
NOTES

Infant Mortality in a Pre-Industrial District

(Cantone di Bassano, 1798-1802)

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In the first few years of the nineteenth century, an anonymous surgeon of Bassano compiled a « Progressive table showing the infant death-rate at different times », using for the purpose registrations made in the Health Office of the canton from 1st August 1798 to 31st July 1802.¹

This unusual document, which is preserved in the Milan State Archives, is remarkably interesting because of the demographic information that can be obtained from it and because it is one of the first attempts to measure the infant death-rate.² But before offering some hypotheses on the motives that may have led the surgeon to busy himself with the Health Office registers, we shall examine the data collected in the Table³ and see what conclusions can be drawn from it.

For each of the nine communes of the canton, the total of the births and deaths is given, together with the number of newborn babies that died by the fifth, tenth, and fifteenth day after birth, and, finally, the number of

¹ A.S.M. (*Archivio di Stato di Milano*), *Fondo studi, parte moderna*, c. 1154, f. 1. We know the author's profession from the following note (by a different hand from the one that actually wrote down the document) on the back of the table: « Comparative table of the births and deaths of babies compiled by a surgeon of Bassano ». The document is not dated but, without any explanation, it has been slipped into a folder of financial statistics sent from the Prefect of the department of Bacchiglione to the Minister of the Interior on 15th November 1809.

² That the document is quite out of the ordinary is confirmed by the fact that a careful search through the demographic statistics in the '*Fondo studi, p.m.*' of the '*Archivio di Stato di Milano*' did not bring to light any similar tables. Correspondence between the Prefects of departments and the central government contains references to and requests to compile all sorts of statistics, enquiries and reports but the authorities never show any specific interest in the problem of the infant and newborn death-rate.

³ The table is given here as an appendix.

children that died before reaching the age of eleven. From these heterogeneous data we can reckon the probability of survival in the first fifteen days of life and the proportion of newborn and child deaths in the overall death-rate.

TABLE I
TABLE OF SURVIVAL OF NEWBORN CHILDREN *
(per 1000 births)

Communes	6th day	11th day	15th day
Bassano	847	775	756
Rosà	823	742	706
Rossan	710	583	544
Cartigliano	713	607	551
San Nazario	798	722	679
Tezze	703	595	530
Pove	888	798	749
Cismon	874	809	764
Solagna	916	863	831
<i>Total</i>	820	739	706

* The table is based on the births and survivals between 1st August 1798 and 31st July 1802. The calculations include some approximations since some of the babies that died in the first days of August 1798 had been born in the previous month, and some born in July 1802 may have died in the following month before reaching their fifteenth day of life.

In some communes, the probability of non-survival in the first fifteen days of life reached peaks of 45-47 per cent (the general average being 30%). But the hardest struggle with death was fought between birth and the sixth day.⁴ It would be interesting to know the causes of death for this group so as to establish the degrees of responsibility between the lack of medical knowledge, the inadequacy of medical services, the environmental conditions and the physical condition of the mother. A full enquiry now being made into mortality in Milan from the 15th to the 19th century⁵ will give us valuable

⁴ The babies' deaths before the fifteenth day of life were distributed as follows:

Deaths within the 5th/10th/14th day	Percentage
5th	61
10th	28
14th	11

⁵ This research, directed by Carlo M. Cipolla, is being carried out at the Institute of Economic History in the University of Pavia. The basic documentation consists in the registers of deaths in the city of Milan preserved in the '*Fondo popolazione*' of the State Archives. On this indispensable demographic source and the information that can be derived from it, see D. ZANETTI, *La morte a Milano*, now in preparation.

information on this, although my impression is that the diagnoses of death are so generic that they will not enable us to provide complete answers to all the unanswered questions.

To the great likelihood of dying in the first few days of life, there was added another, equally great, of dying before reaching the age of ten. We can only make a rough reckoning of the heavy tribute children paid to mortality since the data in our table only record births and deaths between August 1798 and July 1802 and do not follow them up, as would be necessary for the calculation, with the gradual thinning-out of the group of individuals under examination. A precise measurement of this kind can be substituted, to give an idea of the phenomenon, by a calculation of the deaths at various ages as a percentage of the total deaths.

TABLE 2

Age-groups	Number of deaths	Percentage of deaths out of total
0-5 days	942	20
6-10 days	427	9
11-14 days	172	4
15 days - 10 years	1,272	27
over 10 years	1,847	40
0-14 days	1,541	33
up to 10 years	2,813	60

We can now suggest some hypotheses about the surgeon's motives in studying infant mortality. We have no choice but to speak of hypotheses since, unfortunately, we do not know whether the enquiry was requested, like so many others, by the central government or whether it was the result of the surgeon's personal initiative. Everything points to the latter being the more likely explanation — in the correspondence between the Minister of the Interior and the prefect of the department of Bacchiglione, there is talk of delays in sending statistics, difficulties in obtaining the information requested from various communes, and the negligence of this or that functionary, but no mention is made of the surgeon's unusual document.

I think we can, first of all, exclude any wish to put together any real 'survival' table even though limited to the first few years of life. The shortness of the period taken into consideration, the rather limited number of cases, the banal mistakes in arithmetic which are scattered throughout the table,⁶ the choice, for that matter without any justification, of only three ages

⁶ There are exactly twelve mistakes in the addition. They can hardly be considered simply as slips of the pen, unless we accept the idea of an extravagantly careless copyist.

(5, 10 and 14 days), and the heterogeneity of the data assembled, clearly suggest the absence of any specific demographic or actuarial interest.⁷

It seems more likely that professional motives led the surgeon to take on this research. A clue pointing in this direction is that the sources used were not the parish registers (or the state registers begun during the Napoleonic rule) but the documents of the Health Office — perhaps with the intention of getting the causes of death from them.

After this, personal scruple or curiosity may have spurred him to find out the exact ratio between births and deaths in the first few days of life and the incidence of infant mortality. Moreover, the surgeon's personal inclinations were undoubtedly influenced by the spirit of his time, which was imbued, as had rarely happened in the past, with the desire to measure and grasp all social and economic phenomena with the utmost precision. Under the Napoleonic bureaucracy, this desire had filtered through even to the smallest of the rural communes. The surgeon's table could be considered as a contribution to more precise knowledge of a phenomenon whose drama and dimensions were then being realized.

Finally, we cannot exclude the possibility that, together with the professional interest, there were also present the beginnings of the modern attitude towards childhood. An attitude that had been developing slowly in the course of the 18th century, as has been shown in an exemplary manner by Phillipe Ariès.⁸ In contrast to the attitudes of previous centuries, younger children were beginning to be considered part of society, worthy of special care and attention. Public opinion was becoming more and more reluctant to accept a situation that had, for centuries, seemed inevitable.

APPENDIX

In this appendix we are publishing the original document which gives births and deaths in the «Cantone di Bassano» for the period 1798 (1st August) to 1802 (July 31st).

Column 1 lists the parishes; columns 2 and 3 give the total births and deaths; column 4 shows deaths before the sixth day of life; column 5 shows deaths between the sixth and tenth day of life; column 6 shows deaths between the eleven and fourteenth day of life; column 7 gives the total deaths covered by the previous three columns; column 8 shows the total of child deaths up to the tenth year.

⁷ This is hardly surprising. A doctor is surely more interested in knowing the illnesses and if possible the number of deaths than in the possibility of survival up to a certain age.

⁸ No doubt the surgeon's desire to acquire some merit in the eyes of the departmental authorities had something to do with it, too. During the years of Napoleonic rule, memoranda on subjects of public utility proliferated. The authors rarely hid their wish to be rewarded directly or by benefits of various kinds.

⁹ P. ARIES, *Padri e figli nell'Europa medievale e moderna*, Bari 1968.

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TAVOLA DIMOSTRATIVA DEI NATI E MORTI NEL CANTONE DI BASSANO
NEL QUINQUENNIO DAL 1° AGOSTO 1798 A TUTTO LUGLIO 1802
TRATTA DALL'UFFIZIO DI SANITA' DI DETTO CANTONE

(Tabella a scala progressiva dimostrante la mortalità dei bambini in epoche differenti)

Parrocchie	Nati	Morti	del giorno V	del giorno X	del giorno XIV	Totalità dei fanciulli morti nel XV giorno	Totalità dei fanciulli morti sino all'anno X
1798							
Bassano	386	217	48	33	6	87	170
Rosà	210	158	22	9	1	32	79
Rossan	81	90	26	17	6	43 (*)	54
Cartigliano	57	69	14	8	4	28 (b)	50
S. Nazario	36	50	7	7	2	16	24
Tezze	43	33	7	5	2	14	32
Pove	25	22	6	2	2	10	16
Cismon	40	25	4	3	1	8	17
Solagna	37	46	4	4	1	9	20
1799							
Bassano	314	259	55	24	6	85	127
Rosà	258	201	49	16	15	80	154
Rossan	100	101	29	8	2	39	49
Cartigliano	67	80	21	8	5	34	40
S. Nazario	67	72	16	4	—	20	51
Tezze	52	45	13	4	4	21	28
Pove	40	39	10	1	4	15	24
Cismon	39	27	7	4	—	21 (c)	39
Solagna	76	50	8	6	4	18	34
1800							
Bassano	512	440	80	34	14	128	252
Rosà	211	189	40	25	9	74	124
Rossan	95	103	32	14	2	48	70
Cartigliano	55	53	24	5	2	31	37
S. Nazario	56	54	9	1	1	11	25
Tezze	43	41	17	3	2	16 (d)	30
Pove	57	48	3	5	1	9	31
Cismon	43	39	2	—	5	7	17
Solagna	63	59	5	3	2	10	32
1801							
Bassano	388	246	57	25	6	88	143
Rosà	222	179	49	23	8	80	127
Rossan	102	135	29	11	3	43	76
Cartigliano	63	80	18	8	3	29	51
S. Nazario	56	67	9	2	4	15	32
Tezze	51	53	19	5	4	28	28
Pove	55	35	3	5	2	10	20
Cismon	38	27	7	4	2	13	18
Solagna	94	46	4	4	—	8	18
1802							
Bassano	484	444	79	33	8	120	180
Rosà	226	274	40	18	7	65	154
Rossan	94	98	21	15	5	41	74
Cartigliano	61	68	10	3	3	16	46
S. Nazario	37	74	10	5	4	19	44
Tezze	43	43	13	8	3	24	30
Pove	46	77	3	7	2	12	46
Cismon	39	26	5	2	1	14 (e)	26
Solagna	74	78	8	1	4	13	74
Totali	5.151 (f)	4.501 (g)	933 (h)	406 (i)	175 (l)	1.534 (m)	2.770 (n)

The figures followed by letters are wrong. The exact figures are given here:

(*) 44	(d) 22	(a) 4.660	(l) 172
(b) 26	(e) 8	(h) 942	(m) 1.541
(c) 11	(f) 5.236	(i) 427	(n) 2.813