwarranted.

The most solid body of evidence concerning marriage frequency in the Middle Ages is provided by the English poll tax records of 1377, analysed by Russell in his earlier book *British Medieval Population* (1948). The special tax of one 'groat' was levied in theory on all adults over 14 (except for the clergy

[27] See Mols, Vol. I, pp. 37-38.

TABLE 9

Adult population of Zürich (Switzerland) by marital status

Year		*1357*	*1467*	*1637*
Men				
Number		1,612	1,187	2,185
Per cent	Single	40	37	49
	Widowed		2	1
	Married	60	61	50
Women				
Number		1,962	1,649	2,974
Per cent	Single	46	49	48
	Widowed	5	7	15
	Married	49	44	37

Source: Schnyder (1926), pp. 56 and 71.
Daczynska (1889), pp. 387 and 389.

[28] Perhaps, in some cases, some revealing method of analysis may yet be discovered, though this would certainly necessitate going back to the original records. The wider inferences to be drawn if there were good information about marriage in cities would have to be carefully weighed. Late marriage in some of the large centres in the fifteenth century might be an indication not of general late marriage in the period, but of the beginnings of new marriage habits which then spread throughout Europe.

who were separately taxed, and open beggars) and many of the tax lists have been preserved. It is possible to identify married couples in some of them. (There seems to have been no uniform pattern for drawing up the lists of persons who paid.) Russell analysed such lists for a number of villages and towns. His main results are summarized in Table 10. In addition he has assembled data from parts of London boroughs and other places amounting in all to a few thousand further persons. The proportions married are similar to those in Table 10.

TABLE 10

Percentages married among those aged 14 or more from the English Poll Tax Returns of 1377 (villages and towns of varying size)

Size of place (range in total no. of inhabitants) (*a*)	*Names of towns*	*Total persons taxed*	*Per cent of taxed persons married*	
			Men	*Women*
1–25		118	82	86
26–50		660	68	75
51–100		1,560	74	74
101–200		1,830	71	71
201–400		1,811	66	67
759	Dartmouth	506	68 (*b*)	68 (*b*)
1,017	Carlisle	678	59	56
2,325	Kingston-on-Hull (*c*)	1,550	60	58
4,365	Colchester (*c*)	2,910	62	61

Source: J. C. Russell (*British Medieval Population*, Tables 7.1–7.7).

Notes: (*a*) The total number of inhabitants is obtained by Russell by applying a constant factor of 1·5 to the number taxed, to allow for excluded classes, omissions and children under 14.

(*b*) For Dartmouth only a common percentage for both sexes can be calculated because there are 104 servants of unstated sex (assumed to be unmarried).

(*c*) The total populations of Kingston and Colchester were calculated from 1,557 and 2,955 persons taxed, but in some cases sex and marital status could not be established; the percentages married are based on 1,550 and 2,910 persons.

The interpretation of these data is not subject to the difficulties arising out of small numbers or the distortions due to migration. So far as coverage of towns and villages of varying size is concerned, we seem to have here better data than any available for any country before the era of the modern census.

As has already been mentioned, the clerical population are omitted from the tax returns summarized in Table 10. In an earlier paper Russell (1944) made estimates of the clergy using Domesday, records of the special poll taxes levied on the clergy and other sources. In total the number of male clergy appears to have amounted to under 5 per cent of the population aged 14 or over.

There were some 2,000 nuns in a total of some 700,000 women over 14. Contrary to popular belief, the number of women taking the veil was very small; indeed nuns appear to have come mainly from the upper classes.[29] The percentages married among men would thus have been a few per cent lower than those suggested by Table 10 if the clerical population were taken into account. For women inclusion of nuns would make no appreciable difference.

[29] See also Eileen Power, *Medieval English Nunneries*.

The percentages of married persons in Table 10 are much higher than could be expected on 'European' standards. It must be remembered that the widowed are included with the unmarried and that the vast bulk of the population was in the villages. Suppose we assume that the data are unbiased by marital status, i.e. that the chance that a non-clerical person of over 14 be included in the tax lists was the same for persons of all marital conditions. Then the percentage of married among women over 14 in the population from which the poll tax samples of Table 10 are drawn could not have been under 67 per cent and was probably somewhere near 70 per cent. The per cent married among those over 15 must have been over 70 per cent (though knowledge of age at this period would hardly have been very precise). On the European pattern, the percentage of women over 15 who were married in a country as a whole was below 55 and usually below 50 in the nineteenth century.[30]

The percentage of women married according to the poll tax records is thus of quite the wrong order of magnitude for a population of European pattern. On the other hand it is very definitely of the right size if the marriage pattern was non-European. For example, in censuses taken in 1900 the following percentages married (among women aged 15 and over) were recorded:

Bulgaria	69
Rumania	65
Serbia	69

Unfortunately there seems no way of knowing whether the chance that a non-clerical person be included in the tax lists varied with marital status. On general grounds it is possible, and perhaps probable, that the paupers who were not subject to tax and those who were omitted though they ought to have been taxed were largely unmarried. Among those near the lower age limit the unmarried could perhaps more easily escape taxation by claiming to be too young. It was perhaps sometimes possible to conceal the presence of unmarried relatives, while the head of the family and his wife could hardly be missed. Russell believes that the total number of paupers and untaxed is only of the order of 5 per cent. If half of them were women (in fact one is tempted to assume that fewer than half were women) then the true percentage married would still have been very definitely 'non-European' even if all those omitted were unmarried. Only if the number of omissions was very large with a heavy preponderence of the unmarried among those omitted could the populations covered by the poll tax records of 1377 have had a European marriage pattern.

If, on the other hand, the proportions of Table 10 are within a few percentage points of the truth one is tempted to conclude that the marriage pattern of at least some parts of medieval England in the fourteenth century was not at all like that of the eighteenth-century Europe, but much more like that of non-European civilizations.

Further work on the poll tax records is needed before much confidence could be placed in such an interpretation. Is there anything abnormal in those

[30] These generalizations are based on data from censuses of 1850-1910 collected in *Annuaire International de Statistique* (1916), Vol. I, 'État de la population (Europe)', Table D.2.

The percentage of women married in the population aged 14 and over is some 3 per cent below the percentage married in the population aged 15 and over.

few tax lists where married couples can be distinguished? Did the villages covered by these lists have any special character? The poll tax records are by far the most important data so far available on marriage patterns in the Middle Ages. Russell's pioneer work on them needs to be extended with more detailed studies based on the original documents.

Another type of evidence, the 'inquisitions post mortem', i.e. legal documents involved in establishing claims to inheritance, has been used by Russell, and cited by others, to support the contention that women married relatively 'late' in the Middle Ages at least in the social class covered by these documents. It is possible to classify the inquisitions by age and by the marital status of the heiress; and one can then attempt to determine the age at which one half of the heiresses are married. Statistically, this procedure is closely analogous to the methods in the biological assay of, for example, insecticides. Groups of insects are exposed to treatment with an insecticide at various dosages. The dosage in biological assay corresponds to age in the inquisitions. With increasing dosage an increasing percentage of insects die, just as with increasing age an increasing percentage of heiresses are married. The problem is, in the one case, to determine what dosage is sufficient to kill just 50 per cent of the insects, and in the other, at what age just 50 per cent of the heiresses are married. The statistical problems of such data are tricky; and it might be interesting to attempt an analysis of the inquisitions by the techniques of biological assay. Casual inspection suggests that the numbers Russell has been able to collect are far too small to support his conclusion, that in the reign of Edward I some 50 per cent of heiresses were still unmarried at 24. Apart from the question of numbers, there are several other uncertainties in the interpretation of the inquisitions (the accuracy of the determination of marital status is suspect, etc.). In any case, we now have the peerage materials assembled by Hollingsworth (see Table 6) and the inquisitions seem to fit in broadly with the pattern revealed, on much more solid evidence, by the peerage data.

We return below to some indirect evidence relating to marriage in the Middle Ages. That some change in marriage habits took place between the fourteenth century and the eighteenth seems scarcely in doubt. In the Middle Ages the betrothal of children and the marriage of very young adolescents were apparently widespread throughout the population (not only among the nobility). These practices had almost entirely disappeared by the eighteenth century. It does not seem possible that the populations of medieval Europe had the fully developed European marriage pattern; they must either have had a marriage pattern clearly classifiable as non-European, or else some mixture of the two types with a wider variation of age at first marriage than is found later.

The ancient world

> As soon as they are fourteen, women are called 'ladies' by men. When they see that their only resource is to be marriageable, they begin to doll up and put all their hopes in that.
>
> EPICTETUS: The Manual (2nd century)

Surprisingly, there is some statistical evidence on marriage in the Greco-Roman world. One source of information is provided by the inscriptions on

tombstones. These often state the age at death; in the case of a married person dying the number of years he or she had been married is also sometimes stated. By subtracting the duration of marriage from the age at death one can compute the age at marriage. Harkness in 1896 collected 171 inscriptions for women and 191 for men from which age at marriage could be calculated. The only more recent attempt to assemble such data seems to be that of McDonell (1913) who covered a far smaller number. With the enormous increase in the number of published inscriptions since that time, a far greater collection could now be obtained (see Russell (1958)).

TABLE II

Distribution of women's ages at marriage derived from tombstones

	Roman Inscriptions			
Age	*No. of Inscriptions*	*Per cent*	*Norway 1841–50 per cent*	*Crulai (France) 1674–1742 per cent*
10–14	67	39	—	—
15–19	60	35	8	17
20–24	26	15	33	40
25–30	7	4	30	27
30–34	8	5	14	9
Over 35	3	2	15	7
Total	171	100	100	100

Sources: Harkness (1896), Gautier and Henry (1958), p. 83 and Norway, Statistiske Centralbureau, *Oversikt over de vigtigste resultater av de statistiske tabeller vedkommende folkemaengdens bevaegelse, 1866–1885*. Norges Officielle Statistik, Tredie Raekke, No. 106, Kristiania 1890, p. 143.

Table II summarizes Harkness' data for women. The sharp distinction which separates the distributions derived from the inscriptions from the two 'European' distributions added for comparison is evident at a glance.[31] The distributions derived from tombstones is certainly biased. The distributions of ages at death derived from inscriptions clearly do not represent the distribution of deaths in Roman times. For example, the deaths of young women are very probably over-represented (see Durand (1960) and Henry (1957 and 1959)). A further bias is almost certainly introduced in the selection of the very small subgroup of all tombstones from which the age at marriage can be calculated. Probably the bias is in favour of those who married young; one reason may be that the duration of marriage is most likely to be recorded by the surviving spouse if the marriage has lasted a long time. (On the other hand married persons who die before their spouses are likely to be old relative to their spouses.) When data of this type are published in the future, a cross-tabulation of age at death by duration of marriage should be published and not only the distribution of the computed ages at marriage.

Whatever the bias, the conclusion to be drawn from Table II for our present argument cannot be in doubt. No conceivable bias in selection could produce from eighteenth- or nineteenth-century European marriage data the

[31] The distribution for Crulai is for *first* marriages only. If remarriage were included the percentages for the higher age groups would be raised considerably.

distributions yielded by the inscriptions. The population whose deaths the tombstones record had a marriage pattern of 'non-European' type.

The same conclusion emerges from an entirely different type of data, the 'censuses' of Roman Egypt. These were enumerations made for levying taxes. Declarations were required listing all the members of each household. Some two hundred of these declarations are preserved and a full study of them has recently been published by Hombert and Préaux. The declarations give information on relationship between members of each household and also data on age. Something about age at marriage of women can be deduced by subtracting the age of the oldest child present from the age of the mother. The figure so obtained will, in general, be higher than the true age at marriage and sometimes much higher (e.g. when the first child had died or left home). Nevertheless Hombert and Préaux found (pp. 160–1) that of 155 women known to be married, at least 51 had married before 20. This shows marriage at a much younger age than in the 'European' pattern.

According to the data from Roman Egypt, husbands were usually considerably older than their wives. This suggests that men may have married fairly late in life. That men married late and indeed often deliberately abstained from marriage permanently both in Greece and later in Rome, has been inferred from literary evidence (notably Polybius) and from the Roman legislation designed to stimulate marriage. It has been disputed whether these trends extended beyond the upper classes. Some fragments of statistical evidence were assembled by Landry (1936).

Non-statistical evidence

> I have no faith in anything short of actual measurement and the Rule of Three.
>
> CHARLES DARWIN: Letter to W. D. Fox (1855)

Was there, as the scanty statistical evidence suggests, a fundamental change in marriage habits over much of Europe between 1400 and 1650? If so, where did the process begin and by what steps did it spread? What social or economic changes caused the new pattern of marriage to emerge? So much is known about the period, and indeed about the Middle Ages, that there ought to be plenty of materials for answering such questions—or so it would seem to one who is not a historian. If the characteristically late 'European' age at marriage should turn out to go back before the Middle Ages, the prospects for discovering its origins are, of course, less promising. It is probably too late now to determine whether Tacitus' statement[32] about the late age at sexual maturity among the

[32] The relevant passage (*Germania*, section 20) reads as follows (in the Loeb edition): 'sera juvenum venus, eoque inexhausta pubertas. nec virgines festinantur; eadem juventa, similis proceritas: pares validaeque miscentur. . . .' It is tempting for one who has to rely on a dictionary and Latin learnt long ago to translate: 'The love life of young men begins late; and so their strength in young manhood is not drained away. Nor are the girls rushed (into marriage?). Their life in youth is the same, their stature is similar. They are mated when equal (in age?) and strong. . . .' The phrases supplied in brackets, which are crucial, are suggested by Lewis and Short's Latin Dictionary under 'festino' and 'par' (in the former case with particular reference to this passage). This is clearly the meaning accepted by those, like Westermarck, who view the passage as evidence for late marriage among the Germans. However, it is possible, and very much in accord with the general tenor of his remarks, that Tacitus did not intend to say anything about age at puberty or at marriage, but was merely praising the Germans for their modesty before marriage (in contrast with the Romans). The translator of the Loeb edition seems to take the passage in this sense.

Germans had any basis in fact or even exactly what he meant. It is hard to see how he could have had any sound information on such a topic.[33]

The proposition that arguments about statistical matters from literary evidence are risky can be illustrated from discussions of the age at marriage. Thus Russell has pointed, in support of his view that people married late in the Middle Ages, to the doctrine that a man should have a living before he marries. But such doctrines can be found in the literature of other civilizations. There is, for example, a statement in the Talmud that 'a man should first build a house, then plant a vineyard and after that marry'.[34] Yet it can hardly be doubted that the Jews of Talmudic times married young.

One difficulty with literary evidence is, of course, the vagueness of terms like 'late marriage'. In many societies with a distinctly non-European marriage pattern women marry late by Indian standards, but very early by European ones.

If they were looked for, promising lines of evidence which are not directly statistical might well turn up. An interesting possibility is suggested by the work of Backman (1948). He briefly reviewed the references, mainly in legal literature, to the age of puberty, and concluded that the average age at menarche had been constant since classical times at around 14 years, but that about 1500 a process of retardation set in throughout Europe. It is possible that changing opinion concerning the age at puberty and changing definitions of legal majority after 1500 reflected physiological changes. However, it seems at least as likely also that we have here the accompaniment in legal thought of the social changes related to later marriage. On either interpretation the type of material reviewed by Backman may well yield evidence that a change in age at marriage occurred some time around the sixteenth century.

Clearly changes in the laws relating to marriage (including the minimum legal age) are of interest in this connexion. A related matter is the controversy about the nature of marriage at the Reformation. Could the controversy have been in one aspect an attempt to adapt theology to social change? Some of the themes (the voluntary agreement of the spouses, parental consent) might clearly arise at a time of change towards later marriage. It is striking that the properly organized registration of marriages spread during the sixteenth century over almost exactly the area where the European marriage pattern is later known to have prevailed.[35]

The interpretation of statistics in the matter of marriage has sometimes been distorted by general historical preconceptions. An interesting example is provided by Inman (*Domesday and Feudal Statistics*, p. 120) who studied the 1379 poll-tax data for one small area (the 'wapentake' of Claro in Yorkshire). He found that the percentage married was much higher than in nineteenth-century England. He concluded that the data must be at fault and the unmarried must have been especially prone to escape taxation. (He had other reasons for suspecting significant omissions from the tax lists.)

Preconceptions drawn from the modern world have also influenced Homans'

[33] His statement on sexual behaviour among Jews (*Histories*, V, 5) does not strengthen one's confidence in the soundness of his information on such matters.

[34] Babylonian Talmud, Tractate Sotah 44a (quoted in A. Cohen, *Everyman's Talmud* (London, Dent 1932), p. 171).

[35] See Mols, Vol. I, pp. 76–84.

work on *English Villages in the Thirteenth Century* which seems to be by far the most thorough study of marriage in a medieval rural population. Because the rule was observed that a man could marry only after he acquired land, Homans infers that the age at marriage was high. 'If a man had to wait until his father died or gave up his holding, he would be likely to marry rather late in life' (p. 158). Under conditions of high mortality such as existed in the Middle Ages, the conclusion does not follow. Over half the children in thirteenth-century England may have lost their father before they reached their 17th birthday. If they all married on their 17th birthday and the remainder immediately after their father's death, there is no reason to think that the average age of all men at first marriage would have been above 24.[36] In fact, of course, as Homans documents in detail many were married during their father's life-time when the father turned over the land to them. Other aspects of Homans' argument for a high age at marriage are vulnerable on similar grounds; for example the analogy of modern Ireland[37] is misleading among other reasons because of its far lower death rates. When Homans wrote little was known in detail about the mortality of pre-industrial Europe, or other underdeveloped societies. The frequency with which in former days men's lives were disrupted by the death of a relative is very hard to grasp for those living in modern Western societies.[38]

Bücher's little monograph on the position of women in the Middle Ages —originally a lecture delivered in 1882—was expressly based on the belief that the problems of women, and in particular of single women, in his own day were similar to those of medieval times. All his evidence relates to a few cities where indeed there was a substantial surplus of women. These cases are atypical not only because all towns were atypical in an overwhelmingly rural population, but because Bücher's data refer only to some of the largest commercial centres of extensive regions (Nuremberg, Frankfurt, Basle). There is reason to believe that the population of such centres was heavily recruited by immigration and that the female surplus then (as in more modern times) was larger in these cities than in smaller towns. Bücher ignores migration; he believes that the female surplus he found was due to excess male mortality which he attributes mainly to wars and debauchery.

Eileen Power's essay on women in the volume on *The Legacy of the Middle Ages* (1926) draws on Bücher. It is impossible to say whether without his work she would have made her categorical statement that 'it must not be imagined that marriage was the lot of every woman and that the Middle Ages were not *as familiar as our own day* with the independent spinster'. She does, however, hint at additional evidence not derived from Bücher, and, moreover, evidence

[36] These guesses are broadly in agreement with the calculations given by Fourastié (1959) in an article contrasting a typical life-cycle under conditions of high mortality with those of present-day Europe.

[37] It is a mistake to treat modern Ireland as a stable and closed society. So far as marriage is concerned, its unique pattern of very late marriage and frequent celibacy for those who remain in Ireland was developed only in the latter part of the nineteenth century. This pattern is accompanied by a very high rate of emigration. The natural inference is that many of those who want to marry early emigrate and marry abroad (hardly a possibility in medieval England).

[38] The striking calculations of Jean Fourastié (1959) referred to above showing for example how rarely parents must have lived to see the marriage of their own children or how frequently men lost their wives should encourage others to construct models of this sort, so that eventually a firmly based body of results may be available. Facts on these matters should sink deeply into the consciousness of anyone concerned with the study of the Middle Ages.

relating to the rural population: 'A glance at any manorial "extent" will show women villeins and cotters living upon their little holdings and rendering the same services as men; some of these are widows, but many of them are obviously unmarried.' However, she does not present her material in detail; she seems to expect the reader to feel that a high proportion of spinsters is not an unlikely state of affairs.

The interpretation of the history of European marriage should be informed by an awareness of the almost universal prevalence of other marriage patterns, and, preferably, by some knowledge of how they function. For example, Professor Ashton (*English Economic History*, p. 9) has argued that marriage rates must have increased in the early eighteenth century because improved communication made it possible for people who would otherwise have been prevented from marrying to find partners. But most human societies throughout history have achieved nearly universal marriage at young ages with far worse conditions of transport between human settlements than those of seventeenth-century England. If the mechanisms for performing this feat no longer existed in the seventeenth century, when did they break down? Was the eighteenth century, with a pattern of late marriage, preceded by a different pattern of even later marriage in the seventeenth century[39]—a pattern which departs even more radically from the norm of other societies? If such a remarkable situation existed in the seventeenth century, how did it originate? The hypothesis formulated by Professor Ashton is conceivable, but it is not rendered plausible by his type of *a priori* argument.

The age-sex composition of the population

> When the baby is born, if it is a boy, let it live; if it is a girl, expose it (to die).
>
> From a letter dated 1 B.C. written by Hilarion to Alis (presumably his wife)†

Though there is an enormous volume of literature on marriage and the family, little of it has started from the statistical end. Answers to some of the simpler questions raised by a statistical approach seem not to be available.

How has it been possible, in most societies, to arrange for every woman to marry? There are several questions here; one question would be answered by a comparative study of the various mechanisms by which marriage partners were found. The vast majority of human beings have always lived in small communities, such as villages of a few hundred people between which movement was difficult and often hazardous. The number of potential marriage partners must have been small and often diminished by rules (e.g. those of caste) or conventions (e.g. of class) restricting the circle of those whom it is proper to marry. How was it possible to find a partner for every girl?

The mechanisms by which this can be achieved must operate in very

† *Selections from the Greek papyri*, edited by George Milligan (Cambridge 1927), p. 33.

[39] R. H. Tawney (*The Agrarian Problem in the Sixteenth Century*, pp. 104–6) made a suggestion which tends in the opposite direction. He thought that there may have been a trend to late marriage between 1377 and 1500, while in the sixteenth and seventeenth century there may have been a movement towards earlier marriage. There was an increase in numbers of the landless proletariat who had no incentive to postpone marriage.

different ways in different societies. For our purposes, the most relevant question is, what is done in difficult cases where no suitable match for a girl seems available? Comparative studies of the various devices by which this need is met would be of great interest. (The professional marriage brokers of Eastern European Jewish communities are an example, see Katz, (1959)). No doubt a relevant factor which distinguishes modern Western populations from the majority of societies is the conviction that marriage should be decided upon only after the future spouses have got to know each other well. This may render the finding of a marriage partner very difficult since people often have opportunities to become acquainted only with a few young persons of the opposite sex. If, by contrast, it is possible to arrange a marriage between people who have never met, the circle of potential spouses is greatly widened. It becomes feasible to undertake lengthy journeys to trace a suitable partner, as when Abraham sent his servant to travel to a distant country to find a wife for his son (see Genesis, Chapter 24).

The restrictions (e.g. of caste), which limit the number of potential spouses for a given person in the village where he lives, operate also to designate the people among whom a partner may be sought elsewhere. These restrictions, therefore, do not have the effect of keeping women unmarried; such restrictions do mean, however, that a network of kinship relationships is maintained across larger areas than would be necessary if all those living in one place could intermarry. They thus have an important effect both on the social organization and genetic structure of human populations.

A particular puzzle raised by those societies where almost 100 per cent of women marry, is the fate of girls who are seriously handicapped by physical or mental disease or deformity. Though the line between slight defects and those which seriously affect a person's chances of marriage is hard to draw, there are in modern Western societies probably one or two per cent in this condition (blind, deaf, spastic, epileptic, mentally defective, etc.). In other times and places, the scars left by malnutrition, disease and ignorant treatment must have added to their numbers. On the other hand, many of those who were born with handicaps or acquired them when young probably died before reaching marriageable age. How were partners found for the rest? The answer again, must vary widely. In polygamous societies such women can become secondary wives. Elsewhere they may constitute the bulk of those who never marry. No one seems to have discussed the problem.

We have so far discussed the methods by which spouses may be found for particular people. How can the overall account be balanced, if there are surplus women? In Europe, it has been customary to think of a 'female surplus' and the resulting spinsters as a normal condition occasionally aggravated by war. Wars have not been unknown in other societies.[40] How did they find enough men to have every woman married? A tempting answer to this question is 'polygamy'. But it is probably not an important factor in many societies which permit the practice; for it is often on too small a scale.

[40] An interesting study might, perhaps, be made of the way in which societies which take the universal marriage of women for granted deal with a grave shortage of men due to war losses. In ancient Athens, after the disastrous Sicilian expedition in 413 B.C., a law was passed permitting double marriage. Among those who availed themselves of it was Socrates who took a second wife, a destitute widow, in addition to the notorious Xanthippe. (See Alfred Zimmern, *The Greek Commonwealth*, fifth edition, Oxford, Clarendon Press 1931, p. 340.)

The ratio of the total number of men to the total number of women in the population, though frequently mentioned in this context, is not very relevant. Nor is the ratio of adult men to adult women. For example in England at the present time, there is an excess of over 1½ million women over 15 compared with the number of men over 15. Yet so far as availability for marriage is concerned, there is a shortage of women. The 'surplus women' are mainly widows over 60.

The first point to consider then is the ratio of male to female population at the prime marriageable ages. It is probable that in eighteenth-century Europe this ratio was much less favourable to women's chances of marriage than in many non-Western populations. There is, of course, always an excess of boys at birth, some 105 male births for every 100 female births. Male mortality is heavier than female mortality and in eighteenth-century Europe the excess of males dying was probably sufficient, not only to produce equality of the sexes by the marriageable ages, but to create a female surplus. In the Scandinavian countries there was a considerable female surplus. By contrast, in non-Western countries there seems not infrequently to be a shortage of women. A famous example is India. One theory (put forward, for example, by Coale and Hoover) is that women have been underenumerated at censuses to a greater degree than men.

Other commentators on the figures (e.g. Jain, 1954, p. 26) have, however, taken the view that the excess of men is genuine and can be explained by supposing that preferential treatment given to boys causes the death rate of boys to be lower than that of girls. There have been similarly divergent interpretations of the excess of men observed in several Chinese populations. However, the excess of men in the population and the excess of female mortality is found also in the data for Formosa at the beginning of the twentieth century and these data appear to have been of good quality.[41] Moreover, a good deal of data on death rates in underdeveloped countries has become available in recent decades and two world-wide comparative surveys of mortality (by Stolnitz and by the United Nations Secretariat) have shown that where mortality is high, an excess of female mortality in childhood and at young adult ages is not infrequently found.[42]

We may, therefore, accept it as probable that in many non-Western populations there has been an excess of female mortality and a shortage of women at marriageable ages. There are traces of the same tendencies in the data for Southern and Eastern Europe for the nineteenth century and beyond. The impression of a considerable surplus of women in the population and a higher male mortality seems to derive mainly from the statistics of Northern and Western Europe. In the Middle Ages and earlier a shortage of women, or at most a slight excess, was perhaps typical all over Europe. Laplace found that parents in the eighteenth century abandoned girls more often than boys to

[41] See papers by Taeuber and Taeuber (1959) and Taeuber (1961).

[42] This phenomenon is separate from the question of high maternal mortality. The effects of the latter have been widely exaggerated.

the Foundling Hospital in Paris. The preference for boys may well have been at work on a larger scale in earlier times.

The ratio of men to women at marriageable ages does not, by itself, determine the numbers of men and women who can be married in the course of their lives. For single women need not marry single men; they can marry widowers. If many marriages are dissolved by death while the surviving spouse is young, and if widowers remarry far more frequently than widows, it is possible for every woman to get married at least once in her life even in a population where the number of men falls far short of the number of women. In this respect the remarriage of widowers works like polygamy. The point is not new, but often overlooked. Two hundred years ago, Süssmilch (Vol. II, p. 281) called the tendency to remarriage 'polygamia successiva'. For him the issue was theological. The view that the excess of male mortality neatly cancelled the excess of boys born and resulted in an equality of the sexes by around age 20 had been an important doctrine of 'physicotheology'. It illustrated not only that everything in nature was harmoniously co-ordinated in accordance with a Divine plan, but also showed that the Christian principle of monogamy was in accordance with the intentions of the Creator and superior to the heathen practice of polygamy. Süssmilch discovered, however, that in the data available to him from several parts of Europe, the deaths of males under 20 exceeded those of females under 20 by a greater margin than the excess of boys among births, i.e. that by age 20 there were more women than men living. In this dilemma 'polygamia successiva' came to the rescue. Süssmilch could argue that there was nevertheless harmony in the Divine plan which included provision for monogamy, since the tendency for widowers to marry spinsters compensated for the surplus of women.

The degree of successive polygamy is variable and makes it possible to combine different sex compositions of the population with universal marriage. In eighteenth-century Europe, there were probably often between 5 and 10 per cent more women marrying for the first time than men. (See Table 12.) The degree of successive polygamy can be rapidly varied in response to changing circumstances. The history of Formosa described by Barclay provides a striking

TABLE 12

Effect of remarriage in compensating for imbalance in numbers of men and women

Country and date	*Per cent first marriages among marriages of*		*Excess of women marrying (per 100 marriages)*
	Men	*Women*	
Pomerania (Germany): 1748–54	79	84	+5
Sweden: 1750–1800	81	87	+6
France (Crulai): 1674–1742	81	91	+10
Formosa: 1906	72	64	−8
1910	75	69	−4
1920	78	75	−3
1935	89	89	0
1943	90	92	+2

Sources: Süssmilch, Vol. I, p. 183; Gille, p. 29; Gautier and Henry, p. 83; Barclay, p. 225.

example of the magnitude of this effect. At the beginning of the century the number of men aged 10–49 was about 20 per cent greater than the number of women in the same age group. This shortage of women was in part compensated for by female successive polygamy, i.e. remarriage was more frequent among women than men. As the sex ratio in the population became normalized and the proportion of remarriages was reduced owing to a decline in widowhood and divorce, the situation came to resemble European conditions more closely.

The relationship between the numbers of each sex and their chances of marriage is also affected by the difference between the ages of brides and bridegrooms at marriage. The point is most easily understood by a consideration of some hypothetical simplified examples. We first make three assumptions. (i) All brides are married at 20 to grooms aged 25. (ii) Men marry in any case, but the proportion of women who marry is determined by the availability of men. (iii) The number of births is roughly constant from year to year. Under these conditions the proportion of women married will be reduced by the fact that the available number of men is diminished by death between 20 and 25. Suppose that the system were to be changed and girls aged 20 were to be married to men aged 20 (everything else remaining the same). Under these circumstances, the proportion of girls marrying is higher, because the men who die between 20 and 25 are now available for marriage. If on the other hand men married at 30 (while women continue to marry at 20) the supply of bridegrooms would be further reduced, compared with our initial assumption, by deaths between 25 and 30.

It is thus seen that changes in the *difference* between the ages at marriage of men and of women may compensate for variation in the balance between the numbers of each sex. The effect of differences in marriage age is even greater if we suppose that assumption (iii) above (namely that births are constant from year to year) does not hold. Suppose that the population is increasing, i.e. the number of births is increasing from year to year. If women aged 20 marry men aged 25 they marry men born five years before their own date of birth. But five years earlier fewer births were occurring. A large difference between the ages at marriage of men and women in a population of high mortality with an increasing number of births tends greatly to reduce women's chances of marriage.[43]

[43] A remarkable feature of European marriage data is that there is often a relatively small excess (only 2 or 3 years) of the mean ages of men at first marriage over those of women. This is surprising because, other things being equal, a great excess reduces the chances of women at marriage. Yet it is in Europe that the percentage of women remaining single has been highest. The solution of the paradox is that among non-Europeans the great excess of the male over the female age at marriage is counterbalanced by other factors, notably a greater degree of polygamy (successive or simultaneous). In fact a high frequency of (simultaneous) polygamy is possible usually only in a society where young men remain unmarried for a comparatively long period and then marry wives much younger than themselves. In such a system where almost all the women over 16, but only somewhat older men, are married, a high percentage of married men can have two or more wives. (It is not necessary to suppose that men have been decimated by war, etc.) This fairly simple point has usually been overlooked in discussions of the relation between polygamy and the sex ratio. It was apparently first explained by Sonnabend in his demographic study of the Bantu (on pp. 171–3). He claimed that the Zulu 'have a clearer idea (although a purely intuitive one) of the relationship between the ages at marriage of the two sexes and the frequency of polygamy than certain European authors'. Indeed, by varying the relationship between the ages at marriage of the sexes, the rates of first marriage and remarriage etc. one could construct imaginary marriage patterns which are very strange to Western ideas, but in which most or all women are married and hence adequate repro-

From the beginning of the eighteenth century onwards a number of forces probably combined over much of north-western Europe to reduce the availability of men for marriage when compared with the number of women. The decline in death rates reduced the number of widowers and hence the scope for successive polygamy. For example, in Sweden by 1901-10, only 10 per cent of all marriages were contracted by widowers, as against 19 per cent in 1750-1800. This type of decline from about 20 to about 10 per cent is probably typical of much of Europe. The decline in death rates indirectly reduced women's chances of marriage by increasing the rate of population growth. The effect of this was explained in the previous paragraph. Thirdly, emigration in the nineteenth century was a predominantly male affair. Finally in many countries there was a decline in the marriage rates of men, as well as those of women, in the latter half of the nineteenth century, a decline which has sometimes been regarded as an initial response to the feeling that population growth needed to be restrained, as part of the same set of changes which brought about the spread of birth control. (France and Ireland have exceptional marriage histories and some of this paragraph does not apply to them.)

As a result of these developments, the proportion of women never marrying rose to levels probably unprecedented in much of north-western Europe by the end of the nineteenth century. The effect was temporarily reinforced by the First World War. However, since 1920 the situation has been completely transformed and the 'surplus of marriageable women' which had come to be regarded as a permanent condition has given place to a shortage of women.

Conclusion

The main theme of this paper is not new. It is one of the main topics of Malthus' *Essay* and indeed implicit in its very structure (especially in the revised version of the second edition). Malthus devoted Book I of his *Essay* to 'the checks to population in the less civilized parts of the world and in past times', and Book II to 'the different states of modern Europe'. In Europe he traces again and again the workings of the 'preventive checks of moral restraint' which implies 'principally delay of the marriage union' and he contrasts the condition of Europe with that of the peoples described in Book I.

Was Malthus right in thinking that late marriage in Europe resulted in lower birth rates, and hence lower death rates, than obtained among non-European populations? Whatever the nature of the causal connexion, his notions about the levels of birth and death rates gain some support from modern research. European birth rates, so far as we can tell, were rarely over 38 before the spread of birth control; in underdeveloped countries, they are almost always over 40 and often over 45. So far as mortality is concerned, the contrast is less clear cut, but there seems no record in European experience

duction would be possible. For example, one might work out systems in which old men marry young women and young men old women. Something of this sort seems to have been practised among the Tiwi of North Australia, according to a fascinating recent study by Hart and Pilling. Among the Tiwi, these authors maintain, every woman is married (or betrothed) from birth till death. She is betrothed at birth to a man old enough to purchase her; he will thus be at least 40 years old by the time she is old enough to cohabit with him. But young men can marry old women; one possibility, they say, is for A to obtain B's mother to be his wife by giving his (i.e. A's) mother to be B's wife.

since the eighteenth century of conditions such as those in India or Formosa in the initial decades of the twentieth century.

The way in which a non-European marriage pattern goes with non-European birth and death rates may be illustrated by a recent study by Csoscán of the parish registers for three Hungarian villages in the eighteenth century. This population is not in 'Europe' as defined for this paper. The distribution of marriages by age of bride in 1770-1800 was quite definitely 'non-European', as the following figures show:

	Per cent distribution[44] *of*	
Age group	*Bridegrooms*	*Brides*
Under 20	11	52
20-24	48	25
25-29	14	9
30-39	15	9
40 and over	12	5
Total	100	100

In the same period (1770-1800) the crude birth rate in these Hungarian villages was 52 per 1,000 and the death rate was 43 per 1,000. This may be compared, for example, with the following figures for the French village of Crulai given in the study by Gautier and Henry:

Period	*Birth rate*	*Death rate*
1675-1749	36	31
1750-89	31	28

The marriage data for Crulai which have been mentioned several times are, of course, quite clearly 'European'. The eighteenth-century Hungarian villages are thus non-European in all three respects (age at marriage, birth rate, death rate) in contrast with the European levels of Crulai's vital rates, as well as its marriage pattern.

There was a widespread conviction among eighteenth-century authors that European conditions were fundamentally different not only in marriage, birth and death rates, but above all in standards of living, from those obtaining elsewhere in the world. Europeans, a large proportion of them, not just the rich, had better housing, better clothing, a greater variety of food, more furniture and utensils, than people elsewhere. This uniqueness of Europe, so evident to contemporaries, has been largely ignored in recent discussions of economic development; all that is pre-industrial, including eighteenth-century Europe, is often lumped together in generalizations about 'agricultural' or 'peasant' or 'underdeveloped' societies.

Presumably the uniqueness of Europe in standards of living and in death rates did not extend back beyond the seventeenth century (except in limited regions). But if European death rates were as high as in other parts of the world, could birth rates have been lower? And if the European birth rate before the seventeenth century was as high as elsewhere, does this not imply that European women must have married young as in other populations of high fertility?

[44] These percentages are based on 440 cases for men and 442 for women. The number of marriages in which the age was not recorded was, surprisingly for this period, very small. The figures are from page 106 of Csoscán's paper. Remarriages are included and they form a high proportion of the total.

These large and vague questions need to be broken up and investigated by careful calculations on the interrelationships between marriage, birth and death rates. Even the relation between marriage patterns and crude birth rates is not nearly as obvious as is often supposed and it is not independent of mortality.

An inquiry into the origins of the European marriage pattern will inevitably take one into fundamental issues of economic and social history. This is so not only because of the connexions just discussed between marriages and births and deaths. There are other links. A marriage almost by definition requires the establishment of an economic basis for the life of the couple and their children. The arrangements current in a society for achieving this must fit in with the marriage pattern: they will shape it and will be in turn influenced by it. Unmarried men and women must be attached to households in some way, or form independent households. The structure and size of households and the rate of formation of new households and disappearance of old ones, therefore, depend on the marriage pattern. In societies where the household is the principal unit of economic production as well as consumption, all this means that the marriage pattern is tied in very intimately with the performance of the economy as a whole. The emotional content of marriage, the relation between the couple and other relatives, the methods of choosing or allocating marriage partners—all this and many other things cannot be the same in a society where a bride is usually a girl of 16 and one in which she is typically a woman of 24. These things are perhaps obvious, but they have not been much explored, at least not in histories which trace the emergence of modern Europe. A full explanation of the background of European marriage patterns would probably lead into such topics as the rise of capitalism and the protestant ethic.

The economic system influences the marriage pattern through the arrangements by which the economic basis for the support of a couple and their children is established. It is equally true that the marriage pattern influences the economic system. The traditional argument, that late marriage retarded population growth, has already been mentioned but other possible effects need to be explored. In the European pattern a person would usually have some years of adult life before marriage; for women especially this period would be much larger than outside Europe. It is a period of maximum productive capacity without responsibility for children; a period during which saving would be easy. These savings (e.g. by means of the accumulation of household goods in preparation of marriage) might add substantially to the demand for goods other than the food etc. required for immediate survival. In this respect delayed marriage may be similar to income inequality in stimulating the diversion of resources to ends other than those of minimum subsistence; but when later marriage is the norm the total volume of demand generated might be much larger than that which can be caused by a small class of wealthy families in a population at subsistence level.[45] Could this effect, which was uniquely European, help to explain how the ground-work was laid for the uniquely European 'take-off' into modern economic growth?

[45] The mere presence in the labour force of a large number of adult women not involved in child-bearing or -rearing must have been a considerable advantage to the eighteenth-century European economies.

If late marriage brings about wealth, wealth may equally cause late marriage. It was suggested in the eighteenth century (for example by Cantillon) that people married late because they insisted on a certain standard of living (a standard varying with the social position of the individual) as a prerequisite of marriage. More simply, men marry late because they cannot 'afford' to marry young; they have to wait until they have a livelihood, a farmer till he acquires land, an apprentice till he finishes his apprenticeship and so on.

It is tempting to see in this feature a key to the uniqueness of the European marriage pattern. In Europe it has been necessary for a man to defer marriage until he could establish an independent livelihood adequate to support a family; in other societies the young couple could be incorporated in a larger economic unit, such as a joint family.[46] This, presumably, is more easily achieved and does not require such a long postponement of marriage. This line of argument seems especially convincing if the larger economic unit is such that extra labour is often felt to be an economic asset. A system of large estates with large households as in Eastern Europe might thus be conducive to a non-European marriage pattern, while small holdings occupied by a single family and passed on to a single heir would result in a European pattern. If this reasoning has substance, the uniqueness of the European marriage pattern must be ascribed to the European 'stem-family'.[47] (The term 'stem-family' was coined by Le Play in describing the type of family organization in which land descends to a single heir, the other sons going elsewhere.) This explanation calls attention to a force which may have helped to bring about the European marriage pattern, if it did not exist in the Middle Ages. If men had to wait till land became available, presumably a delay in the death of the holders of land resulting from declining death rates would tend to raise the age at marriage. Whether there was, in fact, a decline in mortality over the relevant period is a dubious point (the decline in question must have occurred before the eighteenth century); but this is certainly a hypothesis that merits study.

The connexion between the death of the holder of land and its availability for the founding of a new family is, however, rather an indirect one. Under the mortality conditions of the Middle Ages fathers often died while their children were very young; interim arrangements had to be made till the son was old enough to take over. Even if the father survived to old age, it does not

[46] The young Duc de la Rochefoucauld whose remarks on his visit to England were quoted earlier (p. 115), makes a similar point: 'Perhaps another reason for this (i.e. late marriage in England) is because it is usual to set up house immediately after marriage. The young couple never stay with their parents and they must be sensible enough to avoid extravagance both in their conduct and in their expenditure.'

[47] The extent to which generalizations can justifiably be made about the family system in parts of Europe at particular times (let alone about the whole of Europe or all non-European societies) is totally beyond my competence. There have been large estates and joint families in some regions of Western Europe in the Middle Ages and beyond. Presumably it would be possible to have a system in which each couple is in principle an independent economic unit, but in which early marriage is made possible by arrangements to provide for the couple until they achieve complete independence. The study by Katz (1959) mentions such arrangements among Jews in Eastern Europe. Arrangements of a related kind in medieval England which are described by Homans are referred to below. Joint families can perhaps be regarded as fulfilling the function of such transitional arrangements. In countries where in theory joint families prevail the average size of household is not large. Households consisting of several nuclear families may not remain long in this condition, but this arrangement makes it possible for young couples to be part of a larger unit at the beginning of marriage for some years.

follow that a young family could not be set up on the holding until he died. Homans in his book on thirteenth-century England describes many instances where a father made over the land to his son while he lived, thus permitting the latter to get married. He also mentions instances where a father, while he lived, turned over his holding to be shared between two sons, where a man transferred his holding to someone other than his son, etc. To understand the effect on the frequency of marriage and age of marriage of a rule that a man must acquire land before marrying we should have to know the frequency of the various arrangements by which land was passed on. The rate at which land became available for the founding of new families may have been controlled not so much by death as by social arrangements. It is not at all clear *a priori* how a rule that a man must have a livelihood before marrying would operate to produce just such a postponement as is in fact observed. Even if we understood how the age at marriage of men was determined at a given period it would still need to be explained how women's age at marriage was effected. The uniqueness of the European pattern lies primarily in the high age at marriage of women (often with a relatively small difference between the age of husband and wife), rather than in a high age at marriage for men.

There is no space for further speculation on the causes or consequences of the European marriage pattern. The primary concern of this account has been the mere existence of the pattern. This aspect should be kept distinct from the search for explanations. It has been shown (1) that the distinctively European pattern can be traced back with fair confidence as far as the seventeenth century in the general population; (2) that its origins lie somewhere about the sixteenth century in several of the special upper class groups available for study and in none of these groups was the pattern European before the sixteenth century; (3) the little fragmentary evidence which exists for the Middle Ages suggests a non-European pattern, as do scraps of information for the ancient world.

Some at least of the data presented have probably been mis-interpreted. In dealing with sources of a type of which one has no experience coming from remote periods of whose historical background one is ignorant, one is very likely to make mistakes. In an effort to survey so great a variety of materials, some of them could only be looked at superficially. Even if individual pieces of information have been soundly interpreted, there remains the problem how far generalizations can properly be based on isolated demographic facts. This is a basic problem of much of historical demography. We wish to draw conclusions about the demography of large groups. The terms in which questions are posed (like the distinction between European and non-European marriage patterns) are based on modern statistics for whole countries; but the historical data often relate to small groups such as one village. To what extent are conclusions from such data to larger units justified? How far are statistics of particular groups likely to deviate from those of larger populations of which they form a part (aside from sample fluctuations)? Are data likely to be systematically misleading because they do not relate to a closed population? (This last defect is discussed once or twice in the present paper, particularly with reference to cities.)

In spite of these and other difficulties, there seem to be good prospects of

obtaining substantial further information on the origins and spread of the European marriage pattern. The distinction between European and non-European patterns is substantial so that no very refined measuring instrument is required for its detection. There is probably a good deal of material for the seventeenth and even the sixteenth century. The parish registers offer a large mine of information waiting to be exploited. If it were indeed to prove the case that in the Middle Ages the marriage pattern of Europe was entirely 'non-European', traces of the transition should be visible in some of the early parish register materials. Even for the Middle Ages there seems hope that various types of records (for example manorial extents[48]) if carefully handled may yield useful information. If the recent rate of output of studies in historical statistics is maintained, and if those who engage in such work keep their eyes open for information on marriage, the mystery of the origins of European marriage patterns may be cleared up.

APPENDIX

The evidence from data on marital status in the eighteenth century

In the Scandinavian countries, the regular modern series of censuses began in the eighteenth century. The percentages single are easily accessible (see Gille (1949) and Hajnal (1953)) and have been described in the text. They clearly show a 'European' pattern as far as age at marriage is concerned.

For other parts of Europe the results of a number of isolated enumerations giving some information on the composition of the population by marital status have been preserved from the eighteenth century. We do not, in most cases, have the full cross-classification of age and marital status which was utilized in the preparation of Tables 1-4. Usually we have only the distribution by marital status of the whole adult population, without further subdivisions by age. An additional deficiency in some cases is the inclusion of widowed persons with the single population; this means that the effects of widowhood and remarriage are to some extent confounded with the frequency of first marriage. We first discuss data of this kind.

In Denmark some enumerations were undertaken in the seventeenth century for tax purposes. Mackeprang found the original lists from 1645 for the island of Moen (except for one parish) and published an analysis of them in 1907. In a total population of 4,014 in 5 rural parishes 39 per cent of men and 41 per cent of women over 15 were unmarried (i.e. single or widowed). These percentages seem intermediate between 'European' and 'non-European' levels. Mackeprang compared his figures with the data collected for the same area at the censuses of 1769 and 1901. The percentages for the population over 15 (both sexes combined) were as follows in the 5 rural parishes.

	Married	*Unmarried*
1645	60	40
1769	65	35
1901	55	45

The figure for 1769 seems 'non-European', in so far as one can tell without separation of the single from the widowed. This figure may be misleading. The census of 1769 was very defective; the clergy who conducted the enumeration were required only to draw

[48] The recent study by Hallam (*Economic History Review*, Vol. X), which came to my attention after this paper was written, suggests that promising material may be awaiting analysis.

up summary tables, not lists naming each individual. The total distribution of the Danish population by marital status according to the 1769 census does not seem to be available. In 1781 the percentage married among those 15 and over was 53 for the whole of Denmark; in 1901 it was the same. Did rural Moen in 1769 differ very much more considerably in respect of the percentage married from the national average than in 1901?

In the Austrian census of 1754, the single and widowed were also grouped together. Some cross-classification by age is, however, available. This census covered a population of over 6½ millions and thus seems before the nineteenth century by far the largest enumeration for which marital status data are preserved. The returns of the census were long believed lost, but were rediscovered by Peller (1920). If his figures are trustworthy, there were no married persons under 20 in most provinces. For the age group 20–39 the proportion of non-married persons (i.e. single and widowed taken together) strongly suggests the European pattern (represented here by Great Britain):

Per cent single or widowed in age group 20–39

	Men	*Women*
Austria 1754	41	38
Great Britain 1851	48	45
Bulgaria 1900	28	11

A detailed study of Peller's data, comparing them with later materials for the same areas, could be useful. Is it credible that in most of Austria not one woman under 20 was married? Or perhaps the ascertainment of age was not completely independent of marital status? In the present context the mere fact that it was possible for contemporaries to compile data showing no one under 20 as married is highly significant.

The enumerations carried out in various parts of the Austrian Empire towards the end of the eighteenth century might yield valuable information on marital status, e.g. the Hungarian enumerations of 1784 (see the volume edited by Kovasics). Very interesting analyses relating to a part of Belgium (now known as East Flanders) are contained in Faipoult's *Mémoire Statistique* of 1804–5, a modern edition of which has recently been published by Paul Deprez.[49] Faipoult was a French administrator, but the statistical materials for 1789 which he quotes were presumably collected under the Austrian administration. He was specifically interested in the age at marriage. If his figures are to be believed, there were in 1789 only 7,132 married persons under 30. This number is only 8 per cent of the population aged 20–29. He concludes: 'Donc on se marie rarement, dans ce pays, audessous de 30 ans' (p. 25). His statistical work gives a general impression of competence, but the figure quoted seems suspicious not only on general grounds, but because there seems to be a discrepancy between the marital status data from which it is derived and those for 1801 which he gives elsewhere (pp. 37–46).

We now turn to data where the single have been separately classified. In most cases the only division by age is a distinction between children and adults (say those aged 15 or over). If over 30 per cent of women 15 or over are single one may be certain that the population had a marriage pattern of the European type. This is a very cautious criterion; in Eastern Europe and in non-European countries well under 20 per cent of women aged 15 or over are single.

Unfortunately, many of the enumerations which supply marital status data for the eighteenth century and earlier relate to cities. The composition by marital status of urban populations is often much influenced by migration; European cities in earlier times, as now, often contained many unmarried people, not because city dwellers refrained from marriage, but because unmarried people migrated to the cities.

The evidence from the enumeration of urban populations is thus difficult to interpret. Nevertheless the urban material should be considered. A large volume of data has been

[49] See below, Part III, p. 608.

assembled in the survey by Mols. The eighteenth-century data on the whole suggest a pattern of late marriage and substantial numbers remaining unmarried through life.

One set of data published since Mols wrote should be added both because it is a detailed cross-classification by age and marital status and because it takes us back as far as 1700. Aleati gives the following figures from an enumeration of three parishes of the city of Pavia in Italy in 1700. The total population of these parishes was 2,168, representing some 13 per cent of the total population of the city.

	Men			*Women*		
Age group	20–24	25–29	40–59	20–24	25–29	40–59
Per cent single	78	52	15	41	27	11
Total population in age group	81	106	205	111	119	202

The distribution makes an unmistakably 'European' impression. Over 10 per cent of each sex remain single at the end of the marriageable period.

The only other detailed tabulation by age and marital status for a city at so early a date is that derived from an enumeration of Lichfield in 1695 by Gregory King. The figures have been published from King's manuscripts by Glass (1946 and 1950). They cover 2,861 persons. The percentages single among those over 40 are very low, but high under 40. (Did elderly spinsters claim to be under 40?) The fact that there is only one married woman under 20 would be sufficient by itself to show that these figures could not possibly have been the result of an enumeration in any non-European city.

Gregory King also made calculations giving for the whole of England in 1695 the numbers of bachelors and spinsters as also of husbands, wives, children, servants and sojourners. His London estimates, which he states separately, are fairly close to the Lichfield data and were presumably derived from them.[50] We do not know how much statistical basis he had for his estimates relating to the 'villages and hamlets' which contained the bulk of the population. King's work embodying these calculations was not published till 1802,[51] but the figures were given in an essay which Charles Davenant published in 1699. The estimates of marital status appeared plausible to contemporaries competent to judge, for they were applied in the eighteenth century to their own countries by continental writers on statistics. Unfortunately it is not entirely clear how King's estimates on sex, age and marital status fit together and they may not be altogether consistent. The proportion of single persons in the population at ages under 25 seems comfortably within the European range, but the proportion single among older people seems rather on the low side.

The earliest enumeration of a complete territory, urban and rural, which provides marital status data is the census of Iceland taken in 1703. The original records were preserved in their entirety in the Danish National Archives and rediscovered in 1914. Detailed tabulations were published by the Icelandic Statistical Office in 1960.[52] The proportions recorded as married are staggeringly low even for a European population and (if unmarried really means celibate) seem scarcely compatible with the permanent maintenance of the population in the face of the death rates of that time. For example, only 34 per cent of the men and 39 per cent of the women aged 30–34 are recorded as married. These data call for further investigation. They are quite unlike any data recorded at other times in Iceland or indeed anywhere else, except by obvious misclassification of the married. The age structure of the Icelandic census of 1703 suggests a rapidly declining population with a low birth rate.

[50] See Glass (1950) for a discussion of the way in which King used his Lichfield materials on age distribution. See below, Part II, p. 183 ff.

[51] The marital status data appear on pages 415–6 of the 1802 edition of Chalmers' *Estimate of the comparative strength of Great Britain*.

[52] For earlier and more easily accessible figures from the 1703 census see Gille (1949).

The Icelandic Statistical Office (according to the English summary of their Icelandic text) surmise that the number of married people is somewhat understated, because the marital status may not have been given for married people who had separated and passed into the classes of servants and paupers. Presumably the economic distress which was the reason why the census was ordered may have caused a large number of temporary separations. The data collected were apparently not really intended to provide classification by marital status in the modern sense; the aim was perhaps rather to get economic information, i.e. about the nature of the dependence on the head of the household. The tabulations published by the Iceland Statistical Office throw some light on the matter. Over 97 per cent of the women classed as married are the wives of heads of households. This certainly suggests that when a married woman was not the head's wife, her relationship to him (e.g. as a servant) would be recorded and not the fact that she was married. The vast majority of servants and paupers are classified as single. The very small numbers of widows among the older female servants and paupers seem particularly strange. Was the failure (from our modern point of view) to record marital status confined to servants and paupers and in these categories to persons who lived apart from their spouses? Among relatives of the head marital status might be implied by such descriptions as 'daughter-in-law'. But only two sons-in-law and nine daughters-in-law were reported. There were some 2,500 households with a male head over 50; did only 9 of them have a married son living with them? In view of the circumstances it seems likely that this census was distorted by substantial errors and vagueness of definition (especially when the results are tabulated in modern form). However, since the original records are preserved, there is a unique opportunity to discover something of the processes of the enumeration (and also to study in quite unusual depth the social conditions of a past age).

Apparently the only rural population (apart from Iceland) for which a full cross tabulation of marital status and age (in 5 year groups) is available in the eighteenth century is the Dutch village of Warder. The astronomer and statistician Struyck reports[53] that at his request Pieter Bakker, schoolmaster and precentor of the village, very carefully enumerated the whole population between 20 March and 17 April 1742. A condensed version of the data is reproduced in Table 13.

TABLE 13

Population of Warder (Netherlands), 1742, by age and marital status

Age	*Men*			*Women*			*Servants from elsewhere*
	Single	*Married*	*Widowers*	*Single*	*Married*	*Widows*	
Under 20	69	0	0	90	0	0	6
20–24	9	4	0	7	7	0	0
25–29	3	6	0	2	12	1	0
30–39	1	23	0	0	19	2	0
40–59	1	29	6	1	25	8	1
60 and over	0	4	8	0	3	7	0
Total	83	66	14	100	66	18	7

The almost entire absence of single people over 30 is non-European. The proportions single between 20 and 30 are low for the European pattern, but look high enough to be quite outside any well authenticated non-European experience. However, the numbers are far too small for any real conclusion.

[53] *Nader Ontdekkingen*, p. 13.

Struyck organized the enumeration of many other communities, but apparently not in the same detail. He gives for 45 villages and towns comprising a total population of 29,562 persons a classification by marital status of those over 10.[54] Here, as in the case of Warder, 'domestics' are treated as a separate category—a practice not uncommon in data for the eighteenth century and earlier.

In Struyck's figures for Dutch villages and towns the domestics form about 7 per cent of those over 10 for each sex. Presumably most of them were under 20 and single, as in Warder. Most contemporary and modern authors agree that servants were almost all unmarried. Including servants with the single population we obtain the following percentages, which are definitely 'European'. As will be seen, the Dutch figures show slightly fewer persons single than in Sweden in 1750.

	Men		*Women*	
	Dutch Villages 1742	*Sweden 1750*	*Dutch Villages 1742*	*Sweden 1750*
Single	40·5	44·8	39·2	42·3
Married	50·8	51·8	48·7	44·3
Widowed	8·7	3·3	12·1	13·4
Total	100·0	99·9	100·0	100·0

The assumption that the servants were almost all single is perhaps not entirely indubitable. Moheau (1778) in analysing French data omitted servants altogether in computing the distribution of the population by marital status. He did this because he thought that the distribution of domestics by marital status is 'presumably of the same order as that of the rest of the population'.[55] In the French materials there is several times as high a population of servants as in the Dutch data and one may suppose that an appreciable number were married, though Moheau's procedure, which implies that no higher fraction of servants was unmarried than in the general population, seems to go far beyond any reasonable assumption. Presumably there were differences between countries and regions in the number and type of servants employed and the manner of their treatment.[56] If we treat Struyck's figures in the fashion of Moheau and exclude the servants, we can compute the percentage single in the remaining population. This gives 36·3 for men and 34·4 for women, figures which seem intermediate between European and non-European levels (they relate to the population over 10 years of age). These results are, however, undoubtedly further from the truth than those given by the earlier calculation.

Data somewhat similar to Struyck's are reported by Messance (1766) from enumerations of small towns and villages in the 'généralités' of Auvergne, Lyons and Rouen in France. The enumerations (people were 'comptés tête par tête') took place in 1756 (Auvergne), 1759 (Lyons) and 1762–3 (Rouen). The populations enumerated amounted to some 19,000, 20,000 and 61,000 respectively, mainly in small parishes. Messance himself believed the proportions found in the enumerations to be representative of the total populations of their respective regions. He gives for persons aged 15 and over of each sex the numbers of single, married and widowed (lumped together) and domestics.

The percentages single calculated on the two assumptions mentioned work out as follows:

[54] *Nader Ontdekkingen*, p. 87; the figures are also given by Süssmilch (Vol. II, p. 270).

[55] See p. 55 of the reprint of Moheau's *Recherches*, edited by Gonnard. It is convenient to refer to Moheau as the author of the work published in his name.

[56] See Chambers, *The Vale of Trent*, p. 51. See below, Part II, p. 327 f. Mackeprang in his study of the island of Moen in 1645 gives an interesting analysis of the distribution of servants by age and social origin. The servants were all young. He shows that a high proportion of the youth of Moen must have spent some time in service before marriage.

		Treating domestics as single	*Excluding domestics*
Auvergne	Men	41	32
	Women	38	31
Lyons	Men	39	30
	Women	39	28
Rouen	Men	40	32
	Women	39	33

These percentages are high and clearly European. For Sweden in 1750 the corresponding figures are 36 for men and 35 for women. Additional data similar to those given by Messance, but in less detail, are quoted by Moheau (1778), who also reproduces Messance's figures, without acknowledgement.[57]

Finally mention should be made of the estimates for Vaud in Switzerland, published by Muret in 1766 and quoted in Malthus's *Essay* (in the second and later editions). Among the 76,000 adults in Vaud, there are supposed to be 38,000 unmarried persons of whom probably 9,000 were widows or widowers. This leaves a comfortably European margin for the single. Malthus also quotes some similar figures for Berne. I have not consulted the originals from which one could presumably discover on what enumerations these estimates are based.

This examination of the eighteenth-century materials on the composition of the population by marital status has been superficial, but it is quite clear that, so far as these data go, there is no real trace of anything but a European pattern.

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