

THE EFFECTIVE FAMILY

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In the Enquiries and Problems section of the first issue, Dr. Schofield mentioned some of the rates that could usefully be calculated from 'raw' parish register totals. Amongst those he mentioned was a fertility rate obtained by dividing marriages into baptisms. As Dr. Schofield pointed out, such rates can often be more significant than the traditional birth and death rates based on estimates of the total population. It is possible to make a refinement to this fertility rate that arguably increases its significance. This involves calculating what I have called the 'Effective Family', that is the number of children per family who themselves married. The effective family can be discovered by multiplying the number of children per marriage at any particular date by the proportion of those children who subsequently married. For example, if each family in 1600 produced four children, and half of these subsequently married, the effective family is 2. In this case the population would be exactly reproducing itself. Such a calculation is, of course, a crude one and ignores a number of important factors such as movement in and out of the parish, and infertile marriages. Nevertheless, I have found in practice that to calculate the Effective Family does give interesting and significant results.

My Tables and Graphs suggest that up till the mid eighteenth century the Effective Family remains small and relatively stable in size. Nevertheless, there are periods when the size of total families increases, but these are soon counteracted by a reduction in the proportion of children marrying. Without a more detailed analysis of the registers, it is impossible to say whether this reduction was the result of higher child mortality or rather of an increase in the number of bachelors and spinsters. In either case the effect was the same. A kind of Malthusian law operated by which the fertility rate of any given community remained essentially static over long periods of time, changes in the size of the family being compensated by variations in the marriage rate. Only in the mid eighteenth

century - and possibly in the late sixteenth century - do both the size of family and proportion marrying rise or fall together.

To find the size of the family for, say, 1700 (see Column 5 in the Table) it is only necessary to divide the total number of baptisms for 1691-1710 by the total number of marriages for 1686-1705, on the assumption that the mid-point of a family came about five years after the marriage. The proportion of children marrying (Column 8) is similarly discovered by dividing the total of married people (i.e. double the number of marriages), 1716-1735, by the total baptisms for 1691-1710. Here the assumption is that the mean age of marriage was 25. The Effective Family is now obtained by multiplying the original family size by the proportion of children marrying (1). The use of twenty-year totals is recommended as it has the effect of 'smoothing' the figures and minimising the effect of chance fluctuations that occur in small parishes. For large parishes, ten-year totals should prove adequate.

It must be stressed again that this is a crude calculation, and the resulting figures must not be taken too literally. An Effective Family of less than 2, for instance, probably does not mean that the population was actually decreasing, but that many of those baptised in the parish left it to marry elsewhere. Nevertheless, the calculation of family size, proportion marrying and Effective Family at twenty-year intervals does reveal significant trends: and although it requires more time to work out than do Dr. Schofield's crude fertility rates, it is probably worth the extra effort involved. Below, in Table and Graph form are the results of such calculations made for three Sussex Parishes:

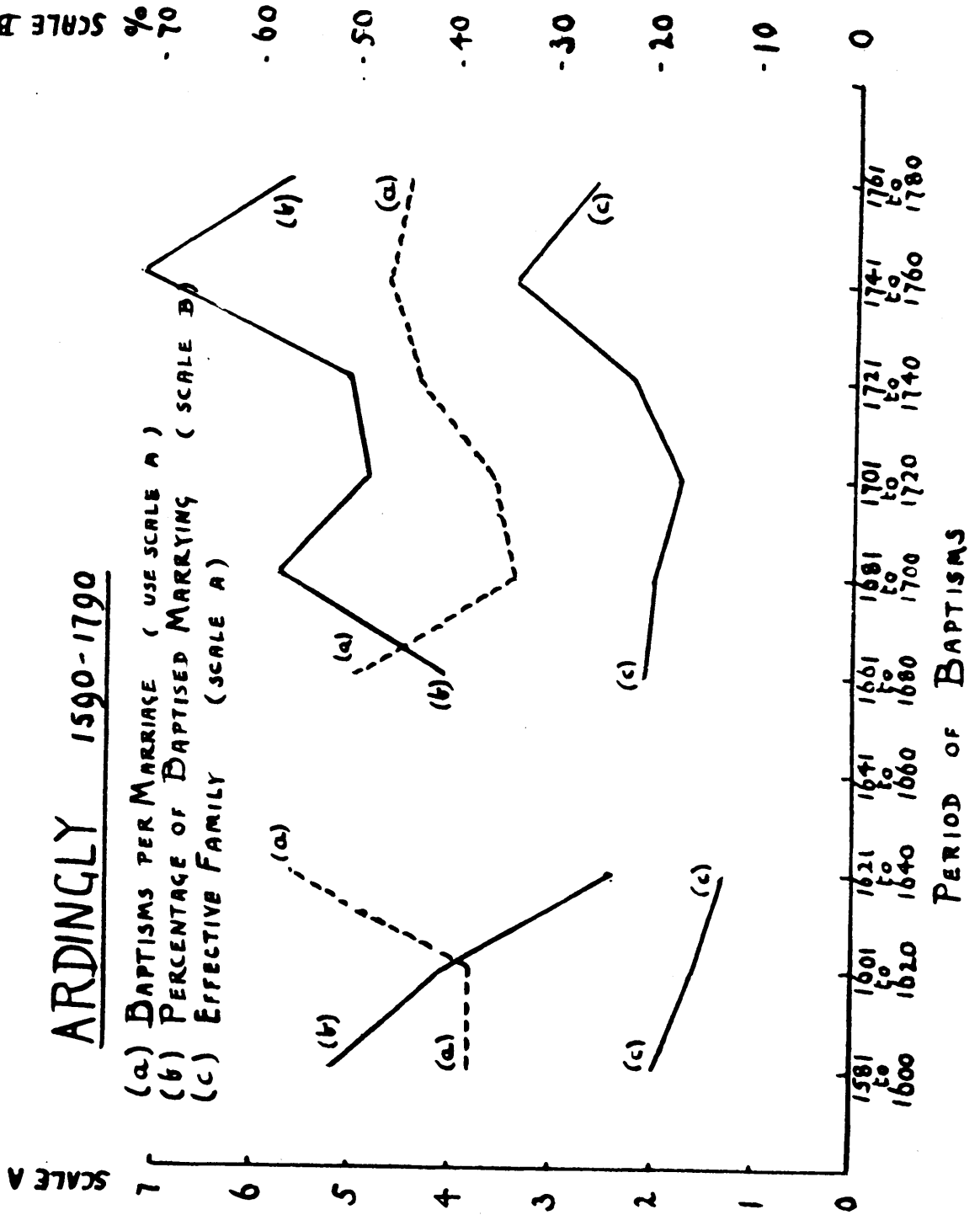
1. Ardingley, a small parish between the Weald and the South Downs. The figures for 1650 are conjectural because of faults in the register.
2. East Grinstead, a market town of between 1500 and 2000 people during the period studied.
3. Worth, a large but thinly populated parish consisting of a small village and hamlets scattered in the forest. The figures for 1690 are conjectural because of faults in the register.

NOTE. (1) If the Effective Family only is required, it can, of course, be obtained more simply by dividing double the number of marriages, 1716-1735, by the number of marriages 1686-1705, but this method does not produce the original family size and the proportion of children marrying.

SIZE OF EFFECTIVE FAMILY IN THREE SUSSEX PARISHES

(1) Period of Baptisms	(2) Total Baptisms	SIZE OF FAMILY		(5) Av. Bapt. per marriage (2) ÷ (4)	PROPORTION MARRYING		(9) Av. No. of children per marriage who marry (5) x (8) ÷ 100	
		(3) Period of Marriages	(4) Total Marriages		(6) Period of Marriages	(7) Total Marriages		(8) % marrying 2 x (7) x 100
<u>Parish of Ardingley</u>								
1581-1600	186	1576-1595	49	3.8	1606-1625	48	52	2.0
1601-1620	172	1596-1615	45	3.8	1626-1645	35	41	1.6
1621-1640	243	1616-1635	43	5.6	1646-1665	24	24	1.3
1641-1660	?	1636-1655	24	?	1666-1685	55	?	?
1661-1680	174	1656-1675	35	5.0	1686-1705	36	41	2.1
1681-1700	173	1676-1695	51	3.4	1706-1725	50	58	2.0
1701-1720	177	1696-1715	49	3.6	1726-1745	43	49	1.8
1721-1740	209	1716-1735	47	4.4	1746-1765	53	51	2.2
1741-1760	184	1736-1755	39	4.7	1766-1785	66	72	3.4
1761-1780	272	1756-1775	60	4.5	1786-1805	78	57	2.6
1781-1800	389	1776-1795	77	5.0	1806-1825	?	?	?
<u>Parish of East Grinstead</u>								
1581-1600	1019	1576-1595	189	5.4	1606-1625	238	47	2.5
1601-1620	1051	1596-1615	231	4.5	1626-1645	181	33	1.5
1621-1640	1039	1616-1635	230	4.3	1646-1665	237	46	2.0
1641-1660	1059	1636-1655	188	5.6	1666-1685	151	29	1.6
1661-1680	926	1656-1675	223	4.2	1686-1705	185	40	1.6
1681-1700	892	1676-1695	150	6.0	1706-1725	165	38	2.3
1701-1720	768	1696-1715	160	4.8	1726-1745	163	42	2.0
1721-1740	988	1716-1735	186	5.3	1746-1765	251	51	2.7
1741-1760	1048	1736-1755	176	6.0	1766-1785	298	57	3.4
1761-1780	1468	1756-1775	270	5.5	1786-1805	296	40	2.2
1781-1800	1829	1776-1795	306	6.0	1806-1825	301	33	2.0
<u>Parish of Worth</u>								
1585-1600	560	1576-1595	141	4.0	1606-1625	115	41	1.6
1601-1620	497	1596-1615	101	4.9	1626-1645	147	59	2.9
1621-1640	515	1616-1635	126	4.1	1646-1665	77	30	1.2
1641-1660	477	1636-1655	119	4.0	1666-1685	72	30	1.2
1661-1680	442	1656-1675	100	4.4	1686-1705	55	25	1.1
1681-1700	462	1676-1695	122(est)	3.8	1706-1725	94	41	1.5(est)
1701-1720	477	1696-1715	79	6.0	1726-1745	79	33	2.0
1721-1740	443	1716-1735	94	4.7	1746-1765	111	50	2.3
1741-1760	512	1736-1755	76	6.7	1766-1785	141	55	3.7
1761-1780	603	1756-1775	150	4.4	1786-1805	169	51	2.2
1781-1800	766	1776-1795	148	5.2	1806-1825	182	47	2.4

ARDINGLY 1590-1790



EAST GRINSTEAD 1590-1790

