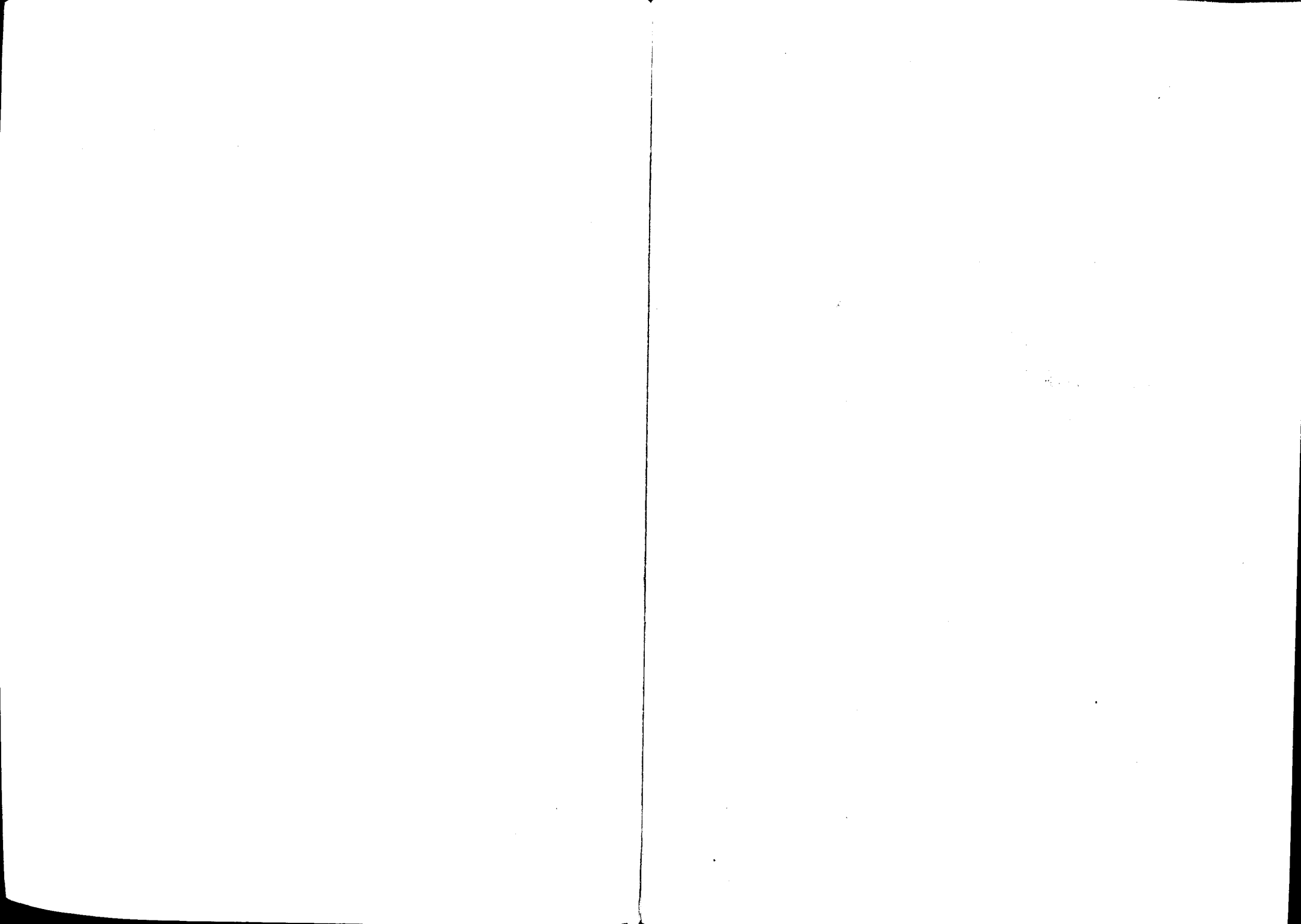


HISTORICKÁ DEMOGRAFIE

13

Ústav československých a světových dějin ČSAV

Praha 1989



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EDITOR: JAROSLAV PURŠ

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INTRODUCTION

The thirteenth series of reports of the Commission Historical Demography contains eleven papers on various issues of age structure of the population of Czech countries in the past. Some of the papers discuss the possibilities to obtain data on the age structure or the reliability of the data obtained, others analyze the age structure of specific populations. There are also several studies on changes in some demographic phenomena with age. The papers of course are not exhaustive treatises on the problems concerned: the range of these problems is much wider, covering many aspects of the social, economic, legal and psychological development of the society. The papers are intended to draw attention to the importance of studying the age structure of the population and to the possibilities offered by the lists of population maintained in a number of dominions in Bohemia from the mid 17th to the mid 19th centuries, the censuses being made every year. As some of the lists have been preserved in long series, they constitute, apart from parish registers, an important source of material for broad historico-demographic research.

This Proceedings is also a modest contribution of Czechoslovak demographers to the seminar on Age and History, which will be organized within the international demographic conference "Ageing of Population in Developed Countries" to be held in Prague on July 3-7, 1989.

Milan Stloukal

PROBLEMS OF INCORRECT NUMBERS OF CASES IN PALAEODEMOGRAPHIC
ANALYSIS

It is essential for palaeodemographic analysis to have a complete set. This condition is met when a whole cemetery has been excavated and skeletons of all persons buried there over the whole period of its existence are available for anthropological investigation. However, this happens very rarely, so the researcher usually has to decide either that palaeodemographic analysis is impossible because of the absence of a significant number of skeletons or that the number of missing skeleton is immaterial.

The completeness of a set depends on many factors. First, it is rarely possible to say that a whole cemetery has been explored. Thorough exploitation is often questionable and in many cases the researcher knows for sure that some graves still remain hidden, especially those in the marginal part of the cemetery, because the topography and other conditions did not allow to disclose them. Of course, it must be taken

into account that many graves were abolished when the cemetery was still in use. This is normal practice even today: a place where there was an old grave is used again after some time. The bones from a previous burial may be left in the grave, sometimes only laid aside, and it depends on the researcher's judgement to decide whether to record them as a separate individual or omit them in palaeodemographic analysis. Late in the Middle Ages and during the modern era, bones were often removed from the older graves to be placed in ossuaries; the quantities of bones in the ossuaries are large, certainly far from negligible from the viewpoint of the palaeodemographer. It should only be hoped that during the older periods, i.e. the early Middle Ages where most palaeodemographic sets are dated, the number of abolished graves was not so large to distort the results of investigation seriously.

Naturally, it must also be taken into account that some permanent inhabitants of the place might be buried somewhere else (e.g. those killed in war). Nevertheless, in spite of all this, the absence of skeletons of adult persons is seldom as significant as the absence of the skeletons of children.

According to the results of observations, analyses and considerations by many authors, and according to experience from the processing of a large number of sets dating to different periods, the d_0 data of the life tables are mostly considered as "chronically" incorrect. What is regarded to be particularly erroneous is the value of D_0 , i.e. the number of skeletons of new-born children and those who died before an age of one year (or 6 months, as asserted by some authors).

The proportion of children who died during the first year of their life, i.e. the d_0 data, in the early medieval sets from the territory of today's Czechoslovakia ranges from zero (or extremely low values of 0.7 to 1.8 %) to more than 10 % (11.0 to 13.8); the only exception is the Libice set with a d_0 of 22.0. Let it be mentioned for illustration that

Weiss suggested a d_0 of 13.3 to 40.0 in his model life tables (1973) for primeval populations. The UN model life tables applying to modern populations amit in model "West" that d_0 may vary from 1.5 to 36.5 in women and from 2.1 to 41.9 in men, but at d_0 values below 15 the e_0 increases above 45, a fact hardly applicable to primeval populations. Does this imply that all the d_0 values for early medieval sets in Czechoslovakia are incorrect and that considerable numbers of skeletons of the youngest children are really missing at all cemeteries? But this is a common finding with almost no exception, at all primeval and ancient cemeteries.

Many scientists have attempted to explain this phenomenon and have written a number of studies (Acsádi and Nemeskéri 1970, Neustupný 1983, Stloukal 1962 and others). Three major explanations have been proposed. The first is that there were separate cemeteries for children, but archaeologists have failed to find them. This hypothesis does not seem very realistic, for no such cemeteries have ever been excavated and in fact, there is no good reason to believe they existed at all. It should be noted in this connection that at least several small children's skeletons (though not always below one year of age) were found in every cemetery. There is justified hesitation to accept the idea that some small children were buried together with the adults at a common cemetery whereas others were buried separately, on a special children's burying ground.

J. Nemeskéri proposed another explanation. Children's graves might be much shallower than the graves of adults and could be destroyed during later earthwork. Situation at cemeteries of Alattyán-Talát (8th century) and Kérpusztá (11th-12th centuries) is put forth as evidence. At Alattyán-Talát the skeletons of young children lay at an average depth of 72 cm whereas the remains of adults were buried in depths of 142 cm (men) and 136 cm (women). At Kérpusztá the

average depth of new-born children's graves was 44 cm and that of the graves of adults was 70 cm (Acsádi and Nemeskéri 1970, 239). Nemeskéri's hypothesis is rational, the more so because the small skeletons of new-born children are known to decompose more easily than the more resistant bones of adult persons. But is this hypothesis exhaustive? Can it fully explain the absence of many children's graves? I think the answer is no, and my view derives from experience gained during exploration of Old Slavic cemeteries at Mikulčice (9th century). The soil inside the area of the Prince's castle is yellow sand which is very favourable for excavations. The dark material in the pits contrasted with the yellow sand and allowed to identify even those graves where no traces of skeleton had remained. Most of these pits were children's graves. Besides, at Mikulčice neither farming nor any other activities have disturbed the upper layer of the soil. And yet, the number of children's graves is small there.

I am well aware of the danger of applying experience from one culture, or horizon, to another, but in this case, with some reservations, such an attempt may serve a good purpose. Compiling palaeodemographic life tables, one can use not only the sets from early mediaeval cemeteries but also materials from the vast cremation cemeteries of the Bronze Age, Halstatt era and Roman epoch. Nemeskéri's explanation cannot be applied to these cemeteries because all the cremation burials lay at the same level. Differences in depth depend only on the topography, and it is evident that urns with the ashes of adults do not lie deeper than those with the remains of children. The burnt remains of small children usually preserve well, so posthumous selection can also be eliminated to some extent. This applies mainly to teeth which are decisive in determining the age of the child; there are usually many teeth in the urns, and they are well preserved. The situation is worse with the pit burials, but in these

cases durability is poor in the burnt bones of both children and adults. Nor have we ever encountered a site where most of the children's graves would be of pit type, i.e. without urns, the burials of adults being in urns. And yet the numbers of new-born and very young children is small at all these cemeteries. Their d_0 value ranges from 1.7 to 15.5. Hence, the situation is generally similar to that in the Old Slavic inhumation cemeteries; it is in fact somewhat "better", as the numbers of remains of children up to one year of age are higher.

Comparison with cremation cemeteries therefore seems to suggest that the absence of skeletons of small children cannot be ascribed to secondary effects. But there is still another possibility: some dead children might not be buried at all for various reasons. This view derives from some historical reports and historical parallels.

There may certainly be a number of reasons but probably the most important thing is that a dead child was not regarded to be a full-value human being who deserved regular burial. This idea will of course seem unacceptable to us, for children today enjoy the attention of the whole society, but comparison with present-day views concerning spontaneous abortion might help us to understand that attitude: there is hardly anyone who thinks about a dead foetus, as we all only feel sorry for the mother. Artificial interruption of pregnancy which has always been a live issue to mankind, is in fact just a variant of the same problem. Permission to interrupt pregnancy is based on the presumption that a foetus is not yet a human being so that its expulsion is no assassination - otherwise it would have to be treated as a crime in every human community. Yet biologists say a new human being begins to live at the moment of conception. There is hardly anyone, whether a doctor or a lawyer, who would dare to decide at what moment exactly a foetus becomes a subject to which

law applies; after all, it is better to avoid this question. If we realize this we shall no longer consider it so absurd that in the primeval era and probably still in the Middle Ages this boundary might be somewhere in the first months or years of life, perhaps when the child begins to communicate, or walk, or talk. Such an approach might help people to overcome the awe of frequent deaths of small children and might even be a method of regulation of population. Once a small child is not regarded to be a full-value human being, it not only deserves no regular burial but even does not need to be kept alive, whether sick or healthy.

The killing of new-born children is documented by many historical reports, though none of them refers to Old Slavs in the territory of today's Czechoslovakia. The victims of this custom were perhaps mainly seriously ill and sickly children and those with an inborn defect (this may be associated with the fact that findings of skeletons with serious defects are very exceptional in the old material). It was a very widespread custom that a father had first to own the child, accept it in the family, and if he refused to do so the child was not kept alive. That time's fathers were perhaps in the same situation as today's gravid women who ask for interruption of pregnancy. His decision was influenced by similar factors, combined with those of the health of the child, the family's or community's interest to increase in number, and often also the sex of the child. It was long believed in many communities that only sons are important descendants to be proud of. It can really be assumed that daughters prevailed among the new-born children who were killed, though this markedly affected the sex ratio in the community.

Niederle (1911) quoted physician Soranus who had lived in the era of Emperor Hadrian and had reported that Germanic, Scythian and other barbarian tribes dipped their new-born children in cold water immediately after their birth to let the

sickly ones die. This was another method of selection which helped to maintain a good quality of the population.

In the Christian era the killing of new-born children was certainly banned but it is probable that this heathen custom still persisted in the baptized population. Many historical sources referred to the stubborn heathen customs for a long time. One of the reasons why St. Adalbert left his see and his country was his abortive struggle against the persisting heathen customs. But Christianity might bring about still another reason why small children could not be buried properly: an unbaptized child could not lie in the sacred soil of the churchyard. If we accept this explanation we face the question whether during the early Christian era the institution of baptism was understood and applied in the same way as in later times. The situation was substantially different late in the Middle Ages and in the modern era, but historians say that even then only a small proportion of dead children were declared dead-born or deceased unbaptized. Naturally, every mother wanted to ensure her dead child a Christian burial, so she either baptized it herself in case of necessity or at least pretended to have done so: anyone could hardly prove that she did not tell truth.

There are perhaps still other possible explanations, but none of them will tell us reliably why some small children were buried properly whereas to others a regular burial was denied. Nevertheless, knowledge of the reason is not so important for the analyst palaeodemographer; the substantial thing is that absence of remains of a comparatively high number of children who died before an age of one year (i.e. in the "zero" age group), and perhaps also children in some other youngest age groups, is common to almost all cemeteries, as most authors assert.

But let us return to the problem of the "zero" age group, an issue of utmost importance for all further calculations.

A low d_0 value affects not only calculation of life expectancy at birth and other items in the life tables as already mentioned, but also the calculation of the size of the group whose dead members were buried at the cemetery. If life tables are compiled from such data, comparisons on their basis may be deceptive because instead of comparing the actual age structure of two or more populations we might well compare different degrees of distortion of the number of cases in the zero age group. Though the relationship between the values of d_0 and e_0 in the life tables is not quite close, it does exist, as clearly shown by the following data taken from the analysis of 32 Old Slavic sets:

1. at an e_0 below 25 the average d_0 is 9.7,
at an e_0 of 25 to 30 the average d_0 is 4.7,
at an e_0 above 30 the average d_0 is 2.2;
2. at a d_0 below 5 the average e_0 is 29.9,
at a d_0 of 5 to 10 the average e_0 is 28.6,
at a d_0 above 10 the average e_0 is 24.0.

It should be added that an e_0 below 25 was recorded in 9 sets, e_0 of 25 to 30 in 16 sets, and e_0 above 30 in 7 sets, and that a d_0 below 5 was recorded in 17 sets, d_0 between 5 and 10 in 9 sets, and d_0 above 10 in 6 sets.

Of course, it is possible simply to neglect the "zero" group in the life tables and use data on the next age group, i.e. the second line of the abridged life tables with e_{1-4} , l_{1-4} etc. However, this approach has several weak points. First, the e_0 value is significant and its omission would affect all further analyses, especially comparisons with other sets. In addition, some tables have a different pattern of age groups, first group including only children who died during the first months of life, so different values are obtained.

Moreover, it is assumed in all this that the frequency of cases in the second line, i.e. the second youngest age group which is usually one to four years, is O.K., that nothing is missing. Yet we cannot be sure of it, and if considerations mentioned above are taken into account, something like that is even improbable.

All these reasons have led anthropologists to attempts to reconstitute the original numbers of cases in the "zero" age group. Model life tables can be used for this purpose, but it is not easy to choose a suitable model. One possibility is to use the model life tables issued by the UNO in 1967 (Models of Estimating ...), but these were compiled from data on present-day populations, so although we use data referring to the least developed countries, i.e. the lowest-levels in these tables, the assumed mortality conditions will be still much better than what may be considered probable for the early Middle Ages. Just for brief orientation: in these model tables the lowest levels (1) are $d_0 = 41.9$ and $e_0 = 18.0$ for men, and $d_0 = 36.5$ and $e_0 = 20.0$ for women ("West" model life tables).

The fact that the UN model life tables were far from ideally applicable to primeval populations led K.M. Weiss (1973) to compiling special models of life tables for these populations. Weiss' models in fact consist of two halves: the adult part, based on the likeness of function e_x , and the infant part, orientated according to the values of function l_x . For the population under review, the model is chosen on the basis of two values, l_{15} and e_{15} . The value of e_{15} is generally unaffected by the missing numbers of cases in young age groups but such a possible error affects very strongly the value of l_{15} ; so again, the Weiss tables are hardly applicable without correction of values in the "zero" age group. Hence, another approach has to be sought. Two possible procedures of reconstitution are available: the method after Neustup-

ný (1983) for reconstitution of the number of cases in the youngest age groups and the method after the two French authors, J.-P. Bocquet and C. Masset (1977).

These French authors are sceptical as to the very essence of palaeodemographic work, i.e. determination of age by skeletons. They are of course aware that the numbers of cases in the youngest age groups are low (therefore they do the reconstitution), but they are also afraid that in remains of adults above 20 years of age every attempt at a closer determination of age is unreliable. To offset this, they calculated a formula on the basis of linear regression using the values of d_{5-14} and d_{20+} to start from. Before calculation, it is useful to verify the stationariness of the population on the basis of a formula; the authors use in it the quantity d_{60+} in addition to the two values mentioned, but the calculation is not applicable if this value is understated, i.e. if the number of persons who died before an age of 60 is too low in the population studied. In this the procedure proposed by J.-P. Bocquet and C. Masset is somewhat illogical: on the one hand they do not believe that the age of adults can be correctly determined but on the other they require separation of the oldest individuals which is in fact the most deceptive thing a palaeodemographer can try. Accuracy of determination of the age of adult persons declines with increasing age, so exact determination of the boundary of sixty years is really very difficult. It is well known that the age of deceased persons, determined by the method proposed by J. Nemeskéri and I. Harsányi (1959), is usually higher than by other techniques, as the group of persons above sixty is always larger in the Nemeskéri method than in others. This fact is a most frequently criticized feature of the Nemeskéri method. In recent years F. Langenscheidt (1985), for example, concluded from her thorough analysis that this method is incorrect for several reasons, including the overstating of the age of

Tab. 1 Comparison of the values of function d_0 according to the original life tables and tables reconstituted after J.-P. Bocquet and C. Masset and after E. Neustupný

Original life tables		Life tables reconstituted after			
site	d_0	J.-P. Bocquet-C. Masset		E. Neustupný	
		site	d_0	site	d_0
Holiare	0,0	Kouřim-sv. Jiří	15,8	Ducové B	13,3
Nitra-Zobor	0,0	Holiare	23,5	Holiare	13,3
Stará Kouřim	0,7	Hradsko-Kanina	23,9	Hradsko-Kanina	13,3
Rajhrad	0,8	Stará Kouřim	24,3	Kouřim-sv. Jiří	13,3
Radomyšl B	1,0	Ducové B	24,4	Stará Kouřim	13,3
Abrahám	1,1	Nitra-Mlynárce	26,1	Nitra-Mlynárce	16,7
Mikulčice 1	1,1	Virt	26,4	Virt	16,7
Želovce	1,1	Znojmo	26,5	Znojmo	16,7
Bešeňov	1,5	Mikulčice 2	27,0	Abrahám	17,0
Hradsko-Kanina	1,8	Abrahám	27,2	Mikulčice 2	20,0
Oškobrň	1,8	Lahovice	27,3	Nové Zámky	20,0
Kouřim-sv. Jiří	2,1	Želovce	28,6	Nitra-Lupka	23,3
Nové Zámky	2,2	Nové Zámky	29,4	Želovce	23,3
Pobedim	2,6	Nitra-Lupka	29,6	Bešeňov	26,7
Nitra-Mlynárce	2,7	Bešeňov	30,0	Holubice VI	26,7
Radomyšl A	3,4	Holubice VI	30,0	Mikulčice 1	26,7
Holubice VI	3,8	Velké Bílovice	30,2	Radomyšl A	26,7
Lahovice	5,1	Mikulčice 1	30,7	Velké Bílovice	26,7
Mikulčice 3	5,1	Libice	31,0	Josefov	30,0
Mikulčice-Klášt.	5,6	Radomyšl A	31,2	Mikulčice 4	30,0
Znojmo	5,6	Mikulčice 11	31,5	Mikulčice 11	30,0
Virt	5,7	Mikulčice 4	31,8	Oškobrň	30,0
Velké Bílovice	6,0	Josefov	31,9	Radomyšl B	30,0
Mikulčice 2	7,6	Radomyšl B	33,1	Ducové A	33,3
Ducové A	8,8	Ducové A	33,4	Mikulčice 3	33,3
Mikulčice 4	9,3	Mikulčice 4	33,6	Mikulčice-Klášt.	33,3
Mikulčice 11	10,0	Mikulčice-Klášt.	33,6	Libice	36,7
Nitra-Lupka	11,2	Nitra-Zobor	33,9	Mikulčice 12	36,7
Mikulčice 12	11,4	Mikulčice 12	34,7	Nitra-Zobor	36,7
Josefov	12,2	Rajhrad	35,3	Rajhrad	36,7
Ducové B	13,8	Oškobrň	36,0	Lahovice	40,0
Libice	22,0	Pobedim	40,0	Pobedim	40,0

adult persons.

It is as yet basically impossible to find a definitive solution to this problem on the basis of presently available materials. However, it can be said to support F. Langenscheidt's view that the number of persons who lived to be older than 60 years was always comparatively low in the past. Investigations by historical demographers provide evidence that there was a small number of old persons still in the modern populations (e.g. Hanzal 1968, p. 12, Skřivánek 1971, p. 121).

We used both these methods of reconstitution and got new general life tables and new values for the individual functions. In the original life tables the value of d_0 ranges from zero to 22.0 whereas in the tables re-done after Neústupný the lowest d_0 value is $d_0 = 13.3$ and after J.-P. Bocquet and C. Masset 15.8; the highest d_0 is 40.0 in both reconstitution methods. The results of both methods are almost never the same but no doubt they are very close together. The e_0 value in the original life tables ranges from 21.7 to 37.4 in the tables after Bocquet and Masset from 8.9 to 31.8, and in those after Neústupný from 12.0 to 33.6.

However, it must be borne in mind that the reciprocal value of e_0 , i.e. $1/e_0$, equals crude death rate, which in turn equals crude birth rate in a stationary population. (It is assumed with all palaeodemographic calculations that the populations to which they refer are stationary). At $e_0 = 20$ the crude birth rate is equal to 50 ‰, at $e_0 = 30$ it is only 33.3 ‰. However, if e_0 is below 20 the crude birth rate exceeds 50 ‰, which is hard to believe in the case of historical populations. And yet in Neústupný's reconstitution this unbelievably low life expectancy applies to more than a third of our sets (half of the cemeteries have an e_0 below 20), and according to J.-P. Bocquet and C. Masset it applies even to 20 sets of the total of 32. I stress again that demographic-

Tab. 2 Comparison of the values of function e_0 according to the original life tables and tables reconstituted after J.-P. Bocquet and C. Masset and after E. Neústupný

Original life tables		Life tables reconstituted after			
site	e_0	J.-P. Bocquet-C. Masset		E. Neústupný	
		site	e_0	site	e_0
Mikulčice 12	21,7	Pobedim	8,9	Pobedim	12,0
Libice	21,8	Rajhrad	12,5	Rajhrad	14,0
Pobedim	22,0	Oškobrň	13,8	Mikulčice 12	15,6
Josefov	22,9	Mikulčice 4	14,2	Mikulčice 3	16,8
Mikulčice 4	23,6	Mikulčice 12	14,2	Ducové A	16,9
Mikulčice 11	23,9	Mikulčice 3	14,4	Nitra-Zohor	16,9
Mikulčice 3	24,1	Ducové A	14,6	Mikulčice-Klášt.	17,0
Ducové A	24,6	Mikulčice-Klášt.	14,6	Oškobrň	18,5
Mikulčice-Klášt.	24,9	Nitra-Zohor	15,9	Lahovice	18,6
Rajhrad	25,3	Josefov	16,6	Libice	19,4
Oškobrň	26,2	Radomyšl B	16,8	Josefov	19,5
Nitra-Lupka	26,3	Bešeňov	17,2	Mikulčice 4	20,1
Radomyšl A	27,0	Mikulčice 11	17,5	Mikulčice 11	20,2
Bešeňov	27,1	Holubice VI	18,+	Radomyšl B	20,3
Ducové B	27,1	Nitra-Lupka	18,4	Bešeňov	20,4
Holubice VI	27,6	Mikulčice 1	18,5	Holubice VI	21,2
Radomyšl B	28,0	Radomyšl A	18,8	Velké Bílovice	21,6
Mikulčice 2	28,6	Velké Bílovice	18,8	Mikulčice 1	22,4
Mikulčice 1	28,7	Nové Zámky	19,7	Nitra-Lupka	22,8
Nové Zámky	28,7	Želovce	19,8	Radomyšl A	22,9
Želovce	29,0	Libice	20,5	Želovce	23,7
Velké Bílovice	29,5	Virt	20,6	Nové Zámky	25,4
Virt	29,6	Mikulčice 2	21,9	Virt	25,8
Hradsko-Kanina	29,6	Holiare	22,0	Mikulčice 2	26,4
Holiare	29,7	Nitra-Mlynárce	22,8	Holiare	26,6
Lahovice	30,9	Abrahám	22,9	Nitra-Mlynárce	28,2
Znojmo	31,3	Ducové B	22,9	Ducové B	28,5
Nitra-Mlynárce	32,6	Znojmo	23,2	Znojmo	29,0
Nitra-Zohor	32,8	Hradsko-Kanina	24,0	Abrahám	29,1
Abrahám	33,1	Lahovice	25,2	Hradsko-Kanina	29,2
Stará Kouřim	36,4	Stará Kouřim	27,1	Kouřim-sv. Jiří	31,4
Kouřim-sv. Jiří	37,4	Kouřim-sv. Jiří	31,8	Stará Kouřim	33,6

ally it is almost impossible for crude birth rate to remain at or above 50 % for longer. If this is taken into account, the original uncorrected life tables will appear more acceptable and reliable than the corrected ones.

Of course, attempts to reconstitute the missing numbers of cases are a serious thing which cannot be passed over. Every palaeodemographer will be confronted with this problem sooner or later. Our results show that though the reconstitution has removed the problem of missing data, we acquire results which are hardly acceptable. It should also be taken into account that every reconstitution in fact distorts the sets by trying to fit them into a picture we regard as logically correct. This may, in many cases, deprive groups of their peculiar characteristics associated with the extraordinary conditions in the population studied.

Yet once the original non-reconstituted mean length of life meets the demographic suppositions better than does the life expectancy read from the reconstituted life tables, then the low original data on the numbers of children who died during the first year of life must be true, however unacceptable they may seem at first sight. Shall we put up with such a conclusion?

We cannot but go into the world of speculation. In fact it is a speculation even to believe that the development of mankind is one of continuous improvement, that there is a continuous progress in science and hygiene. In this particular case it may even be wrong to think that mankind in the primeval era and Middle Ages lived in bad hygienic conditions, died on mass, and had a poor life expectancy. This was actually the case in some periods in history, but certainly not always. It would really be a mistake to think that life expectancy has been steadily increasing from the very low level for the Neanderthal man through the Middle ages and modern era until the present time. We can believe with a high

measure of certainty that period favourable for population growth have always been alternating with periods which were far from favouring successful development of human race. As known, wars affected populations catastrophically, and there were many other adverse factors such as bad crops which entailed famine, and various epidemics.

Primeval and early medieval populations mostly lived a rural life, which is something many urban people today seek for recreation. This alone seems to suggest that such a way of life might be much healthier than life in later medieval towns which we now consider almost as a symbol of absence of hygiene and example of other adverse aspects of life. But the food of the early medieval people was certainly closer to what we now regard to be rational food allowances; the danger of epidemics was not so great and even the family life and the raising of children were probably also generally sound.

There were no artificial baby foods in the Middle Ages, and perhaps only the institution of wet nurses was not fully natural, though these women provided children with what they needed most of all: milk containing an ideal combination of nutrients and substances which provided general protection against sickness or at least against a fatal course of a disease. Interesting changes have recently occurred in views concerning the care of children: a rooming-in system is being introduced in which babies in the maternity hospitals are no longer separated from their mothers, as it has been found that close contact of the new-born child with its mother has an enormous positive influence on its further mental and physical development. So although a whole generation of physicians took great efforts to develop the best replacer foods which would perhaps be even better than mother's milk, it is now stressed that nothing can replace breast feeding.

Long in the past, concentration of many people at one place was an exception and it would be easy to count the pri-

meval and medieval "cities" of Europe. Of course, there was difference between central Europe and the important centres of the Roman Empire; in our territory the first settlements of urban type, Celtic oppida, began to occur only during the last century B.C. They did not last long, and the next wave of urban-type settlements came with the centres of Great Moravia as many as nine centuries later. Yet all these settlements differed from medieval cities as described with all their adverse features in many novels and films. If marked turning points in population development are to be sought, they will certainly be found in medieval urbanization. Of course, this cannot be considered in isolation, as a general change took place simultaneously in the economic situation with the introduction of a new system of farming; all this certainly had a substantial influence on the quality and composition of food.

With only minor exceptions, palaeodemography in general deals with populations which lived before the onset of the urbanization process. There are several reasons why this is so, and the major one is that later periods are referred to in written reports which provide much better information than analyses of skeletons from the cemeteries. They even provide good information on what we are trying to learn about the older times by archaeological research. This is why excavations of cemeteries dated to ripe Middle Ages and the modern era are so rare. But let us try to admit that conditions of life and especially the raising of children in the early medieval populations were good enough to keep mortality of newborn babies and small children much lower than we would expect. This would imply that our original data on life expectancy and mortality rate of children in the first year of life are close to reality and that only later, when the child was weaned and lost the beneficial effect of mother's milk which protected it against common infections, the mortality

of older children increased. This would shed new light on the problem of wrong numbers of cases in palaeodemographic analysis, though the problem itself would not be removed definitively.

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Jana P r a ž á k o v á

LA RECONSTITUTION DES FAMILLES ET LES REGISTRES DES SERFS

L'étude du mouvement naturel de la population à l'époque préstatistique, basée surtout sur l'emploi des registres paroissiaux se heurte aux difficultés les plus diverses. A surmonter beaucoup d'entre elles peut concourir une méthode qui, dans les dernières décennies prend de l'étendue toujours plus grande et de l'importance - la reconstitution des familles. Mais ni cette méthode basée sur l'établissement laborieux et long des extraits des registres paroissiaux et l'établissement suivante de l'ensemble des fiches de familles comme matériel de départ pour l'étude des indices du mouvement naturel de la population, n'évite pas quelques écueils. Ceux-ci concernent entre autres aussi le fait qu'encore relativement longtemps au 18^e siècle on ne peut pas compter sur la fiabilité absolue des notations dans les registres paroissiaux même pas au cas où nous savons que les registres paroissiaux étaient tenus suffisamment soigneusement. Nous pouvons trouver des imprecisions des enregistrements de l'âge de décès des personnes

adultes, relativement souvent aussi de ceux concernant l'âge des fiancés à l'heure de la conclusion du mariage s'il est mentionné au fait dans les registres paroissiaux; des difficultés sont causées aussi par des lacunes éventuelles qui peuvent apparaître dans les registres paroissiaux. Dans une certaine mesure nous pouvons nous acquitter de celles-ci et aussi d'autres insuffisances des registres paroissiaux en employant d'autres sources d'archives comprennent des listes nominatives des habitants. Mais tous les documents d'archives de ce genre, déposés dans nos archives, ont dans une plus ou moins grande mesure un défaut commun: ils ne considèrent que certaines catégories sociales et d'âge de la population. Une source, marquée par cette insuffisance en comparaison avec les autres peut-être le moins, qui devient ainsi du point de vue d'un démographe historique l'une des sources les plus importantes et sans exagérer inestimable, si nous en avons à disposition une série suffisamment longue, sont les registres des serfs. Si nous laissons de côté le fait que la comparaison mutuelle de ceux-ci avec les registres paroissiaux rend possible une critique du registre paroissial comme une source, alors leur importance repose surtout dans le fait qu'ils peuvent préciser et compléter les indications des registres paroissiaux et justement en combinaison avec ceux-ci aider considérablement lors de l'établissement des fiches de familles. Néanmoins ces registres ne sont même pas une source parfaite. Leur insuffisance principale est le fait qu'elles prennent en considération l'ensemble de la population soumise à certains seigneurs sans considérer si toutes les personnes étaient vraiment présentes sur les terres seigneuriales ou qu'elles vivaient en dehors de celles-ci (même s'il faut noter que cette réalité est d'habitude mentionnée dans les registres), et au contraire en majorité des cas ils n'enregistrent pas les personnes présentes dans le domaine, mais libres ou des personnes arrivées d'autres domaines dont le nombre pouvait être même relative-

ment élevé. Et quand même les registres des serfs appartiennent aux sources les plus appréciées et les plus fiables pour la reconstitution des familles.

Les registres des serfs constituent une source spécifique pour les pays tchèques ou plus exactement pour la Bohême. Leur origine au 16^e siècle était en relation avec l'obligation des seigneurs de s'occuper des orphelins vivant dans le domaine et avec ça aussi avec la nécessité de leur enregistrement. La destination originare des registres influença aussi leur titre le plus habituel "les registres des orphelins", "les listes des orphelins" et ainsi de suite, qui s'est tenu souvent jusqu'à l'époque où cet enregistrement s'est répandu aussi sur d'autres ensembles de la population et les registres saisissaient déjà un ensemble d'habitants sensiblement plus large dans le domaine. C'étaient surtout les raisons économiques qui entraînaient à l'époque d'après la Montagne Blanche, mais surtout après la Guerre de Trente ans des soins plus élevés des seigneurs pour l'enregistrement des serfs, de sorte que les registres - à l'époque d'avant la Montagne Blanche établis plutôt irrégulièrement - commencent à être dressés chaque année. Mais l'établissement de ceux-ci n'était pas courant dans tous les domaines et aussi les niveaux de leur forme et de leur contenu variaient en relation avec le niveau de l'administration de la seigneurie foncière de ce temps-là. Successivement a été changé aussi leur titre et le plus souvent ils sont nommés - aussi en relation avec la pénétration de l'allemand dans l'administration du domaine - Mannschafts-buch ...

Le but de cet exposé n'est pas une analyse critique des registres des serfs ni une description de leur histoire. ¹⁾ Nous ne voulons que faire remarquer les possibilités qu'ils nous offrent pour préciser et perfectionner le travail lors de la reconstitution des familles. Nous sortons des expériences gagnées lors de l'établissement des notations des registres

paroissiaux menées dans la paroisse catholique-romaine du doyenné de Smečno dans les années 1700-1783, ²⁾ dont nous avons cherché à comparer les données, respectivement les données sur les familles, établies sur leur base, aux données comprises dans les registres choisis des serfs du domaine de Smečno. Ce domaine, situé à proximité de Prague, était la propriété de la famille noble tchèque renommée des seigneurs de Martinitz. Dans ses archives déposées dans les Archives régionales d'Etat à Prague a été conservée une série relativement continue des registres des serfs des années 1663-1782. ³⁾ Désavantageux est le fait que ceux-ci (à l'exception des années 1664-1684) manquent les données pour Muncifaj (le Smečno actuel), une ville soumise qui était le centre administratif du domaine. Pour les raisons qui ne peuvent être relevées que difficilement, après 1700 ses habitants n'étaient pas enregistrés ensemble avec les autres dans un volume unique, établi chaque année, mais - comme il paraît - sur un cahier séparée. Jusqu'à nos jours nous avons trouvé un seul registre des habitants de cette ville de l'an 1736, comprenant 12 folios, mis dans le volume, portant l'indication de la même année, comprenant les registres des autres serfs du domaine de Smečno.

Comme les registres des serfs en général, même ceux de Smečno conservaient une forme et une structure non changées: ils avaient l'apparence d'un livre et pour chaque année était fondé un nouveau volume. Les serfs y étaient enregistrés d'après les villages appartenant au domaine. A l'intérieur des différents villages sont notés à la première place les habitants établis avec leurs familles (cela signifie ceux qui possédaient une exploitation rurale avec une certaine étendue de terre), après c'est une liste d'orphelins et enfin les ouvriers de ferme, les sans-terre, qui vivaient dans les fermes en location. Ce schéma des registres est respecté durant toute la période de laquelle ils remontent. Du point de vue de leur usage pour la reconstitution des familles, il est im-

portant pour nous qu'ils gardent un ordre stable même s'il s'agit des différentes propriétés rurales et familles. Ils représentent en effet un registre de familles actuelles à cette époque-là, vivant dans le domaine ou plus exactement soumises à la seigneurie avec l'indication de l'âge des parents ⁴⁾ et leurs enfants célibataires qui vivaient ensemble avec eux dans la même ménage ou demeuraient ailleurs dans le domaine ou en dehors de celui-ci. Dans un tel cas il est noté d'habitude où ils demeurent. Ce qui est très important est le fait que les registres des serfs (au contraire des registres menés à l'usage ecclésiastique qui ne saisissaient pas les enfants moins âgés de 8 - 10 ans) enregistrent au moins tous les enfants plus âgés d'un an, dans les temps postérieurs aussi les nourissons jusqu'à l'âge d'un an, tant qu'ils étaient vivants au moment de l'établissement du registre.

Si nous essayons à la conclusion de résumer à quel usage les registres des serfs sont si importants et pour la reconstitution des familles exceptionnellement précieux comme un source complémentaire des registres paroissiaux, nous voyons leur valeur surtout dans le fait qu'

- ils peuvent être un matériel auxiliaire excellent pour la recherche ou la spécification de l'âge des fiancés à l'heure du mariage (par exemple les registres paroissiaux de Smečno durant la période observée ne notent pas l'âge des fiancés à l'heure de la conclusion du mariage). En plus ils peuvent aider à trouver la date au moins vraisemblable de la conclusion du mariage dans le cas où il s'est conclu apparemment en dehors de la paroisse et il n'apparaît dans le registre paroissial que par les naissances des enfants, éventuellement par le décès des époux. Ils facilitent en plus l'observation du nombre des seconds mariages.
- ils concourent à la redécouverte des naissances perdues, cela signifie des enfants nés en dehors de la paroisse et

non enregistrés dans le registre paroissial (il pouvait arriver par exemple que la femme partait accoucher - le plus souvent le premier enfant - chez ses parents. Si elle provenait d'une autre paroisse, l'enfant était enregistré dans le registre paroissial de là-bas, mais il réapparaît - s'il n'est pas mort bientôt - dans le registre des serfs. Mais la raison du non-enregistrement pouvait être causée aussi par une erreur, négligence et pareillement).

- ils peuvent considérablement s'écarter à identifier ou préciser l'âge de décès de l'enfant (par exemple dans les registres paroissiaux de Smečno l'âge de décès n'est noté que depuis 1726, mais encore relativement longtemps nous ne pouvons pas accepter cette donnée - surtout chez des personnes plus âgées ou très vieilles - sans critique et ça même dans le cas où il est indiqué apparemment très exactement non seulement en nombre d'années, mais aussi de mois et de jours).

- ils peuvent considérablement limiter ou bien même exclure le danger de créer des familles fictives qui est entraîné par la possibilité de l'apparition plus fréquente du même nom de famille dans le même lieu ou la variabilité, jusqu'au dernier tiers du 18^e siècle toujours persistante des noms de famille, l'emploi des soi-disant noms créés suivant la chaumière (même si, tant qu'il agit de la paroisse de Smečno, de tels cas ne sont pas fréquents). Des difficultés sont causées quelquefois par le fait que plusieurs enfants recevaient successivement le même prénom, même si son porteur précédent était mort.

A la conclusion nous voudrions rappeler que les registres des serfs ne sont pas une source seulement pour la reconstitution des familles, leur importance est beaucoup plus large, car ils constituent une source riche et jusqu'à présent peu employée surtout pour l'étude de la composition sociale de la population rurale, mais aussi pour d'autres domaines des recherches historiques ou historique-démographiques.

1. Informations plus détaillées des registres des serfs voyez: Josef Křivka, Význam poddanských seznamů pro demografické bádání in: Historická demografie, 4, 1970, s. 50-56.
2. Dette étendue de temps a été donnée d'un côté par le fait que seulement environ depuis 1698 les registres paroissiaux de la paroisse de Smečno peuvent être considérés comme relativement fiables, de l'autre côté par la dernière année entière jusqu'à la fin de laquelle la paroisse existait dans les limites non changées.
3. En égard à l'exigence extraordinaire de temps d'un tel travail, nous n'avons choisi pour la comparaison qu'une partie (7 volumes) de l'ensemble étendu de 66 livres des années en question. Dans toute la série il y a des lacunes considérables entre les années 1684-1690, 1691-1703, 1725-1730 et 1769-1780.
4. Néanmoins dans les registres antérieurs l'âge des parents n'est pas indiqué régulièrement - dans quelques années il manque. L'âge des enfants est enregistré toujours.

Eliška Č á ň o v á

POPULATION OF THE TŘEBOŇ DOMINION

(An analysis of the List of Subjects of 1586)

The 1581 List of Subjects of the Třeboň Dominion ¹⁾ covers four towns and sixteen villages. ²⁾ The population is listed by households, comprising all persons who lived in each household in family, kinship and other relationships to the household head. Thus the List covers families including all their members, with indication of their mutual relationships, plus indication of the age of the persons listed. In the towns Lomnice on Lužnice, Mezimostí and Ledenice, sublessees ³⁾ were listed with the households with which they lived but at Veselí on Lužnice they were entered separately. In villages the sublessees, if there were any, were also listed with the households where they lived, only at Borkovice and Kundračice they were entered separately. Besides sublessees, the List also includes servants, each with his or her special denomination (servant girl, man servant, nurse maid and others). The age of every person is indicated.

This wealth of data provides a clear picture of every place with its well established social order. The order is represented by actual people, each denoted by position and age. The researcher can use all this information in many ways. The most important area of use is investigation of the family of the last quarter of the 16th century in general. There are important data on the core of the family which includes the parents and children. Both close and distant relatives are often also included. Furthermore, persons without kinship might also live and work within the family - farm servants or servants kept in artisans' households.

The completeness of the List has to be viewed critically and the same applies to the age structure: the first thing to be considered with age is the critical analysis of the data entered. The results of such an analysis will then have to be critically evaluated in comparison with data known from others sources. The age structure of part of the List had been the subject of an earlier study.⁴⁾ It follows from the data in the List that the population of the sixteen villages of the Třeboň Dominion included 43.33 % youth up to 14 years of age, which corresponds with other researchers' calculations for other areas and other periods.⁵⁾ A similar calculation for the towns in the Třeboň Dominion will show the following percentages of children up to an age of 14:

Lomnice on L.	Veselí on L.	Mezimostí	Ledenice
33.43 %	35.59 %	35 %	41.3 %

Though these data are lower than those referring to villages, they correspond with data from other sources. However, when the partial data are analyzed in detail it is noted soon that children below 1 year of age are listed inconsistently: at Lomnice on L. the age of many children entered in the List was counted at weeks (up to an age of 1 year), at Lednice and Mezimostí there are no entries in this category, and at

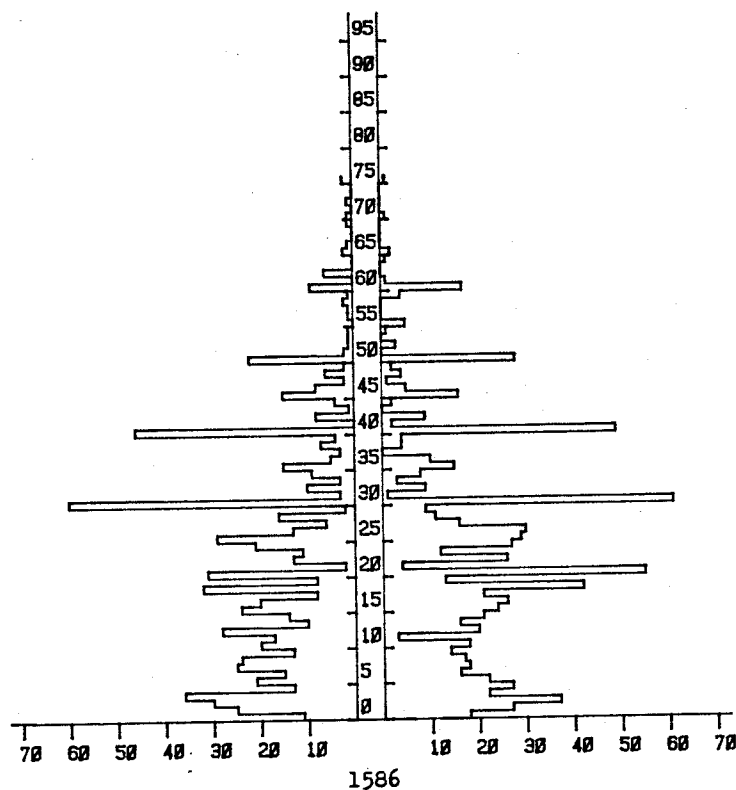
Veselí on L. only three (See also Table 2). Considering the analytic results, data in the List can be regarded to be realistic and as such they can be used in further investigation. Of course, some general limitations and reservations, concerning all sources of this kind from the pre-statistical period (e.g. registration of children under an age of 1 year), apply equally in this case.

Another important characteristic that can be traced in the List is the sex ratio (See Table 1), but its calculation is also affected by the inconsistency of registration of children below 1 year of age. Perhaps only the Lednice data could be regarded to be realistic, but they must be confronted with sex ratio in the nearest age group (1 to 4 years: 391 boys for 1000 girls) which, however, are data of low probability. There is in general a marked downward trend in the numbers of young men, and this compares with data recorded in other places and other periods.⁶⁾

Looking just briefly at the age data we shall see that some of them repeat frequently. In a dominion as large as Třeboň the officers making the census could not, with registration methods available, avoid using various auxiliary data which, however, could be only approximate, representative of a certain category, as suggested by the fact that the last figure in very many numbers is zero, sometimes five. If actual situation is to be reconstituted, the ages of all persons in the List will have to be broken up by years because in five-year groups the higher frequency of use of some data would not be distinct (See Table 2).

It follows from this overview that cumulations of data occur around ages of 20 - 30 - 40 - 50 - 60 years (especially around the first three rounded age data mentioned). Both in towns and villages, these years are determined by the lower and upper extreme values of 2.92 % (twenty-year-olds at Mezimostí) and 10.93 % (thirty-year-olds at Lednice). Cumulation

FIG 1 Age structure of the population of the Třeboní
dominion - urban



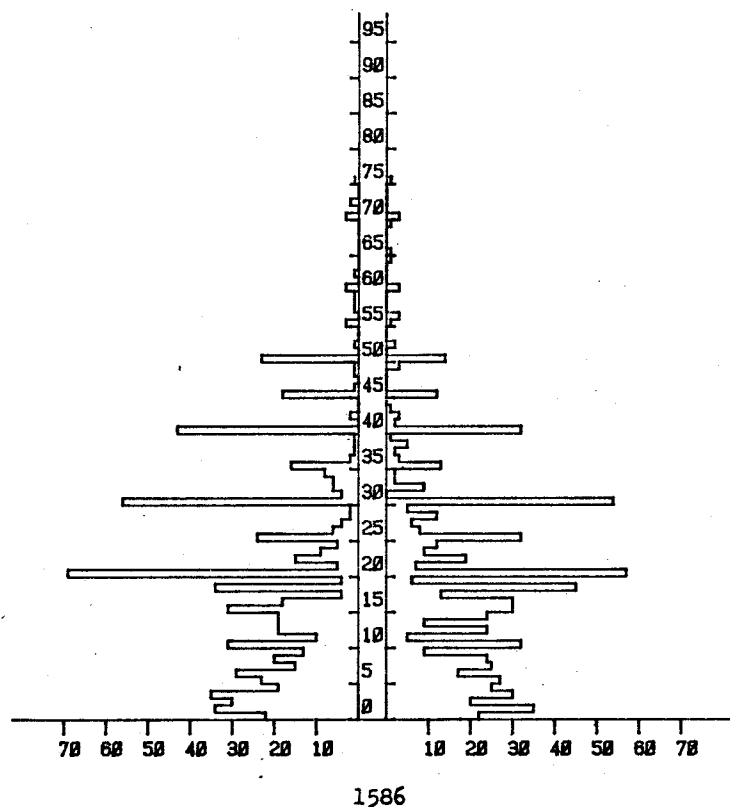
with years whose last figure is five is less pronounced. Some concentration of data is also observed at an age of 7, 12 and 18 years. Of course, the higher frequency of some data could not be so distinct in small villages where the population was low.

Cumulation around numbers 7, 12 and 18 has its justification in the life cycles of that time's society. Auxiliary labour force (cowherds, goosegirls, nurse maids) were entered in the List as being of the seven-year age category. Seven years is the lowest age at which children went to confession and communion. Twelve-year-old youths were commonly included among servants. Twelve years was also the upper limit of the age of the first confession. Eighteen years was generally regarded as an age of full adulthood. All these were by no means arbitrarily chosen boundaries: they were actual terms of the mental and physical maturity of the young generation. Hence, although the age data in the List are not fully accurate, not fully comparable with the accuracy of present-day statistics, they allow to calculate safely the age category to which the person concerned belongs.

Comparing the cumulated data with other data nearest in time, it is seen that there are much more e.g. forty-year-old persons than those old 36, 37, 38, 39 years; this implies that the persons whose actual age would be 36, 37, 38 or 39 were included in the rounded-off age category.

Analysis of similar sources from the pre-statistical period requires detailed critical evaluation of the quality of the data entered. There is no other source of the same type to provide entirely accurate data on that period, so the historical demographer must do with what is available. For later periods, starting from the latter half of the 17th century, accurate data on the age of the population can be provided by very laborious family reconstitution from parish registers, if of course reliable registers were preserved, but

FIG 2 Age structure of the population of the Třebon
dominion - rural



as to the 16th century, a well preserved register is a rarity.

The life expectancy of the population of both the towns and villages can also be easily derived from the data in the tables. It was not very high, compared with present-day life expectancy data; those who exceeded the age of fifty years were few and those who lived to be older than sixty were rare. Only one person in the List was eighty years old and one was ninety. Naturally, both these data are regarded to be rounded.

No exact calculation is needed to see that the population studied is young, with a low mean age. This is a common fact, known also from other studies. 7)

The lowest age of married men and women in the List, the numbers of persons registered as single and the age of the youngest widow and widower can be traced in a similar way.

The age difference between the spouses can also be determined from the data in the List and the most marked ones can be pointed out (See Table 3). Data on Lomnice on L. may be an example of the general marriage patterns of the region and period under study. The table confirms what has been said above about the youth of the population of the Třebon Dominion: most of the married couples, including those of the sublessees, are young or middle aged. In five-year intervals the age differences are not so marked, so it is better to show the extreme data; there were more couples in which the husband was much older than those where the wife was much older. The largest difference is 52 years (the husband was 72, the wife 18); further, there are differences of 36, 35 and 24 years. In the reverse case where the wife was much older, the greatest difference was 35 years (the wife was 70, the husband 35), and the next large difference was 25 years. In the sublessee marriages the greatest differences recorded were 25 years (husband 50 years, wife 25) and 20 years. In none of the sublessee couples was the wife much older than the husband, probably because of the absence of strong eco-

conomic interests that would encourage marriages of convenience in this group, as distinct from the group of widows and widowers who kept their own households. However, the set of married couples of sublessees was too small for definitive conclusions.

Situation in the group of sublessees also differed from other groups in family structure: there were many incomplete families, i.e. a mother or a father with children, in the sublessee group, but in the group of those who had their own households such families occurred rarely: at Lomnice on L. there were only 8 incomplete families of the total number of 117 families who kept their own households.

The people who lived in a household were the family (though perhaps incomplete) of the head of the household, and besides them there might be sublessees and often also other families: married children of the head of the household or his other relatives with their families. Divided by composition types, ⁸⁾ using the given categories with a minor extension with respect to the List studied (subdivision into families with and without servants), there are five groups of families in the List (See Tables 4a, 4b). The most frequent type in both villages and towns was a simple family of parents and children, often with servants. In towns this group consisted of more than 84 families and in villages somewhat less. Cases of several related families living together in one household were more frequent in the country than in towns. On the other hand, there were adequately less households kept by single persons not forming a married couple. This was probably caused by the degree of labour division on farms and in towns: an urban household, dependent on a trade or craft, could probably be more easily maintained by a single person than a rural household where the work of the family was required.

The List also contains data on the marital status of the persons entered, allowing to make a survey based on this cri-

terion (See Tables 5a, 5b). If marital status is studied on the background of age, then of course it will be seen that the group of children up to 10 years of age consist exclusively of single persons, and the first married and also widowed men and women occurred in the latter half of the second decade of life. During the third decade the number of single persons diminished and this trend was maintained with a greater intensity during the fourth decade. The absolutely highest number of married women was recorded already in the third decade of life. Then, in accordance with data from earlier studies, the absolute numbers of both men and women began to fall, and this tendency continued rapidly in the subsequent decade. The number of widows and widowers began to grow.

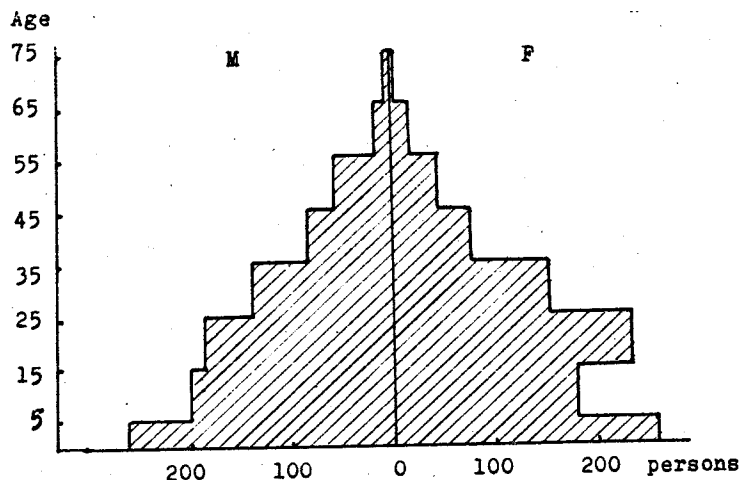
The List we studied confirms what was known from other sources: the number of widows was highly above the number of widowers. In the towns the age group of persons above 40 included 7 widowers and 45 widows. In villages this ratio was similar, though the difference was not so striking: 13 widowers and 31 widows.

The last group to be analyzed are persons in servant relationship to the head of the household. By age structure this group in which farm servants prevailed was young. The oldest farm maid was 45 years and the oldest groom 50, but these were really very exceptional. The age of farm servants seldom exceeded 20 years and most of them (both sexes) were below 20. All were single, or solitary, except for merely two married couples. The youngest maid was 5 years old, entered in the List as a "girl", and there were several six-year-old children, some entered as "boys" or "stable boys". These denominations also referred to some older children up to about ten years. As a rule, where grown-up children lived together with their parents, the family had no servants. In some villages there were no servants at all (Svinky and Kundratice), but most of the families there had teenage children. A relation-

ship can be traced between the presence of sublessees and absence of servants in households. Of course, data on size and on the potential possibilities and actual methods of management should be known for each particular farm or artisan's household, if exact conclusions are to be drawn.

All the questions suggested here could be studied separately within a wider framework, using additional archival documents to explain the general aspects of life in the villages and towns under review, or gathering all comparable data available in both domestic and foreign literature. This is only a basic study, intended to draw attention to the possibilities of further investigation and to show researchers how rich our archives are.

Fig. 3
Age structure of the population of the Třeboň dominion



Notes

1. SOA Třeboň, Vs Třeboň, I B 5 A U, N 1
2. Lomnice n. Lužnicí, Veselí n. Lužnicí, Mezimostí, Ledence; Ševětín, Vitín, Drahotěšice, Kostelec, Radonice, Mázlov, Slovénice (Lower and Upper), Borkovice, Mažice, Vidov, Sviny, Svinky, Kunratice, Ponědrážka, Hrachoviště, Jílovice.
3. These are persons referred to in 17th and 18th century Latin sources as "inguilini" and in historico-demographic literature as "brassiers" in French or "mitleute" in German ("podruzi" in Czech).
4. Čáňová, E., Horská, P., Maur, E., Les listes nominatives de la Bohême, source de données pour l'histoire sociale et la démographie historique. Annales de démographie historique 1987, p. 297.
5. Maur, E. calculated that in 1651 the proportion of youth below 14 years made up 29.3 - 45.7 % of the population of Royal Demesne. In: Populační vývoj českých komorních panství po válce třicetileté. (Population development of Bohemian Royal Demesne after the Thirty-Year War.) Acta universitatis Carolinae, Philosophica et historica 3, 1972, p. 57. Data from entirely different areas for the 19th century are given in V. Srb, M. Kučera, L. Růžička, Demografie, Praha 1971, pp. 162-163: 200 - 400 persons of a thousand in this group.
6. E.g. Mužík, P., Obyvatelstvo města Domažlic v letech 1651 - 1830. (Population of the town Domažlice in 1651 - 1830.) Sborník archivních prací XXXVI/1, p. 165 - the table shows situation in 1830.
7. Maur, E., Problémy demografické struktury Čech v polovině 17. stol. (Problems of the demographic structure of Bohemia in the mid-17th century.) Československý časopis historický, XIX, 1971/3, p. 862.
8. Imhof, A.E., Einführung in die Historische Demographie, Beck'sche Elementarbücher, München: Beck, 1977, p. 71 - 6 groups are proposed.

Tab. 1 Sex ratio by age (men for thousand women), 1986

Age	Lomnice on Luž.	Mezi- mostí	Veselí on Luž.	Ledenice	Villages	Total
0	455	.	500	1000	833	738
1-4	919	826	1290	391	1111	1000
5-9	810	2125	1333	1231	980	1048
10-14	1536	1429	958	632	1043	1087
15-19	774	571	763	667	734	732
20-24	769	500	710	350	990	802
25-29	871	545	500	1250	603	658
30-34	943	1667	778	1700	1194	1122
35-39	1182	250	1125	1000	875	965
40-44	1000	1200	800	1000	1184	1040
45-49	1833	714	1154	500	1400	1233
50-54	866	800	1000	667	1500	1063
55-59	500	2000	333	.	1500	733
60 +	473	8000	1333	2000	1000	1000
Total	900	916	890	777	976	884

Tab. 2a Age structure of the population - villages

Age	M	F	Total	Age	M	F	Total
0	22	22	44	45	18	12	30
1	34	35	69	46	1	-	1
2	30	20	50	47	-	-	-
3	35	30	65	48	1	-	1
4	19	25	44	49	1	3	4
5	23	27	50	50	23	14	37
6	29	17	46	51	-	-	-
7	15	25	40	52	1	2	3
8	20	24	44	53	-	-	-
9	13	9	22	54	-	-	-
10	31	32	63	55	3	1	4
11	10	5	15	56	-	3	3
12	19	24	43	57	1	-	1
13	19	9	28	58	1	-	1
14	19	24	43	59	1	-	1
15	31	30	61	60	3	3	6
16	18	30	48	61	-	-	-
17	4	13	17	62	1	-	1
18	34	45	79	63	-	-	-
19	4	6	10	64	-	1	1
20	69	57	126	65	-	1	1
21	5	7	12	66	-	-	-
22	15	19	34	67	-	-	-
23	9	9	18	68	-	-	-
24	5	12	17	69	-	1	1
25	24	32	56	70	3	3	6
26	6	8	14	71	-	-	-
27	4	6	10	72	2	-	2
28	2	12	14	73	-	-	-
29	2	5	7	74	-	-	-
30	56	54	110	75+	1	1	2
31	4	..	4				
32	6	9	15				
33	6	2	8				
34	8	2	10	Uns.	3	6	9
35	16	13	29	Total	780	799	1579
36	2	3	5				
37	1	2	3				
38	1	5	6				
39	1	1	2				
40	43	32	75				
41	-	2	2				
42	2	3	5				
43	-	1	1				
44	-	-	-				

Tab. 2b Age structure of the population - towns

Age	M	F	Total	Age	M	F	Total
0	11	18	29	45	15	16	31
1	25	27	52	46	8	5	13
2	30	37	67	47	2	1	3
3	36	22	58	48	6	4	10
4	13	27	40	49	2	2	4
5	21	22	43	50	22	28	50
6	15	16	31	51	2	--	2
7	25	18	43	52	1	3	4
8	24	17	41	53	1	--	1
9	13	14	27	54	1	1	2
10	20	18	38	55	--	5	5
11	17	3	20	56	1	--	1
12	28	20	48	57	1	--	1
13	10	16	26	58	2	2	4
14	14	21	35	59	1	4	5
15	24	24	48	60	9	17	26
16	20	26	46	61	--	1	1
17	8	21	29	62	6	--	6
18	32	42	74	63	--	--	--
19	8	13	21	64	--	1	1
20	31	55	86	65	2	2	4
21	2	4	6	66	1	--	1
22	13	26	39	67	--	--	--
23	11	12	23	68	--	--	--
24	21	27	48	69	1	--	1
25	29	29	58	70	1	1	2
26	13	30	43	71	--	--	--
27	6	16	22	72	1	--	1
28	16	11	27	73	--	--	--
29	2	9	11	74	--	--	--
30	60	61	121	75+	2	1	3
31	3	1	4				
32	10	9	19				
33	3	3	6	Uns.	2	1	3
34	9	8	17				
35	15	15	30	Total	806	911	1717
36	5	10	15				
37	3	--	3				
38	7	4	11				
39	4	4	8				
40	46	49	95				
41	--	2	2				
42	8	9	17				
43	1	--	1				
44	4	2	6				

Tab. 2c Age structure of the population - Lomnice nad Lužnicí

Age	M	F	Total	Age	M	F	Total
0	5	11	16	45	9	5	14
1	12	3	15	46	2	--	2
2	8	14	22	47	--	--	--
3	12	7	19	48	1	--	1
4	4	12	16	49	--	--	--
5	6	9	15	50	13	14	27
6	5	7	12	51	--	--	--
7	6	11	17	52	--	1	1
8	11	8	19	53	--	--	--
9	6	7	13	54	--	--	--
10	10	8	18	55	--	2	2
11	10	1	11	56	--	--	--
12	13	5	18	57	1	--	1
13	4	6	10	58	--	--	--
14	6	8	14	59	--	--	--
15	12	12	24	60	5	15	20
16	9	9	18	61	--	--	--
17	1	11	12	62	--	--	--
18	17	16	33	63	--	--	--
19	2	5	7	64	--	1	1
20	20	25	45	65	1	2	3
21	--	2	2	66	--	--	--
22	6	12	18	67	--	--	--
23	2	2	4	68	--	--	--
24	11	12	23	69	--	--	--
25	12	12	24	70	1	1	2
26	6	10	16	71	--	--	--
27	2	3	5	72	--	--	--
28	7	4	11	73	--	--	--
29	--	2	2	74	--	--	--
30	28	33	61	75+	2	--	2
31	--	--	--				
32	3	1	4	Uns.	--	--	--
33	--	--	--				
34	1	2	3	Total	333	370	703
35	8	5	13				
36	3	5	8				
37	1	--	1				
38	1	1	2				
39	--	--	--				
40	24	26	50				
41	--	--	--				
42	2	2	4				
43	1	--	1				
44	1	--	1				

Tab. 2d Age structure of the population - Veselí nad Lužnicí

Age	M	F	Total	Age	M	F	Total
0	1	2	3	45	4	8	12
1	7	11	18	46	5	3	8
2	12	9	21	47	2	1	3
3	16	5	21	48	3	2	5
4	5	6	11	49	1	-	1
5	7	4	11	50	3	5	8
6	6	5	11	51	1	-	1
7	7	5	12	52	1	1	2
8	9	7	16	53	1	-	1
9	3	3	6	54	-	-	-
10	6	4	10	55	-	3	3
11	2	1	3	56	-	-	-
12	2	8	15	57	-	-	-
13	2	4	6	58	1	-	1
14	6	7	13	59	1	3	4
15	2	5	7	60	1	-	1
16	8	7	15	61	-	-	-
17	5	9	14	62	6	-	6
18	9	13	22	63	-	-	-
19	5	4	9	64	-	-	-
20	5	12	17	65	-	-	-
21	1	1	2	66	1	-	1
22	5	4	9	67	-	-	-
23	4	6	10	68	-	-	-
24	7	8	15	69	-	-	-
25	7	9	16	70	-	-	-
26	3	11	14	71	-	-	-
27	1	7	8	72	-	-	-
28	4	3	7	73	-	-	-
29	2	4	6	74	-	-	-
30	7	13	20	75+	-	1	1
31	1	1	2				
32	5	6	11				
33	5	2	5	Uns.	2	1	3
34	5	5	10				
35	4	6	10	Total	252	275	527
36	2	5	7				
37	2	2	4				
38	6	2	8				
39	4	3	7				
40	8	10	18				
41	-	2	2				
42	5	6	11				
43	-	-	-				
44	3	2	5				

Tab. 2e Age structure of the population - Mezimostí

Age	M	F	Total	Age	M	F	Total
0	-	-	-	45	1	1	2
1	4	7	11	46	1	2	3
2	9	5	14	47	-	-	-
3	4	6	10	48	2	2	4
4	2	5	7	49	1	2	3
5	7	5	12	50	2	3	5
6	2	1	3	51	1	-	1
7	3	1	4	52	1	1	2
8	1	1	2	53	-	-	-
9	3	1	4	54	1	1	2
10	2	-	2	55	1	-	1
11	4	-	4	56	1	-	1
12	4	2	6	57	-	-	-
13	2	2	4	58	1	-	1
14	1	3	4	59	-	1	1
15	1	2	3	60	2	1	3
16	1	5	6	61	-	1	1
17	1	1	2	62	-	-	-
18	4	3	7	63	-	-	-
19	1	3	4	64	-	-	-
20	1	6	7	65	1	-	1
21	-	1	1	66	-	-	-
22	2	8	10	67	-	-	-
23	4	1	5	68	-	-	-
24	3	4	7	69	1	-	1
25	3	5	8	70	-	-	-
26	3	6	9	71	-	-	-
27	3	5	8	72	-	-	-
28	5	3	8	73	-	-	-
29	-	3	3	74	-	-	-
30	8	5	13	75+	-	-	-
31	2	-	2				
32	2	2	4	Uns.	-	-	-
33	1	1	2				
34	3	1	4	Total	113	127	240
35	1	2	3				
36	-	-	-				
37	-	-	-				
38	-	1	1				
39	-	1	1				
40	5	4	9				
41	-	-	-				
42	1	1	2				
43	-	-	-				
44	-	-	-				

Tab. 4a Types of families - towns

Type of family	Lomnice on L.	Mezimostí	Veselí on L.	Ledenice	Total
I. Solitary householders ^a b	1		6	1	8
II. No family households ^a b		1		2	3
III. Simple family households ^a b	57 29*	30 13*	73 31*	33 6*	193 79*
IV. Extended family households ^a b	13 6	2 2	3	6	24 8
V. Multiple family households ^a b	1 1	1		2	4 1
Total	118 29*	44 13*	101 31*	54 6*	317 79*

* sublessees

Tab. 4 b Types of families - villages

Type of family	Ševětín	Vitín	Dráho- tešice	Koste- lec	Rad- nice	Maze- lov	Slově- nice	Borko- vice	Mažice
I. Solitary householders ^a b				1	1		1		
II. No family households ^a b			8 1*	2 6*	2 4*	10 4*	17 5*	10 7*	1 2
III. Simple family households ^a b	9 9*	5 4	7	4 2	1 2	9 1	6 3	1 2	
IV. Extended family households ^a b	1 1	1 1		2 1	2 1	2 2	2 1	2 1	
V. Multiple family households ^a b	19 9*	21 5	19 1*	10 6*	8 4*	26 4*	30 5*	14 7*	2 1*
T o t a l									

a) without servants; b) with servants; * sublessees

Tab. 4 b Types of families - villages (cont.)

Type of family	Vidov	Sviny u Veselí ⁴⁾	Svinky	Kundratice ⁴⁾	Ponědražko	Hrachovické	Jilovice	Total
I. Solitary householders ^a								2
II. No family households ^a	1			1				1
III. Simple family households ^a	6	23	6	6	22	2	10	125
IV. Extended family households ^a	1			6*	4	6	4	48*
V. Multiple family households ^b		2					2	9
Total	7	26	6	7	6	8	18	227
				6*				48*

a) without servants; b) with servants; * subclasses; 4) at Sviny and Kundratice the servants are not listed with the households but are all annexed at the end, 9 persons on the whole (3 men and 6 women)

Tab. 5a Population by age, sex and marital status, Třebon
Dominion 1586 - urban

Age	Male					Female				
	sin.	mar.	wid.	uns.	total	sin.	mar.	wid.	uns.	total
0	11	-	-	-	11	18	-	-	-	18
1	25	-	-	-	25	27	-	-	-	27
2	30	-	-	-	30	37	-	-	-	37
3	36	-	-	-	36	22	-	-	-	22
4	13	-	-	-	13	27	-	-	-	27
5	21	-	-	-	21	22	-	-	-	22
6	15	-	-	-	15	16	-	-	-	16
7	25	-	-	-	25	18	-	-	-	18
8	24	-	-	-	24	17	-	-	-	17
9	13	-	-	-	13	14	-	-	-	14
10	20	-	-	-	20	18	-	-	-	18
11	17	-	-	-	17	3	-	-	-	3
12	28	-	-	-	28	20	-	-	-	20
13	10	-	-	-	10	16	-	-	-	16
14	14	-	-	-	14	21	-	-	-	21
15	24	-	-	-	24	24	-	-	-	24
16	20	-	-	-	20	25	-	-	-	25
17	8	-	-	-	8	20	-	-	-	20
18	30	2	-	-	32	29	1	-	-	30
19	8	2	-	-	10	13	3	-	-	16
20	23	8	-	-	31	24	30	1	-	55
21	1	1	-	-	2	2	2	-	-	4
22	8	4	1	-	13	20	20	-	-	40
23	5	6	-	-	11	5	7	-	-	12
24	8	13	-	-	21	4	19	2	2	27
25	8	21	-	-	29	4	21	3	3	29
26	1	13	-	-	14	2	23	1	4	30
27	2	3	-	1	6	1	12	-	3	16
28	2	13	-	1	16	1	8	-	2	11
29	1	2	-	-	3	1	7	1	7	9
30	9	49	1	1	60	6	46	4	5	61
31	1	3	-	-	4	1	1	-	1	3
32	1	9	-	-	10	-	7	1	1	9
33	1	3	-	-	4	-	3	-	1	4
34	1	9	-	-	10	-	3	1	4	8
35	1	15	-	-	16	-	12	1	2	15
36	4	4	-	1	9	-	10	-	-	10
37	3	7	-	-	10	-	7	-	-	7
38	7	7	-	-	14	-	1	2	1	4
39	4	4	-	-	8	-	4	-	-	4
40	4	4	-	-	8	-	4	-	-	4
41	43	2	1	1	46	1	32	5	11	49
42	7	1	-	-	8	-	1	3	1	9
43	1	-	-	-	1	-	-	-	-	1
44	4	-	-	-	4	-	-	-	-	4

Tab. 5a (cont.)

Age	Male					Female				
	sin.	mar.	wid.	uns.	total.	sin.	mar.	wid.	uns.	total
45	-	13	2	-	15	1	10	4	1	16
46	-	6	2	-	8	-	3	1	1	5
47	-	2	-	-	2	-	1	-	-	1
48	-	6	-	-	6	-	3	-	1	4
49	-	2	-	-	2	-	2	-	-	2
50	-	22	-	-	22	-	10	12	6	28
51	-	2	-	-	2	-	-	-	-	-
52	-	1	-	-	1	-	2	-	1	3
53	-	1	-	-	1	-	-	-	-	-
54	-	1	-	-	1	-	-	1	-	1
55	-	-	-	-	-	-	-	2	3	5
56	-	1	-	-	1	-	-	-	-	-
57	-	1	-	-	1	-	-	-	-	-
58	-	2	-	-	2	-	-	-	-	-
59	-	1	-	-	1	-	2	1	1	4
60	-	9	-	-	9	-	2	11	4	17
61	-	-	-	-	-	-	-	1	-	1
62	-	5	-	1	6	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	1	1
65	-	-	-	-	-	-	-	2	-	2
66	-	2	-	-	2	-	-	-	-	-
67	-	1	-	-	1	-	-	-	-	-
68	-	-	-	-	-	-	-	-	-	-
69	-	1	-	-	1	-	-	-	-	-
70	-	1	-	-	1	-	1	-	-	1
71	-	-	-	-	-	-	-	-	-	-
72	-	1	-	-	1	-	-	-	-	-
73	-	-	-	-	-	-	-	-	-	-
74	-	-	-	-	-	-	-	-	-	-
75+	-	1	1	-	2	-	-	1	-	1
Unsp.	-	-	-	2	2	-	-	-	1	1
Total	459	329	10	8	806	462	329	60	60	911

Tab. 5b Population by age, sex and marital status, Třebon' dominion 1586 - rural

Age	Male					Female				
	sin.	mar.	wid.	uns.	total	sin.	mar.	wid.	uns.	total
0	22	-	-	-	22	22	-	-	-	22
1	34	-	-	-	34	35	-	-	-	35
2	30	-	-	-	30	20	-	-	-	20
3	35	-	-	-	35	30	-	-	-	30
4	19	-	-	-	19	25	-	-	-	25
5	23	-	-	-	23	27	-	-	-	27
6	29	-	-	-	29	17	-	-	-	17
7	15	-	-	-	15	25	-	-	-	25
8	20	-	-	-	20	24	-	-	-	24
9	13	-	-	-	13	9	-	-	-	9
10	31	-	-	-	31	32	-	-	-	32
11	10	-	-	-	10	5	-	-	-	5
12	19	-	-	-	19	24	-	-	-	24
13	19	-	-	-	19	9	-	-	-	9
14	19	-	-	-	19	24	-	-	-	24
15	31	-	-	-	31	28	2	-	-	30
16	17	1	-	-	18	23	7	-	-	30
17	1	1	-	-	2	8	5	-	-	13
18	3	3	-	-	6	17	17	-	-	34
19	2	2	-	-	4	5	1	-	-	6
20	29	40	-	-	69	22	34	1	-	57
21	1	4	-	-	5	1	6	-	-	7
22	7	7	1	-	15	5	14	-	-	19
23	3	6	-	-	9	3	6	-	-	9
24	5	5	-	-	10	4	8	-	-	12
25	4	20	-	-	24	1	30	1	-	32
26	2	4	-	-	6	1	6	-	1	8
27	1	3	-	-	4	6	6	-	-	12
28	-	2	-	-	2	-	12	-	-	12
29	1	1	-	-	2	-	5	-	-	5
30	3	50	2	1	56	4	39	1	10	54
31	1	3	-	-	4	-	-	-	-	-
32	-	6	-	-	6	1	6	1	1	9
33	-	6	-	-	6	2	2	-	-	4
34	1	7	-	-	8	1	1	-	-	2
35	-	14	2	-	16	1	8	3	1	13
36	-	2	-	-	2	-	3	-	-	3
37	1	-	-	-	1	-	2	-	-	2
38	-	1	-	-	1	-	4	-	1	5
39	-	1	-	-	1	-	1	-	-	1
40	3	38	-	2	43	1	17	9	5	32
41	-	-	-	-	-	-	1	1	-	2
42	1	1	-	-	2	-	2	-	1	3
43	-	-	-	-	-	-	1	-	-	1
44	-	-	-	-	-	-	-	-	-	-

Tab. 5b (cont.)

Age	Male					Female				
	sin.	mar.	wid.	uns.	total	sin.	mar.	wid.	uns.	total
45	-	15	3	-	18	-	6	5	1	12
46	-	1	-	-	1	-	-	-	-	-
47	-	-	-	-	-	-	-	-	-	-
48	-	1	-	-	1	-	-	-	-	-
49	-	-	1	-	1	-	3	-	-	3
50	1	20	1	1	23	-	10	3	1	14
51	-	-	-	-	-	-	-	-	-	-
52	-	1	-	-	1	-	1	1	-	2
53	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-
55	-	3	-	-	3	-	-	1	-	1
56	-	-	-	-	-	-	3	-	-	3
57	-	1	-	-	1	-	-	-	-	-
58	-	1	-	-	1	-	-	-	-	-
59	-	1	-	-	1	-	-	-	-	-
60	-	1	1	1	3	-	1	1	1	3
61	-	-	-	-	-	-	-	-	-	-
62	-	1	-	-	1	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	1	-	1
65	-	-	-	-	-	-	-	1	-	1
66	-	-	-	-	-	-	-	-	-	-
67	-	-	-	-	-	-	-	-	-	-
68	-	-	-	-	-	-	-	-	-	-
69	-	-	-	-	-	-	-	-	1	1
70	-	1	2	-	3	-	2	1	-	3
71	-	-	-	-	-	-	-	-	-	-
72	-	1	-	1	2	-	-	-	-	-
73	-	-	-	-	-	-	-	-	-	-
74	-	-	-	-	-	-	-	-	-	-
75+	-	1	-	-	1	-	1	-	-	1
Unsp.	-	-	-	3	3	-	-	-	6	6
Total	481	277	13	9	780	461	277	31	30	799

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ON USING THE 1661-1839 LISTS OF SUBJECTS OF THE TŘEBOŇ
 DOMINION TO STUDY THE AGE STRUCTURE OF THE POPULATION

Problems of Age in Historical Demography

Demographing ageing of population is one of the topical problems of scientific investigation of populations in Europe today. The increasing proportion of people in post-productive age in many industrial countries is of course not just a problem of population structure alone; it will certainly affect economic and social development in general. What weight can this phenomenon be expected to have? Obviously, analysis of the present demographic situation in Europe will hardly suffice when the answer is sought, and sooner or later historical demographers will have their say.

For the International Symposium on Demographic Ageing of Population to be held in Prague in 1989, a pack of problems

to be discussed by demographers has been proposed by Jacques Dupâquier who has studied the history of European population for many years. In his view, the importance of investigations on the age structure of historical population reaches far beyond demography itself. The age distribution of the population must certainly be studied everywhere suitable historical sources exist. However, these efforts must not be confined to merely learning the age structures without a view to biological, economic, sociological and psychological implications.

What is the real relationship between legally acknowledged age and biological age in historical populations? Has the average age of puberty changed over the centuries from prehistorical times to the present day? Until what age did the reproduction process continue in people in different regions and historical periods? Was a man of forty really regarded to be old in the so-called traditional communities, as some people believe? What was the age of the start and end of economic activity in different communities and historical periods? What work was done by children and by people now regarded to be old? How was the legal concept of majority developed in different regions and different social groups?

In some historical periods and some communities, men and women preferred saying they were of a certain age whereas other age groups were much less popular. Why? What was the cultural and social significance of rounding the people's age to certain values?

Czech historical demographers have attempted many times to find answers to many of these questions. They have always been eager to discover the relationships between population processes and social development. Their eagerness to study the relationships between demographic and social structures is strongly encouraged by the wealth of the collections in Czech archives referring to population development during the period of re-catholicization of Bohemia after the Battle of the White

Mountain (1620) and during the so-called second serfdom in central Europe. 1)

Lists of subjects, made at an about the same time every year by the clerks of Czech dominions, are a unique source of data from the pre-statistical period. The list of subjects of the Třeboň dominion the analysis of which is the subject of this paper has a specific position among them. Before experts of the State Archives of Třeboň describe this source in detail it would be useful to explain why this particular source has been picked for an investigation of the problem of people's age in history.

Researchers involved in historical demographic investigation in Czechoslovakia have never doubted that the annual lists of subjects of the Třeboň dominion, one of the largest feudal domains in Bohemia in the period of late feudalism, may help to explain at once several problems which are still open in the study and use of the so-called nominative lists of population in several regions of Bohemia between the mid 17th and mid 19th centuries. Even the most serious sources such as the Confession List of 1651, which includes not only the serfs but also a large proportion of free inhabitants of many Czech dominions and towns, did not avoid the rounding of the age of the people and failed to record consistently the infant part of the population. The age and sex structure of the population could not be identified clearly before the government organized the first censuses which provided data as of a single fixed date. All the civil, military and church lists of population, made between the mid 18th and mid 19th centuries, included age data learned from the persons concerned. Determination of age according to the date of birth started in the western part of the Hapsburg Monarchy, including the Bohemian countries, as late as in 1857. 2)

The use of annual lists of subjects, covering all population of more than sixty villages of the Třeboň dominion from

1661 to the early 19th century, offers a unique chance to learn the real age structure of a central European population in the pre-statistical period; however, to use this chance, the researcher must face great methodological problems. Before the historical demography group began to tackle this problem, they had asked advice from Louis Henry, a French demographer, author of methods and techniques now used most frequently in historical demography.

Louis Henry's book *Technique d'analyse en démographie historique* (Paris, INED 1980) contains a special chapter (pp. 159-166) on the lists of population, entitled "Listes nominatives successives". In his letter of 12th July 1986 to Pavla Horská, who had asked how to proceed in excerption of the annual lists, he said that in the chapter mentioned he had not dealt with the use of annual lists in detail because in French sources such lists dated to a time before the 19th century occur very sporadically. When he saw a sample of Třeboň excerpts referring to one village over several decades, he said the Czech lists were a remarkable source. The method he recommended for its exploitation was family reconstitution. Although the lists dated before 1753 included age data only on children, not their parents, accurate tracing of families can lead to detection of the data of birth of many parents in older lists where they were entered as children in their original families. Thus only children born and deceased between two lists would escape analysis, and also the wedding data. However, if these absent data could be found in parish registers, family reconstitution based on annual lists could be easier than the classical technique of detailed excerption from registers. Nevertheless, the Třeboň material is so ample that family reconstitution for the whole dominion would require thousands of hours of work.

A viable method by which the small group of Czech historical demographers could undertake such a big task has not yet

been found, but the Třeboň lists are too great a lure. Why not at least make an attempt to excerpt data only from some selected annual records for the whole dominion and whole years? This would allow, first, to determine the number of the dominion's population in the selected years and second, to explore the extent to which the data on age in the lists can help in learning the distribution of the population in separate age groups. Thus we picked the years 1665, 1700, 1753, and 1800. This study on age structures, based on written sources from the pre-statistical period, refers to these four years.

Lists of Subjects of the Třeboň Dominion

Advanced enterprising activity of feudal lords in Bohemia required advanced recording and control of the population in each particular dominion; this in turn led to introduction of new special forms of administrative work and special kind of documents. Thorough exploitation of labour force required measures to restrict free movement of the rural people, so lists of subjects were made periodically for this purpose in the dominions. ³⁾ They developed in the 17th century from the so-called orphan registers ⁴⁾ which served for the recording of orphans fit for service to the manor. As the orphan registers had to be regularly updated, a procedure called presentation of orphans was held every year between about the end of November and about the 25th of December.

The oldest preserved orphan registers of the Třeboň dominion date to the years 1629, 1634 and 1656-1660. Count Jan Adolf Schwarzenberg who became owner in the Třeboň dominion in 1660 made a change in the orphan registers. Starting from 1661, registers which had referred only to orphans were extended to cover all rural population. Inhabitants of subject towns and townlets did not appear in these records - only subtenants with families and orphans who had come to the towns

from villages were entered. This fact must be taken into account because the population of the dominion's four towns and three townlets constituted a substantial part of the total population.

Several circulars concerning the presentation of orphans have been preserved in the collections of the Třeboň Estate. The 1809 circular, for example, says: "Notice is hereby given to the village Magistrates listed below, when and on which day the said Magistrates, every one with his people, shall of a surety appear before this Office for the presentation of orphans, as is written to be seen below. The said Magistrates are then strictly ordered and bidden that they themselves in person shall take with them here on that day all the peasants, cottagers and subtenants, as well as servants counted from on age of 14 years, and so present them to this Office that whatever they may have gained can be chalked up and whatever they may have lost can be duly written off". 5)

The lists of subjects are held in the Regional State Archives of Třeboň. They are part of the Třeboň Estate files under shelf mark IB 5 AU Nro. 1; the later ones, starting from 1785, have shelf mark ID 5 AU Nro. 1. Until 1792, lists of subjects from villages of the estate of the Augustinian Monastery of Třeboň were filed separately under shelf marks IB 5 AU Nro. 3 and ID 5 AU Nro. 3. After 1792 the monastery estate was transferred to the Třeboň dominion and the lists were filed jointly. On the whole there are 175 files of lists of subjects of 1586 and 1661-1839 for the Třeboň dominion and 88 files of 1699-1792 for the estate of the Třeboň monastery. Further, there are two files of the preceding lists of orphans referring to 1629, 1634 and 1656-1660. Only several years (1664, 1703 and 1741) are not covered, and only some records (1709, 1712, 1783) are incomplete.

Every annual list of subjects is bound separately, mostly in leather or half-leather. Binding of one-year records in two

volumes occurred rarely. The lists were filed under various titles: First they were entitled "Registers of Presentation of Orphans" in Czech, or "Waisenbuch", "Waisen oder Mannschafsbuch" in German, and later in the 19th century "Bauer, Innleut. and Waisenbuch", or only "Mannschafsbuch".

The title page with the name of the file is followed by the index of villages, listed according to their geographical position in relation to each other and in the same order as their inhabitants appeared at Třeboň for the presentation of orphans. As the dominion extended, the number of villages in the files increased. The villages Vlastiboř and Svinky were added in 1672, Líšnice in 1706, Kosov, Zborov, Ohrazení, Sv. Voršila and Lomec in 1709, and Hamr, Val and Vlkov in 1729. Later the index of villages had an alphabetical order.

Most of the records were kept in the Czech language.

As for the method of keeping the records, there are two distinct periods. Until 1743, the settled population of each village was first listed by farmsteads, 6) including the deceased husbandmen's widows and orphans, followed by subtenants, also including widows and orphans. This system changed in 1744: first there were separate lists, for each village, of the peasants, cottagers and subtenants, followed by a separate section with data on the widows and orphans left by the persons mentioned above when they died.

Below the names of the villages the clerks wrote entries concerning each family. First there is the name of the peasant (farmer), or the subtenant, followed by the name of his wife. Until early in the 18th century these persons were entered without indication of their age. From the mid century the indication of age occurred irregularly and from 1753 it became a rule. The reliability of the age data was affected by the fact that the age data entered in the list during the presentation of orphans depended on what the clerk was told by the person concerned, or his/her relatives, or the magistrate (births,

weddings, deaths). Errors in age data might also be caused by copying incorrect data every year. The names of parents in the list are followed by names of their children in the order of their births, and their age is indicated. Children added to a finished list were usually entered without age data. If a person in the list died during the year, the event was denoted by an added cross.

Entries concerning individual persons often contain various notes and comments, especially on the movement and behaviour of the serfs (on journey, in service), often with indication of the place of service and the wage earned (in Moravia, left long ago, nothing known of him, tramping, of another dominion, seeks father and does not come back, in Prague - given consent and the like), on their social status and relations (subtenant, retired, with step-father, begs his living, tramps and begs, in the army, fled from gaol, lives with brother, quitted for theft, is to marry, raped, illegitimate, now student etc.), on state of health (lame, deficient, old and deficient, dumb, blind beggar, deaf old woman etc.), on empty farmsteads, on desertions from farmsteads, on persons who went away to become apprentices, students, servants, soldiers and the like.

The lists of subjects also served as a basis for general statistics on the serfs. The collections of the Třeboň Estate contain ample material of annual reports summarized from the data of the lists of subjects; these had been used before the national statistics were introduced. They contained data on the number of population of the dominion, number of those who were absent and why they were absent (journeyman, in the army, in service and the like). Some annual reports contain only summarized numbers of births, marriages, deaths, and persons taken to the army). ⁷⁾

Hence, the lists of subjects are a unique source for studies on the problems of historical demography, especially the number of population, its movement and social structure, state

of health and economic status. They can also be of great help as additional material in the genealogical, demographic and onomastic study of parish registers.

Age Structure of Population in 1665 and 1700

The files of lists dating to the earlier period are of limited use in the determination of the age structure of the population. Results of excerption of the age of persons from the lists of 1665 (one of the first years of the 177-year series) and from 1700 are used here ⁸⁾ as an example. As it was impossible to make even a very approximate estimate of the age of married and widowed persons from this source without further search in parish registers or lists referring to other years, the tables added to this paper (Appendixes 1, 2 and tables 1, 2), showing age structure in age units and in five-year age groups, refer only to unmarried men and women, whereas the age of other persons is shown just by aggregative figures.

The population in the list is divided into those present and those absent (with the absent persons one cannot be sure whether they were still alive when the list was made). Persons whose entries bore notes such as "nothing known of him", "wanderers", "in the army" (men taken to the army were filed separately in the set studied) were included in the "absent" group. Though this was a very subjective criterion, we think there were not many errors and the results were not much distorted. ⁹⁾

In the case of subtenants, excerptors paid no attention to the notes saying that the persons concerned served in another village (all children of a subtenant family might in fact stay in villages other than where they were listed, as their listing with their parents continued until they left the family by marriage or death). Hence, the figures in the annex, concerning the numbers of population in the villages, can serve only for rough orientation, because they refer to persons listed in the village, not to persons present there.

Tab. 1 Age structure of the population of the Třeboň dominion, 1665

Age	M	F	Total
s i n g l e s			
0	80	67	147
1-4	288	268	556
5-9	383	403	786
10-14	381	399	780
15-19	307	281	588
20-24	174	166	340
25-29	47	41	88
30-34	29	21	50
35-39	4	2	6
40-44	7	11	18
45-49	6	4	10
50-54	9	17	26
55-59	3	4	7
60 +	10	6	16
Unsp.	9	14	23
Total	1737	1704	3441
Married	989	992	1981
Widow.	40	146	186
On the whole	2766	2842	5608

The 1665 lists contained entries concerning 6296 persons, including 5608 persons present in the territory of the dominion and 684 (10.9 %) staying outside it. By the year 1700 the number of subjects increased to 10 350, and 856 of them were outside.

The data obtained provide only some basic information on the age structure of the population. Assuming that there was hardly any boy or girl who would marry before an age of 15, we think that the age structure of the youngest part of the population suggested by our data is very close to reality. Both the tables (pp. 114-115) and the figures (2-3) show how uneven the age structure of unmarried persons was in the list (this is particularly conspicuous in the 1665 files). It can be taken for granted that age was just roughly estimated in many cases.

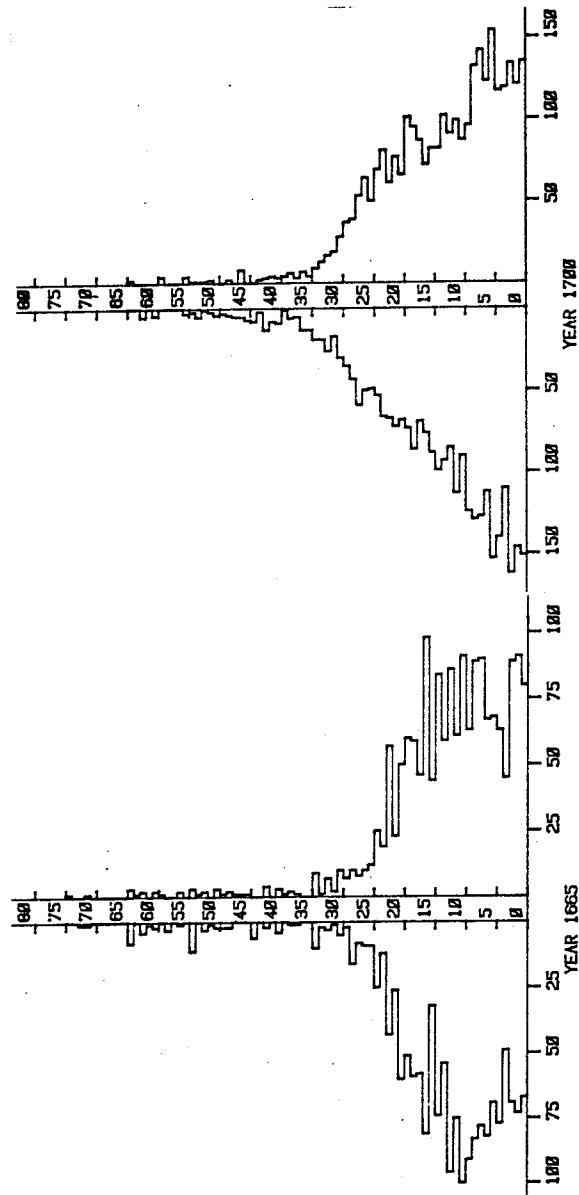
Tab. 2 Age distribution of the population of the Třeboň dominion in 1700

Age	Male	Female	Total
s i n g l e			
0	135	151	286
1-4	491	558	1049
5-9	647	645	1292
10-14	461	480	941
15-19	437	392	829
20-24	354	326	680
25-29	243	236	479
30-34	86	111	197
35-39	24	37	61
40-44	12	40	52
45-49	10	24	34
50 +	4	27	31
Total	2904	3027	5931
Married	1608	1615	3223
Widowed	35	307	342
On the whole	4547	4949	9496

The number of three-year-old children is conspicuously high, and with the older children there is an almost regular alternation of the frequencies of odd and even figures of age: there are few eleven-, thirteen-, and fifteen-year-old children but this is offset by high numbers of those who were ten, twelve, fourteen and sixteen years old.

There were not many older single men and women, but even these were mostly entered as being of even-numbered age, and most of the age data are multiples of four. Hence, even numbers enjoyed some priority but this does not seem to have caused much distortion in the age structure of the population. The differences between recorded age and actual age was probably small though in older age it might be greater. In children and adolescents, in our opinion, it did not exceed 2-3 years.

Fig. 1 Age structure of the never-married, Třeboň Dominion in 1665 and 1700



Irregularities were also observed in the age structure of unmarried men and women in the list of 1700, but the higher and lower ages did not alternate so regularly as in 1665. It is interesting that in some years there were large differences in frequencies between males and females.

The data suggest generally what was the proportion of children below 15 years out of the total population. In 1700 the percentage of persons older than 15 years was appreciably greater than in 1665 and the proportion of younger age groups slightly declined. This difference could hardly have been caused merely by differences in the recording of age in the sources, though it can be admitted that over the long period of practice (more than thirty years in 1700), the clerks might develop some habits and that their scrupulosity or slackness might also be involved. The proportion of older persons in the population was obviously influenced by external conditions of population development. In 1665, seventeen years after the end of the Thirty Years' War (there is evidence that was operations still continued in the Třeboň dominion in 1648), the older age groups were certainly affected by the war; in 1700, on the other hand, the situation must have been better and the slightly larger proportion of persons older than 15 years seems to

Tab. 3. Population of the Třeboň dominion, divided by age and sex, in 1665

Age	Men	Women	Total	Relative data			Men per 100 women
				men	women	total	
1665							
0-4	368	335	703	133	118	125	110
5-9	383	403	786	138	142	140	95
10-14	381	399	780	138	140	139	95
15 +	1634	1705	3339	591	600	596	96
Total	2766	2842	5608	1000	1000	1000	97
1700							
0-4	626	709	1335	138	143	141	88
5-9	647	645	1292	142	130	136	100
10-14	461	480	941	101	97	99	96
15 +	2813	3115	5928	619	630	624	90
Total	4547	4949	9496	1000	1000	1000	92

support this view. As none of the lists does specify the age of all persons, we were unable to determine separately the proportions of older age groups (the middle-aged and older generations). Though some changes seem to be implied by differences in the proportion of unmarried persons, they should not be taken for granted, because they may equally well be a manifestation of changes in the general marital status of the population.

Women prevailed in the population, and this prevalence was greater in 1700 than in 1665. Migration was obviously the main cause, as men prevailed among the absent persons in both 1665 and 1700. There was a marked increase in 1700 in the number of men recruited to the army: 41 men were conscripted in 1665 and 140 in 1700 (the 1665-1700 increase in the total number of population listed was 69 % but the number of conscripts increased by 241 %).

Differences between the 1665 and 1700 lists were also recorded in the marital-status structure of the population above 15 years of age. In 1665 the proportion of persons living in wedlock was comparatively large: 61 % of men, 58 % of women. Bachelors accounted for 37 % and spinsters for 33 %, widowers only 2 % and widows 9 %.

The percentage of widowed persons remained almost unchanged until 1700 but the proportion of married men decreased by 4 points and married women by 6. Of course, there was a corresponding increase in the percentages of bachelors and spinsters. The area of the dominion varied, as shown by the annexed list of villages, so it is not easy to evaluate the general growth of population in the latter half of the 17th century; nevertheless, it would not be a mistake to say that the increase was great: in villages for which the data of the lists were compared in both years the average rate of population growth was above 1 % annually. Changes in the marital status of persons older than 15 years are also partly ascribable to chan-

Tab.4 Age structure of the population of the Třeboň estate 1665 - absent

Age	Male		Female	Total
	all	soldiers		
0-4	10	-	7	17
5-9	14	-	18	32
10-14	20	2	20	40
15-19	52	4	34	86
20-24	105	22	54	159
25-29	45	5	22	67
30-34	42	2	22	64
35-39	16	2	9	25
40-44	20	2	12	32
45-49	11	-	10	21
50-54	15	1	10	25
55-59	6	1	10	16
60-64	3	-	3	11
65-69	-	-	-	-
70-74	1	-	-	1
Unsp.	39	-	49 ⁺	68
Total	404	41	280	684

+ Incl. 3 persons with unsp. sex

Tab.5 Age structure of population of the Třeboň estate 1700 - absent

Age	Male		Female	Total
	all	soldiers		
0-4	9	-	5	14
5-9	15	-	9	25
10-14	19	-	16	35
15-19	27	-	24	51
20-24	59	4	38	97
25-29	76	27	41	117
30-34	81	50	40	121
35-39	42	22	32	74
40-44	35	18	28	63
45-49	24	11	16	40
50-54	11	4	9	20
55-59	7	1	5	12
60-64	6	-	3	9
65-69	1	-	1	2
Unsp.	79	3	97	176
Total	492	140	364	856

ges in the ratio of the middle-aged to old generations (such changes can be assumed though there is no direct evidence). There was obviously an increase in the proportion of 15-49-year-old persons and in the proportion of the younger part of this age group. The increase in the proportion of spinsters may be attributed, to some extent, to increased conscription to the army.

Tab. 6 Structure by marital status of the population of the Třeboň dominion in 1665 and 1700

Year	Sex	Persons above 15	Of this,			Relative data		
			unmar-ried	married	wido-wed	unmar-ried	mar-ried	wido-wed
1665	male	1634	605	989	40	37	61	2
	female	1705	567	992	146	33	58	9
1700	male	2813	1170	1608	35	42	57	1
	female	3115	1193	1615	307	38	52	10

As seen, simple excerption from lists of subjects from the end of the 17th century can draw only a schematic picture of the structure of population. Better results are obtained if the material is exploited in detail by the method of family reconstitution.

Family Reconstitution in the Village Záblatí (1661-1720)

An attempt - still continued - at family reconstitution has been made by Pavla Horská who chose for this purpose the village Záblatí and the period from 1661 to 1720. She has made excerptions from all annual lists referring to this village and compared them with the registers of births of the parish of Lomnice nad Lužnicí where Záblatí belonged. This has allowed to obtain many interesting data on demographic development in one of the many villages of the Třeboň dominion. Especially valuable data, fully sufficient for the reconstitution

of families in the village Záblatí, refer to the period from May 1674 to August 1696 during which the records on baptisms in the Lomnice parish were kept with particular accuracy.

In 1700 there were 62 men and 78 women in that village. In addition, 16 men and 9 women were permanently outside. The 1700 lists contained 39 men and 49 women present in the village and specified by age. Most of these persons were children and unmarried adults. Family reconstitution for the 1661-1700 period allows to determine the age of the majority of parent couples, or at least assign them to five-year age groups.

Tab. 7 Population present in the village Záblatí in 1700: distribution by age and sex

Age group	A Data from the list of 1700				B Data from family reconstitution for 1661-1700			
	men		women		men		women	
	num-ber	%	num-ber	%	num-ber	%	num-ber	%
0- 4	7	11.2	13	16.6	8	13.7	11	14.4
5- 9	6	9.6	9	11.5	7	12.0	9	11.8
10-14	8	12.9	5	6.4	8	13.7	5	6.5
15-19	6	9.6	6	7.6	4	6.8	6	7.8
20-24	7	11.2	8	10.2	7	12.0	9	11.8
25-29	4	6.4	5	6.4	6	10.3	13	17.1
30-34	1	1.6	2	2.5	6	10.3	4	5.2
35-39			1	1.2	3	5.1	2	2.6
40-44					2	3.4	2	2.6
45-49							3	3.9
50-54					2	3.4	4	5.2
55-59					1	1.7	1	1.3
60-64							1	1.3
65-69					1	1.7	1	1.3
70-74							1	1.3
75-79							1	1.3
Adults of un-known age	23	37.0	29	37.1	3	5.1	3	3.9
Total	62	99.5	78	99.5	58	99.2	76	99.3

The difference in the numbers of men and women who were entered on the list in 1700 and those identified by family

reconstitution is due to the fragmentariness of records on the mostly incomplete families living in subtenancy (These are persons referred to in 17th and 18th century Latin sources as "ingullini" and in historico-demographic literature as "brasiers" in French or "mitleute" in German.) with the peasants, keepers of farms. This stratum of rural population was probably very movable, with frequent changes of residence. Thus it could happen that some persons listed at Záblatí in 1700 appeared there neither before nor after that year in any of the families.

Although the age structure of the population of Záblatí, obtained on the basis of family reconstitution, does not look fully balanced, the general trends reflected in it basically correspond with the structures reconstituted by excerpts from other 17th century lists of population in Bohemia. Thus for example researchers who have so far studied the Confession List of 1651 believe that the group of children below 15 years accounted for 36 to 43 % of all the rural population present in the villages, the group of persons from 15 to 49 years averaged about 50 % in both villages and towns, and persons above 50 usually made up about 10 %. In 1700, the Záblatí population included 35.8 % of children from 0 to 14 years, 50 % of persons from 15 to 49, 9.7 % of those older than 50, and 4.4 % of adults of unknown age.

When we asked Louis Henry how to determine correctly the proportion of the youngest children in the population in the pre-statistical period when the registration of children up to one year was poor, he advised in his letter of January 5 1989 to Pavla Horská to try to find comparison with a population where the registration of new-born babies would be satisfactory. As an example he mentioned the population of France of 1740-1789 where the age distribution for both men and women was as follows (in thousands): 3204 in the group from 0 to 4 years, 5140 in the group from 5 to 14, and 4575 in the group

from 15 to 24 years.¹⁰⁾ Hence, in that population the proportion of children from 0 to 4 years equals 62.3 % of those in the 5-14 group and 70.0 % of the group of 15-24 years. We have unfortunately failed to find in Bohemia a group of people where the registration of children up to a year of age would be reliable and where at the same time there would be enough data on other age groups. At Záblatí in 1700, the number of children old 0-4 years was equal to 65.5 % of that of the 5-14-year group and 73.0 % of that of the 14-24-year group, both sexes being counted together. Can a more general characterization of the age structure of a large population be derived from so small a sample as the inhabitants of a small village?

Similarity of the relation of the proportion of the 0-4-year group to the other two age groups mentioned for Záblatí and for France can perhaps be sought in the circumstance that the Záblatí data of 1700, obtained by the combination of the list of subjects with family reconstitution, refer to settled population, bound to land. Though some of the young people left their village when they married or when they went to serve to nearby villages, others came to Záblatí for the same reasons. Considering the general trend, the population of Záblatí grew and so did the average number of persons in the family households.

Tab. 8 Average number of persons in the family households of peasants at Záblatí

Pentad	Av. number
1664 - 1668	4.5
1669 - 1673	4.6
1674 - 1678	5.1
1679 - 1683	6.0
1684 - 1688	6.4
1689 - 1693	6.2
1694 - 1698	6.5

Comparison of the annual lists for the village Záblatí with the parish register of births for the same village will show, first, that the number of baptisms was about 20-30 % higher than the number of children entered in the lists as new-born during the year and second, that children were born in the village also to parents not mentioned in the lists.

The first statement is easily understandable. On closer examination it can be demonstrated in the majority of cases that children entered in the parish register and not in the list had died before they reached an age of one year. If these births are added to the family data on the settled population of Záblatí, it is seen that the average interval of successive births in this village was almost the same as that known from other attempts at family reconstitution for Bohemia in the same or similar period. For example, Eliška Čáňová found that in families which were set up in the town Broumov in northwestern Bohemia in 1650-1659 the average interval between successive births was 26.6 months. Pavla Horská, who studied the demographic history of the village Břevnov near Prague, calculated that in women who married in 1652-1789 the average interval between successive births was also 26.6 months. At Záblatí this interval for women who bore their children in 1674-1696 (period when the lists of population could be compared with the parish register) was 26.7 months.

Yet where to include the baptisms of children whose families were not permanently settled at Záblatí? These families cannot be reconstituted, at least not from the annual lists. The fact that some children were born to parents who had no permanent relationship of allegiance to the owner of the dominion suggests that there was an ever-fluctuating group of people who cannot be traced adequately within a single village. Could this be done through family reconstitution for the whole Třeboň dominion?

The fate of 248 children, born to the reconstituted fami-

lies at Záblatí, could be traced at least partially in the lists of 1661-1710 and in the parish register of births of 1674-1696.

Tab. 9 Age of the children of peasants at Záblatí at important vital events in 1661-1710

Age group	Number of cases												
	Male						Female						
	A	B	C	D	E	Total A - D	A	B	C	D	E	Total A - D	
0- 1				15		15					17		17
1- 4				10		10					14		14
5- 9				3	2	3		1					5
10-14			8	1	3	9			9			4	9
15-19	1	2	7	3	8	13	8	2	5	1	8		16
20-24	13	7	13	4	9	37	21	2	10	2	6		35
25-29	13	4	3			20	8	1	2	2			13
30-34	7	1	4	1	1	13	4		1				5
35-39	1					1	1		1				2
40-44			1			1			3	1			4
45-49			2			2			3	1			4
Total	35	14	38	37	23	124	42	6	34	42	18		124

- A - marrying for the first time
- B - leaving the dominion or escaping from it (unmarried persons)
- C - last mention of unmarried persons older than 10 years
- D - deaths of unmarried persons
- E - entering service (not added to total sum as those concerned are included in groups A-D)

Children up to 10 years are not included in group C because they all belonged to cases of observation terminated at the end of the period under investigation when infant and child mortality could not be studied so well as at the time prior to 1700, for which the data could be compared with parish registers. Hence, assuming that the 248 children in our set were born to the peasant families at Záblatí in about 1661-1710 and that the death records refer to about the same period, we shall be able to calculate the infant and child mortality rate.

Tab. 10 Infant and child mortality at Záblatí in 1661-1710

Type of mortality	Male	Female	Total
Infant mortality	120.9	137.0	129.0
Child mortality: 0-4 years	201.6	250.0	225.8
0-9 years	225.0	282.0	254.0

Comparison of these data with the results of investigation of long-term trends of mortality in the territory of Czech countries during the pre-statistical period ¹¹⁾ will show that Záblatí's mortality of 0-4-year-old children is similar to that in the North Moravian village Poruba at the turn of the 17th and 18th centuries. Later during the 18th century child mortality at Poruba increased; after all, this happened elsewhere in the Czech countries, as far as available evidence indicates. Yet there were some places in Moravia where child mortality rate was higher than at Poruba still in the latter half of the 17th century. The village Kralice na Hané is an example: the mortality rate for 0- to 4-year-old children of both sexes in that village was 343.2 ‰. However, girls at Kralice, unlike at Poruba, suffered excess mortality: their mortality rate was 360.5 ‰ and boys' 327.6 ‰. Excess mortality of girls was also observed at Záblatí, but hitherto results of family reconstitution do not allow to explain this phenomenon in detail. What is especially missed is explanation of the relationship between births recorded in the parish registers and the entries on the annual lists of population. If some births cannot be assigned to reconstituted families it is impossible to trace these children's further fate, or their death, as they seldom appeared in the parish registers of deaths and often even cannot be identified with births in the parish registers' birth records because records concerning children of unsettled families are mostly incomplete, without the surnames of parents etc.

However, even with a small set such as the children born

at Záblatí in 1661-1710 is it possible to find analogies with other investigations on family reconstitution in Bohemia, especially those concerning mortality. ¹²⁾

Tab. 11 Proportions of first marriages in age groups

Age groups	Záblatí 1661-1720		Břevnov near Prague 1750-1852	
	men	women	men	women
15 - 19	28	191	22	149
20 - 24	372	500	324	423
25 - 29	372	191	361	266
30 - 34	200	95	174	97
35 and above	28	23	119	65
	1000	1000	1000	1000
Number of cases	35	42	590	692

It is indisputable that family reconstitution based on annual lists of the settled population of the Třeboň dominion, supplemented by data from parish registers, would allow to answer a number of questions of the age and life cycles of the rural population of Bohemia in the 17th and 18th centuries. Unlike data in parish registers, annual lists of population also provide information on the age structures of economic activity. For example, the small set of families of the village Záblatí was sufficient to show that on the turn of the 17th and 18th centuries the average age of boys who entered into service either at manorial estates or on farms was 18.2 years and their average age at marriage was 25.8 years. Girls entered service at an average age of 17.7 years and married at an average age of 22.9 years. Years of service usually preceded marriage, but by far not all young people did marry. In the age group of 25-29 years at Záblatí the proportion of married women was about 60 % and that of married men was above 40 %. Reconstitution of families from a larger number of villages

would show the proportions of those who left their village for service and those who left to marry. However, those who left their villages were not only young people: this group also often included widowed women with children or old people who left to spend the rest of their life with their relatives elsewhere, even outside the Třeboň dominion, or found refuge in the Třeboň infirmary or a sort of old people's home. Hence, if sufficient information on the life cycles of population in the pre-statistical period is to be obtained, age structures will have to be studied on the whole territory of the Třeboň dominion.

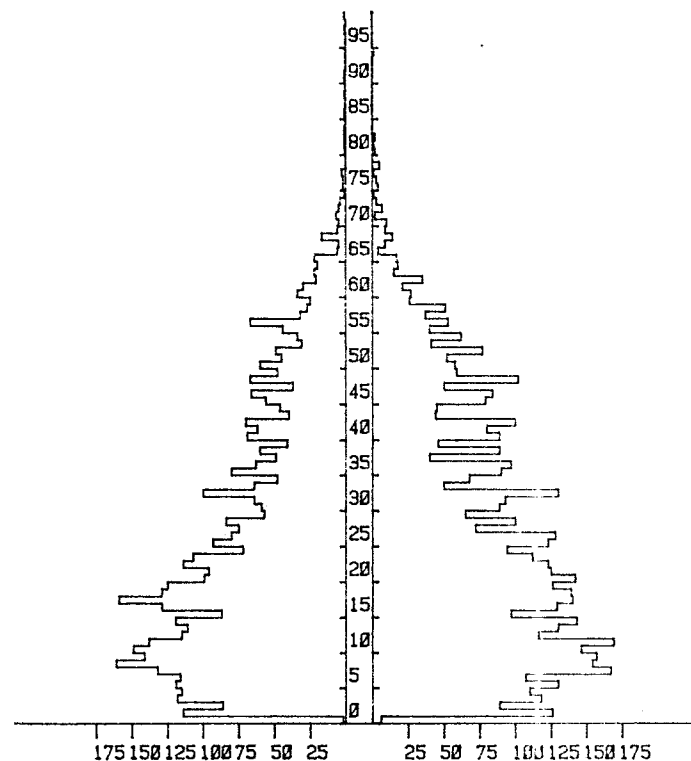
Age Structure of the Population in 1753

Age data began to be included in the list of rural subjects as late as in 1753. Extension of age recording to all the population might be associated with the Imperial Rescript of October 13, 1753, by which Empress Maria Theresa ordered to take a census of the population.¹³⁾ In the national summaries of the census the population is distinguished according to sex and age groups (up to 15 years, 15-20, 20-40, 40-50, above 50), and persons above 20 years are divided into married and unmarried. As the lists of subjects in the dominion were made in autumn, it is really probable that the Imperial Rescript mentioned above was taken into account in the 1753 census.

The 1753 lists included 13 260 persons, 1782 (13.4 %) of whom were outside the dominion.¹⁴⁾ All men conscripted to the army (their total was 847), and all persons whose entries bore the note that the place of their stay was unknown, were regarded to be absent.

Of the 11 478 persons present in the dominion, 45.4 % were men. This suggests that women highly prevailed: there were 120 women per 100 men. The very high number of conscripts

Fig. 3 Age structure of the population, Třeboň dominion in 1753



was in fact the main cause of this disparity, as in the age group of 15-39 years there were 125 women per 100 men, whereas among the younger people the ratio was more balanced though, generally, women prevailed in all age categories except for the group above 70 where there were more men than women. However, as mentioned in detail below, the age records in the lists are incomplete: age was not indicated in 7 % of the women. As all these were married women and widows, the prevalence of women in the middle-aged group was obviously greater and the number of older women was probably also higher.

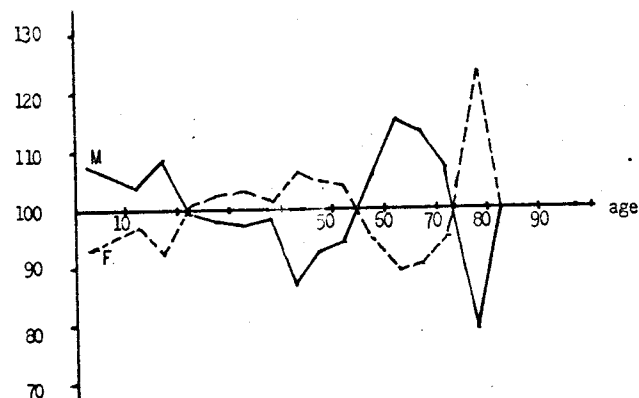
Tab. 12 Sex ratio by age (men per thousand women), 1753

Age	Sex ratio	Age	Sex ratio	Age	Sex ratio
0- 4	1032	20-24	1221	50-59	1200
5- 9	1069	25-29	1254	60-69	923
10-14	1114	30-39	1261	70-79	1241
15-19	1003	40-49	1307	80 +	545
				total	1201

There was a great disparity in sex ratio in the mid 18th century, and the prevalence of women was perhaps also responsible for some other features of the population which affected social situation in the villages: there were many unmarried mothers and a comparatively high number of beggar women.

Clerks probably had problems with the determination of age in all persons at the beginning. This is suggested by the fact that age is not indicated in 5 % of all persons, namely the older married and widowed men among whom those without age indication accounted for 3 % of all men, and particularly in married women and widows (7 % of all women). In the first part

Fig. 4 Sex ratio by age in 1753, Třeboň dominion
(Smith's diagram)



of the list the proportion of women without indication of age is sometimes as large as a quarter in some villages (in some cases no married women and no widows did have any age data at all), but in villages included in the latter half of the list the proportion of persons without indication of age is much smaller, usually below 3-4 %, and as for men, almost none were entered without age data.

It is still impossible without thorough analysis to say whether the scribes who made the lists derived the age of the people by calculation from previous lists or just put down what the persons concerned said. Comparison of successive annual lists suggests that in unmarried persons the recorded number of years was really higher by one every subsequent year. But this must not have been so in 1753 with those whose age was recorded newly - in these cases the clerks probably put down the age they heard from the subjects being listed.

The same conclusion is drawn from the analysis of the age structure of the population. For children and adolescents the data obtained by excerption seem probable. The number of 15-year-old youths is very low but some of them might be included in the groups of 14- and 16-year-olds; otherwise the numbers are more or less balanced. In adults the differences are larger: there are conspicuously higher numbers of persons old 28, 32 years, and also 36 and 42, and in all these cases the numbers of persons in adjacent age groups are low. Although these deviations are not very large, they do suggest that there was a tendency to round the age data (the figures mentioned are multiples of four).

To some extent this hypothesis is supported by the fact that age was indicated even for persons who were outside the dominion and could not appear in the office when the list was made. Men taken to the army were a special group. Where available data allowed, attempts were made to calculate the age at which they were conscripted. It was found that clerical errors

were sometimes made during routinely copying some data and adjusting others (the year of conscription was copied and age was increased by one year). This is the only explanation why according to the data in the list eleven men went to the army at an age below 10 (see the Table 17). As can be derived from this, such slips of the pen could equally well happen in the case of other persons. This is only an illustration of the quality of the list in which in fact errors are neither large nor numerous and the age data, as far as they are indicated, are comparatively reliable.

Hence, the list can also be used for the determination of the age structure of rural population in the mid 18th century.

If it is not taken into account that the list contains no legally free persons, who were probably few, and no children below one year, who were obviously recorded only when they survived until next year's census, it can be said that the list is a true description of the population who lived in the dominion.

Tab. 13 Percentual proportions of the major age groups of the population

Age	A	B
0-14	33.1	32.9
15-49	54.5	53.5
50 +	12.4	13.6

A - calculation from data obtained by excerption

B - calculation from age structure where estimates were made of the number of children up to 1 year and of the age structure of persons without indication of age

Among those in the dominion whose age was indicated in the 1753 list, 33 % were children below 15 years, 54 % were persons in productive age (15-49 years), and 13 % were older. Assuming that the number of babies up to one year was the same as that of children old one year and that the age structure

re of persons without indication of age corresponded with the age structure with whom age was indicated, the figures obtained will be a bit different (Tab. 13). Nevertheless, the general ratio of the main age groups will remain unchanged; the only change will be a somewhat larger proportion of the oldest generation where the highest number of data were missing (older women and widows), otherwise the basic features of age structure are the same.

Marital status can be determined in all the persons in the list. However, when marital status is to be studied in combination with age the situation will appear worse because age was recorded consistently only in unmarried persons. Age is not indicated only in 7 bachelors (0.2 %), in 5.9 % of married men, and in 23.4 % of widowers. In the case of women the attitude to age registration was similar: there were no age data in only 10 unmarried girls (0.3 %) but in 15.2 % of married women and in 22 % of widows.

Of every hundred men older than 15 years, 39 were bachelors, 59 were married and only two were widowers. Of every hundred women older than 15 years, 40 were spinsters, 47 were married and 12 were widows. Though the proportions of unmarried men and women were about the same, the proportions of married men was much larger than that of married women, and there was the same difference between the proportions of widowers and widows. These differences were caused by the younger age of girls at first marriage, by differences in the mortality of men and women, and by differences in chances to marry again.

The data below refer to analysis of the set of persons whose age was indicated in the list; this implies a slight understatement of the proportions of married women and a great understatement of the proportion of widowed persons, as will be demonstrated.

Men married only exceptionally below an age of 20.

Tab. 14 Population by marital status in five age groupings, Třebon dominion, 1753

Age	M a l e				F e m a l e			
	bach.	mar.	wid.	total	spin.	mar.	wid.	total
0- 4	434	-		434	452	-	-	452
5- 9	672	-		672	713	-	-	713
10-14	637	-		637	699	-	-	699
15-19	612	19		631	582	45	-	627
20-24	379	110	1	490	398	196	-	594
25-29	170	220	1	391	218	268	2	488
30-34	72	264		336	151	269	8	428
35-39	41	250		291	123	226	14	363
40-44	21	266	1	288	84	238	35	357
45-49	15	256	2	273	83	222	70	375
50-54	9	206	4	219	58	147	86	291
55-59	11	173	11	195	32	89	85	206
60-64	4	109	14	127	13	35	69	117
65-69		43	13	56	8	17	28	53
70-74	1	16	5	22	3	6	14	23
75-79		5	2	7	3	1	9	13
80-84		1	3	4	-	2	3	5
85-89		3		3	-	-	-	-
90 +	1	1	2	4	-	-	1	1
Unsp.	7	121	18	146	10	315	122	447
Total	3086	2063	77	5226	3630	2076	546	6252

The 1753 list showed that only 3 % of men in the 15-19 group were married. Among those at an age of 20-24 years, almost a quarter were married. The proportion of married men in the group of 25-29 years was above a half of those present in the dominion. Above forty the percentage of unmarried men was small and declined further with increasing age. Only 3 % of men above 60 remained unmarried.

Although age was not indicated in almost a quarter of widowers, it can be assumed that their number among men below 50 was minimum; in the list there were only five. Naturally, their proportion increased with age and in the age group of 60 every fifth man was a widower. The list included several men - all were peasants with their own farms - who became widowers and married again in the same year.

Tab. 15 Population by marital status in five age groupings, Třebon dominion, 1753 (%)

Age	M a l e			F e m a l e		
	bach.	married	widowers	spin.	married	widows
-14	100	-	-	100	-	-
15-19	67	3	-	93	7	-
20-24	77	23	0	67	33	-
25-29	44	56	0	44	55	1
30-34	21	79	-	35	63	2
35-39	14	86	-	34	62	4
40-44	7	92	1	23	66	11
45-49	5	94	1	22	59	19
50-59	5	92	3	18	48	34
60-69	2	83	15	12	31	57
70+	5	65	30	14	11	65
15-49	48	51	1	52	44	4
50+	4	87	9	9	46	45
15+	38	60	2	40	48	12

Women married younger, on an average, and many women remained spinsters because of women's permanent prevalence in the population of the Třebon dominion. The incompleteness of age data in the list caused problems also in this case, though it can be generally said that almost one-third of women above 40 still remained single. In addition, women became widows sooner and more frequently: every third woman in the 50-54 group and every other woman above 60 was a widow. One-tenth of women older than 60 were spinsters and less than one-quarter still lived in wedlock. However, it must be added that these figures are distorted by the shortcomings of the list. When the proportions of the married and widowed men and women whose age was not indicated in the list are taken into account as above, estimated from those of the persons whose age was indicated, the structure of population by age and marital status will change a little: at an age of 15-49 years 47 % of women were spinsters, 48 % were married, and 5 % were widows, and at an age above 50 years the respective proportions were 8 %, 44 % and 48 %.

Though these relationships look closer to reality, they do prove the same: in the mid 18th century 8-9 % of women and about 4 % of men remained permanently unmarried. Even in the case of men this proportion is high and cannot be ascribed only to high conscriptions. This category of both men and women obviously included those who were physically or mentally handicapped. Health care was poor, so many people remained crippled after injury, often from childhood; blindness was also frequent. It is still impossible with the source analyzed to say to what extent social conditions were involved.

Age data were indicated for both spouses in 1710 married couples. This allowed to analyze still another aspect of the problem of marital status: comparison of the age of the spouses. After all, this can also be done on the basis of age at marriage (see Appendix 5). Only 2 % of the married women and 1 % of married men were younger than 20. Couples where the man was 1 to 4 years older than the wife prevailed. Of course, as elsewhere, there were couples with much larger age differences, the husband being older by as many as twenty years and vice versa, but these were rare and most of them occurred in peasant families where a deceased husbandman or wife had to be replaced soon if the surviving spouse wanted to stay on the farm. The age structure of the peasants also shows that the keepers of farms usually retired at an age of 55-60 years and perhaps even sooner: there were only 5 % farmers above 60 (the oldest one was 69-year-old and the age of his wife was 41). Similarly, there were only few peasant wives (4 %) older than 55 years. The largest group of couples on the farmsteads consisted of husbands old 30-44 years and wives old 24-34 years.

In the group of subtenants and cottagers who complemented the mosaic of the social structure of the Bohemian village, the age ratio of the spouses was about the same. Though there were some couples with a large age difference, those whose age ratio corresponded with convention prevailed.

Tab.16 Age structure of population of the Třeboň estate 1753 - absent

Age	M a l e		Female	Total
	all	soldiers		
0-4	1	-	1	2
5-9	6	-	5	11
10-14	11	-	5	16
15-19	33	13	16	49
20-24	116	86	20	136
25-29	169	136	35	204
30-34	167	135	44	211
35-39	194	156	50	244
40-44	158	115	57	215
45-49	109	74	47	156
50-54	72	39	37	109
55-59	74	33	43	117
60-64	43	22	20	63
65-69	25	15	10	35
70-74	11	5	7	18
75-79	4	1	-	4
80-84	2	-	3	5
85-89	-	-	-	-
90-94	-	-	1	1
95-99	-	-	-	-
Unsp.	91	17	95	186
Total	1 286	847	496	1 782

The age structure of all married couples also corresponds with the biological structure of the population. The number of marriages of older persons declined rapidly with increasing age and generally it can be said that there only few couples where both the husband and wife lived until a high age.

In the 1753 list of subjects, above 13 % of the persons entered were outside the dominion. Half of them had been conscribed to the army, others had left the dominion for other reasons. Although the source does not say what reasons these were, it can be taken for granted that most of them were associated with the social and economic conditions of rural life.

Apart from individuals, there were also whole families who left their villages. For young women there was one strong reason to leave the dominion: the extremely unfriendly conditions for unmarried mothers.

The number of absent persons probably was not so high as the list suggests. The subjects were only written off when the office knew from credible sources that the person in question had really died. (Sometimes it happened that people, mainly soldiers, returned home after many years of absence.) Otherwise the absent subjects were kept on the list for a very long time and were written off only at a very high age. These people had often left the dominion when they were children and it might well happen with the high mortality of that time that many of them had died much sooner than their number was removed from the list. The table shows the age structure of the persons who were on the list but could be regarded as absent. Although most of them were of the age group of 20-25, and their number declined with increasing age, the figure is most probably overstated and many of the older persons on the list were in fact no longer alive in 1753. And this applied twice as much to soldiers, although of course some of them might decide not to return home when their term of service was over. For this reason the survey of persons not present in the dominion is a proof of the particularity with which the books were kept rather than evidence of population structure.

Soldiers, for their part, constituted a specific group of those who were absent. Their number was very high. If they were added to the number of men present in the dominion they would account for more than a quarter of the 20-40-year group and for 15 % of the group of 20-24 years (this group was perhaps least affected by casualties at the time in question). Entries concerning 638 of the 847 men who served in the army in 1753 included not only their age data but also the year when they left. Age at conscription can be derived from these data.

Tab. 17 Soldiers by age and the year of conscription, 1753

Age	Years since conscription										Unsp.	Total								
	0-4		5-9		10-14		15-19		20-24				25-29		30-39		40-49		50+	
	1749- 1753	1744- 1748	1739- 1743	1734- 1738	1729- 1733	1724- 1728	1714- 1723	1704- 1713	before 1703											
0-4				1															1	
5-9				6															10	
10-14	2	10	6	12	4														35	
15-19	13	65	40	72	12							9	5						216	
20-24	20	43	42	82	14			2				6	3						212	
25-29		18	20	49	11							2	4						104	
30-34		9	8	23	3			1											44	
35-39		2	4	6	2														14	
40-44			1																1	
45-49				1															1	
Unsp.		2	1	2															204	
Total	35	149	122	254	47	3	17	14	2										847	

Although the credibility of the list declines with the length of time that had elapsed from the day the men had left the dominion, it can be said that most of them left between the age of 15 and 30. Older men were conscripted just exceptionally: these often were married men who joined the army voluntarily, perhaps to solve their family problems. The age of the conscripts probably also depended on how many new soldiers the army needed. The number of conscripts was high during the period from 1734 to 1738; the 1734 conscription seems to have been enormous because in the 1753 list the names of 94 men still bore the note that they had left in 1734, and further conscripts of 1734 may be among those in whom the year of conscription was not indicated (a quarter of the soldiers). For the remaining years of this five-year period the numbers of conscripted soldiers, still kept on the list, ranged between 28 and 49. Another increase in the number of conscripts was observed in 1741-1746, whereas in other years the army's requirement was much smaller. This corresponds with the military and political situation of that time. Increased conscriptions accompanied the War of the Polish Legacy of 1733-1738 in which Emperor Charles VI participated, the Turkish Campaign of the same emperor in 1737-1739, and the major events of the Seven Years' War (1741-1748), waged by Empress Maria Theresa.

The structure of population of the Třeboň dominion as it appears on the basis of the list of subject can be regarded as corresponding to situation in reproduction known to prevail in populations prior to the demographic revolution. Fertility and mortality were high, so there was a large proportion (33 %) of the youngest age groups. As the life expectancy was short, there was just a small proportion (14 %) of persons above 50 and only a few (obviously not more than 4 %) of those older than 70.

The age structure of the population was influenced by the large proportion of women among middle-aged persons; this affected the structure determined by marital status and perhaps

also the proportion of the infant part of the population which was comparatively small. However, the results of this brief insight do not allow to say the extent to which this situation was typical of the Bohemia of the mid 17th century and the extent to which it was caused just by the specific conditions of the Schwarzenberg dominion in the Třeboň region.

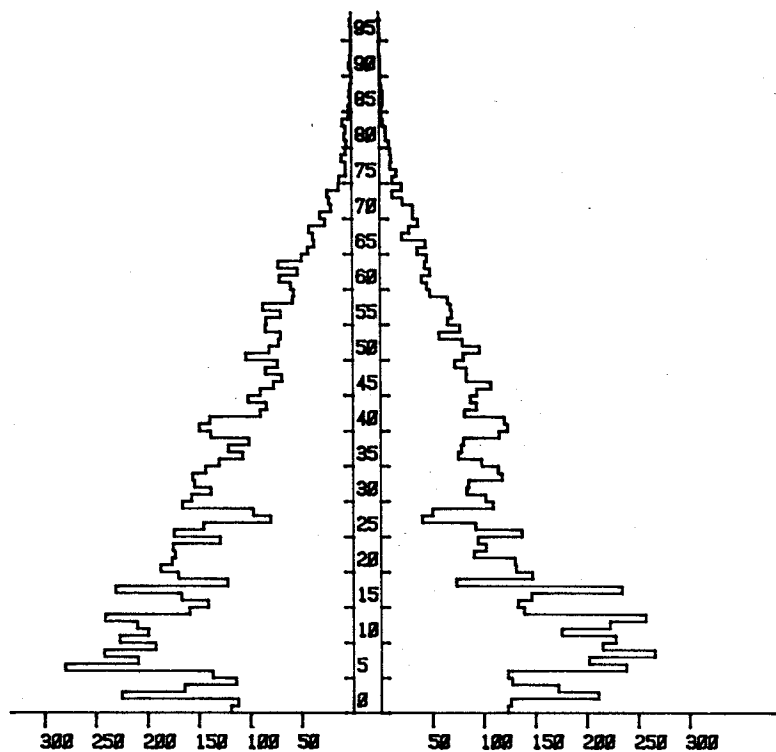
The results of excerption of data from the list of population of 1800 can be characterized in a similar way.

Age Structure of Population in 1800

Like the preceding ones, the 1800 Orphan Book of the Třeboň dominion is not merely a list of orphans but it surveys all the subjects of the dominion.¹⁵⁾ On 700 folios, two scribes put down the following data on every person listed: name, surname and age, and if they deemed it necessary they added a note on his (her absence from the farmstead, from the village or dominion, a serious defect, the trade followed by the person and the like). In the case of the subject's not being present on the farm or in the village the scribe put down the name of the person on whose farm the subject concerned served, and sometimes also the name of the village, and the wage earned (obviously for a year of service). Among those who were not present in the dominion the book distinguished thoroughly only the soldiers ("soldat" or "in Krieg"); others are most frequently characterized by the place where they stayed, usually "in Prag", "in Wien", "in Budweiss". When the place of stay of an absent person was not known, the clerks most frequently added the notes "aufgangen" or "wandert". In the inhabitants present in the village, distinction was often drawn between retired farmers and the young husbandmen, especially in those cases when the scribes had not yet included a retired farmer among subtenants where he traditionally belonged.

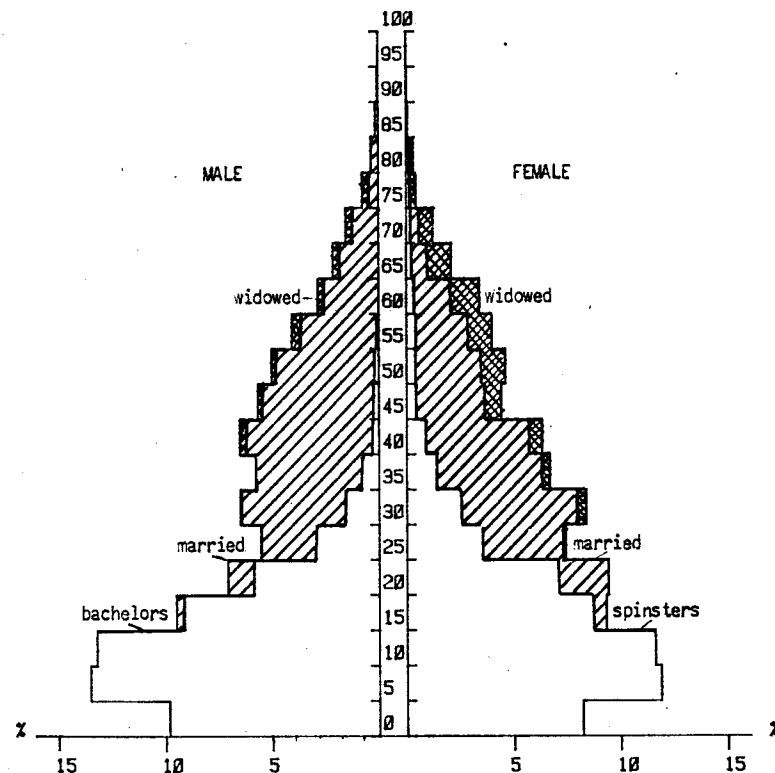
In the cases of farmers, cottagers, and subtenants with

Fig. 5 Age structure of the population, Třeboň dominion in 1800



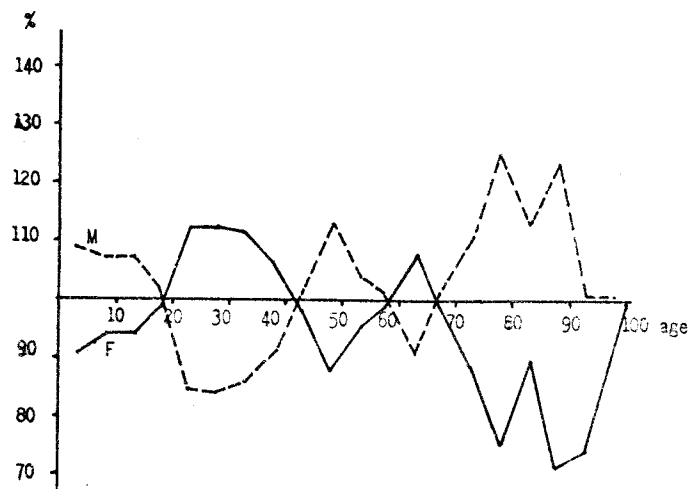
separate lodging, the list also includes the number of the house in which the persons concerned stayed. For every village, the families of the farmers are entered first, followed by cottagers and subtenants, and the widows and orphans sustained by the community. The Orphan Book does not cover all the villages of the dominion but only those under direct authority of the owner of the dominion.

Fig. 6 Age structure of the population in five age groupings, Třeboň dominion in 1800



As to towns, not all the inhabitants are listed: the persons on the list are those directly subject to the lord¹⁶⁾ who constituted just a tiny fraction of the total population of the towns. For example, the list contains no inhabitants of the town Soběslav and only six subjects from the townlet Lednice. Specific groups of population whose common trait was their trade or occupation rather than their place of residence were also assigned to towns. These include fishers, millers, tar burners, charcoal burners, overseers, stewards, prince's

Fig. 7 Sex ratio by age in 1800, Třeboň dominion
(Smith's diagram)



servants, knackers, all with their families, and with orphans annexed at the end. It is interesting that smiths were not recorded as a special group and that some millers were also listed together with the village in which they lived.

Many of the entries concerning the towns are problematic, the more so because with only few exceptions there are no notes which would help to distinguish the inhabitants who were present in the town and those who were absent. The same applies to some separate groups of professions. (In the Appendix 4 orphans and widows, i.e. the least settled group of population of the towns and of the separately listed professions, are denoted by a cross; their age data are very high and hence improbable, so many of them should be regarded to be absent.)

An overwhelming majority of the entries and notes in the Orphan Book were written in German interlaced with Latin words

(macaronics"). Czech words such as "žena jeho" (his wife) or "dětí" (children) were maintained, with only few exceptions, only in the column with the names and surnames of the subjects listed. The first names are written either in their Czech or German form; in the case of villages, German names were preferred, but there were German names only for several villages.

The value of the annual records in the lists of subjects of the Třeboň dominion highly increased when the clerks entrusted to keep the books began to record consistently the age data in all groups of population irrespective of sex, marital status or social status of the subject concerned. This turning point dates back to about the middle of the 18th century. However, many of these data must have been distorted by being based on mere estimation, at least at the beginning. The accuracy of the age data in the books was highly improved during the latter half of the 18th century when the data of births was really consistently indicated (though often with a more than a year's delay) for all children born and when one year was regularly added to the age indicated the preceding year. Estimates perhaps remained only in the data on the age of the oldest subjects who were still alive in 1800, and on the immigrants, who were only few.

On the whole, the Orphan Book listed 16 725 persons present in the dominion of whom 5654 (33.9 %) were in a pre-productive age (0-14 years), 8234 (49.2 %) were in reproductive age, and 2755 (16.5 %) in post-reproductive age.

Tab. 18 Percentual proportions of the major age groups of the population, 1800

Age	M	F	Total
0-14	37	32	34
15-49	46	52	49
50 +	17	16	17
Total	100	100	100

As mentioned, the list included only part of the total number of babies up to an age of one year, because the clerk was not able to enter babies born during the last months before making the fair copy of the list; another reason was that he had not enough information from the distant villages of the large dominion. A high infant mortality might also be involved because if the baby died there was no sense in putting it on the list.

A peculiar feature of the age structure of the Třeboň dominion in 1800 can be seen in the comparatively small number of 27- and 28-year-old persons, lower by a half than the numbers of 26- and 29-year-olds. This was probably a consequence of the famine which struck the region in 1771-1772: infant mortality must have been high that time and there must also have been temporary sterility of the women owing to a lack of full-value food and to the shock of the critical months of the famine. The group of youths born in 1771 and 1772 also yielded a small number of soldiers: almost double the number of conscripts went to the army from among men older or younger by 2-3 years.

The small number of persons old 36-38 years (particularly men) might also be associated with the demographic crisis mentioned above, although it is assumed that such a crisis mainly increased the mortality of younger children, i.e. those who were below five years in 1771-1772.¹⁷⁾ A local increase of infant mortality early in the seventeen-sixties might also be involved. The problem could be explained by an analysis of the lists of subjects of 1771-1772 combined with analysis of parish registers.

The 1800 list also contains a comparatively small number of 4-5-year-old children. This is obviously associated with the small-pox epidemic of 1799. The large difference between the numbers of 16-, 17- and 18-year-old youths was probably caused by the fact that the age of 17 enjoyed a sort of priority.

Tab. 19 Sex ratio by age (men per thousand women), 1800

Age	Sex ratio	Age	Sex ratio	Age	Sex ratio
0- 4	1034	20-24	651	50-59	915
5- 9	985	25-29	646	60-69	788
10-14	986	30-39	705	70-79	1187
15-19	882	40-49	983	80 +	1171
				Total	866

Large differences were recorded in the age at marriage of men and women. The youngest brides were 15- and 16-year old; one-third of the girls married at about an age of twenty-one, some married around 25 and some even later. The average age of women at marriage was around 24 years.

Many of the women who married at a higher age probably entered their first marriage with a widower who usually had children. This was often the fate of girls of subtenant families and of unmarried mothers. Girls born in the years when the famine culminated had better chances to marry. Some of these girls obviously married at a younger age because there were not enough potential partners for the higher numbers of men older by 2-5 years. This is indirectly confirmed by a comparatively lower number of spinsters among those who were born in the famine-stricken years.

Men seldom married younger than 20; many of them married at an age of 30 or even more years. The average men's age at marriage was around 25 years.

Only several dozen of men of those permanently living in the dominion remained single throughout their life - about 5 % of men above 50 years were unmarried. The proportion of life-long spinsters was somewhat larger: 8 % of women above 50.

The difference between the numbers of widows and widowers was larger. According to the list, the youngest widows and widowers were 25-29-year old. Men regarded their being widowers as transient and most of them married again but women often had to accept their widowhood as a permanent status.

Tab. 20 Population by marital status in five age groupings, Trebon dominion 1800

Age	Male				Female			
	bach.	mar.	wid.	total	spin.	mar.	wid.	total
0-4	759	-	-	759	734	-	-	734
5-9	1044	-	-	1044	1060	-	-	1060
10-14	1021	-	-	1021	1036	-	-	1036
15-19	714	19	-	733	781	50	-	831
20-24	457	90	-	547	625	215	-	840
25-29	236	190	2	428	314	344	4	662
30-34	127	374	1	502	227	497	24	748
35-39	60	385	1	446	110	451	36	597
40-44	34	464	6	504	69	443	52	564
45-49	20	412	6	438	34	298	62	394
50-54	17	368	4	389	35	276	102	413
55-59	14	282	19	315	35	221	100	356
60-64	16	185	20	221	32	149	124	305
65-69	9	130	27	166	15	75	96	186
70-74	10	78	31	119	21	33	56	110
75-79	10	31	19	59	8	4	28	40
80-84	6	13	7	26	6	1	17	24
85-89	-	7	4	11	-	2	5	7
90+	1	3	-	4	1	-	3	4
Unsp.	17	10	1	28	14	32	8	54
Total	4572	3041	147	7760	5157	3091	717	8965

4636

The reason is clear: there was a high general prevalence of women and girls over men and boys (more than 115 women per 100 men, and in reproductive age this discrepancy was even larger). However, when all the population born in the dominion is taken into account, and not only the population present there, the bad sex ratio will completely disappear. There will be 97.9 women per 100 men in such a case. The unfavourable sex ratio in the dominion and all its social, psychic and population consequences can be generally ascribed to the frequent conscriptions to the army because soldiers made up an overwhelming majority among the part of population not present in the dominion (71.8 % of the absent men).

The high prevalence of women among the population present

Tab. 21 Population by marital status in five age groupings, Trebon dominion 1800 (%)

Age	Male			Female		
	bach.	mar.	wid.	spin.	mar.	wid.
-14	100	-	-	100	-	-
15-19	97	3	-	94	6	-
20-24	84	16	-	65	35	-
25-29	55	44	1	47	52	1
30-34	25	75	0	30	66	4
35-39	13	86	1	18	76	6
40-44	7	92	1	12	78	10
45-49	5	94	1	9	76	15
50-59	4	92	4	9	65	26
60-69	7	81	12	9	46	45
70+	13	60	27	19	22	59
15-49	46	54	0	46	50	4
50+	6	84	10	10	53	37
15+	35	62	3	38	50	12

in the dominion partly influenced the age differences between spouses. There were only few couples in which the wife was much older, but couples where the wife was older by 2-5 years were not uncommon. However, in the majority of cases men were older, usually by 2-10 years; married couples where the husband was older by 25 or even more years were not very exceptional.

Paradoxical situations sometimes occurred when the second or further marriages were contracted: the new wife's age might be closer to that of the children from her partner's previous marriage than to that of her husband. The relationship between the stepmother and the children thus might often lead to conflict in the family, caused either by aversion or, on the other hand, too much affection, arising from the polarity of sexes, which could hardly be tolerated by the elderly husband. Notes in the list suggest that measures were taken to prevent such conflicts or to solve them when they arose, usually to the detriment of the stepchild. Most of the daughters in such a situation left for service, and boys became soldiers even though

they might be first-born sons of farmers with whom something like that was unusual.

There were few couples in which the spouses were of the same, or almost the same, age. Such couples occurred mostly in those cases when the newly weds were very young.

It is almost impossible with the list alone, without comparison with the parish registers, to reconstitute the numbers of children in families. The book, as mentioned, does not contain entries on all children below 1 - 2 years of age, and babies who died soon after birth were also missed. Nor does the book say whether the children come from one or more marriages. It follows from several brief surveys that most of the families had 4-6 children, exceptionally more; families in subtenancy usually had less children (mostly 2-3), because of the higher age at marriage in this group of rural people. A long time often elapsed between births but the value of the interval between successive births can hardly be derived from that. More accurate data could only be obtained on the basis of comparison with parish registers.

As said, most of the persons not present in the dominion were soldiers; some people also left the villages to live in towns and there were also some wanderers.

The youngest soldiers were probably below sixteen, but most of the conscripts were between 19 and 21 years. Only seldom did they come from farmer families; most of them were sons of the poorest parents, and orphans (very few orphans in fact did avoid military service). Soldiers seldom returned to the dominion - the list mentions only few, but many soldiers were kept on the list until a high age (2.7 % of the total number of soldiers coming from the dominion were older than eighty). In 1800 these old soldiers were probably already dead, and so were certainly other absent inhabitants of the dominion whose age was indicated as being about ninety. (After theoretically reaching the age of a hundred years they were usually no longer entered on the list.)

Tab. 22 Age structure of population of the Třeboň estate, 1800 - absent

Age	M a l e		Female	Total
	all	soldiers		
0-4	3	-	2	5
5-9	9	-	7	16
10-14	13	-	18	31
15-19	101	74	27	128
20-24	327	289	42	369
25-29	297	245	50	347
30-34	311	252	54	365
35-39	160	109	54	214
40-44	97	64	40	137
45-49	69	47	36	106
50-54	91	48	40	131
55-59	112	66	43	155
60-64	105	72	36	141
65-69	57	34	39	96
70-74	69	37	23	92
75-79	62	43	15	77
80-84	49	31	9	58
85-89	7	2	3	10
90-94	5	4	3	8
95-99	3	1	4	7
100 +	1	1	-	1
Unsp.	27	-	20	47
Total	1 975	1 419	565	2 540

Most of the remaining absent persons moved (or fled before 1781) to cities, most frequently to České Budějovice and Prague, sometimes also Vienna, rarely Linz or other cities. It often happened that the clerk knew nothing more but that a person had left. Most of those who left were former subjects in reproductive age; whole families with small children went away only exceptionally. The list does not contain records on those subjects who married into families in a neighbouring or more distant dominion.

Some words should be added about the persons whose age was

not indicated in the list. Compared with the older books, their proportion were very low (0.4 % of all present men and 0.6 % of all present women). These cases also include those where the age data were originally indicated but were lost when the folios were cut and the book bound. Age data were never indicated in the case of knackers.

On the whole, the 1800 list of subjects of the Třeboň dominion contained almost seventeen thousand persons who were present and two thousand and a half those who were outside the dominion. Around sixteen thousand of those who were present were rural people; in the towns of the dominion less than a thousand people were listed, i.e. 1/8 to 1/9 of the actual number of the inhabitants of the towns.

Compared with earlier books, the data of the list of subjects of the Třeboň dominion for 1800 are more complete and more accurate. The age structure of the population of the dominion was affected, in two generations, by the consequences of famine which had struck the region in 1771-1772. The gap between the numbers of men and women was caused by the frequent conscriptions to the army; most of the young men who went to the army did not come back. This affected the age at marriage in part of the women and led to a comparatively high number of unmarried mothers. In the married couples the husband was usually older and in many cases, mainly when the husband contracted a second marriage, the age difference between spouses was close to a difference between generations.

x x x

The lists of subjects of the Třeboň dominion show some major characteristics of the structure of population living in a comparatively large area in South Bohemia between the mid 17th century and the early 19th century. As the lists contained, in the essence, only the inhabitants of certain villages

who in the main permanently stayed in their villages, the set of population studied can be generally regarded as rural population. As suggested, the lists can be exploited as sources of information for the study of a number of questions of historico-demographic development in the period of late feudalism. We have not yet succeeded to answer all the questions raised in the introduction to this paper. Family reconstitution should be attempted in a larger set and over a longer period of time in order to draw a more detailed picture of the age structure of the population of the area in the latter half of the 17th century and in the first half of the 18th century. It will also be useful to continue in investigation of the subsequent period for which the lists are more complete. When some methodical problems are solved, e.g. determination of the proportion of the youngest children and reliable identification of persons present and absent, the data that will be obtained may become valuable material for further historico-demographic analysis. The first results, particularly those of the investigation of the proportions of the three major age groups or of the sex ratio, suggest clearly the trends of the development of population in the latter half of the 17th century and during the 18th century; as such, they fit in well with our general conception of population development in Czech countries during the period concerned.

N o t e s

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2. L. Kárníková, Vývoj obyvatelstva v českých zemích 1754-1914. (Development of population in Bohemian countries 1754-1914.) Praha 1965, p. 340
3. Often referred to inaccurately as lists of population
4. The oldest preserved lists dated late in the 16th century are referred to by Petráň J.: Poddaný lid v Čechách na prahu třicetileté války. (Czech subjects on the verge of the Thirty Years War.) Praha 1964, pp. 165 and 202. The rise of the oldest preserved list of subjects in the Třeboň dominion of 1586, exclusive by its historical dating, is explained in the same book.
5. Collections of the Třeboň Estate, shelf mark ID 5 AU 6
6. Influenced by the method of keeping the land and duties registers
7. Shelf mark IB 5 AU 65-70, up to about 1757
8. Excerptions for 1665 were made by PhDr. Karel Dudáček and that for 1700 by Marie Rěpásová, who also described the source
9. As the excerptions were not made all by the same researchers, the "present" and "absent" categories might not be distinguished in a perfectly identical manner, although identical excerption rules had been present for all. This applies mainly to data on persons who stayed in more distant villages. However, such differences, if any, were associated only with individual persons and could not cause any significant distortion of the over-all data. This also applies to excerptions from the 1753 and 1800 files.
10. Population, 1975, Démographie historique, p. 102, Tab. 18
11. Dlouhodobé populační trendy na území ČSR. (Long-term population trends in the territory of today's Czech Socialist Republic.) In: Acta demographica IV, Praha 1981

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14. Excerpton of the 1753 list was performed by Ludmila Fialová
15. Excerpton of the 1800 list was performed by PhDr. Miloš Sládek
16. As early as in the Confession List of 1651 (SM R 109/45) a large proportion of inhabitants of the subject towns in the dominion was denoted as free. In the essence, their status was probably close to that of the inhabitants of royal cities.
17. Cf. L. Dokoupil, L. Nesládková, Úmrtnost kojenců a mladších dětí v českých zemích na konci feudalismu. (Infant and young-child mortality in Czech countries towards the end of feudalism.) HD 11, 1987, p. 147

Appendix 1

Age distribution of the population of the Třeboň dominion
in 1665 (bachelors and spinsters)

Age	Bach.	Spin.	Total	Age	Bach.	Spin.	Total
0	80	67	146	40	3	4	7
1	91	73	164	41	-	-	-
2	89	69	158	42	4	2	6
3	45	49	94	43	-	-	-
4	63	77	140	44	-	6	6
5	68	69	137	45	1	-	1
6	67	82	149	46	1	-	1
7	90	78	168	47	1	-	1
8	89	83	172	48	2	2	4
9	69	91	160	49	1	2	3
10	91	100	191	50	3	2	5
11	61	75	136	51	-	1	1
12	86	96	184	52	2	3	5
13	59	54	113	53	1	-	1
14	84	74	158	54	3	11	14
15	44	32	76	55	-	-	-
16	98	81	179	56	2	1	3
17	46	58	104	57	-	-	-
18	59	59	118	58	-	3	3
19	60	51	111	59	1	-	1
20	50	60	110	60	2	1	3
21	23	26	49	61	-	1	1
22	57	43	100	62	2	-	2
23	19	12	31	63	1	-	1
24	25	25	50	64	3	4	7
25	12	9	21	65	-	-	-
26	10	9	19	66	-	-	-
27	8	8	16	67	-	-	-
28	10	16	26	68	-	-	-
29	7	2	9	69	-	-	-
30	10	5	15	70	-	-	-
31	2	1	3	71	1	-	1
32	7	3	10	72	-	-	-
33	1	2	3	73	-	-	-
34	9	10	19	74	1	-	1
35	-	-	-	75+	-	-	-
36	-	-	-	Unsp.	9	14	23
37	1	1	2	Total	1 737	1 704	3 441
38	2	1	3				
39	1	-	1				

Appendix 2

Age distribution of the population of the Třeboň dominion
in 1700 (bachelors and spinsters)

Age	Bach.	Spin.	Total	Age	Bach.	Spin.	Total
0	135	151	286	40	3	9	12
1	121	146	267	41	4	8	12
2	134	162	296	42	3	13	16
3	119	110	229	43	2	2	4
4	117	140	257	44	-	8	8
5	154	153	307	45	-	7	7
6	123	112	235	46	8	5	13
7	142	127	269	47	-	5	5
8	132	129	261	48	2	4	6
9	96	124	220	49	-	3	3
10	87	90	177	50	-	4	4
11	99	113	212	51	1	2	3
12	91	85	176	52	-	-	-
13	102	93	195	53	1	4	5
14	82	99	181	54	-	2	2
15	82	88	170	55	-	3	3
16	72	76	148	56	-	-	-
17	87	69	156	57	-	-	-
18	95	86	181	58	-	-	-
19	101	73	174	59	-	-	-
20	66	68	134	60	-	3	3
21	77	72	149	61	-	-	-
22	61	67	128	62	-	5	5
23	81	66	147	63	-	-	-
24	69	53	122	64	2	-	2
25	50	49	99	65+	-	4	4
26	64	50	114	Unsp.	-	-	-
27	53	59	112	Total	2 904	3 027	5 931
28	39	43	82				
29	37	35	72				
30	28	30	58				
31	19	17	36				
32	17	26	43				
33	13	19	32				
34	9	19	28				
35	4	13	17				
36	7	13	20				
37	3	5	8				
38	6	6	12				
39	4	1	5				

Appendix 3

Population by age, sex and marital status, Třebon' 1753

Age	Male				Female			
	single	marr.	wid.	total	single	marr.	wid.	total
0	2	-	-	2	7	-	-	7 ⁺
1	114	-	-	114	127	-	-	127
2	87	-	-	87	88	-	-	88
3	116	-	-	116	120	-	-	120
4	115	-	-	115	110	-	-	110
5	118	-	-	118	131	-	-	131
6	117	-	-	117	106	-	-	106
7	135	-	-	135	164	-	-	164
8	163	-	-	163	152	-	-	152
9	139	-	-	139	160	-	-	160
10	149	-	-	149	145	-	-	145
11	141	-	-	141	169	-	-	169
12	116	-	-	116	116	-	-	116
13	113	-	-	113	129	-	-	129
14	118	-	-	118	140	-	-	140
15	87	-	-	87	97	-	-	97
16	127	4	-	131	121	3	-	124
17	154	5	-	159	135	6	-	141
18	124	5	-	129	123	16	-	139
19	120	5	-	125	106	20	-	126
20	84	14	-	98	98	43	-	141
21	79	16	1	96	69	56	-	125
22	86	29	-	115	85	39	-	124
23	79	29	-	108	89	23	-	112
24	51	22	-	73	57	35	-	92
25	47	48	-	95	48	75	-	123
26	40	40	-	80	56	71	1	128
27	32	42	-	74	47	27	-	74
28	33	52	-	85	35	63	1	99
29	18	38	1	57	32	32	-	64
30	18	41	-	59	34	54	-	88
31	6	58	-	64	20	70	3	93
32	25	76	-	101	31	94	4	129
33	13	51	-	64	31	19	-	50
34	10	38	-	48	35	32	1	68
35	11	69	-	80	28	59	3	90
36	9	53	-	62	30	66	2	98
37	9	40	-	49	25	13	1	39
38	5	54	-	59	21	64	5	90
39	7	34	-	41	19	24	3	46
40	2	67	-	69	23	53	13	89
41	6	55	1	62	23	52	5	80
42	7	64	-	71	11	81	8	100
43	1	39	-	40	13	24	6	43
44	5	41	-	46	14	28	3	45
45	3	52	1	56	21	49	8	78
46	5	60	1	66	19	50	15	84
47	2	34	-	36	13	29	9	51
48	1	66	-	67	18	66	19	103
49	4	44	-	48	12	28	19	59

Appendix 3 (cont.)

Age	Male				Female			
	single	marr.	wid.	total	single	marr.	wid.	total
50	3	56	-	59	12	25	20	57
51	3	42	-	45	14	30	9	53
52	1	45	3	49	11	40	26	77
53	3	29	-	32	13	14	14	41
54	-	33	1	34	8	38	17	63
55	-	43	1	44	8	17	15	40
56	5	56	6	67	3	26	24	53
57	2	28	2	32	8	18	10	36
58	1	25	1	27	9	16	26	51
59	2	22	1	25	4	12	10	26
60	-	31	3	34	1	6	20	27
61	1	25	4	30	4	7	10	21
62	2	16	3	21	3	13	20	36
63	-	20	2	22	1	5	9	15
64	1	17	2	20	4	4	10	18
65	-	14	8	22	2	6	9	17
66	-	4	2	6	1	-	3	4
67	-	5	-	5	1	4	4	9
68	-	14	3	17	1	5	8	14
69	-	6	-	6	3	2	4	9
70	-	3	2	5	1	2	7	10
71	1	5	1	7	1	1	-	2
72	-	5	-	5	-	3	4	7
73	-	3	1	4	1	-	2	3
74	-	-	1	1	-	-	1	1
75	-	2	-	2	2	-	2	4
76	-	1	1	2	-	-	3	3
77	-	2	1	3	-	-	1	1
78	-	-	-	-	1	1	3	5
79	-	-	-	-	-	-	-	-
80	-	-	1	1	-	1	1	2
81	-	-	1	1	-	-	1	1
82	-	-	1	1	-	1	1	2
83	-	1	-	1	-	-	-	-
84	-	-	-	-	-	-	-	-
85	-	1	-	1	-	-	-	-
86	-	1	-	1	-	-	-	-
87	-	-	-	-	-	-	-	-
88	-	1	-	1	-	-	-	-
89	-	-	-	-	-	-	-	-
90	-	-	1	1	-	-	-	-
91	-	-	1	1	-	-	-	-
92	-	-	-	-	-	-	-	-
93	-	-	-	-	-	-	1	1
94	-	-	-	-	-	-	-	-
95	-	-	-	-	-	-	-	-
96	-	-	-	-	-	-	-	-
97	-	1	-	1	-	-	-	-
98	-	-	-	-	-	-	-	-
99	1	-	-	1	-	-	-	-
Unsp.	7	121	18	146	10	315	122	447
Total	3086	2063	77	5226	3633	2076	546	6252

+ Incl. 3 children with unsp. sex

Appendix 4

Population by age, sex and marital status, Třebon 1800

Age	Male				Female			
	bach.	mar.	wid.	total	spin.	mar.	wid.	total
0	123	-	-	123	119	-	-	119
1	126	-	-	126	112	-	-	112
2	211	-	-	211	225	-	-	225
3	172	-	-	172	164	-	-	164
4	127+1	-	-	127+1	114+1	-	-	114+1
5	123	-	-	123	137	-	-	137
6	238+2	-	-	238+2	260+2	-	-	280+2
7	202	-	-	202	209	-	-	209
8	266+1	-	-	266+1	242	-	-	242
9	215	-	-	215	192+1	-	-	192+1
10	228+2	-	-	228+2	227+1	-	-	227+1
11	175	-	-	175	199	-	-	199
12	222+2	-	-	222+2	210+1	-	-	210+1
13	257	-	-	257	241+2	-	-	241+2
14	139	-	-	139	159+1	-	-	159+1
15	133	-	-	133	140	1	-	141
16	146+2	-	-	146+2	162+1	5	-	167+1
17	225+1	9	-	234+1	218+3	13	-	231+3
18	71+1	2	-	73+1	111+3	11	-	122+3
19	139+3	8	-	147+3	150	20	-	170
20	116	15	-	131	159+3	28	-	187+3
21	122+4	8	-	130+4	128	48	-	176
22	74	16	-	90	129+3	44	-	173+3
23	76+4	26	-	102+4	129+1	46	-	175+1
24	69+4	25	-	94+4	80+1	49	-	129+1
25	96+3	41	-	137+3	104+4	69	1	174+4
26	63+2	27	2	92+2	77	68	-	145
27	10+1	30	-	40+1	28+1	52	-	80+1
28	27	23	-	50	35+2	62	-	97+2
29	40+2	69	-	109+2	70+1	93	3	166+1
30	29+3	73	-	102+3	56+2	99	2	157+2
31	25+6	58	-	83+6	51+2	83	4	138+2
32	27+1	58	-	85+1	51+3	99	4	154+3
33	26+4	91	1	118+4	34+1	115	7	156+1
34	20+1	94	-	114+1	35	101	7	143
35	20+1	77	1	98+1	32+1	92	6	130+1
36	14+2	61	-	75+2	17+3	88	2+2	107+5
37	6+3	72	-	78+3	23+1	89	9	121+1
38	11	69	-	80	15+3	79	7	101+3
39	9+2	106	-	115+2	23	103	12	138
40	14+3	106	3	123+3	21+5	114	14	149+5
41	5+3	114	1	120+3	14+4	113	12	139+4
42	5+4	76	-	81+4	13	68	9	90
43	3+2	89	1	93+2	8+3	70	6	84+3
44	7+2	79	1	87+2	13	78	11	102
45	5	87	1	93	9	68	13	90
46	8+1	96	3	107+1	6+1	59	12	77+1
47	1	82	-	83	7+1	50	12	69+1
48	3+1	80	-	83+1	4+1	65	16+1	85+2
49	3	67	2	72	8	56	9	73

Appendix 4 (cont.)

Age	Male				Female			
	bach.	mar.	wid.	total	spin.	mar.	wid.	total
50	5+2	75	-	80+2	14+1	73	20	104+1
51	3+2	91	2	96+2	2+1	57	22	81+1
52	3	75	1	79	9+3	41	22+1	72+4
53	2	55	-	57	9	46	15+1	70+1
54	4+3	72	1	77+3	4	53	23+3	86+3
55	2+2	61	2	65+2	5	57	22+1	84+1
56	4+2	60	3	69+2	7+1	42	21	73+1
57	1+3	61	6	68+3	8+2	53	26	87+2
58	3+1	58	4	65+1	8	34	16	58
59	4+2	42	2	48+2	7+2	35	15+2	57+4
60	2	41	2	45	5+1	34	21+2	60+3
61	2+2	32	6	40+2	9+1	33	29+1	71+2
62	2	42	4	48	6+1	26	21+1	53+2
63	4+3	36	3	43+3	8+1	31	33	72+1
64	6	34	3	45	4+1	29	20+1	49+2
65	2+3	30	4	36+3	6+1	19	18	43+1
66	3	37	4	44	2	12	23+1	37+1
67	1+1	13	7	21+1	2+2	15	21+1	38+3
68	1+3	21	6	28+3	4+2	16	20+1	42+3
69	2	29	5	37	1	11	14	26
70	3	24	5	32	4+2	7	20+1	31+3
71	2+2	20	10	32+2	7+1	8	5	20+1
72	1+4	14	7	22+4	4	7	11+1	22+1
73	1	7	4	12	3	7	14	24
74	3+2	13	5	21+2	3+1	4	6	13+1
75	2	4	6	12	3+1	1	8	12+1
76	3+2	10	3	16+2	-+2	2	4	6+2
77	1+3	5	4	10+3	-	-	5	6
78	2+2	8	1	11+2	3	-	7	10
79	2+4	4	4	10+4	2+1	-	4+3	6+4
80	2+1	5	2	9+1	2	-	3	5
81	2+1	3	1	6+1	-	1	6+2	7+2
82	2+3	3	1	6+3	3+1	-	3+1	6+2
83	-+1	1	2	3+1	-	-	3	3
84	-	1	1	2	1+1	-	2+1	3+2
85	-+1	1	1	2+1	-+1	1	2	3+1
86	-	2	1	3	-	-	1+1	1+1
87	-	1	2	3	-	1	1+1	2+1
88	-+1	2	-	2+1	-	-	1	1
89	-	1	-	1	-	-	-	-
90	-	1	-	1	-	-	-	-
91	1	-	-	1	-+1	-	2	2+1
92	-+1	1	-	1+1	1	-	-	1
93	-	-	-	-	-	-	-	-
94	-+1	-	-	-+1	-	-	-	-
95	-	1	-	1	-	-	-	-
96	-+2	-	-	-+2	-+1	-	-	-+1
97	-	-	-	-	-	-	1-	1
Unsp.	17+3	10	1	28+3	14+2	32	8+2	54+4
Total	4572	3041	147	7760	5157	3091	717	8965
	+137			+137	+98		+32	+130

Note: See p. 102, too.

Appendix 5

Age difference of spouses in the Třebon̄ dominion in 1753

Age of men	Age of women										total
	16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60+	
peasants (with own farms)											
16-19	1	2	-	-	-	-	-	-	-	-	3
20-24	7	23	4	-	-	1	2	-	-	-	37
25-29	3	44	40	10	-	-	2	-	-	-	99
30-34	-	17	58	21	10	4	3	3	-	-	116
35-39	2	4	20	61	34	4	3	1	1	-	130
40-44	-	2	12	29	52	27	6	5	-	-	133
45-49	-	2	3	12	15	48	22	3	2	1	108
50-54	2	1	3	6	7	17	38	15	1	-	90
55-59	-	1	1	1	1	8	22	26	7	-	67
60-64	-	-	-	-	2	3	2	10	11	7	35
65+	-	-	-	-	-	3	-	1	4	-	8
total	15	96	141	140	121	115	100	64	26	8	826
cottagers											
16-19	1	1	-	-	-	-	-	-	-	-	2
20-24	3	3	-	-	-	-	-	-	-	-	6
25-29	-	4	6	2	-	-	-	-	-	-	12
30-34	-	2	11	8	2	1	-	-	-	-	24
35-39	-	3	4	8	1	3	-	1	-	-	20
40-44	-	-	-	6	7	1	-	-	-	-	15
45-49	1	-	-	-	2	3	6	-	-	-	12
50-54	-	-	-	2	3	5	2	1	1	1	14
55-59	-	-	-	-	-	2	1	1	2	1	7
60-64	-	-	-	-	-	1	-	-	-	2	3
65+	-	-	-	-	-	-	-	-	1	1	2
total	5	13	21	26	12	14	13	4	4	5	117
subtenants											
16-19	5	4	2	-	-	-	-	-	-	-	11
20-24	11	29	3	2	1	-	-	-	-	-	46
25-29	4	38	23	11	1	2	1	-	-	-	80
30-34	1	9	42	18	3	6	1	1	-	-	81
35-39	-	3	11	43	13	3	1	-	-	-	74
40-44	-	2	7	13	40	22	2	2	1	-	89
45-49	-	2	4	8	19	46	21	7	3	1	111
50-54	-	1	-	1	6	10	45	14	7	1	85
55-59	-	-	2	1	3	6	23	20	18	9	82
60-64	-	-	-	1	4	4	6	15	22	10	62
65+	-	-	-	1	1	3	5	8	5	24	47
total	21	88	94	99	91	102	105	67	56	45	768

Appendix 5 (cont.)

Age of men	Age of women										total
	16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60+	
all spouses											
16-19	7	7	2	-	-	-	-	-	-	-	16
20-24	21	55	7	-	1	1	2	-	-	-	89
25-29	7	66	69	23	1	2	3	-	-	-	191
30-34	1	28	111	47	15	11	4	4	-	-	221
35-39	2	10	35	112	48	10	4	2	1	-	224
40-44	-	4	19	48	99	50	9	7	1	-	237
45-49	1	4	7	20	36	97	49	10	5	2	231
50-54	2	2	3	9	13	30	86	31	9	2	189
55-59	-	1	3	2	4	16	46	47	27	10	156
60-64	-	-	-	1	6	8	8	25	33	19	100
65+	-	-	-	1	1	6	5	9	10	25	57
total	41	197	256	265	224	231	218	135	86	58	1711

Appendix 6

A list of villages and towns - or parts of them
(present inhabitants)

Name	1665	1700	1753	1800
Bor	94	108	133	172
Borkovice				195
Bošilec	164	215	213	284
Braňšovice	2	9	9	13
Branná	28	81	64	336
Břilice				293
Bukvice	4	7		7
Cep	194	246	259	270
Dolní Bukovsko		11	9	16
Dolní Miletín				80
Dolní Slověnice		148	273	172
Dolní Stropnice	16	27	56	32
Dománín				290
Donov				166
Doudleby	71	89	91	110
Drahotěšice	101	163	231	260
Drahov		76	77	100
Dunajovice				274
Dynín	87	224	252	250
Frahelž	54	126	170	174
Hamr			92	141
Horní Miletín	13	48	64	101
Horní Slověnice	203 ⁺	184	170	215
Horusice	133	252	279	304
Hrachoviště				221
Hrdlořezy	128	125	180	263
Hůrka	4	8	47	59
Hvozdec	48	80	78	107
Jílovice	112	223	270	275
Klec	63	90	86	123
Kojákovice	164	208	279	359
Kolence	106	161	210	266
Kondrač	6	68	3	5
Kosov			56	67
Kostelec	44	78	89	111
Kramolín	87	133	138	240
Kundratice	43	3	96	121
Ledenice		8	11	6
Lhota	81	105	109	126
Libín				108
Lipnice				201
Líšnice			136	150
Lomec			38	56

Appendix 6 (cont.)

Name	1665	1700	1753	1800
Lomnice nad Lužnicí		30	11	38
Lužnice	164	225	310	304
Mazelov	165	219	214	255
Mažice				28
Mezimostí		12	3	19
Mladčovice				107
Mláka	56	70	102	129
Mostecký		105		
Mysletín		42	8	
Neplachov	152	231	263	393
Nová Hlína		27	50	124
Nová Ves	58	92	77	91
Novosedly nad Nežárkou	249	401	435	478
Ohrazení				17
Ohrazeníčko			87	66
Palejovice	80	148	165	178
Petrovice				103
Ponědraž	78	126	142	186
Ponědražka	118	143	150	192
Přeseka	128	141	167	229
Radonice	61	90	122	172
Radostice	115	171	193	212
Radoun		33		
Rájec	159	208	239	263
Sedlčkovice	60	90	101	132
Slavošovice	68	85	71	148
Smržov	112	137	159	196
Soběslav		30	2	
Spolá				140
Stará Hlína	99	134	198	255
Staré Hodějovice	190	233	241	247
Strážkovice	8	5		6
Svatá Vozžila			40	38
Sučndol nad Lužnicí	360	560	472	587
Svínky		31	64	55
Sviny	169	246	297	306
Šalmanovice				198
Sevětín	90	152	213	255
Štěpánovice	116	249	320	470
Třebon - town		54	34	267
- castle		315	144	87
Val			212	264
Veselí nad Lužnicí		40	21	35
Vidov	26	59	48	43
Vitín	87	176	235	292
Vlastiboř		82	119	120
Vlkov			99	142
Vlkovice	71	76	91	131

Appendix 6 (cont.)

N a m e	1665	1700	1753	1800
Vrcov				21
Vřesná		151		
Záblatí	93	140	115	179
Záhoří	56	93		
Zborov			193	247
Zaliny	66	108	145	151
Zvíkov	90	135	170	171
Žišov	103	163	164	232
samoty (jednoty)	111	137	177	262
others			307	345
Total	5608	9496	11 478	16 725

+ incl. Dolní Slověnice

Historická demografie, 13/1989, s. 125-160

Ústav československých a světových dějin ČSAV, Praha

Ladislav Dušek, Ludmila Fialová

AGE STRUCTURE OF THE POPULATION OF ČESKÁ KAMENICE
IN 1670 - 1750

In this study an attempt is made to use the series of lists of subjects of Česká Kamenice, which is a valuable source of historical demographic information, for investigation on the development of the age structure of the Czech country town in the 17th and 18th centuries.

1. The Town Česká Kamenice

Today Česká Kamenice is a town with a population of about 7000 located in northern Bohemia 15 km east of Děčín. The origin of the town is dated to the period of the reign of Přemysl Ottakar II. Under the reign of Wenceslas II, the town, encircled by walls, was donated to Jan of Michalovice and the house of Michalovice kept it until 1406. In 1380, during the Michalovice era, the famous Town Book, one of the oldest in Bohemia, was founded at Česká Kamenice, and in 1394 Jan II of Michalovi-

ce gave the burghers of Česká Kamenice a number of privileges, including the right of brewing and the right to sell beer and wine, and others. After 1406 the town had a number of owners in succession (the houses of Wartenberg, Trčka of Lípa, Salhausen), and finally it became the property of the house of Vchynský (later Kinský) of Vchynice and Tetov. After the battle of the White Mountain (1620), the population of the town declined considerably, because most of the non-catholic inhabitants of the town had to emigrate. ¹⁾ The town was badly affected by military operations during the Thirty Years' War. The Fiscal Rule of 1654 recorded 227 husbandmen (68 peasants, 57 cottagers and 82 gardeners) and the Maria Theresa Land Survey of 1757 recorded 288 husbandmen, 52 subtenants (many of them were artizans), and 287 houses. At the time when the Maria Theresa Land Survey was made, the town was of farmer-artizan character, because apart from peasants there lived 234 artizans and the area of land owned by the inhabitants of the town was only 338.2 strychs (1 strych = 0.711 acre), whereas, from comparison, the nearby town Dolní Chříbská had 40 peasants with 451.3 strychs of land. At Česká Kamenice, 201 inhabitants had strips of land up to 1 strych in size, 69 up to 5 strychs, 17 up to 15 strychs, and one up to 30 strychs. Some artizans produced their goods to meet the consumer demand of the town, but the major trades in the town were associated with textile and glass: there were 29 hosiers, 6 cloth shearers, 5 dealers in linen, 27 clothiers; 7 glass cutters, 2 glass workers, 1 dealer in glass. ²⁾

2. Lists of Subjects

The archive collections of the Česká Kamenice Estate, kept at the Děčín branch of the Regional State Archives of Litoměřice, contain 23 lists of the subjects of the town Česká Kamenice, dated 1669, 1670, 1674, 1676, 1680, 1683, 1687, 1694,

1695, 1699, 1704, 1709, 1713, 1717, 1720, 1722, 1725, 1734, 1736, 1738, 1744, 1749 and 1750. Twenty-one of them record only the inhabitants of the town and the remaining two cover the population of the whole estate (1669, 1676). The size of the books is about 20 x 32 cm. Originally they were unbound, later they got simple binding. ³⁾ The language the the lists is German.

The lists cover all the population subject to the owner of the estate, including those subjects who lived outside the town or estate (even in another country) for even several decades, as well as those whose fate was unknown (wandering artizans, beggars, soldiers and others).

The lists kept about the same form throughout the period of 1670 to 1750: on the left there is a column with data on age, separated from the rest by a vertical line. All family members are entered one below the others: father first, with indication of occupation, followed by his wife and children, usually in the order of their age, although there are many exceptions. Families are separated by horizontal lines. In the case of orphans there is the name of the father (e.g. "Hans Patzenhauers hinterlassene Tochter"); marital status is indicated in the case of widows and widowers. The order of families remained the same in subsequent list; this suggests that the records were made according to houses.

The majority of the lists refer to situation as of the January of the respective year (indicated on the title page); some of them are not dated, and some describe situation as of another date (1674 and 1725; February; 1722: April; 1736: July; 1744: March). All the lists have a uniform structure - the population is divided into categories in the following order: burghers, gardeners, Lower Town cottagers, Upper Town cottagers, inhabitants of New Street (Neugasser), community cottagers (Hausgenosshäusler), and subtenants (Hausgenossen). The 1669 list also included orphans, manor servants and Upper and

Lower Town peasants, the 1674 list included the manor servants, and the 1680 list the Upper and Lower Town peasants.

With only some exceptions, the lists consistently recorded only the households of individuals and of simple families. It is just in exceptional cases that still unmarried sibs were recorded together with the family of a married brother. Even in those cases when a widowed parent lived in the family of one of the children there are separate entries for such persons, with an indication of where the person concerned stayed. Servants were never listed with any family (in several cases there are notes saying: lives with X.Y.).

All the lists were made in the same way, on the basis of a draft. This draft could not be identical with the preceding list because each subsequent list contains notes on all changes that happened meanwhile (deaths, establishment of new families and the like). The fair copy was updated to a greater or lesser extent by the inclusion of notes: the names of newborn children were added, the dead were denoted by a cross, by crossing out the name or by the note "gestorben"; some notes reported on wandering, studies and the like). The number of additional notes varies greatly with years: it is very low in some years because practically all the latest changes had been recorded when the fair copy was made (e.g. 1674, 1676, 1683, 1687, 1694, 1695, 1720, 1734, 1738, 1749), whereas in other lists the number of additional notes is great and free space was left for them in the fair copy (e.g. 1699, 1717, 1736, 1744, 1750). There are some peculiarities in some of the lists: the 1676 lists has numbers below the text on every page, indicating the total number of subjects entered on that page; the 1683 list is the only one to have contemporary pagination (others were paginated or foliated later or have no pagination); in the lists of 1709, 1713 and 1720 there are numbers on the right side of the entries of every family (in an overwhelming majority of cases these are single figures), but

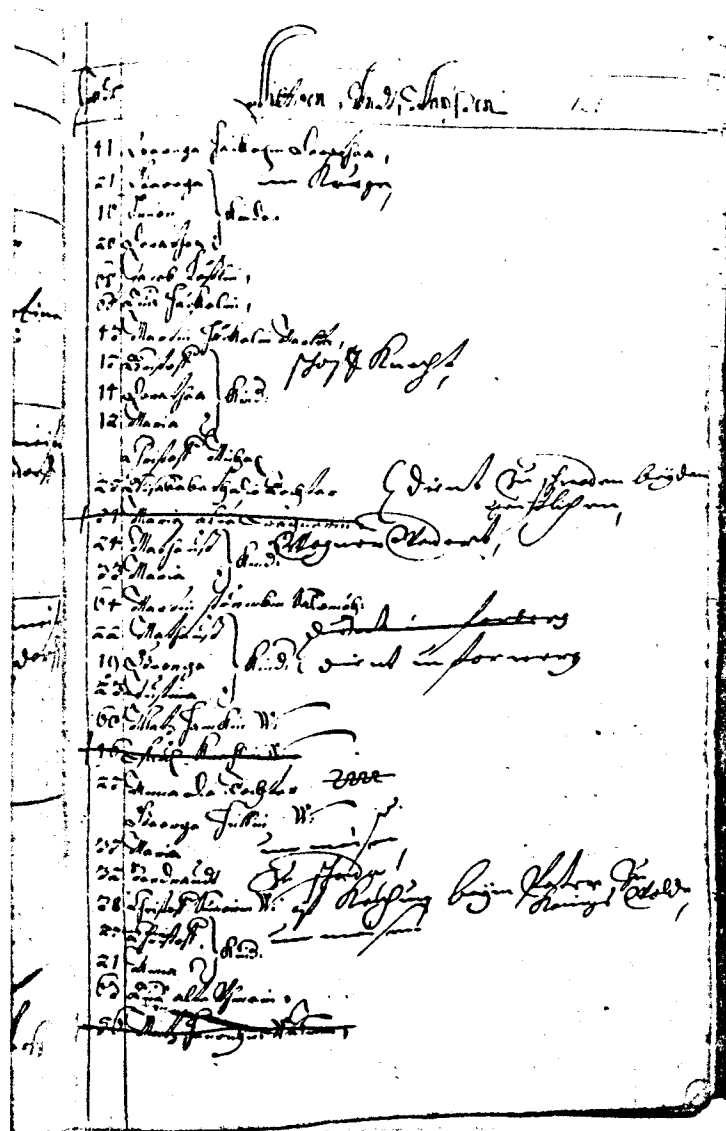


Fig. 1 List of subjects of the town Česká Kamenice of 1669
(Regional State Archives of Litoměřice)

their meaning is unknown; further, there is a check mark at every person's entry (before the age data) in the 1713 list.

The list of 1725 is also exceptional, but in this case the exception complicates the whole subject of our investigation. In some entries there is the mark "-" before the name of a child; the meaning of this mark is not very clear. There are many indications suggesting that the children concerned were very young, perhaps up to 1 year of age (we used this assumption in determining the age structure of the population in the year concerned). The most convincing argument in favour of this explanation is the fact that the mark occurs almost exclusively with the names of the last children born to the families and that these names were added as a note to the fair copy. The trouble is that there are exceptions to this rule: in three cases the mark is added to the names of the two youngest children of the family and the age of the children is indicated in two of these cases (p. 24 2 years and 1 year, and 1 1/2 and 1/4 of a year). By no means could the mark mean death, because in the list concerned all deaths were indicated by a clear cross behind the name.

3. Reliability of the Data

In this chapter we attempt to evaluate the reliability of the lists as a source of historical demographic information on the basis of the data of the text of the lists alone. Starting from the list of 1676, the date of birth (and also date of death but this is useless for our purpose) copied from the parish register was later added to the entries concerning some of the persons listed. In the majority of cases the age data in the list are very accurate and deviations of one year from reality occur just exceptionally. Unfortunately, there is no case in which such a check would be available for persons above 55 years of age.

The image shows a handwritten list of subjects of the town Česká Kamenice of 1750. The list is organized in columns with numbers 1-32 on the left and names in a cursive script. There are checkmarks and a large 'X' drawn over the bottom half of the list. A page number '65' is written in the bottom right corner.

Fig. 2 List of subjects of the town Česká Kamenice of 1750
(Regional State Archives of Litoměřice)

The completeness of records on children, especially the youngest ones, is a great problem in many lists. To check this we picked two years, 1680 and 1738, in which some data of the lists were compared with parish registers. Lists of children born in 1677-1679 and in 1735-1737 were compiled from the parish registers of births of those years. Children who had died within these two periods were excluded and the names of the children who remained in our list were compared with the names of the children in the lists of subjects. In the case of the list of subjects of 1680 the result was unexpectedly good: of the 93 children born in 1677-1679 the 1680 list failed to record only five, which is a negligible number. In addition, the 1680 list of subjects contained 32 children at an age of 0 to 2 1/2 years the birth of whom was not recorded in the parish register. In the case of the list of 1738 the situation was complicated and the result somewhat obscures the problem of genesis of the separate lists. The problem is that the list and parish register agreed only until July 1736 (though the agreement was not so perfect as in the case of the 1680 list because the 1736 list failed to record 14 of 75 children); of the children born after July 1736 the list contains none! This suggests that the list of 1738 refers, for unknown reasons, to situation as of July of August 1736. This view is supported by the fact that the list includes Marie Magdalena Elster who died on August 10, 1736, Hieronymus Riehl who died on May 12, 1737, and Veronica Langschadel who died on May 16, 1738. On the other hand, there is no entry concerning Bettine Piltz who died on May 16, 1738. Obviously, the whole problem deserves detailed comparison of a higher number of lists of subjects with data in the parish registers (the possibility of such a comparison is complicated by the fact that the parish registers referring to 1715-1734 have not been preserved) and mutual comparison of several lists in succession. However, such a laborious task was too time consuming to be attempted by the

authors. Hence, on the basis of the two "probes" mentioned above it can be stated that the lists of subjects of 1680 and 1738 contain fairly reliable data on children in the age group of 0-3 years, though in the latter list the situation is complicated by the problem of uncertainty as to the time of its compiling.

4. Development of Population Estimated from the Lists of Subjects

4.1. Introduction

As the number of lists of subjects referring to the period under study is high but their time distribution is irregular, we decided to study the development of age structure from lists in about ten-year intervals (1670, 1680, 1694, 1704, 1713, 1725, 1738, 1750).

As said, who wants to use the Česká Kamenice lists for the study of demographic issues will have to face great problems because the lists include not only the population living at the given moment at Česká Kamenice but all the persons who were subject to the owner of the estate. We had therefore to eliminate all persons who lived permanently outside the town during the time when the list was made. This elimination could be neither simple nor clear in all cases; authors' subjective views could not be avoided and it must be admitted that other authors might have used a different procedure in some cases. However, in spite of all this, we believe that the final results are not much distorted. We eliminated those persons (or whole families) whose names bore a note saying that they lived in another place (elsewhere in Bohemia or abroad), or that they were journeying (mostly with the indication of time), that they were in the army, or stayed in an unknown place. On the other hand, we left in the list those children, or more exactly, those sons, with whom it was noted that they were

students or apprentices. We are aware that at this point our decision may be regarded to be disputable, but after some hesitation we decided to look upon these persons from the point of view of the present time.

4.2. Development of the Number of Population

Over the period from 1670 to 1750 the number of population at Česká Kamenice grew from 1367 to 1836, i.e. by a third, considering only those persons who lived in the town and were present there (except for the persons mentioned above) at the time when the list was made. However, it must be added that almost all this increase took place during the first decade: between 1670 and 1680 the number of inhabitants of Česká Kamenice increased by 446 persons (the mean annual growth was 28.2 ‰). During that period the town was most probably still offsetting the losses from the Thirty Years' War. During 1680-1694 the population declined by 3.1 ‰ annually, on an average. As the history of the town has not yet been consistently studied in detail, it remains unknown why this was so: there was no greater increase in mortality at that time and the plague of 1680 did not strike the town. 4)

Tab. 1 Number of population in the town Česká Kamenice and annual percentage rates of population growth, 1670-1750

Year	No of the population	Annual percentage rates of population growth
1670	1 367	.
1680	1 813	2.82
1694	1 735	- 0.31
1704	1 826	0.51
1713	1 925	0.59
1725	1 834	- 0.40
1738	1 838	0.02
1750	1 836	- 0.01
1670-1750	.	0.37

The number of population increased again during 1694-1714 to reach a maximum (1925 persons) in 1713. This probably strained the town's possibilities of development, because the population declined again in the subsequent years. In 1725 the number of population was again about 100 persons lower, and remained unchanged in the subsequent decades during which it did not exceed 1840 persons. According to the Maria Theresa Land Survey, there were 287 houses in the town; this implies that there were about 6.4 persons per one house in that time - a number corresponding with situation elsewhere.

Immediately after the Thirty Years' War the number of population of the town grew very rapidly. This growth probably came to an end late in the 17th century when the maximum economic possibilities of the town were reached; then followed a period of slight fluctuations around the mean (1800-1840 persons) which lasted throughout the first half of the 18th century.

4.3. The Sex Ratio

In the whole period under study, women prevailed among the settled subjects who were liable to listing. The highest balance between the sexes was recorded at the start of investigation in 1670 when there were 96 men per 100 women, and in 1738 when this ratio was 94:100. In the remaining years the masculinity was much lower. This lack of balance in the sex ratio was due to the high prevalence of women in productive age, especially those in the age group of 20-29 years. The most probable cause was that boys and men above 15 years often left the town to become apprentices and later journeymen. Many men in this age group also had to go to the army. On the other hand, the number of women in this age group increased by the girls who came to the town to become maid servants. These effects on the age structure were so serious that they could not be offset even at a higher age; it was only among persons older than 60 years that the number of men was higher than the

number of women in some years.

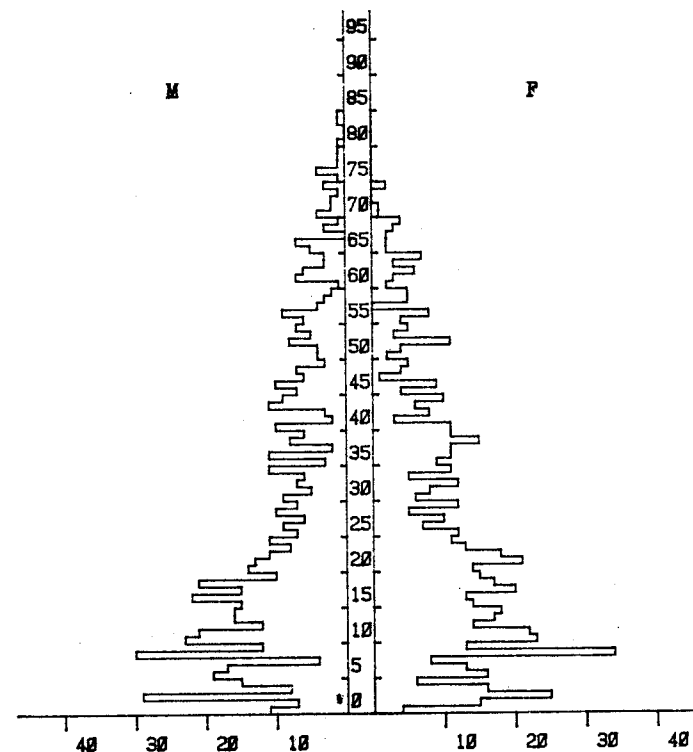
In these cases the prevalence of men above 60 years of age over women of the same age might also be caused by lack of accuracy in the indication of age, both in men and women, although otherwise the lists are reliable. For instance, in the list of 1713 age data were absent from entries on 5 % of the women and these 5 % of women appear to be of the older age groups. On the oldest list of 1670, men began to prevail from the age group of 40-49 years. This high masculinity of the older population seems to reflect the extremely unfavourable conditions in which the population had to live in the first half of the 18th century and which could result in a still higher excess mortality of women than usual, ⁵⁾ On the other hand, the comparatively better life conditions at the turn of the 17th and 18th centuries reduced the excess mortality of women and balanced the sex ratio of the population in post-productive age.

On the other hand, the lower proportion of boys in the youngest age group may be ascribed, to some extent, to the failure to record all children, especially the new-born ones, among whom masculinity is usually the highest, and to the fact that in a small population such as that of Česká Kamenice the number of boys of born may not be higher than that of the girls in all years.

Tab. 2 The sex ratio by age (men per hundred women)

Age	1670	1680	1694	1704	1713	1725	1738	1750
0-4	106	92	99	99	118	101	81	94
5-9	98	97	82	111	110	107	101	84
10-14	84	89	120	89	94	113	128	83
15-19	105	84	78	64	104	108	89	88
20-24	74	63	48	72	55	64	104	83
25-29	85	75	68	69	63	71	107	60
30-39	69	78	78	67	81	60	89	76
40-49	112	95	82	71	89	83	75	89
50-59	111	82	79	84	79	69	90	102
60+	155	123	100	86	103	127	91	83
Total	96	86	82	81	88	87	94	82

Fig. 3 Age structure of the population of the Česká Kamenice in 1670



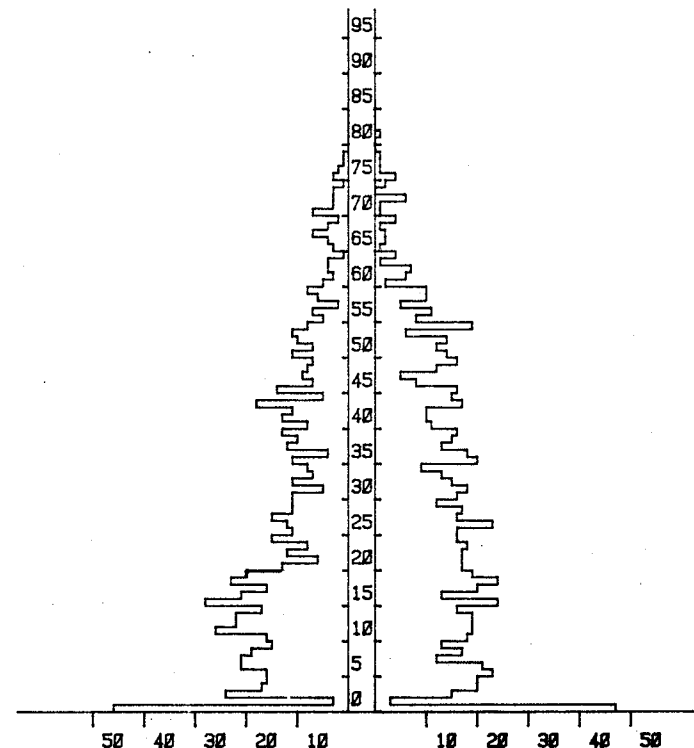
4.4. Age Structure

In the annex, tables and figures are given to show, for the selected lists, the structure of population according to five-year age groups, according to sex, and according to marital status. The age structure of the population is also indicated in age units on the basis of the lists of 1670 and 1725. These very lists were investigated in detail because the proportions of persons without age indication was low in them. The diagrams, the tables as well as the concentration index provide evidence in favour of the high reliability of the data recorded. For example, in 1670 the index of age concentration for the adult population (age 23 - 62 years) was 0.90 for men and 0.87 for women.⁶⁾ In 1725 this index amounted to 1.06 and 1.00, respectively. This implies that in these years there was no rounding of age data to numbers ending at 0 or 5, a phenomenon otherwise fairly common. In 1670 the reverse was the case: there was a comparatively small number of age data with "0" or "5" endings.⁷⁾

The unequal numbers of population in the different years, giving the impression, especially in the diagrams, of a great irregularity of age structure, must be ascribed to the fact that the number of population of the town was low: we cannot expect such a small population to balance the proportions of individual year groups, as known from larger sets. However, when the population is divided into five-year age groups, these small irregularities are levelled off and the general picture of age structure in all years looks balanced.

However, in both lists (1670 and 1725) there are deviations in the age structure that can be ascribed to errors in the indication of age. This applies mainly to the young part of the population (children) which probably was not included whole and in which the age was recorded, mainly in the 1670 list, on the basis of a rough estimate. This is the reason

Fig. 4 Age structure of the population of the town Česká Kamenice in 1725

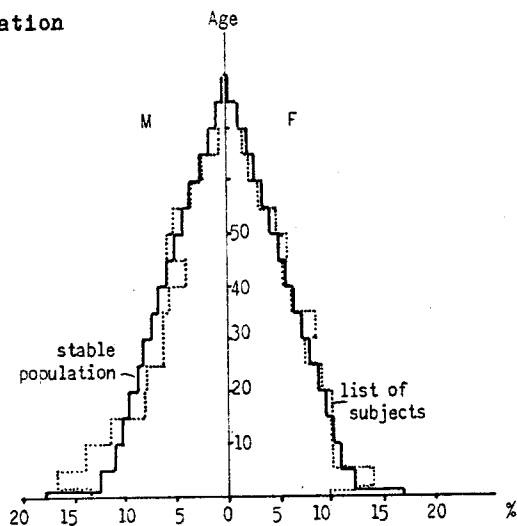


why in the 1670 list there are so many two- and eight-year-old children whereas the numbers of three- and seven-year-olds are much smaller. Perhaps some customs were involved: e.g. an eight-year-old child was regarded to be already able to do some kinds of work.⁸⁾ As to the youngest children (up to 1 year of age), some lists appear to include only a small proportion of them.

In the case of the list of 1725, all children who had a dash before their names (see above) were regarded to be of age 0.

However, in general the age data in the lists can be considered to be reliable. This is documented by comparison of the age structure of 1704 with the table population. The age structure of the population in 1704 is almost the same as the structure of stable populations with an annual growth rate of 5 ‰ and with parameters of natural change not necessarily very different from the conditions at Česká Kamenice in 1704.⁹⁾

Fig. 5 Comparison of the age structure of 1704 with stable population



Comparison of the age structure of the population in individual years also allows to recognize some trends in the population development of the town in 1670-1710. It can be derived from the ratio of the basic age groups that until about 1713 the population of Česká Kamenice exhibited features of markedly progressive growth. As a rule, the proportion of the children (0-14 years) was above 35 %, the proportion of adult population (15-49) made up about a half, and that of old persons (above 50) was about 15 %. If it is assumed that not all children were recorded, the proportion of the young part of the population will be even slightly higher. The proportion of people above 50 years is surprisingly high. This was probably due to the fact that population in the middle-aged group was always artificially weakened: this applies mainly to men who were permanently absent from the town, either deliberately or involuntarily; some left for ever, others just for some time.

Tab. 3 The age structure of the population of the town Česká Kamenice in 1670-1750 (expressed to the base 100)

Age	1670	1680	1694	1704	1713	1725	1738	1750
0- 4	10	12	12	14	12	12	7	10
5- 9	12	12	12	12	12	10	10	9
10-14	13	12	12	11	12	11	10	10
15-19	12	10	9	9	10	11	9	10
20-29	16	17	16	16	13	15	16	15
30-39	12	13	13	13	12	13	15	12
40-49	10	9	12	11	10	12	12	12
50-59	7	7	7	8	8	10	11	9
60 +	7	7	6	5	8	6	9	10
Unsp.	1	1	1	1	3	0	1	3
0-14	35	37	37	37	37	32	27	29
15-49	50	49	50	49	45	51	52	49
50 +	14	14	13	13	16	16	20	19
Total	100	100	100	100	100	100	100	100

Starting in 1725, and mainly in 1738 and 1750, the ratio of the major age groups suggests that conditions under which

the population lived had changed a little. The proportion of children up to 14 years of age declined below 30 % and the proportion of old people increased above 20 %. This does not indicate a significant change in the age structure of the population where young people still prevailed (average age still below 30 years), but a trend is suggested according to which the reproduction conditions in the first half of the 18th century differed slightly from situation late in the 17th century.

4.5. Structure by Marital Status

The main reasons why the structure of population based on marital status is regarded as interesting are the facts that the majority of children were born in wedlock and that the standard of living of the female part of the population depended, in the period under study, on whether the women was married or widowed, or lived outside wedlock for whole life. The records in the lists allowed to distinguish fairly reliably the population according to marital status: the number where we failed to recognize the marital status was less than 2 ‰; it was only in the 1713 list that the marital status is not indicated in 9 % of the women.

As to men, the proportion of unmarried men above 15 was about 30-40 % in 1670-1713. The proportion of unmarried men kept declining during this period: from 38 % in 1670 to mere 29 % in 1713. Then the trend changed and the proportion of unmarried men grew again to reach 42 % during 1725-1738. A reverse development was recorded in the proportion of married men: it continued increasing from 1670 until 1713 (from 58 % to 67 %) and then it declined fairly rapidly to 51 % during the last two periods of investigation. The number of widowers increased slightly throughout the period under study: the highest proportion of widowers, 7 %, was recorded in 1750; in 1680 it was 6 % and otherwise it ranged between 3 and 5 %.

Tab. 4 Population of the town Česká Kamenice aged 15 and over by marital status (expressed to base 1000)

Year	Male				Female			
	bach.	mar.	wid.	unsp.	spin.	mar.	wid.	unsp.
1670	376	580	32	12	361	549	88	2
1680	347	581	69	3	366	483	127	24
1694	331	626	37	6	400	457	128	15
1704	311	643	46	-	409	461	128	2
1713	294	668	38	-	356	529	107	8
1725	313	627	40	20	359	445	107	89
1738	415	515	52	18	371	466	136	27
1750	425	508	61	6	430	405	155	10

When unmarried and married men are compared in different age groups it is seen that late in the 17th century men married most frequently at an age of 25 to 30 years. During that period there were about 15 % of men who were married at an age of 20-24 years but the proportion of married men in the 25-29-year age group was 70 %. In the age group of 30-39 years almost 90 % of the men were married. The lists also include widowers but their number was very low and the youngest ones were above 30 years old.

In the mid 18th century the pattern of marital status of men showed a small difference: a significant decline was recorded in the number of married men in the age group up to 30 years. Many men married only after their thirtieth birthday and the proportion of permanently single men in the older age groups increased. A slight rise also occurred in the proportion of widowers.

A very similar development was observed in women. The proportion of single women older than 15 years increased during the period under study; on the whole, this increase was by 7 points (from 36 % to 43 %) and was observed in all age groups. The proportion of married women declined proportionately from 54 % in 1670 to 40 % in 1750.

The fact that the decrease in the proportion of married women was caused by a decrease in nuptiality is indicated by

the stagnation of the proportion of widows. In 1670 the proportion of widows was low, 9 %, otherwise it ranged between 11 and 13 %, and only in 1738 did it increase to 14 % and in 1750 to 16 %. Hence, the proportion of widows of the female part of the population was more than twice as large as the proportion of widowers of the male part of the population.

Girls at Česká Kamenice seldom married before 20. Throughout the period under review, less than a quarter of the women of the 20-24-year age group lived in wedlock. Late in the 17th century 70 % of 30-year-old women and all 40-year-old women were married. The first widows occurred in the age group of 30-40 years; their proportion increased rapidly and at an age of about 50 years every third woman was a widow. This more or less corresponds with their chances to marry again: widows' chances in this respect were negligible.

Like in the case of men, a steady increase was observed in all age groups of unmarried women. In 1750 only 40 % of women aged 25-29 years lived in wedlock and the proportion of permanently single women in the age group of 45-49 years increased to as much as 20 %. In that period, widows occurred mainly among older women.

The marital status structure of the population as drawn on the basis of the data in the lists was obviously influenced by the conditions and customs of the time to which the lists refer. Many unmarried younger men left the town and, on the other hand, single girls came. This is probably the reason why the proportion of single men up to an age of 50 is somewhat lower and the proportion of single girls higher. Widowed men under 50 probably married again soon whereas widows' chances to contract another marriage were much lower.

The decline of the proportion of population living in wedlock in the mid 18th century seems to be associated with the general situation as described above, owing to which the population ceased growing. After the end of the Thirty Years'

War, when the population and economic losses caused by the war were being offset, the population developed very dynamically, but in the first half of the 18th century the possibilities of such a dynamic growth were already exhausted.

5. Conclusion

The fact that a series of population records on Česká Kamenice has been preserved, in which the entries concerning individual persons include data on social status and even on sex, marital status and age, allowed to study the structure of the population by these basic biological characteristics and, to trace, to some extent, the development of this structure for a period of about eighty years.

The age structure of the population of the town kept the general features of what can be called a progressive population (a large proportion of children, low proportion of persons above 60) for the whole period of investigation; however, some changes which were recorded mainly towards the end of the period under review suggest that the growth of population slowed down. Similar trends were observed in the structure by marital status: the proportion of never married women and men in progressively higher age groups began to increase after the third decade of the 18th century.

Generally it can be said that until the end of the 17th century the conditions in Česká Kamenice were favourable to a rapid population growth. The development of the population lost its high dynamics at about the beginning of the 18th century, the growth of population being obviously retarded by the poorer possibilities of economic development of the town - this is the only explanation why the number of population showed practically no change over the period of 1725-1750. This was probably associated with another unfavourable phenomenon mentioned in the analysis - a lower proportion of persons contracting marriage: this led to a slight decrease in the proportion

of children. The general economic and social development of the town would have to be analyzed in detail if reliable conclusions of this kind are to be drawn. However, the analysis of the preserved lists has confirmed that historico-demographic investigation of such lists can make a significant contribution to knowledge of the historical development of the localities concerned.

Notes

1. Until now there is no detailed treatise on the history of Česká Kamenice. A brief survey, based mainly on the German local historical and geographical literature, is given in F. Roll, Česká Kamenice a okolí (Česká Kamenice and the area around the town.). Děčín 1967.
2. Tereziánský katastr český. (Maria Theresa Land Survey of Bohemia.) Vol. 2, Praha, AS MV 1966, p. 89
3. Regional State Archives SOA Litoměřice, Vs. Česká Kamenice.
4. As shown by data the parish register of deaths, a total of 816 persons died over 1680-1693, i.e. 58 persons annually, on an average; the maximum number of deaths in a single year (72 persons) was recorded in 1690.
5. For the sex ratio of the population above 50 years of age after the Thirty Years War, cf. A. Blaschka: Des Trautenauer Unterenverzeichniss vom Jahre 1651. Jb DRGV 1925, p. 115, quot. after E. Maur, Problémy demografické struktury Čech v polovině 17. století (Problems of the demographic structure of Bohemia in the mid 17th century.). CSCH 19, 1971, p. 847
6. For construction of the index, cf. V. Roubíček, Demografická statistika (Demographic statistics.). Praha 1958, p. 61
7. Details on the rounding - cf. E. Maur, Problémy ... p. 845n.
8. Ditto.
9. For this tabulated population, the crude birth rate for women was 45.9 ‰ and for men 51.2 ‰; the crude mortality rate was 40.9 and 46.2 ‰, respectively. The average age was 26.76 years in women and 26.52 in men. Source: A.J. Coale, P. Demeny, Regional model life tables for stable populations. Princeton 1966, model east, level 3, pp. 441 and 562.

Annex 1a

Age structure of the population of the town Česká Kamenice in 1670

Age	M	F	Total	Age	M	F	Total
0	11	4	15	45	7	4	11
1	7	15	22	46	10	9	19
2	29	25	54	47	6	1	7
3	8	16	24	48	7	4	11
4	15	6	21	49	3	5	8
5	19	16	35	50	4	2	6
6	17	13	30	51	4	4	8
7	4	8	12	52	8	11	19
8	30	34	64	53	5	3	8
9	12	13	25	54	7	5	12
10	23	23	46	55	6	4	10
11	21	22	43	56	9	8	17
12	12	14	26	57	4	-	4
13	16	17	33	58	3	5	8
14	16	18	34	59	2	5	7
15	15	14	29	60	1	2	3
16	22	13	35	61	7	3	10
17	15	20	35	62	6	6	12
18	21	17	38	63	3	3	6
19	10	15	25	64	3	7	10
20	14	14	28	65	5	2	7
21	13	21	34	66	7	2	9
22	11	18	29	67	-	2	2
23	8	13	21	68	3	3	6
24	11	11	22	69	1	4	5
25	7	12	19	70	4	1	5
26	9	7	16	71	2	1	3
27	6	10	16	72	2	-	2
28	10	5	15	73	1	-	1
29	7	12	19	74	3	2	5
30	9	6	15	75	1	-	1
31	5	8	13	76	4	-	4
32	7	12	19	77	1	-	1
33	6	5	11	78	1	-	1
34	11	11	22	79	1	-	1
35	3	9	12	80	1	-	1
36	11	11	22	81	-	-	-
37	2	11	13	82	-	-	-
38	8	15	23	83	1	-	1
39	6	11	17	84	1	-	1
40	10	11	21	85	-	-	-
41	2	3	5	Un.	5	5	10
42	3	8	11	Total	671	696	1367
43	11	6	17				
44	9	10	19				

Annex 1b

Age structure of the population of the town Česká Kamenice in 1725

Age	M	F	Total	Age	M	F	Total
0	46	47	93	45	14	16	30
1	3	3	6	46	7	8	15
2	24	15	39	47	9	5	14
3	17	20	37	48	8	12	20
4	16	20	36	49	7	16	23
5	16	23	39	50	11	14	25
6	21	21	42	51	7	12	19
7	21	12	33	52	10	14	24
8	19	17	36	53	11	6	17
9	15	13	28	54	8	19	27
10	16	18	34	55	5	8	13
11	26	19	45	56	7	11	18
12	22	19	41	57	2	5	7
13	22	19	41	58	6	10	16
14	17	16	33	59	8	10	18
15	28	24	52	60	5	2	7
16	21	13	34	61	3	6	9
17	16	20	36	62	4	7	11
18	23	24	47	63	4	1	5
19	20	19	39	64	1	4	5
20	13	17	30	65	3	1	4
21	6	17	23	66	4	2	6
22	12	17	29	67	7	2	9
23	8	18	26	68	4	1	5
24	15	16	31	69	2	4	6
25	11	16	27	70	7	1	8
26	12	23	35	71	3	1	4
27	15	16	31	72	3	6	9
28	11	17	28	73	3	-	3
29	11	12	23	74	1	2	3
30	11	16	27	75	3	4	7
31	5	18	23	76	2	1	3
32	11	15	26	77	1	1	2
33	7	13	20	78	1	1	2
34	8	9	17	79	-	-	-
35	11	20	31	80	-	-	-
36	4	18	22	81	-	-	-
37	12	13	25	82	-	-	-
38	10	15	25	83	-	1	1
39	13	16	29				
40	8	11	19	Uns.	1	1	2
41	13	10	23	Total	852	982	1834
42	11	10	21				
43	18	17	35				
44	5	15	20				

Annex 2

Population by age, sex and marital status, Česká Kamenice

Age	Male					Female				
	bach.	mar.	wid.	uns.	total	spin.	mar.	wid.	uns.	total
1670										
0-4	70				70	66				66
5-9	82				82	84				84
10-14	88				88	94				94
15-19	83				83	78	1			79
20-24	53	4			57	59	18			77
25-29	13	24	2		39	14	32			46
30-34	5	33			38	6	34	2		42
35-39	1	29			30	1	50	5	1	57
40-44	3	32			35	1	34	5	3	38
45-49		32	1		33		19	4		23
50-54		26	1	1	28		19	6		25
55-59		19	4	1	24		16	6		22
60-64		16	3	1	20		12	9		21
65-69		16		1	16		9	4		13
70-74		11	1		12		3	1		4
75-79		6	1	1	8					
80+		2		1	3					
Unsp.	4		1		5	4	1			5
Total	402	250	14	5	671	407	248	40	1	696
1680										
0-4	103				103	112				112
5-9	112				112	115				115
10-14	101				101	113				113
15-19	83				83	99				99
20-24	53	7			60	68	26	1		95
25-29	26	36			62	36	46	1		83
30-34	7	50	1		58	16	61	3	2	82
35-39	4	45			49	4	43	6	2	55
40-44		36	6		45		35	5		43
45-49		36	1		38	3	31	11	2	44
50-54		21	3		24		24	13	1	38
55-59		24	6		30		17	9	2	28
60-64		15	5		20		8	10	3	21
65-69		16	6		22		4	12	3	19
70-74		5	5		10		2	8	1	11
75-79		4	3	2	9		1			1
80+		4			4			1		1
Unsp.	5	6			11	5	7			12
Total	498	305	36	2	841	571	305	80	16	972

Annex 2 (cont.)

Population by age, sex and marital status, Česká Kamenice

Age	Male					Female				
	bach.	mar.	wid.	uns.	total	spin.	mar.	wid.	uns.	total
1694										
0- 4	111				111	112				112
5- 9	93				93	114				114
10-14	115				115	96				96
15-19	67				67	86				86
20-24	40	6			46	75	20			95
25-29	25	27			52	43	31	1	2	77
30-34	10	32	1		43	17	45	2		64
35-39	8	48	1		57	15	42	6	1	64
40-44		51	1		52	9	52	8		69
45-49	1	32	1		34	7	38	6	2	53
50-54	2	34	1		37	1	25	11		37
55-59		18		1	19	15	14		1	30
60-64		19	2		21	11	10			21
65-69		11	4	1	16	6	10		1	17
70-74		5			5		5			5
75-79		2	3		5		1	4	1	6
80 +		2	2		4		1	1	1	2
Unsp.		2	1	1	4		3	3		6
Total	472	289	17	3	781	575	289	81	9	954
1704										
0- 4	132				132	133				133
5- 9	112				112	101				101
10-14	91				91	102				102
15-19	67				67	104				104
20-24	56	10			66	70	21			91
25-29	14	37			51	31	41	2		74
30-34	7	47			54	20	64	1		85
35-39	3	39			44	17	37	8		62
40-44	2	28	2		32	8	41	6		55
45-49	1	45	3		49	14	36	8	1	59
50-54		39	3		42	4	34	11		49
55-59		27	1		28	5	16	12	1	34
60-64		19	4		23	1	11	10		22
65-69		4	4		8		4	13		17
70-74		10			10		5			5
75-79		2			2		4			4
80 +							2			2
Unsp.		3	3		6	1	5	4		10
Total	485	310	22		817	611	310	86	2	1009

Annex 2 (cont.)

Population by age, sex and marital status, Česká Kamenice

Age	Male					Female				
	bach.	mar.	wid.	uns.	total	spin.	mar.	wid.	uns.	total
1713										
0- 4	129				129	109				109
5- 9	117				117	106				106
10-14	108				108	115				115
15-19	98				98	93	1			94
20-24	42	5			47	62	23			85
25-29	10	38			48	40	35	1		76
30-34	4	53			57	12	55	2		69
35-39		45			45	6	47	4		57
40-44	1	50			51	2	55	3	2	62
45-49		41		2	43	3	30	6	1	44
50-54	2	27		5	34	3	29	8		40
55-59		33		2	35	8	28	9	2	47
60-64		30		6	36	2	21	10		35
65-69		17		3	20	2	7	11	1	21
70-74		9			9		2	5		7
75-79		2		1	3			4		4
80 +		2		1	3		1	1		2
Unsp.	4	13	1		18	8	33	10		51
Total	515	365	21		901	577	367	74	6	1024
1725										
0- 4	106				106	105				105
5- 9	92				92	86				86
10-14	103				103	91				91
15-19	108				108	100				100
20-24	44	10			54	67	18			85
25-29	27	33			60	35	48	1		84
30-34	2	40			42	24	42	3	2	71
35-39	3	45		1	50	17	59	5	1	82
40-44	1	53		1	55	8	44	10	1	63
45-49	1	38		5	45	7	35	12	3	57
50-54		43		2	47	1	40	17	7	65
55-59		24		4	28	1	28	10	5	44
60-64		15		1	17	2	6	8	4	20
65-69		16		3	20	2	3	4	1	10
70-74		9		6	17	1	3	3	3	10
75-79		2		2	7		2	5		7
80 +								1		1
Unsp.		1			1		1			1
Total	487	329	21	12	859	547	329	79	27	982

Annex 2 (cont.)

Population by age, sex and marital status, Česká Kamenice

Age	Male					Female				
	bach.	mar.	wid.	uns.	total	spin.	mar.	wid.	uns.	total
1738										
0-4	55				55	68				68
5-9	91				91	90				90
10-14	106				106	83				83
15-19	79				79	89				89
20-24	75				76	58	15			73
25-29	55	22	1		78	40	32		1	73
30-34	28	42	1		71	24	52	2	2	80
35-39	11	50			61	13	52	3		68
40-44	7	44	3		54	10	41	7	1	59
45-49	3	29	2	2	36	8	40	10	3	61
50-54	4	46	3	1	54	11	30	10	3	51
55-59		32	5	2	39	4	29	16	3	52
60-64	1	27	7	2	37	3	20	21	1	45
65-69	1	17	3		21		8	17	4	29
70-74		5	5		10			7	1	8
75-79		4	1	2	7	1		2	1	4
80+		1	2	2	5			1	1	2
Unsp.	1	9		1	11	1	10		1	12
Total	517	329	33	12	891	503	329	96	19	947
1750										
0-4	88				88	94				94
5-9	72				72	86				86
10-14	79				79	96				96
15-19	82				82	92	1			93
20-24	61	2			63	60	16			76
25-29	31	19			50	49	34	1		84
30-34	18	32			50	30	33	5		68
35-39	12	39			51	16	48	1		65
40-44	9	57	2		68	14	46	3		63
45-49	6	25	3		34	11	30	10	1	52
50-54	9	44	5		58	13	25	6		44
55-59	2	23	4		29	8	18	16	1	41
60-64	4	15	3	1	26	6	14	14		36
65-69	5	21	3		30	5	6	17	2	30
70-74	3	4	6		13	5	3	9		17
75-79	1	5	3	2	11		4	8		12
80+		1	3		4			5	1	6
Unsp.	6	11			17	7	20	19	2	48
Total	488	298	36	3	825	592	298	114	7	1011

Fig. 6a
DISTRIBUTION OF POPULATION IN FIVE AGE GROUPINGS OF ČESKÁ KAMENICE

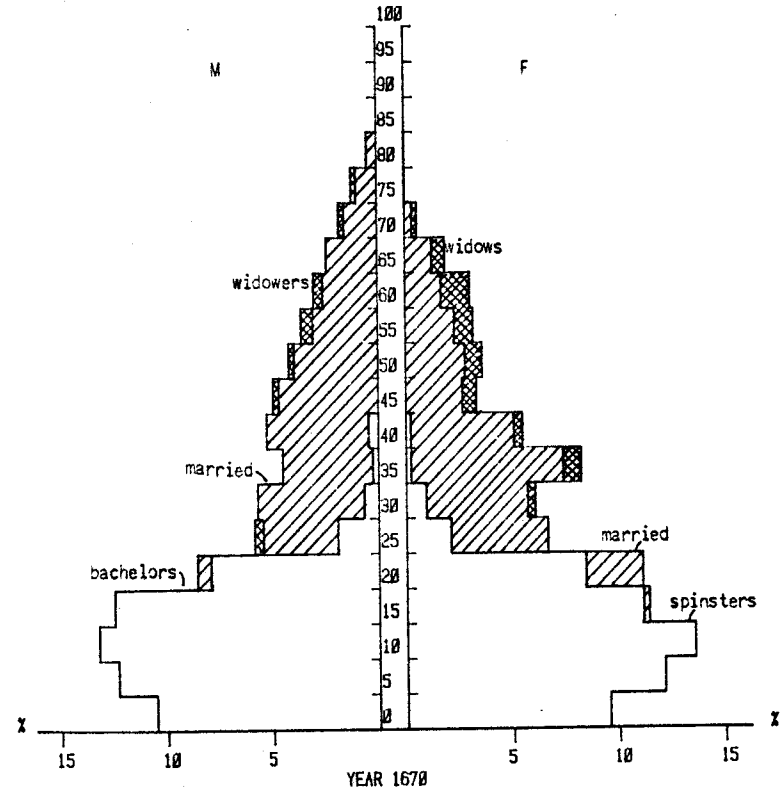


Fig. 6b
DISTRIBUTION OF POPULATION IN FIVE AGE GROUPINGS OF ČESKÁ KAMENICE

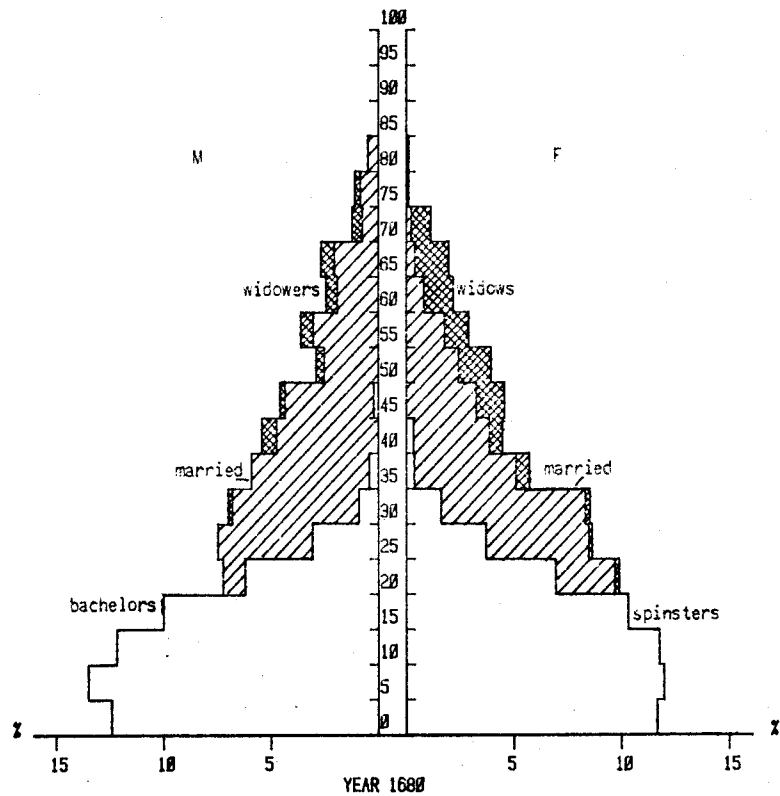


Fig. 6c
DISTRIBUTION OF POPULATION IN FIVE AGE GROUPINGS OF ČESKÁ KAMENICE

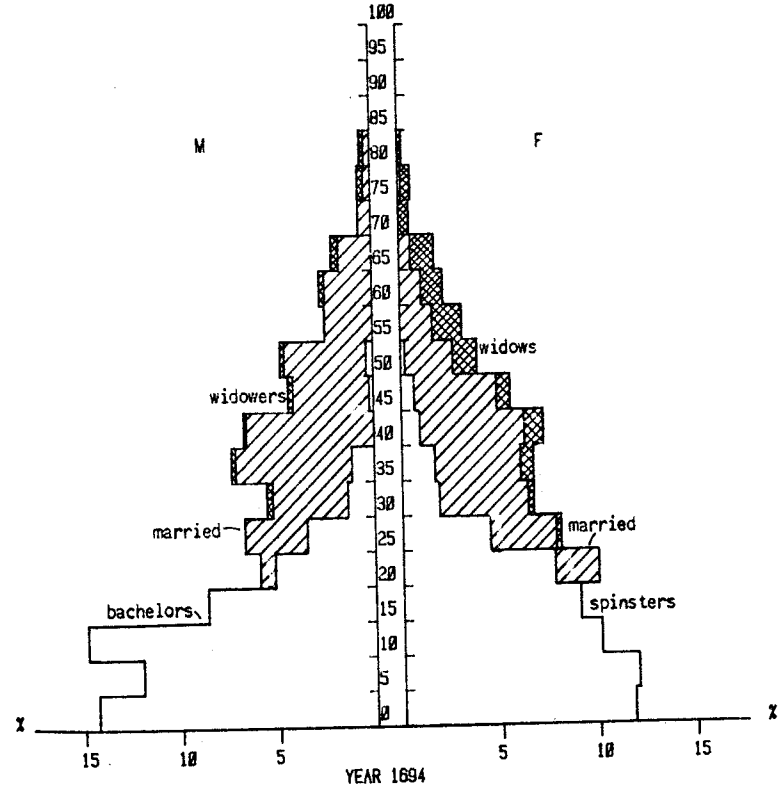


Fig. 6d
DISTRIBUTION OF POPULATION IN FIVE AGE GROUPINGS OF ČESKÁ KAMENICE

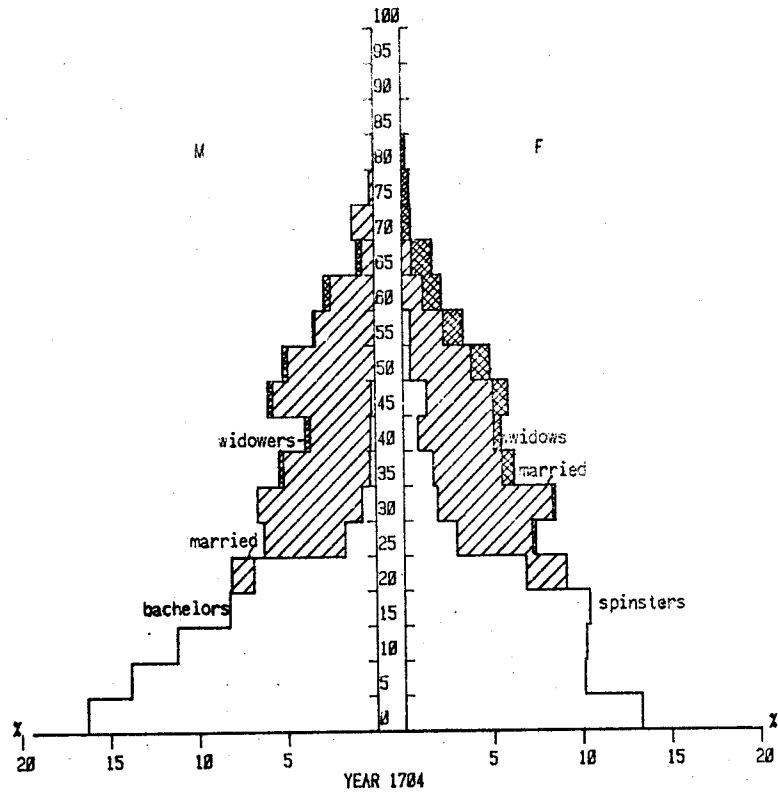


Fig. 6e
DISTRIBUTION OF POPULATION IN FIVE AGE GROUPINGS OF ČESKÁ KAMENICE I

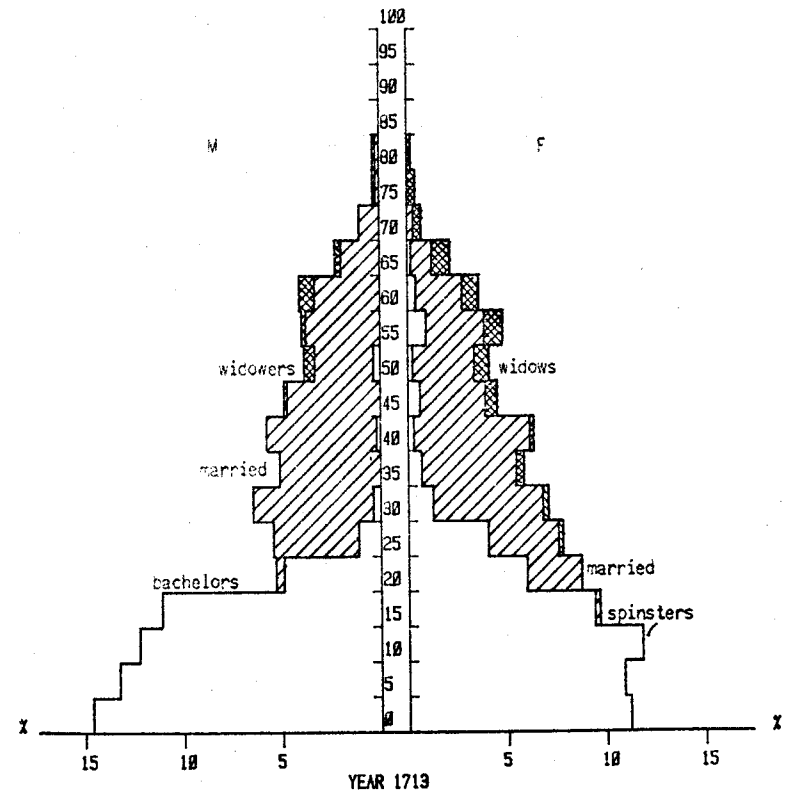


Fig. 6f
DISTRIBUTION OF POPULATION IN FIVE AGE GROUPINGS OF ČESKÁ KAMENICE

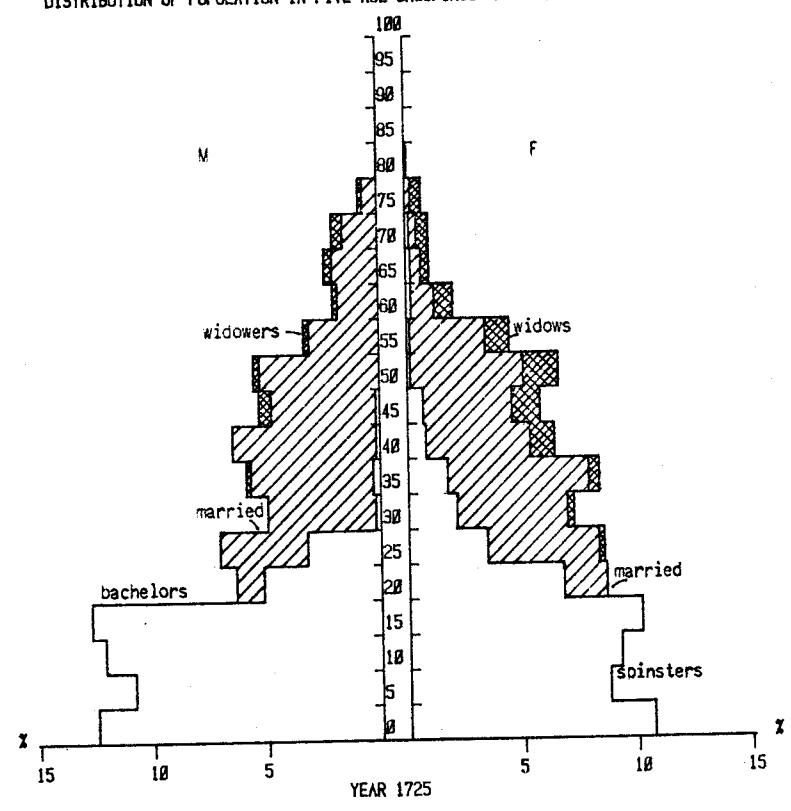


Fig. 6g
DISTRIBUTION OF POPULATION IN FIVE AGE GROUPINGS OF ČESKÁ KAMENICE

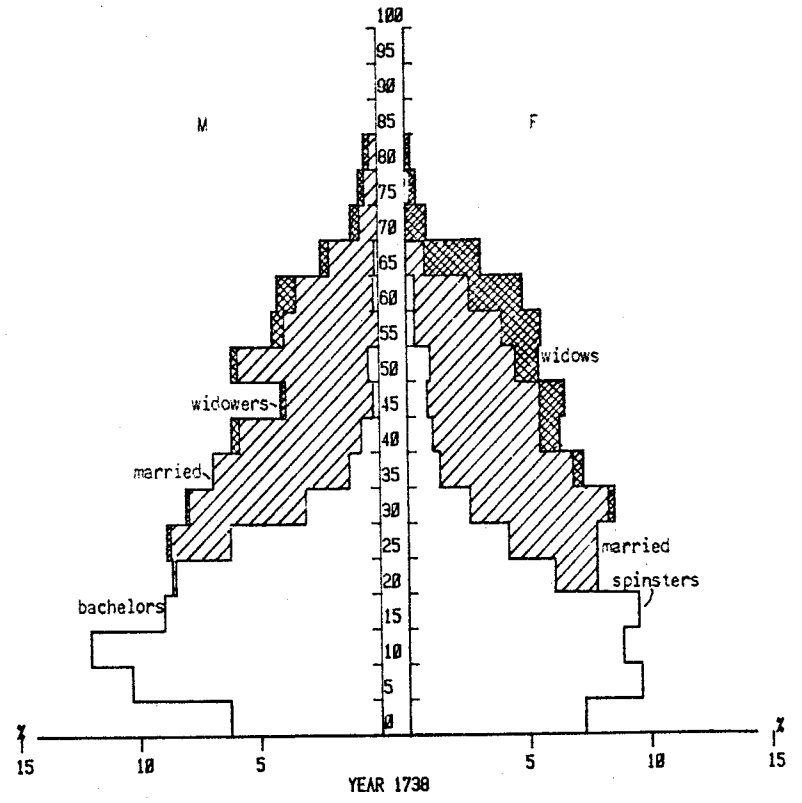
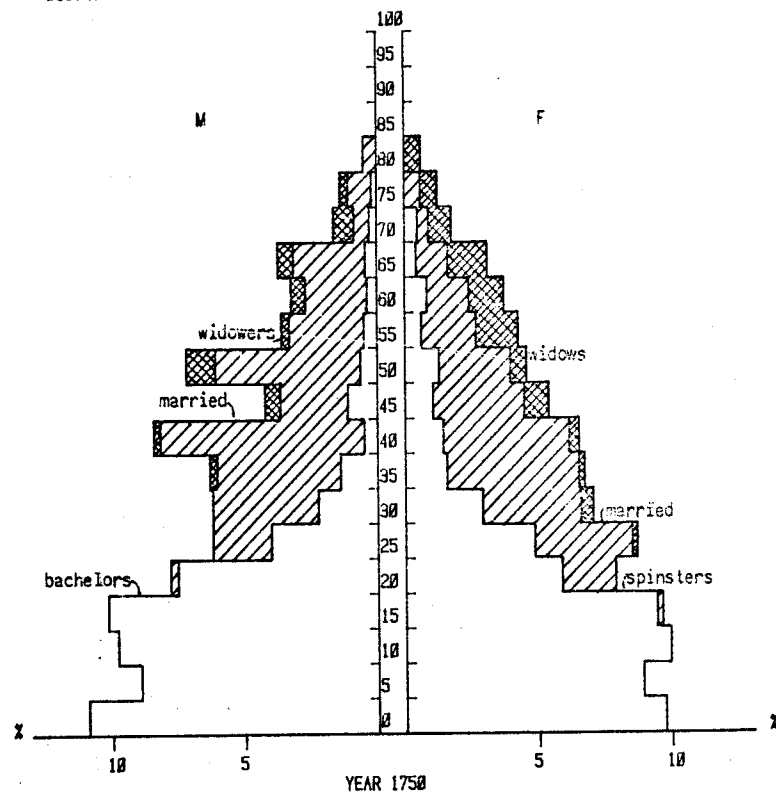


Fig. 6h
DISTRIBUTION OF POPULATION IN FIVE AGE GROUPINGS OF ČESKÁ KAMENICE



Lumír Dokoupil, Ludmila Nesládková

DEMOGRAPHIC REVOLUTION: A PREREQUISITE AND CONSEQUENCE
OF AGEING IN THE POPULATIONS OF THE INDUSTRIAL REGION
OF OSTRAVA DURING THE INDUSTRIAL REVOLUTION

When the causes, conditions and implications of the intensification processes typical of the onset and advance of capitalism in Europe are contemplated from the point of view of a historian and historical demographer, one cannot avoid thinking of demographic revolution as of one of the integral parts of recent modernization. Owing to his way of looking at things, the historian or historical demographer will largely focus his interest on those aspects of this, as Zd. Pavlík says, relatively non-complex process which not only have their specific pattern in time, but are also increasingly socially conditioned within this pattern. As the original process, which was largely biological, changes into a socio-biological one, the development of populations during the demographic revolution is becoming attractive to those who are engaged in

historical and historico-demographic investigation. 1)

There is a whole range of problems that could be studied in this context. The authors of this small contribution decided to try to trace the relationships between the course of the second stage of the demographic revolution and the advance of the industrial revolution in the Ostrava region during the period of its industrialization. An attempt is made to identify and illustrate the processes of ageing of the populations in the Ostrava industrial region (especially its hinterland) which can be understood as a manifestation of a change in the nature of demographic revolution from biological to socio-biological.

The Ostrava industrial region is regarded as an industrialized area of a new type. First, starting largely in the latter half of the 19th century, there was a typical differentiation of demographic development, followed after the first decades of the 20th century by a re-integration, as the second stage of the demographic revolution was being finished. Its features included a unification of development in a number of traits which described the increasing manifestation of the ageing of the populations in the Ostrava industrial region; this involved the development of mortality, fertility, average age and other characteristics of the population.

During the onset of the second stage of demographic revolution, contemporaries in Bohemia observed great changes, especially in mortality. The typical manifestation was a decline of total number of the deceased, and there were shifts in mortality between age groups. Gradual improvement of health service, wider prophylaxy for the control of epidemics, and building of hospitals and other health facilities started to bring some successful results, though the effectiveness of these efforts had been limited at the beginning. In spite of these observable changes, research on population development in the Czech countries led to the following statement: "analy-

sis of the mortality of the population with respect to age, especially a detailed analysis of infant mortality and its components, suggests that major changes in the mortality characteristics of the population of Czech countries came with a great delay after the termination of the process of industrial revolution at the end of the 19th century and became significant in many cases only in the early decades of the present century". 2)

This characterization can be applied reliably mainly to the industrial region of Ostrava with its wide hinterland. This region's development whose initial stage was finished late in the nineteenth century appears to confirm the view that the later the onset of the phenomena characteristic of demographic revolution, the greater the intensity and dynamism of their manifestation. 3) The development of the Ostrava region had some specific features which kept general mortality at a considerably high level during the whole 19th century; however, from the very beginning of the 20th century the death rates in the towns and villages of the Moravská Ostrava district were lower than in the Czech countries generally.

World War I interrupted the advancing process of reduction of mortality: many of the men died as soldiers, many people in the hinterland died of the misery of the catastrophical living conditions. However, decline in mortality remained a typical manifestation of the population conditions during the post-war decade.

Analysis of the separate populations of towns and villages in the Ostrava region demonstrated that the mortality curves had fluctuated in the 19th century and the crude death rate was high. An actual decrease of the high mortality began as late as in the last decade of the 19th century; later, early in the nineteen-thirties, the mortality fell to about half the original level.

For example, at Stará Bělá (now part of the city of Ostrava) death rate was as high as 29.3 ‰ still in the early eighteen-nineties; by the outbreak of World War I it decreased by 10 ‰ and the general trend continued so that in 1925-1929 the death rate was as low as 13.2 ‰.⁴⁾

Similar developments were recorded in other villages in the Ostrava region, e.g. at Rychaltice, Kateřinice and others, in which the calculated data are close to those for Stará Bělá. At Lískovec, an important iron processing locality, the death rate recorded late in the nineteen-twenties was still lower: below 10 ‰. No significant differences in mortality, compared with localities mentioned above, were recorded even in the distant and isolated villages of the Beskid Mountains. For example at Bukovec, a village near Jablunkov near the border with Slovakia, the death rate fell from 27.8 ‰ to 14.3 ‰ over the forty-year period from the last decade of the 19th century to 1930.

The decline in the death rate was closely associated with changes in the age structure of the deceased. This particular change, which was very dynamic, was felt very intensely by the contemporaries. Before the onset of demographic revolution, excess child mortality, and especially infant mortality, was a decisive feature (children usually made up more than a half of the deceased). Then a substantial change took place dynamically within a generation interval: a single generation interval sufficed for the far-reaching change which shifted the prevalence of mortality from the young age categories to that of post-productive age.

It was quite common still in the last decade of the 19th century that the proportion of the age category of 0-14 years was above 50 % in some localities in the Ostrava region (this was the case e.g. at Stará Bělá in 1895-1899 with 50.6 %, at Lískovec with 52.8 %, at Čeladná with 54.6 %, and a number of

other villages and towns under study). In the same period, the post-productive age category accounted for 19.3 %, 21.7 % and 25.4 %, respectively, in the villages mentioned above. After World War I the situation changed: the proportion of the old category was always above 2/5 of all the deceased, whereas that of children ranged from 1/5 to 1/4 of the deceased.

The process of ageing of the population is also reflected in data per 10 000 deceased with respect to their age structure. The data referring to the Beskid mountain village Ostravice in the latter half of the 19th century, compared with the period of 1900-1930, shows a decline in the proportion of deceased mainly in the young-age category (from 792.0 to 400.6), whereas the mortality of adults increased (from 1960.2 to 2131.4 in the 15-49-year category and from 2546.1 to 3365.4 in the category above 50). This led to an increase in the average age of the deceased. For example, in the population of Kateřinice the average age of the deceased was 28.7 years (52.8 years when child mortality was not included) before World War I (in 1900-1913), and after the war, in the nineteen-twenties, the average age of the deceased increased to 43.7 years (62.1 years when child mortality was not included). It is also these data that suggest an increase in the average age of the population, hence its progressive ageing.

It is also important for the investigation of the process of population ageing to study the development of fertility and its changes, as they took place with the advancing demographic revolution. The typical features of population development in the new-type areas included a long-persisting high birth rate. However, research has demonstrated significant differences in the development of the areas within the industrial region. With a considerably extensive reproduction, the populations of the industrialized localities kept high crude birth rates for a comparatively long time, but the situation was different in the hinterland. What occurred first in the

economically stagnant urban localities was a decrease of birth rate below 40 ‰. For instance, a great decline of fertility could be observed at Jablunkov from the tragical period of famine in the mid 19th century when the birth rate had fell below 30 ‰. A less dramatic decline of natality was recorded in other urban localities, e.g. at Přebor and Klimkovič, but after all, in these towns the birth rate remained at about 35 ‰ even in the favourable period of the eighties. In some of the towns within the hinterland of the industrial region, the process of decrease in fertility came later - this was, for example, the case of the more than six-thousand population of Frenštát pod Radhoštěm where the process started as late as about the year 1880; this drop in natality and in natural population increase fully coincided in time with the general stagnation of the development of the number of population at Frenštát. On the other hand, in the rural localities a high level was kept for a comparatively long time: in a number of villages the birth rate stayed above 40 ‰ even early in the 20th century. This was, for example, the case of the populations of Hrabyně, Čeladná, Ostravice and other villages during the first decade of the 20th century. As a result, the natural increase remained unusually high, often above 15 ‰, for some time.

However, even in these populations a decrease of fertility became common during the second decade of the 20th century at the latest. An especially marked decrease of birth rate occurred mainly during the years of the first World War when this decrease averaged about 10 ‰, so that a 20 ‰ level was exceeded only exceptionally. Although the curve turned up again for some time after the war, the long-term trend of decline in fertility remained definitive as the process of demographic revolution continued in the nineteen-twenties.

Although the data on the crude rates did reflect changes which prevailed progressively in the development of reproduc-

tion, they could not express with sufficient accuracy the qualitative aspects because they were counted without respect to the age structure of the populations in question and their sex ratio. To get a more detailed picture, several selected populations in the hinterland were subjected to detailed study by the method of family reconstitution; its results were then used as starting data for the calculation of the fertility of married women. The data were computed for married women old twenty years and older; the age group of 15-19 years was very small, so it was not taken into account (Table 1).

In spite of some differences in the values for the individual populations, it can be inferred from the "probes" into the end of the 19th century that fertility was high during that time. The highest fertility was recorded in the 20-24-year group and 25-29-year group (e.g. 0.521 and 0.465, respectively, in the population of Lískovec); a high fertility in the older group of 30-34 years (0.514) was an exception, recorded in the rural population of Rychaltice.

The analysis of the fertility of married women in the iron-working centre Třinec suggests the differences which began to occur as early as at the end of the 19th century. Fertility levels were compared in the marriages contracted before 1890 and in the subsequent decade and a general decline was recorded; in particular, there was a substantial decline in the higher age groups of married women where e.g. the fertility rate of married women in the 30-34-year group decreased from 0.333 to 0.169 and in the 35-39-year group from 0.253 to 0.108.

To be able to trace the process of decline of fertility, legitimate fertility rate was studied in marriages contracted during 1900-1918 and during 1919-1930. It is typical that the changes were slower in the rural population of Rychaltice than in the industrial town Lískovec. At Rychaltice, the marriages contracted in 1900-1918 maintained a comparatively high fertility rate even in women in the age groups of 30-34 and 35-39

years, although this was just about half the level of fertility recorded before 1900. At Lískovec, on the other hand, the fertility rate of women above 35 years of age was negligible. In the subsequent years the fertility-decline trend reached younger age groups and the highest fertility was concentrated in the 20-24-year group.

The decline in fertility in all age groups of women and the shift of top-fertility levels to the period immediately following marriage are closely associated with changes in the length of the reproductive period of women. Before 1900 the reproductive period of women was, e.g. in the Lískovec population, 15 years in marriages where reproduction ceased in a natural way, and at Rychaltice it spread over 17.5 years. However, as the top fertility period was shifted to the first pentad after wedding, the reproductive period was markedly shortened - first 9 and 8 years in marriages contracted in 1900-1918 and finally 7 and 5 years in marriages from the period of 1919-1930.

Artificial birth control was associated with changes in intervals between successive births. In the populations under study the interval from marriage to first birth gradually increased (at Rychaltice from 14.3 to 16.0 months); the intervals between the further births were also longer (now largely just the interval between the first and second birth - e.g. at Lískovec this interval increased from 21.7 to 28.1 months).

The decrease in fertility was associated with a marked decrease in the number of children per family. The data recorded in the successive periods illustrate the dynamism of the changes which led to the formation of a generally prevailing model of family with two children in the final stage in the hinterland of the Ostrava industrial region (Table 2).

The described development in the natural change of population in the hinterland of the Ostrava industrial region, especially birth control leading to reduction of the number

of children per family and to replacement of the extensive reproduction model by an intensive model, created prerequisites for the ageing of the population, especially during the second stage of the demographic revolution. In the actual case of the rural areas around the Ostrava industrial region this process was intensified by another substantial factor: passive balance, caused by the prevailing migratory movement from the hinterland to the industrial centres of the region, or to places near these centres.

Several "probes" were made in the hinterland of the Ostrava industrial region to determine the balance data. As no data were available on the migratory movement of the population of each particular village or town, the general development of the number of persons in these populations was compared with the balance of births and deaths, and conclusions concerning the role of migratory movement in the development of an actual population were drawn from this comparison.

All the "probes" had one feature in common: a marked passive balance in which population decline was caused by drift to the industrial localities of the core of the region.

During the last three decades of the 19th century (1869-1900), the decline of population in the rural locality Kateřinice amounted to 111 persons, in the Beskid mountain villages Ostravice and Čeladná 182 and 437 persons, and in the distant village Bukovec near Jablunkov even 511 persons. No great changes occurred in the first decades of the 20th century. For example in the respective populations the decline caused by migration increased to 144, 281, 726 and 549 persons during 1900-1930. After the beginning of the 20th century, this formerly prevailing drift from hinterland to industry began to combine increasingly with another significant factor, emigration to other countries, especially overseas. Many reports on this emigration can be read in contemporary press. For example, *Moravskoslezský duch času* (Moravian-Silesian Spirit of Time) of October 1902 reported: "Heading for America! This is

Notes

a new slogan of many workers at Vítkovice. No week can pass without their taking "abrechnung" on mass to depart over the large ocean, to America. On Sunday September 28, another 60 left ..." 5)

With respect to the high territorial mobility of young people, this is obviously an important factor affecting the process of ageing of the population.

As suggested on the preceding pages, the finishing of the second stage of demographic revolution with changes in the processes associated with the advance of capitalist industrialization in the Ostrava industrial region, and in this region's hinterland, led to an integration of all the demographic parameters analyzed. Symptoms of ageing progressively intensified, manifesting themselves e.g. in a decrease in the death and birth rates, in changes in the age structure of the deceased with a shift of the mortality peak from the children's category to the groups of post-productive age, in the reduction of fertility of married women, in a marked reduction of the length of reproductive period, increase of the interval between marriage and first birth, marked decrease of the average number of children per family, and changes in the pattern of migration movement.

Thus the intensification of demographic processes, leading to the ageing of population in the Ostrava region, was finished.

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5. Moravskoslezský duch času (Moravian-Silesian Spirit of Time), Vol. IV, no. 40, Oct. 2, 1902, p. 2

Tab. 1 Age-specific marital fertility rates (live births per 1000 woman-years lived)

Town, village, Period of marriage	Age of women					
	20-24	25-29	30-34	35-39	40-44	45-49
Třinec before 1890	0.472	0.329	0.333	0.253	0.188	0.058
1891-1900	0.389	0.303	0.169	0.108	0.049	0.019
Lískovec before 1900	0.521	0.465	0.402	0.338	0.150	0.034
1900-1918	0.422	0.361	0.258	0.094	0.061	0.014
1919-1930	0.350	0.227	0.146	0.055	0.009	.
Rychaltice before 1900	0.423	0.474	0.514	0.437	0.217	0.047
1900-1918	0.449	0.409	0.214	0.222	0.082	.
1919-1930	0.425	0.178	0.142	0.080	0.017	.
Kateřinice before 1900	0.421	0.368	0.269	0.218	0.085	.
1901-1930	0.289	0.296	0.189	0.135	0.063	.
Hrabyně 1901-1920	0.397	0.342	0.252	0.122	0.047	.

Tab. 2 Number of children per family

Town, village Marriage cohort	reproduction ceased in a natural way		reproduction ceased in a in- natural way	
	mean	median	mean	median
Třinec before 1890	6.5	6.0	5.5	4.5
1891-1900	3.6	3.5	3.5	3.0
Lískovec before 1900	6.8	6.0	4.2	5.0
1900-1918	4.0	3.0	2.3	2.0
1919-1930	2.6	2.5	1.5	1.0
Rychaltice before 1900	8.4	9.0	7.2	6.0
1900-1918	4.3	4.0	4.1	3.0
1919-1930	2.4	2.0	2.2	2.0
Stará Bělá before 1899	5.9	6.0	4.8	5.0
1900-1930	3.2	3.0	2.8	2.5
Kateřinice 1870-1900	.	5.0	.	4.0
1901-1930	.	3.0	.	2.0

Jaroslav Lá n í k

DEVELOPMENT OF MORTALITY IN CZECH CITIES AT THE TURN
OF THE 19TH AND 20TH CENTURIES

Data on the natural change of urban population were used as argument against big cities in the 19th and early in the 20th centuries. In these views, the population of big cities could not exist independently: they needed a supply of new inhabitants from the country. The manifestations of the unfavourable effect of urban environment allegedly included a decline of fertility and, in particular, a high mortality which was said to decimate mainly the children.¹⁾ However, these views were often supported by data from medieval cities, or reflected situation in the first half of the 19th century and were based on data which were not always very trustworthy. Thus these views gradually got into contradiction with reality as it developed late in the 19th and early in the 20th centuries.

Two statistical series²⁾ can be used as a basis for investigation of the population of Bohemian cities. The number of the deceased first occurred in the weekly medical reports

in 1886. These reports included the number of the deceased divided by sex, the number of the non-local deceased (Ortsfremde), and the number of the dead-born. The approximate level of neonatal mortality is suggested by the column of "deceased of congenital bodily feebleness". The number of babies who died during the first year of life and the number of women deceased during puerperium were recorded since 1891. An important change was made in 1896: the deceased began to be divided into age groups. Data were recorded on the numbers of the deceased in the first month of life, in the first year of life, and in the age groups of 0 - 5 years, 6 - 15 years, 16 - 30 years, 31 - 50 years, 51 - 70 years, and above 71. Classification of the causes of death was changed and extended at the same time. Great attention was paid to mortality in the Yearbook of Austrian Cities (österreichisches Städtebuch), where the numbers of the dead were given with differentiation according to sex, marital status, place of death (in or outside an institute), place of birth in or outside the city, and native domicile. Further, mortality was classified according to age groups, causes of death, and place of residence. Child mortality was monitored in detail: mortality in the first week of life was recorded by individual days, mortality in the first month of life by weeks, and in the first year by months. There were particularly detailed statistics concerning mortality and morbidity associated with infectious diseases; data on inoculation were included in these statistics. The first data on separate cities (depending on whether each particular city did or did not participate in the elaboration of the Yearbook) refer to the mid eighteenth-eighties, but some of the cities published retrospective data, usually reaching back to the mid-seventies.

Great problems in the determination of the number of the dead were caused by the inaccuracy of definition of the "non-local" ("non-resident") category (Ortsfremd). These were person who died in the town, mostly in hospitals and institutes,

but were not residents of the town. In 1876 the International Statistical Congress decided to publish all cases of death en bloc, without distinguishing the residents and non-residents, and to calculate the crude birth rate from this sum. The assumption was that large cities both gain (maternity hospitals) and lose (hospitals, old people's homes and the like) from these "strangers" and that the gains offset the losses in practice. Later it was found that this assumption was false and the "resident" and "non-resident" categories were consistently separated again. However, there was considerable variability in what the "non-resident" category was to signify. This is suggested by the large differences between cities, large differences between years within the same cities or towns, and by the results of the review of data from 1910-1912. Often the "non-resident" category comprised all persons who were born in another locality or had not a permanent address in the town or city concerned. And again, there was much variance in the explanation of the concept of permanent address. Situation was particularly complicated in cities where large maternity hospitals were located and where, with only minor exceptions, women who only came to give birth to their babies without having anything else in common with the town, were not recorded separately from the local ones. ³⁾ In some towns there was a minimum number of entries, or no entry at all, which would concern a "non-resident" deceased, whereas in other towns or cities such persons accounted for one-third up to a half of all the dead. The number of "non-residents" varied, so it is impossible today to say, merely on the basis of published data, to what extent this variation can be ascribed to random local effects, inaccuracy of statistics, or differences in the definition of the category. Perhaps some partial explanation might be attempted on the basis of the varying number of persons who died in the institutes. As a rule, cities or towns where the numbers of those who had died in institutes were high also had

a high number of non-resident deceased. The differences in the numbers of the deceased including and not including those who were non-residents were often large and often were among the causes of the apparent population passivity of cities. 4) Sporadic data on the age structure of the non-resident deceased suggest a high irregularity of the proportions of the various age groups; this was associated with the age structure of the migrants in the cases of time-limited migrations and stays of persons of higher age in hospitals and institutes. Thus for example in Liberec in 1903-1944, the 207 children who died in the first year of life included 7 non-residents, i.e. 2.5 %, and of the 107 who died at an age of 1-5 years 8 were non-residents, i.e. 7.5 %. In the age group of 21-30 years the non-residents accounted for 46 %, and the same proportion was recorded in the age group of 31-50 years; in the 51-60-year group non-residents made up 36 % of the deceased. Similar data were recorded at Karlovy Vary in the late eighties-eighties and e.g. in Ústí nad Labem late in the eitheen-nineties. 5) Hence, accurate determination of the proportion of the different age groups of urban population out of the total number of the deceased is hindered by unsurmountable obstacles which cannot even be removed when more systematic records on the causes of death are available. Demographers cannot help regretting that so much effort was once taken to record the non-resident deceased with respect to the months of death, to record all the deceased in relation to housing conditions (whether the deceased had lived in basement, on the first, second or other floors, or in the attic), and not to classify them by age. This fact affected the proportions of the different causes of death, because the main causes of death of the non-resident deceased were tuberculosis (recorded since 1896; until then the records included only its pulmonary form), cancer, and contagious diseases. Comparison of both statistical series showed that many data on the numbers of the deceased and on the non-resident deceased were entirely the same. When comparing the data on those

who had died in the first month, first year, and before 5 years of age, large differences were recorded in some years, especially in those cases when deviations which could not be explained satisfactorily occurred in one of the statistical series.

The differences in age structure of the population in cities and in the country influenced the value of the crude death rate. In the Czech lands the death rate ranged between 25-30 ‰ in the latter half of the 19th century, and this level was exceeded only in the years of epidemics or as a result of war events (in 1866 it reached 45.1 ‰ and in 1873 33.5 ‰). Decreases occurred in 1895 (25.7 ‰) and at the turn of the 19th and 20th centuries (below 25 ‰). The decreases were then steady and early in the second decade of the 20th century the death rate was below 20 ‰. During the eighteen-eighties, the crude death rate ranged from 25 to 32 ‰ in the largest Czech cities and showed in fact no difference from the figures for the Czech Lands as a whole. Crude death rate in Czech cities began to fall early in the eighteen-nineties and at the turn of the centuries it was below 20 ‰; during 1911-1913 it sank to 15 ‰. Individual cities registered crude death rates ca. 3-7 ‰ lower than the national mean, and these differences were maintained until the outbreak of World War I. 6)

The main factor that contributed to the reduction of crude death rate in both cities and the rest of the country was a reduction of child mortality with all its components. Early in the eighteen-seventies, neonatal mortality in Czech countries ranged about 110 ‰, and in each subsequent five-year period it decreased by about 4 ‰. This rate of decrease continued until the mid eighteen-nineties when it was at 96 ‰; another greater decrease (to 88 ‰) was recorded late in the eighteen-nineties, and during 1905-1909 neonatal mortality fell to 78 ‰. Infant mortality ranged between 255 % and

Tab. 1 The development of death rate in Czech towns in 1886 - 1913 (°/oo)

Town	1886-1890	1891-1895	1896-1900	1901-1905	1906-1910	1911-1913
Aš	.	22.7	18.5	16.3	15.4	14.3
Ústí n/L.	32.3	23.9	20.8 ⁺	19.1	15.9	13.7
Most	.	26.2	21.7	21.2	17.1	16.1
České Budějovice	26.1	23.5	21.8	20.7	18.4	15.6
Čeb	30.5	27.2	21.3	20.4	18.3	16.9
Jablonec	.	23.3	19.3	16.6	13.7	12.3
Kladno	.	24.0	20.3	19.0	16.6	15.9
Flzen	28.5	21.6	20.0	18.6	16.3	15.0
Liberec	25.3	23.9	20.1	18.9	15.0	14.8
Teplice-Šanov	.	19.4	18.9	18.0	15.9	15.6
Varnsdorf	29.9	26.7	22.4	20.2	17.8	15.7

⁺ data of 1896 - 1899, from 1901 on incl. localities Klíše and Krásné Březno

source: Das österreichische Sanitätswesen

265 °/oo, from the eighteen-seventies and a marked decrease, by about 30 °/oo, was recorded only in the latter half of the eighteen-nineties. During each of the subsequent pentads the levels of infant mortality decreased by 10-15 °/oo and in 1919-1913 it was at 190 °/oo. Child mortality (up to full five years of age) was between 360 and 370 °/oo from the eighteen-seventies to the first half of the eighteen-nineties. In the latter half of the nineties its level fell by almost 50 % and during 1905-1909 it was at 280°/oo. 7)

Data for some Czech cities suggest that neonatal, infant and child mortalities were more or less stable during the latter half of the nineteenth century, remaining at an about the same level with only minor fluctuation. About a quarter up to one-third of children died during the first year of their life; in the age group up to 5 years there were 430-460 deceased per 1000 children born. These data are high above the national mean.

Tab. 2 Neonatal, infant and child mortality rates in Ústí nad Labem and Liberec in 1861-1880, in °/oo. 8)

Mortality	Ústí nad Labem				Liberec			
	1861-1865	1866-1870	1871-1875	1876-1880	1861-1865	1866-1870	1871-1875	1876-1880
Neonatal mortality rate	133	109	142	113
Infant mortality rate	332	315	348	328	284	290	283	337
Child mortality rate (1-5)	128	136	127	104	168	127	134	107
Child mortality rate (0-5)	460	451	475	431	452	417	417	444

As early as in the first half of the eighteen-nineties, neonatal mortality in some Czech cities declined below the national average. The number of cities where neonatal mortality was below this average level kept increasing. As to infant mortality, the development was not so clear and satisfactory. Most of the cities registered infant mortality levels equal or close to the national average until the beginning of the 20th century. It was only just before World War I that an overwhelming majority of the large Czech cities remained below the national mean infant mortality. The development of child mortality was largely influenced by local conditions which were hard to recognize and quantify. However, it can be said that these quotients were the highest in industrial centres, particularly in the mining centres and those of textile industry. Besides the absolute decline of the separate components of child mortality, there was also a relative decrease in these quotients; in other words, there were decreases in the proportions of the deceased of the respective age groups out of the total number of deaths. These data were also influenced by the decreasing crude birth rate.

The following cities were chosen for detailed analysis of mortality: Plzeň, Ústí nad Labem, Jablonec nad Nisou, Liberec and Karlovy Vary. A stagnat population was recorded only in Liberec where the number of population was 34 000 in 1900 and 36 350 in 1910. Except for Jablonec nad Nisou, the dynamics of development was progressively shifted to the suburban localities. Naturally, administrative division of the city which failed to take these changes into account affected the values of demographic parameters.

There were differences between the cities in their economic functions. Plzeň, Liberec and Ústí nad Labem were important regional centres of industry, transport and trade (the proportion of persons dependent on industry ranged from 44 to 52 % and that of population dependent on trade and transport ranged from 27.5 to 32.5 %). Plzeň and Liberec were also important centres of culture and administration. Jablonec nad Nisou was more or less a monofunctional centre of industry (60 % of population was dependent on industry and artisans' trade), and the spa town Karlovy Vary was characterized by a low industrialization and a large proportion of transport and trade. As for the branches of industry, Plzeň was a centre of metal-working industry which employed about 37 % of the total number of persons active in industry. Liberec was a centre of textile industry (28 %) and clothing industry (also about 28 %), Ústí nad Labem chemical industry (19 %) and food industry (about 18 %). Jablonec was a town with a great prevalence of metal-working industry (38 % of all persons active in industry), and Karlovy Vary had mainly clothing industry (48 % of persons engaged in industry).⁹⁾ There were also differences between the towns in the social structure of the population, in the proportions of employed women, and in housing conditions.¹⁰⁾

Throughout the period under study, the towns differed significantly from one another in crude birth rate. For example in 1881-1885 the birth rate of the Ústí nad Labem popula-

Tab. 3 Development of neonatal mortality in Czech cities and towns in 1891 - 1913 (‰/oo)

city/town	1891-1895	1896-1900	1901-1905	1906-1910	1911-1913
Aš	.	71 ¹	68	84	80
Ústí nad Labem	81 ²	70 ¹	76	75	68
Most	109 ³	103	88	72	88
České Budějovice	84 ³	65	67	.	52
Cheb	.	70	62	64	71
Jablonec nad Nisou	92	84	61	75	63
Kladno	.	86	90	74	75
Plzeň	84	78	75	79	70
Liberec	89	86	78	64	63
Teplice - Šanov	.	102	83	80	63
Varnsdorf	.	105	92	95	80

- 1 - data of 1896 - 1899; since 1901 the localities Krásné Březno and Klíše were also included
- 2 - data of 1891 - 1893, 1895
- 3 - data of 1892 - 1895

Tab. 4 Development of infant mortality in Czech cities and towns in 1891 - 1913 (‰/oo)

city/town	1891-1895	1896-1900	1901-1905	1906-1910	1911-1913
Aš	182	173 ¹	209	211	183
Ústí nad Labem	238	196 ¹	220	202	182
Most	269	277	257	214	231
České Budějovice	259	232	242	215	170
Cheb	264 ²	225	161	166	169
Jablonec nad Nisou	316 ²	244	184	171	174
Kladno	252	214	225	212	191
Plzeň	218	206	197	174	175
Liberec	302	261	240	173	185
Teplice - Šanov	283	233	223	207	202
Varnsdorf	301	286	254	208	189

- 1 - data of 1896 - 1899; from 1901 on, the localities Krásné Březno and Klíše were also included
- 2 - This value differs significantly from data in Ōsb (Österreichisches Stadtebuch) by which infant mortality at Jablonec nad Nisou was 278; in other cities the differences were negligible.

tion was 44.1 ‰ whereas in Liberec it was only 30.5 ‰. Ústí nad Labem kept its much higher crude birth rate until the end of the first decade of the 20th century when its level was 14.5 ‰ for Liberec and 25.9 ‰ for Ústí nad Labem. Plzeň was closest to Ústí nad Labem, especially at the beginning of the 20th century. Differences in crude death rate were much smaller, 5 ‰ at the maximum. For example, in 1891-1895 the crude birth rate of Ústí nad Labem was 41.9 ‰ and Liberec only 26.4 ‰, but crude death rates were about the same for both: 23.9 ‰ for Liberec and 23.8 ‰ for Ústí nad Labem.

Differences in the age structure of population were both a cause and consequence of the differences in the crude birth and death rates, described above. The continuous decrease of crude birth rate in Liberec led to a decline of the proportion of population in the age group of 0-15 years (from 313 ‰ in 1880 to 231 ‰ in 1910) and to an increase of the proportion of the age group of 16-50 years and the group of persons above 50. At Karlovy Vary the decrease of the proportion of the 0-15-year group was not so great and the proportion of the group above 51 years slightly dropped. Comparability of the data on Ústí nad Labem was affected by the administrative change in the size of the city. Taking this into account it can be stated that the proportion of persons in the 0-15-year group did not change over the period in question, and the proportion of persons old 51 years or older exhibited a slight decrease.¹¹ It follows from all this that there were differences between the cities in the contribution of each particular age group to the mortality of the population. At Liberec there was obviously a higher mortality of people in the older age groups than in the remaining cities (the proportions of 51-year-old and older persons was the highest at Liberec); however, there might also be a higher mortality of persons in productive age in that city. Again, accurate comparison is complicated by variance in the definition of the concept of "non-residents".

Tab. 5 Development of child mortality (1-5 years of age) in Czech cities and towns in 1891 - 1913 (‰)

City	1891-1895	1896-1900	1901-1905	1906-1910	1911-1913
Aš	.	59 ¹	63	64	35
Ústí nad Labem	82	75	78	63	52
Most	72	86	68	65	50
České Budějovice	109	92	83	77	63
Čeb	.	57	84	67	67
Jablonec nad Nisou	57	78	60	63	67
Kladno	.	90	62	76	100
Plzeň	90	75	75	96	68
Liberec	94	97	112	79	79
Teplice - Šanov	.	77	106	86	105
Varnsdorf	.	66	64	42	38

1 - data of 1896 - 1899; since 1901 the localities Krásné Březno and Klíše were also included

Tab. 6 Development of child mortality (0-5 years of age) in Czech cities and towns in 1891 - 1913 (‰)

City/town	1891-1895	1896-1900	1901-1905	1906-1910	1911-1913
Aš	.	232 ¹	272	275	218
Ústí nad Labem	320	271	298	265	234
Most	341	363	325	279	281
České Budějovice	368	324	325	292	233
Čeb	.	282	245	233	236
Jablonec nad Nisou	373	322	244	234	245
Kladno	.	304	287	288	291
Plzeň	308	281	272	270	243
Liberec	396	358	352	252	264
Teplice - Šanov	.	310	329	293	307
Varnsdorf	.	352	318	250	223

1 - data of 1896 - 1899; since 1901 the localities Krásné Březno and Klíše were also included.

Source: neonatal and child mortality in 1891 - 1895 calculated from data in OSb, otherwise data were taken from OSw

As it was impossible to solve this problem on the basis of data from the ÖSb (Österreichisches Städtebuch), at least the data on child mortality were used because they suffered least from the obscurity of definition of non-residents. The crude death rate in each particular city was influenced by child mortality to an appreciable extent. Children who died within the first five years of age accounted for 50 percent, or more, of all the deceased in cities with a high fertility and a high child mortality (counted without "non-resident" deceased); by the beginning of the 20th century this proportion decreased to 40%. Only in Liberec - where fertility had decreased considerably and a partial decrease also occurred in child mortality - did the proportion of the 0-5-year age group out of the number of deaths decrease from about 40% to 25%.

The proportion of deaths during the first month of life of the total number of the deceased remained more or less stable, ranging from 10 to 15%; in some cities (Ústí nad Labem, Jablonec nad Nisou, Plzeň) an appreciable stability was also observed in the proportion of those children who died during the first year of their life.

Large differences were recorded in child mortality when distinction was drawn between legitimate and illegitimate children. Mortality of legitimate children decreased markedly whereas that of illegitimate children remained almost unchanged in some cities and the discrepancy between these categories gradually aggravated. Towards the end of the period under review the proportions of deaths during the first year of life per 1000 live born babies were about 250 in the case of legitimate children and above 400 in the case of illegitimate children in all the cities studied, except Jablonec nad Nisou. This development was associated with the decrease in the number of children in families and with continuous improvement of the care of children. Early in the eighteen-nineties there were more than 3, and sometimes 4, children per marriage and early

Tab. 7 Proportions of children who died within the first month, first year, and first five years of age out of the total number of deaths, not including the "non-residents" (%)

City	Mortality	1886-1890	1891-1895	1896-1900	1901-1905	1906-1908
Plzeň	NM	.	14	.	12	12
	IM	.	35	37	32	31
	CM	.	50	49	44	40
Ústí n.L.	NM	15 ¹	14	15 ²	12 ³	.
	IM	45 ¹	42	41 ²	37 ³	.
	CM	61 ¹	56	55 ²	51 ²	.
Jablonec n.N.	NM	.	12	13	11	13
	IM	.	37	37	32	28
	CM	.	48	47	40	38
Karlovy Vary	NM	13 ⁴	11	.	.	10
	IM	32	29	.	.	25
	CM	49	43	.	.	37
Liberec	NM	.	10	10	7	6
	IM	.	33	30	24	18
	CM	.	44	40	35	25

1 - data of 1887 - 1890, 2 - data of 1896 - 1899, 3 - data of 1901 - 1904; since 1901 the localities Krásné Březno and Kliše included, 4 - data of 1887 - 1890

in the 20th century this number was about 2.

Again, with exceptions, there was an excess mortality of boys. The differences in five-year means ranged mostly between 30 and 40 ‰ in child mortality; rarely did they reach higher values.

Data from Ústí nad Labem were used for determination of infant mortality with respect to the causes of death. As the data suggest, reduction of infant mortality caused by gastric and intestinal catarrh made the greatest contribution to the general decrease of infant mortality. In 1886-1890 these catarrhs killed 814 babies (52% of all deaths in the 0-1-year category). The enormous proportion of gastric and intestinal catarrhs as causes of infant mortality is also in-

Tab. 8 Neonatal, infant and child mortality (age from 0 to 5 years) in legitimate and illegitimate children in 1886-1910

City	1886-1890		1891-1896		1901-1906		1906-1910	
	le	il	le	il	le	il	le	il
Neonatal mortality								
Plzeň	91 ¹	126 ¹	81	122	62 ²	148 ²	70	150
Ústí n/L	105 ₃	155 ₃	78	109	67 ²	84 ²	67 ²	115 ²
Jablonec n.N.	90 ₃	136 ₃	86	148	60	109	74	99
Karlovy Vary	76	113	79	144	.	.	54	141
Liberec	.	.	77	159	64	128	51	141
Infant mortality								
Plzeň	214 ¹	321 ¹	196	328	186 ²	330 ²	186 ²	393 ²
Ústí n/L	318	387	228	292	188 ²	313 ²	185 ²	302 ²
Jablonec n.N.	309 ₃	339 ₃	274	314	187	214	174	218
Karlovy Vary	203	241	211	342	.	.	146	321
Liberec	.	.	277	389	214	338	155	292
Child mortality								
Plzeň	364 ¹	452 ¹	302	401	261 ²	390 ²	253 ²	422 ²
Ústí n/L	443 ₃	457 ₃	315	347	286 ²	365 ²	250 ²	352 ²
Jablonec n.N.	430 ₃	407 ₃	363	386	246	226	229	253
Karlovy Vary	327	305	314	441	.	.	249	429
Liberec	.	.	369	461	321	420	228	401

1 - legitimate 1 - illegitimate
 1 - data of 1888-1890; 2 - since 1901 the localities Krásné Březno and Klíše included; 3 - data of 1887-1888, 1890

indicated by the fact that every fifth live born child died of this disease in the period of 1886-1890. Great progress in hygiene (canalization, water pipings and the like) and greater care of the children led to a permanent reduction of deaths of catarrhs. In the immediately following five-year period the proportion of deaths of catarrhs of infant mortality decreased to 39 % and catarrh killed every eleventh live born child.

Tab. 9 Development of neonatal, infant and child mortality (boys and girls) in 1886 - 1910 (%/oo)

City	Morta- lity	1886- 1890		1891- 1895		1896- 1900		1901- 1905		1906- 1910	
		M	F	M	F	M	F	M	F	M	F
Plzeň	NM	91 ¹	101 ¹	89	78	.	.	66	80	73	
	IM	263 ¹	239 ¹	231	201	.	.	180	213	189	
	CM	372 ¹	363 ¹	325	290	.	.	281	281	251	
Ústí n. Labem	NM	124	99	91	69	.	.	75 ²	82 ²	54 ²	
	IM	240	315	261	213	.	.	236 ²	202 ²	159 ²	
	CM	446	443	343	295	.	.	309 ²	283 ²	206 ²	
Jablonec n.N.	NM	103 ³	88 ³	101	81	86	71	63	91	62	
	IM	330 ³	295 ³	201	252	237	225	210	169	155	
	CM	447 ³	408 ³	393	335	305	275	262	225	215	
Karlovy Vary	NM	115	93	76	71	.	.	.	271	262	
	IM	285	219	219	191	.	.	.	191	147	
	CM	422	349	310	290	.	.	.	271	262	
Liberec	NM	.	.	89	89	80	80	81	67	56	
	IM	.	.	302	296	250	239	207	187	157	
	CM	.	.	398	393	340	311	345	266	233	

1 - data of 1886, 1888 - 1890
 2 - from 1901 on, the localities Krásné Březno and Klíše included
 3 - data of 1887 - 1888, 1890

Tab. 10 Causes of infant mortality in Ústí nad Labem in 1886 - 1895 and in Liberec in 1891 - 1894

Cause of deaths	Ústí n.L.		Liberec
	1886-1890	1891-1895	1891-1894
congenital bodily feebleness	15	23	15
Meningitis and other cerebral ailments	8	8	.
diseases of respiratory organs	8	13	16
gastric and intestinal catarrhs	52	39	18
TBC	-	1	6
contagious diseases	3	4	4
miscellaneous	14	12	41
total	100	100	100

It can be said that during the period when the survey was made, contagious diseases were of minor importance for infant mortality. At the turn of the eighteen-eighties and nineties they killed only 3-4 % of the babies. Comparison of the occurrence of contagious diseases in infants and in children up to 5 years will show no relationship between the number of cases of disease and the levels of infant or child mortality in Ústí nad Labem. For example, in 1892 there were 136 cases of illness caused by infectious diseases in children in the 0-5-year category in Ústí nad Labem, and child mortality was 353 ‰. In 1894 there were 497 cases (of this, 346 cases of measles) and child mortality was 355 ‰ (crude birth rate in these two years was 41 ‰ and 42.2 ‰, respectively).

Although just a very limited set of data has been analyzed, some preliminary conclusions can be drawn. Arguments according to which there was enormous mortality in cities and the cities could never reach self-sufficiency in population and so

on, are generally overstated. In early stages of their development, cities were unable to solve their hygienic and other problems caused by the rapid population growth and increase of population density, problems of housing, control of contagious diseases and the like; this caused above-average mortality of children up to 1 and 5 years of age. However, efforts to find solutions were successful and early in the eighteen-nineties the most serious problems were practically removed.

Notes

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2. For details see Lánik, J., Počátky městské statistiky v Rakousku (Beginnings of urban statistics in Austria). CsCH 1989, forthcoming.
3. Drexel, K., Geburten und Sterbefälle in den grösseren Städten Österreichs im Jahrzehnt 1901 - 1910 und in den Jahren 1910, 1911, 1912. SM N.F. (Neue Folge) 19, Brno 1914
4. Rauchberg, H. Der nationale Besitzstand in Böhmen Bd. III. Kartogramm referred to Liberec as having a passive population as early as in 1891-1900, although the town showed permanent population passivity only from 1904.
5. Österreichisches Städtebuch (next Osb) XI, p. 688-689.
6. Kárníková, L., Vývoj obyvatelstva v českých zemích v letech 1754-1914 (Development of population in the Czech Lands in 1754-1914). Praha 1965
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8. Reichenberg in der Zeit der Selbstverwaltung vom Jahre 1850 bis 1900. Liberec 1902, p. 102-103. Statistisches Handbuch der konigl. Freistadt Aussig. Ústí nad Labem 1888, p. 36
9. Berufstatistik nach der den Ergebnissen der Volkszählung vom 31. Dezember 1910 in Österreich. Österreichische Statistik Neue Folge Bd. 3 H. 8 Bohmen Tab. I. p. 2-145.
10. Havránek, J., Plzeň a její obyvatelé v roce 1910 (Plzeň and its population in 1910). Minulostí západočeského kraje XXI, 1985, pp. 97-110.
11. Österreichische Statistik N.F. Bd. 4 H. 2 p. 10-11
Lánik, J., Vybrané demografické charakteristiky některých českých měst ve 2. polovině 19. století (Selected demographic characteristics of some Bohemian cities in the latter half of the 19th century). Historická demografie 11, 1987, p. 171, tab. 9.

Historická demografie, 13/1989, s. 193-227

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ON SOME PROBLEMS OF THE MIGRATION OF POPULATION AND ITS AGE STRUCTURES EARLY IN THE 20TH CENTURY

Some implications of the migration of population were studied in one of the industrial centres of the so-called Brdy Mountains Industrial Region. The centre under study included the town Beroun with a population of more than eleven thousand, and two villages, each having less than 2000 inhabitants before the year 1910.

The general range of problems studied included the extent and intensity of in-migration in the town and the two villages, its implications for the social status, occupational classification and age structure of the population in the social status groups of "independents", "factory workers", and "small-scale production workers".

The analysis whose results are given here was conducted within a wider investigation of the problems associated with migration in Bohemia under a state-sponsored basic research programme¹⁾. The main source of data for this investigation were the schedules of the census conducted at Beroun, Králův

Dvůr and Počaply in 1910. These three localities constituted an industrial centre of the Beroun district of that time and were at the same time an important in-migration area, in which the increase of population on the turn of the 19th and 20th centuries was so high that in-migration must certainly have been significantly involved in population growth. In the remaining villages of the Beroun district the number of population mostly declined or remained stagnant²⁾. The industrial centre under study is typical of the whole industrial region of the Brdy Mountains, stretching between Prague and Plzeň, with a number of smaller or larger conglomerations clustered around factories or towns in areas whose population was mostly engaged in farming³⁾.

Economic development of the area around Beroun was supported by its very advantageous location with a good system of transport facilities. The Czech Western Railway, finished in 1862, gave a new stimulus to the flourishing of the existing industry and to establishment of other operations. Possibilities of transport of raw materials, finished products and passengers kept increasing until the end of the 19th century; late in the eighteen-nineties the centre had direct traffic relation with Prague, Plzeň and Příbram, and also with Rakovník and the industrial region of Kladno. Apart from the railways, there was a public highway and several district roads which connected the industrial centre with neighbouring villages outside the railway and with areas outside the district.

Economic progress in Beroun, Králův Dvůr and Počaply, located close to each other, required increased supply of labour force and the local sources were soon exhausted. Workers, who came with their families, were attracted mainly by several large factories. Chief among them was the iron works of the Prague Iron Company which kept expanding from 1870⁴⁾, and the cement factory built in 1890-1891 and modernized in 1910⁵⁾, both at Králův Dvůr. The main industrial plants at Beroun were a spin-

ning and weaving mill, founded in 1860 and owned by the Kubínský Company. It was impossible to determine exactly the number of workers but it can be said for sure that several thousand workers found jobs in these factories around the year 1910. There were several other larger plants⁶⁾ and a number of small artisans' workshops, retail shops and the like at Beroun, where the district authorities were also located. Počaply had no big industrial operations; there were only several small artisan establishments, but the village could be regarded as industrial because an overwhelming majority of the settled population belonged to the social status group of "factory workers", according to the profession of the bread-winners (in the census the bread-winners were referred to as "household representatives"). The workers were employed in the factories at Králův Dvůr, located near by. There were many in-migrants; we determined their origin according to the districts of their place of birth. Many of them came from the villages around, but the number of those who moved to the area from more distant places was still larger, as can be seen from the following tables and maps.

Tab. 1 Proportions of in-migrants of the population of Beroun, Králův Dvůr and Počaply in 1910 (%)

Persons born	Beroun			Králův Dvůr			Počaply		
	€	at an age of		€	at an age of		€	at an age of	
		0-15	15 and above		0-15	15 and above		0-15	15 and above
outside the town/village concerned - total	51.8	8.2	43.6	68.8	15.0	53.8	77.5	22.4	55.1
Of this: in other towns & villages of Beroun district	9.9	1.8	8.1	21.9	7.0	14.9	16.6	6.5	10.1
in another district in Bohemia	39.9	6.1	33.8	41.3	7.2	34.1	58.6	15.7	42.9
outside Bohemia	1.4	0.3	1.1	5.6	0.8	4.8	2.2	0.1	2.1
unsp.	0.6	-	0.6	-	-	-	0.3	0.1	-

The map and the tables show the nature and intensity of in-migration in the area under study. It is clear, first of all, that the number of in-migrants was very high, especially at Počaply and Králův Dvůr. Hence, in-migration was a significant factor in the development of the industrial area around Beroun and its consequences manifested themselves mainly in population growth. Workers, the most frequently migrating category of population, settled in the area, thus augmenting its industrial features. Those who came from larger industrial centres, e.g. northern Bohemia, had ample experience in revolutionary struggle of advanced proletariat and helped significantly in the development of worker movement in the Beroun area⁷⁾.

In the period under study, in-migration had the strongest influence on the development of the village Počaply. In 1890 the village had 279 inhabitants, ten years later 504, and the number of population recorded there on December 31 of 1910 was 1918. Persons engaged in industry clearly prevailed among the population; a slight prevalence of persons working in industry over those engaged in farming was felt already in 1890⁸⁾.

This high increase in population was a consequence of the great expansion of production in the Králův Dvůr iron works in 1904-1905. The former Rudolfshütte, a sheet rolling mill, was transferred there from Teplice in northern Bohemia and its operations were reconstructed that time. Production was started on the 1st of May 1905 and the mill provided new jobs for the local population. However, the core of the staff was represented by in-migrants from Teplice. The majority of the 122 families who came from Teplice were Germans. A new worker settlement had been built for them at Počaply. Most of them were skilled workers; auxiliary workers (about 200), came from the vicinity of the mill. Several Teplice rollers left, owing to disagreement with the employer who intended to cut their wages, but in 1910 there were, at Počaply, still 120 fa-

Tab. 2 Proportion of in-migrants born in villages and towns of the Beroun district, recorded in 1910 (%)

From town/village	Beroun	Králův Dvůr	Počaply
Beroun	---	3.5	2.2
Bitov		0.2	0.3
Bubovice	0.1		
Bykoš	0.4		0.3
Broumy		0.2	
Černín	0.3	0.5	0.7
Hostín	0.2		
Hýskov	0.8	0.5	0.7
Jarov	0.3		
Karlova Huť	0.2	2.9	1.7
Koněprusy	0.2	0.9	
Králův Dvůr		---	2.8
Křižatka	0.5	0.2	0.1
Levíp	0.2	0.2	1.4
Litěň	0.2	0.1	0.1
Lodenice	0.2	0.1	0.1
Lounín	0.1	0.5	0.3
Malkovy		0.4	
Počaply	0.3	1.4	---
Popovice	0.3		2.1
Srbsko	0.2		
Stará Huť		0.5	
Suchomasty	0.4	0.9	0.1
Svatá	0.5	4.1	2.0
Sv. Jan	0.3		
Tetín	0.8	0.1	0.2
Tmaň	0.5	1.4	0.3
Tobolka	0.1		
Trubín	0.3	0.2	0.6
Trubská	0.2	0.3	0.2
Velká Mořina	0.1		
Vráž	0.3		
Zadní Třeboň		0.1	
Zahořany		0.2	0.4
unsp.	0.2		
some other localities †)	1.7	2.5	
Total	9.9	21.9	16.6

†) localities each of which contributed less than 0.1 % to this in-migration

families coming from northern Bohemia and claiming to be of German nationality⁹⁾. The Prague Iron Company established a German school¹⁰⁾ at Počaply for the children of their German employees. Hence, in-migration of the former workers of the Teplice sheet rolling mill changed the nationality structure of the village where Germans constituted a large proportion from the year 1905.

As said, many in-migrants came to Beroun, Králův Dvůr and Počaply from a comparatively high number of villages of the Beroun district. (See Tab. 2) For the workers themselves as their family members, the main reason for this migration was the seeking of jobs. The data show that there were fairly large sources of manpower in the Beroun district. Most of the conglomerations in the Beroun district, except Beroun, Karlova Huť, Králův Dvůr, Počaply and Popovice, were small villages with farming population or places where industry was declining or had died, which was the case of Hýskov and Stará Huť. Job opportunities were scarce, so the population of these villages had to seek jobs elsewhere. Many of these villages were close to the area under study so that the workers could commute every day, but our data show that in many cases they changed the place of residence when they got the job. Of course, the number of the daily commuters was high. For example, many of the inhabitants of Králův Dvůr and Počaply came from Svatá and 80 % of all workers who still lived at Svatá had jobs in the Králův Dvůr iron works¹¹⁾. Hence, early in the 20th century the Beroun district itself was a significant, and probably the largest, source of manpower. There were some differences in the intensity of migration from the neighbouring and other districts of Bohemia to the area studied¹²⁾. For Beroun, the largest sources of manpower were in the adjacent Hořovice district, the city of Prague¹³⁾, the area south of Kladno, and the Unhošť, Příbram and Rakovník district; the districts of Rokycany and Křivoklát were less significant for migration to

Beroun. A more or less compact area of other districts which supplied labour to Beroun stretched both north and south of the vicinity of the town and in the east Bohemian textile and engineering industrial zone; these areas contributed about 13% of the Beroun in-migrants. The proportion of those who came from areas outside Bohemia was 1.4 %. Another 4.3 % of in-migrants came from other districts, scattered over the country, but the numbers of in-migrants from each of them taken separately was negligible.

Králův Dvůr drew most of its labour force from the Beroun district, followed by the districts of Rakovník and Hořovice. Then followed the city of Prague and the districts of Rokycany, Kladno, Unhošť, Plzeň and Příbram. This general pattern suggests that apart from the Beroun district where Králův Dvůr itself was located, most of the in-migrants came to this newly industrialized village mainly from places with advanced industry such as Prague, the Plzeň and Rokycany districts and part of the Kladno district, and from places where industrial production was stagnant or declining, which was the case of the Příbram and Rakovník districts. The area south of Kladno and the Unhošť district also showed no traces of industrial development, so that many people had to leave. Hence, these were the major sources of in-migration to Králův Dvůr, apart from its own district of Beroun. Contributions from other districts were small, one percent at the maximum.

In-migration to Počaply differs conspicuously from in-migration to Beroun and Králův Dvůr, as recorded in 1910. First, the origin of the Počaply in-migrants is concentrated to a much smaller number of districts in Bohemia and second, the neighbouring districts did not belong to the major sources of in-migration. The majority of the Počaply inhabitants born outside the village and outside the district came from the district of Teplice: the number of these in-migrants was just 0.2 % less than those from the Beroun district itself. Smaller

numbers of in-migrants came from the districts of Rakovník, Hovovice, Stříbro, Planá, Kladno-Unhošť, the city of Prague, Rokycany and Příbram. Other places, mostly farther from Počaply, contributed a much smaller number of in-migrants. One of the main reasons why the neighbouring districts had such a small importance for migration to Počaply is the high number of workers of the sheet rolling mill who moved from Teplice together with their factory, which was built anew at Králův Dvůr. Thus the majority of the people who worked in this mill at Králův Dvůr came from the industrially advanced north Bohemian region and some of them came from the stagnant industrial areas around Stříbro, Tachov and Planá.

The range of the labour market and the proportion of in-migrants of the total population of the village Počaply can be compared, on the basis of census schedules, with situation in 1890. A high number of Počaply inhabitants born outside the village was recorded already in 1890: their proportion was 55.9%. Those born outside the village but in the same district accounted for 34.8%¹⁴⁾. Another 21.1% of in-migrants came from other 19 districts which were, in general, not very distant from the Beroun district¹⁵⁾.

Hence, the large proportion of in-migrants (77.5%), and the much wider range of the places of their origin as shown by the analysis of the situation in 1910, indicates that the sources of manpower employed mainly in the Králův Dvůr iron works were extended considerably¹⁶⁾. On the basis of the available data we could also compare the proportions of persons in the social status category "worker": in 1890 the proportion of those who belonged to this category in Počaply was 43.7%, and in 1910 as many as 78.4%.

The population of the area under study was analyzed for its social status and occupational classification, as influenced by in-migration. Three social status categories were investigated: "independents", "factory worker", and "small-

scale production worker". These categories constituted a substantial part of population in Beroun as well as at Králův Dvůr and Počaply, as the table below suggests. Detailed classification was performed only in the case of the town Beroun.

Tab. 3 Proportions of persons in the social status categories of "independents", "factory workers" and "small-scale production workers" out of the total number of population in the Beroun industrial centre in 1910 (%)

Town/ village	Σ	Independents		Factory workers		Small-scale production workers	
		0-15	15 and above	0-15	15 and above	0-15	15 and above
Beroun	64.2	5.1	11.2	12.3	22.4	4.3	8.9
Králův Dvůr	73.3	2.7	5.4	25.1	31.6	2.8	5.7
Počaply	89.5	4.4	6.7	32.9	41.7	1.2	2.6

It can be seen from this basic general classification of the population how high the proportion of persons engaged in industry was; more detailed classification would be of no great use here. However, detailed classification will be useful if it is combined with an analysis of household structure. The structure of households at Králův Dvůr and Počaply was studied in the inhabitants of some of the houses owned mostly by the tenants' employers. This set covers more than 40% of the population belonging to different groups, especially to the category of workers. For Beroun where the social groups were more varied and their number was higher, a different procedure had to be employed, in order to cover almost all the population living there¹⁷⁾.

Králův Dvůr had 116 houses; 4 of them were owned by Prince Fürstenberg, 19 by the Prague Iron Company, 8 by the cement works, and there was also one council house. On the whole, 40.2% of all the actual population lived in these houses in 135 flats. Unfortunately, we failed to obtain any reliable

data on the size of the flats in any of the localities. It can only be assumed that the worker flats owned by the Prague Iron Company had, as was more or less usual that time, a kitchen and a living room, and a common lavatory in the corridor or in the yard. There was a large estate, owned by Prince Fürstenberg, in the cadastral area of Králův Dvůr, and some of its employees lived in the four houses which belonged to the estate. Those who lived there with their family members were the manager of the estate, foreman of barnmen, manager of the woods and forests, overseer of the estate, 11 farm servants, 3 farm hands and a day-labourer, and also 1 engineer, 2 clerks, 8 workers and 1 watchman, all employees of the Králův Dvůr iron works, 1 pensioner formerly employed by the Prague Iron Company, 1 pensioner who had retired from the Imperial & Royal State Railways, and 1 inn-keeper. Besides family members (parents, children), the household of the manager of the estate included 1 maid and 1 subtenant, the household of the manager of the woods and forests included 2 maids and one female relative, the household of the engineer had a nurse maid and a cook, the household of one of the clerks had 2 maids and another clerk's household one maid. On the whole, 153 persons lived in 34 flats in the Fürstenberg houses. The total number of children under 15 years of age was 56 in these houses. There were also 16 older children who were already wage earners (10 men, 6 women), and 5 who were not gainfully employed (1 man and 4 women). Ten wives, all in the families of the farm servants, were employed.

The inhabitants of the houses of the Prague Iron Company included families of the directors of the iron works, the clerks and technicians, a physician, a hotel-keeper, a porter, a coachman, a driver, two gardeners, an inn-keeper, 2 laboratory technicians, several foremen and many workers of various professions; in total there were 458 persons in 87 flats; these included 180 children up to an age of 15 years. The number

of older children in these households was 74; 33 men and 4 women of these 74, all from worker families, were gainfully employed. The families of the 17 technicians and clerks employed 24 maids, 1 nurse maid and 2 cooks; the household of the hotel-keeper employed 1 apprentice, 1 cook and 3 maids. 6 families had a relative in their households and 2 families of foremen had a subtenant.

The Joint Stock Company for Cement Production owned 8 houses with 11 flats in which 50 persons lived; most of them had non-worker professions. There were families of 4 foremen who perhaps could be regarded to represent workers, though their profession ranked them with a preferred worker category. The families living in these houses had 19 children up to 15 years of age and only 4 older children; 2 men of these four were employed. On the whole, there were 3 maid servants, 1 cook and 1 nurse maid. The wife of one foreman was gainfully employed, the remaining 9 not.

The council house had 3 flats with 13 inhabitants: the family of a worker, an almsman, and a widow. With them there were 5 children below 15 and 3 older sons who were gainfully employed.

The small number of subtenants, recorded in these houses, should be complemented by another 20: the households of a janitor, a shopkeeper, worker in the cement works, a widow, an inn-keeper, a tailor, a turner and a sheet cutter of the iron works, a fitter, and a housewife had one subtenant each. Two subtenants were in the households of a road mender and a foreman of the iron works. One female worker and a locksmith from the cement works had three subtenants each. The household of a smelter had one lodger and an assistant judge had 4.

There were several grocers, one haberdashery, a butcher, miller, tailor, shoemakers, one wheelwright, one beerhouse and about six farms. The owners of these shops and farms and their family members represented, in the essence, the "independents"

category at Králův Dvůr.

At Počaply there were 122 houses, of which 25 belonged to the Prague Iron Company, which also owned the building of the school with three flats. There was also one council house. The total number of flats in these houses was 199 and 46.4 % of Počaply inhabitants lived there. The remaining houses (like at Králův Dvůr) were private. The houses of the Prague Iron Company were inhabited almost exclusively by workers of various professions, mainly the specialists who had moved to this area together with the sheet mill from Teplice: rollers, cutters, sorters, tanners, enginemen, and metallurgical workers. About ten flats were inhabited by clerks and teachers. On the whole, there were 370 children below 15 years of age in these houses. Of the 128 older children who stayed in their parents' households 79 were employed (66 sons and 13 daughters). 49 older children (9 men and 40 women) did not work to earn their wage. There were only two employed wives: a worker and a teacher. Six families had subtenants: two families of clerks, family of a foreman, families of two workers, and a pensioner. However, the total number of subtenants was higher at Počaply as a whole (like at Králův Dvůr). Their total number was 23: five stayed with the households of other workers, two were in the household of a servant from the factory hospital, four in the households of two inn-keepers; a baker, a smelter, a foreman and a founder had one subtenant each. The census schedules contained a record on only one lodger who was in the family of a founder. There were also 33 relatives who stayed in 24 households in the houses of the Prague Iron Company.

Fourteen people lived in the council house, two in the parson's house, and six in the school building.

There were 8 farms at Počaply and 2 inns; the population of the village included the families of 7 grocers, 1 haberdasher, 1 smith, 2 bakers, 2 butchers, 2 barbers, 1 joiner, 4 tailors, 5 shoemakers, 1 milkwoman and 1 organ grinder. When

these figures are compared with the data on Počaply population in 1890 (3 tailors, 1 shoemaker, 1 joiner, 1 smith, 1 grocer, 12 farmers, 5 teachers, 1 woman teacher, 1 midwife, 1 common herdsman and road mender, 2 inn-keepers), it is shown that there was an increase not only in the number of worker population but also in the number of those in the category of "independents". A decrease occurred only in the number of private farmers.

This extension of what can be called public services in modern terms is also one of the consequences of the big wave of in-migration to Počaply: the increased number of population needed, and was able to support, more artisans and shop keepers who provided these services to the local population.

In Beroun, our analysis covered 2103 households with 9990 persons¹⁸⁾. The basic data on the Beroun households are tabulated (See Tab. 4).

According to the social status of the bread-winners, 6.7 % of the Beroun households depended on agriculture, 62.8 % on some of the branches of industrial production, 7.6 % on trade, and 10.9 % were included in group D - Miscellaneous, which was a group of all occupations that could not be included in the other groups mentioned. These were, for example, the inn-keepers, the clearly worker professions in public service, (Imperial & Royal State Railways), coachmen and others. Fairly frequent were professions, or sources of living, which could not be included in any of the occupations. Such persons are in group E - Without employment. Most of the persons in this category were pensioners, rentiers and those who included themselves among "persons of their own means". However, besides these, the same group comprises people dependent on public assistance, those living on alms and begging, but the number of these persons was low. On the whole, group E contained 9.7 % of households. Group E was the only group in which women prevailed among the bread-winners. Most of them were widows living on

Tab. 4. Structure of households in BEROUN in 1910

Households depending on:	E. persons		Bread-winner		Spouse		Children up to 15 years		Relatives		Servants		Ap-pran-tices	Sub-tenant	Lod-ger	other room-mates
	M	F	M	F	M	F	M	F	M	F	M	F				
A. Agriculture	437	67	14	1	59	62	29	24	113	26	1	4				17
W	260	44	15	-	41	72	18	15	104	1	1	8				2
V	697	111	29	1	100	154	47	39	157	-	27	12				19
B. Industry	1 116	204	8	-	195	319	48	50	161	1	20	10				45
W	5 473	1 047	62	1	974	1 696	339	311	910	1	6	82				4
V	6 589	1 251	70	1	1 169	2 015	387	369	1 068	1	26	92				49
C. Trade	632	112	35	6	100	134	29	42	106	9	24	7				19
W	44	10	3	9	20	20	29	42	107	9	24	7				19
V	676	122	38	6	109	154	29	42	107	9	24	7				19
D. Miscellaneous	363	68	14	-	60	82	9	21	54	-	20	7				22
W	725	128	19	-	120	280	34	33	94	-	4	2				-
V	1 088	186	33	-	180	362	43	54	149	-	24	9				22
E. No employment	756	72	131	1	51	139	79	63	185	-	13	1				1
F. Clerks	184	49	1	-	35	42	3	10	18	-	19	-				-
A - F Total	9 990	1 801	302	9	1 644	2 866	508	597	1 684	10	133	68				110

*) I - independents
W - worker categories

pensions, rentiers, or women who owned a real estate and probably lived on the income from it. There were only 2.3 % of the households of clerks who were not employed in public service. All groups include high numbers of children up to 15 years of age. An overwhelming majority of the bread-winners had a spouse; there were only few free unions. Relatives and children above 15 years made up a comparatively large proportion of persons in all groups; the group of private farmers and group E - without employment had an especially high number or relatives in their households. In the farmer households these people obviously represented additional manpower. Households in group E usually could not be regarded as households of families in the traditional sense: most of them were an older married couple or a widow (widower) with some income, usually living together with unmarried daughters, with studying or employed sons, old parents, a brother or sister etc. Almost every tenth of these households had a subtenant which was obviously dictated by the need for an additional income. Such an improvement of income was also recorded in some other groups, especially in the households of clerks and agricultural workers where there was a subtenant in every seventh household. In some other groups of population subtenants were not so frequent (there was a subtenant in every 13th-14th household of workers); this can perhaps be ascribed to worse housing conditions, compared with the conditions of clerks and families in group E, and to the comparatively good earnings of workers, particularly those working in factories¹⁹). However, there were many families of older parents with children who were already gainfully employed. These "hidden" subtenants were mainly unmarried sons. In Beroun, as elsewhere, daughters, as well as wives, were usually not employed. They stayed in their original family and helped in the household until they married. A number of employed wives and daughters were recorded only in families depending on agriculture, especially those who earned their li-

ving as hired labour. Gainfully employed persons occurred frequently among those referred to as "other co-inhabitants", and sometimes also among the relatives. In several cases a contribution to the household budget was obtained from a lodger.

Some of the households included apprentices and servants. Apprentices lived either in the households of their masters or in their own families. Most of them were in the households of "independents" of various industrial fields, in households associated with trade, and in the "Miscellaneous" group (group D). Similarly, servants (mostly females) occurred almost exclusively in the households of "independents", persons of their own means, some pensioners who were better off, and in the families of clerks. There was a fairly high number of maid servants in the households of farmers, but these were in fact farm labour. In worker households, maids occurred exceptionally.

It is suggested by findings recorded in the studied groups of population in the Beroun industrial centre that the average household, represented in this area that time - more or less - by the worker family, consisted of a married couple with several children below 15 years of age, often with one or several older children of whom the males usually were gainfully employed and could help to cover the household's expenditures. Girls were employed exceptionally. They mostly helped in the household and took care of younger sibs. However, it was probably quite common that women also irregularly contributed to the family budget: they helped in seasonal work in agriculture, worked as charwomen and the like. Sooner or later, some of the parents of the husband or wife often came for various reasons to the family. In the other social status categories the mode of family life was about the same. Some typical peculiarities in the structure of some households (presence of a maid or apprentice) were associated with the occupational status, or generally social status, of the bread-winner.

In conclusion an attempt will be made to demonstrate the

extent to which in-migration influenced the age structure of the population of the Beroun industrial centre, namely those persons who were included in the social status categories of "independents", "factory workers", and "small-scale production workers"; these categories prevailed in the population of Beroun, Počaply and Králův Dvůr. Their proportion was particularly high in the latter two localities.

A survey of the social status groups differentiated by their being of local origin or in-migrants and by their age, is given in the tables below.

Tab. 5 Population, classified by age and place of birth

BEROUN, total population 11 177				100 %
of this, persons belonging to the social status categories of "independents", "factory workers", and "small-scale production workers" (men + women) %				
	up to 15 years	above 15 years	total	
local-born	16.7	13.1	29.8	
in-migrants	5.0	29.4	34.4	
total	21.7	42.5	64.2	
KRÁLŮV DVŮR, total population 1675				100 %
local-born	18.7	6.2	24.9	
in-migrants	11.9	36.6	48.5	
total	30.6	42.8	73.4	
POČAPLY, total population 1918				100 %
local-born	15.9	2.5	18.4	
in-migrants	22.6	48.3	70.9	
total	38.5	50.8	89.3	

Tab. 6 Population, classified by social status categories

Locality	Total	Persons belonging to the social status categories											
		independents				factory worker				small-scale production worker			
		local-born		in-migrants		local-born		in-migrants		local-born		in-migrants	
		1	2	1	2	1	2	1	2	1	2	1	2
Beroun	64.2	4.1	3.4	1.1	7.6	9.1	7.3	3.1	15.3	3.5	2.4	0.8	6.5
Králův Dvůr	73.4	1.9	1.4	0.8	4.0	15.5	3.9	9.5	27.8	1.3	0.9	1.6	4.8
Počaply	89.3	3.1	1.3	1.3	5.5	12.4	1.0	20.5	40.4	0.4	0.2	0.8	2.4

- 1 - persons at an age up to 15 years
 2 - persons older than 15 years

The lower proportion of those who were born in the place of their residence, especially among persons older than 15 years, confirms the importance of in-migration for the whole area under study.

The smallest difference between persons of local origin and in-migrants in the groups of both factory workers and small-scale production workers was recorded in Beroun. The situation was different at Králův Dvůr (number of in-migrants more than twice higher than the number of persons of local origin) and especially at Počaply (number of in-migrants almost five times higher).

The proportions of children up to 15 years belonging to the social status categories under study were 21.7 % in Beroun (16.7 local-born and 5.0 in-migrants), 30.6 % at Králův Dvůr (18.7 and 11.9), and 38.5 % at Počaply (15.9 and 22.6). These data alone allow to draw the conclusion that the population of Králův Dvůr and Počaply was generally younger. Population above 15 years of age was analyzed in detail according to age groups and length of stay. The proportions of the age groups

of population in the localities under study are plotted in diagrams and tabulated (See Fig. 4a-e and Tab. 7-9).

There are, especially, marked differences in the ratio of small-scale production workers to factory workers. In Beroun this ratio is 20.7 to 53.3, at Králův Dvůr 13.0 to 74.1, and at Počaply 5.0 to 82.6 % in favour of factory workers.

In the "independent" category, the age group of 15-19 years was most frequently represented at all the three localities. A significant proportion (in Beroun the largest) was represented by persons born in the town (village). Most of the in-migrants among whom men prevailed had come in the last five years. The number of those of local origin declines with increasing age whereas the proportion of those who had come before 1906 (i.e. before more than five years) increases with age. Some age groups contain no persons born in the respective place: at Králův Dvůr this applies to the groups of men old 20-24 years and 25-29 years, women old 30-34 years, persons of both sexes old 35-39 years, women old 40-49 years and 50-54 years, and at Počaply to 25-39-year-old men and women, and women above 55 years.

In the category of factory workers, those of local origin prevailed only in the 15-24-year group and in the category of small-scale production workers the locals prevailed only in the 15-19-year group in Beroun. In the remaining age groups and social status categories (at Počaply and Králův Dvůr this also applies to the age groups mentioned above), in-migrants prevailed in all the three localities, having come before more than five years. In the last pentade the largest number of in-migrants were factory workers of the 20-34-year group who came to Počaply, women old 20-24 years and men and women old 25-29 years who came to Králův Dvůr, and, especially, small-scale-production workers of all age groups who came to Počaply and men and women of the 20-34-year group, men of the 55-59-year group, and 60-year-old and older men at Králův Dvůr. What

Fig 4a Persons above 15 years of age classified by age groups and lengths of stay - social status category of „independents” - Beroun

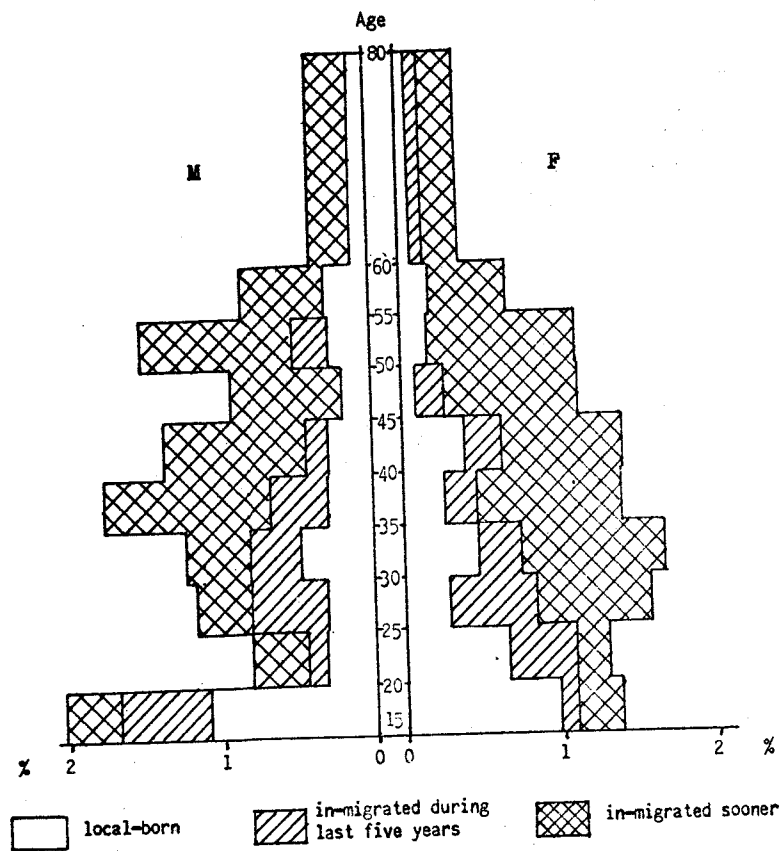


Fig. 4b Persons above 15 years of age classified by age groups and lengths of stay - social status category of „independents”

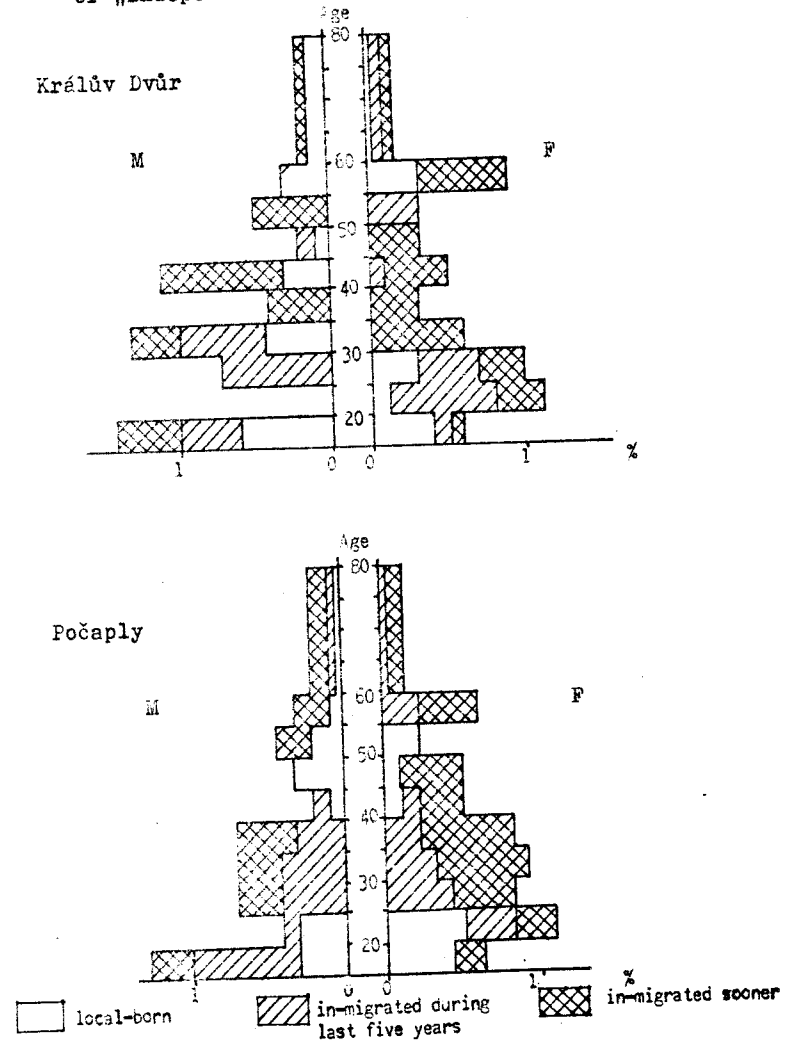
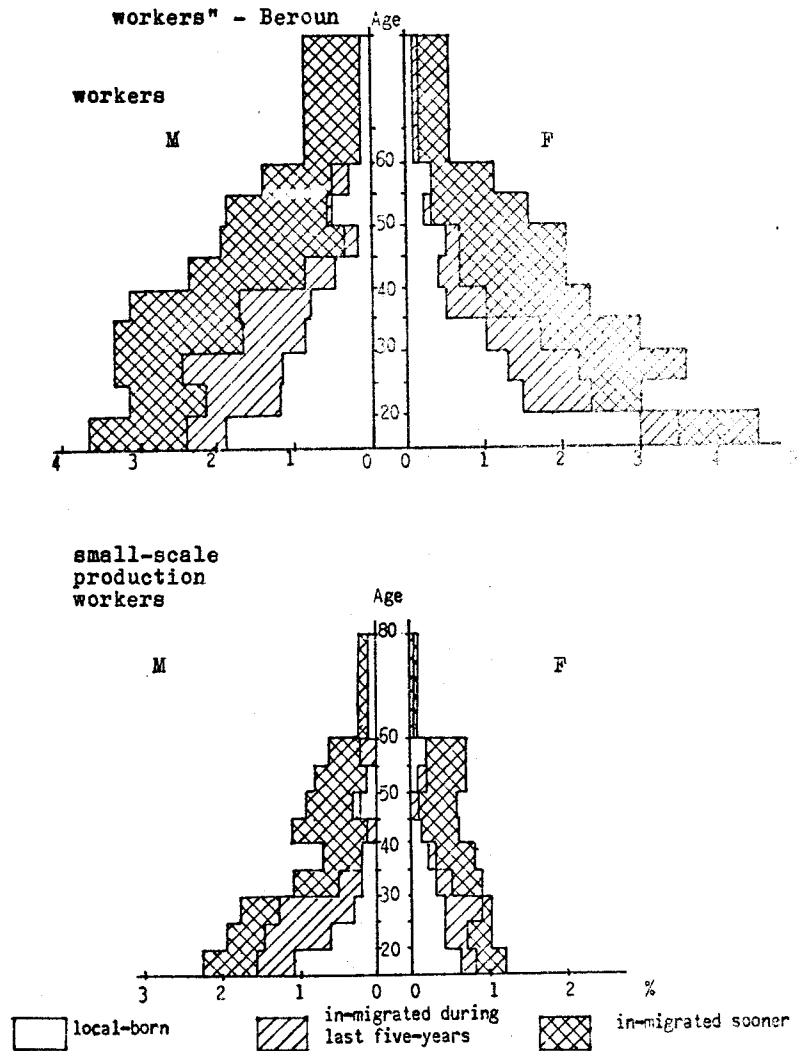
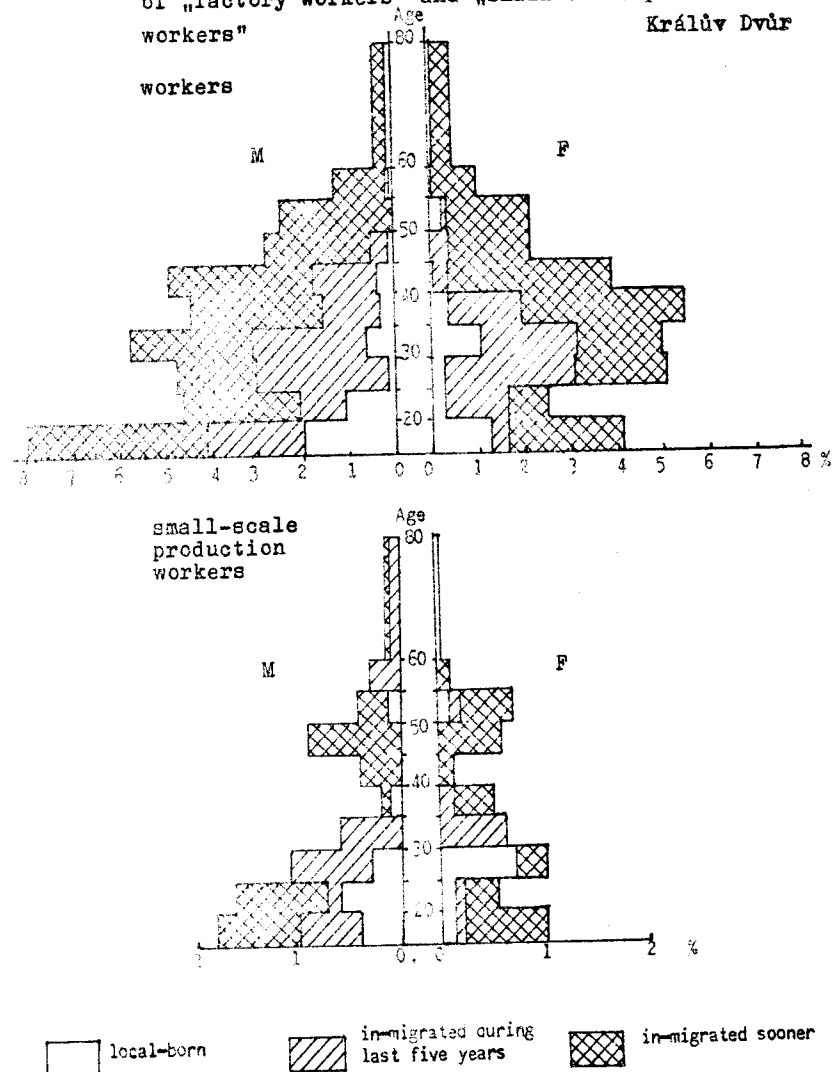


Fig. 4c Persons above 15 years of age classified by age groups and lengths of stay - social status category of „factory workers” and „small-scale production workers” - Beroun



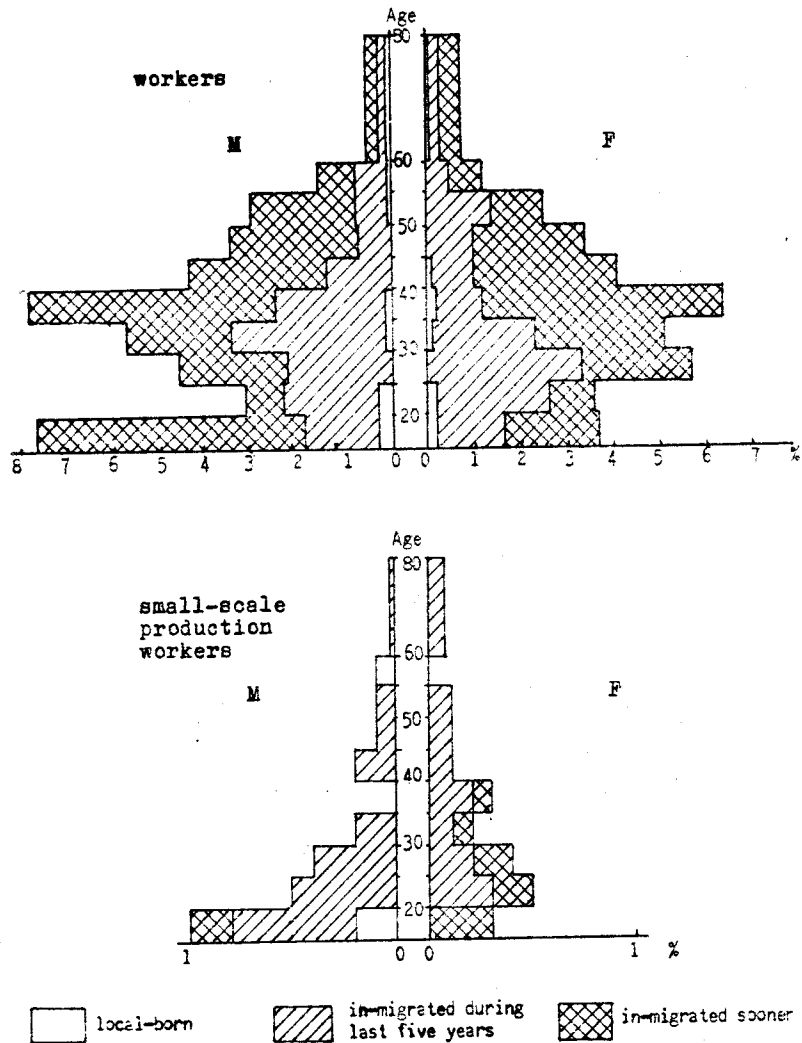
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Fig. 4d Persons above 15 years of age classified by age groups and lengths of stay - social status category of „factory workers” and „small-scale production workers” - Králův Dvůr



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Fig. 4e Persons above 15 years of age classified by age groups and lengths of stay - social status category of "factory workers" and "small-scale production workers" - Počaply



BEROUM

Tab. 7 Persons older than 15 years, classified by age groups and length of stay, belonging to the social status categories of

Age group	independents						factory workers						small-scale production workers												
	a		b		c		a		b		c		a		b		c								
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F							
15-19	15,2	1,1	1,0	0,6	0,1	0,3	0,3	2,0	1,4	1,9	3,0	0,5	0,5	1,3	1,0	3,7	4,5	1,1	0,6	0,6	0,2	0,7	0,4	2,4	1,2
20-24	11,3	0,3	0,7	0,1	0,4	0,3	0,2	0,7	1,3	1,2	1,5	1,0	0,9	1,0	0,7	3,2	3,1	0,6	0,4	0,9	0,3	0,5	0,3	2,0	1,0
25-29	12,5	0,3	0,3	0,5	0,6	0,4	0,7	1,2	1,6	1,1	1,3	0,9	0,9	1,4	3,3	3,6	0,3	0,4	1,0	0,5	0,5	0,1	1,8	1,0	
30-34	11,4	0,4	0,5	0,3	0,3	0,5	0,9	1,2	1,7	0,9	1,0	0,8	0,7	1,4	3,4	3,1	0,2	0,3	0,3	0,2	0,6	0,4	1,1	0,9	
35-39	9,8	0,3	0,3	0,3	0,2	1,1	0,9	1,7	1,4	0,8	0,5	0,6	0,5	1,4	2,6	2,4	0,2	0,2	-	0,1	0,5	0,5	0,7	0,9	
40-44	9,0	0,3	0,4	0,1	0,2	0,9	0,8	1,3	1,4	0,5	0,4	0,4	0,3	1,5	1,4	2,3	2,1	-	0,1	0,1	-	1,1	0,5	1,2	0,6
45-49	7,6	0,2	0,1	-	0,2	0,7	0,8	0,9	1,1	0,2	0,5	0,2	0,2	1,6	1,4	2,0	2,1	0,2	-	0,1	0,6	0,6	0,9	0,6	
50-54	7,6	0,3	0,2	0,2	-	1,0	0,9	1,5	1,1	0,5	0,2	0,1	0,1	1,3	1,3	1,9	1,6	0,1	0,1	-	0,1	0,7	0,5	0,8	0,7
55-59	5,3	0,3	0,2	-	-	0,5	0,5	0,8	0,7	0,3	0,3	0,2	-	0,9	0,8	1,4	1,1	-	0,2	0,2	-	0,4	0,5	0,6	0,7
60 and above	10,3	0,4	0,3	-	0,2	1,1	1,0	1,5	1,5	0,4	0,3	0,1	0,3	2,9	1,6	3,4	2,2	0,4	-	-	0,2	0,6	0,5	1,0	0,7
Total	100,0	3,9	4,0	2,1	2,2	6,8	7,0	12,0	13,2	7,8	9,0	5,2	4,4	15,2	12,4	27,1	25,0	3,1	2,3	3,2	1,7	6,2	4,2	22,5	8,2

a - local-born
b - in-migrated during last five years
c - in-migrated sooner

Tab. 8 Persons older than 15 years, classified by age groups and length of stay, KRALBY svGR

Age groups	Independents						Factory workers						Small-scale production workers											
	a		b		c		a		b		c		a		b		c							
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F						
15-19	17,0	0,6	0,4	0,4	0,1	0,4	1,4	0,6	2,0	1,3	2,2	0,4	3,0	2,5	0,4	2,0	0,4	0,1	0,6	0,1	0,8	0,8	1,0	
20-24	10,3	-	0,1	-	0,7	-	0,3	-	1,1	1,1	0,3	1,0	1,4	2,5	0,8	4,6	2,5	0,6	1,1	1,0	0,1	-	0,3	1,6
25-29	13,6	-	0,3	0,7	0,4	-	0,3	0,7	1,0	0,1	0,3	2,9	2,8	1,7	2,0	4,7	5,1	0,3	-	0,8	0,7	-	0,3	1,1
30-34	13,8	0,4	-	0,6	-	0,3	0,6	1,3	0,6	0,6	1,1	2,5	2,1	2,6	1,8	5,7	5,0	-	-	0,6	0,6	-	-	0,6
35-39	11,3	-	-	-	-	-	0,4	0,3	0,4	0,3	0,4	1,3	1,6	2,8	3,5	4,4	5,5	0,1	-	-	0,1	0,1	0,4	0,2
40-44	10,9	0,3	-	-	0,1	0,8	0,4	1,1	0,5	0,4	1,1	1,4	0,3	3,1	3,5	4,9	3,9	-	-	-	-	-	0,4	0,1
45-49	7,0	0,1	-	0,1	-	0,3	0,2	0,3	0,1	-	0,4	0,4	2,3	1,0	2,0	2,2	-	-	-	-	-	-	0,9	0,6
50-54	6,6	-	-	-	0,3	0,5	-	0,5	0,3	-	0,3	-	0,1	2,5	1,0	2,5	2,2	0,1	0,1	-	0,1	0,3	0,5	0,4
55-59	3,9	0,3	0,3	-	-	-	0,6	0,3	0,9	0,1	1,1	0,1	-	1,1	0,9	1,3	1,0	-	-	0,3	-	-	0,1	0,3
60 and above	5,6	0,4	0,1	-	0,3	0,3	0,7	0,7	0,3	0,1	-	0,4	1,4	1,4	1,4	1,7	1,9	-	0,1	0,4	-	0,1	-	0,5
Total	100,0	2,1	1,2	1,8	1,9	2,7	3,2	6,6	6,3	5,0	4,0	11,8	9,5	3,8	20,0	40,0	43,5	1,5	0,4	3,7	1,7	2,6	3,1	7,8

a - local-born
b - in-migrated during last five years
c - in-migrated sooner

Tab. 9 Persons older than 15 years, classified by age groups and length of stay, POLSKY

Age groups	Independents						Factory workers						Small-scale production workers											
	a		b		c		a		b		c		a		b		c							
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F						
15-19	14,6	0,3	0,4	0,7	-	0,3	0,2	1,3	0,6	0,3	0,2	1,6	1,5	5,8	2,0	7,7	3,7	0,2	-	0,6	-	0,2	0,3	1,0
20-24	9,3	0,3	0,5	0,1	0,3	-	0,3	0,4	1,1	0,3	0,2	1,2	2,5	0,8	0,9	3,2	3,6	-	-	0,5	0,3	-	0,2	0,5
25-29	12,5	-	-	0,4	0,4	0,3	0,4	0,7	0,8	-	1,4	1,4	1,2	2,3	4,6	5,7	-	-	-	0,4	0,2	-	0,2	0,4
30-34	12,8	-	-	0,4	0,3	0,3	0,6	0,7	0,9	0,2	0,1	1,4	2,2	2,1	2,0	5,7	5,1	-	-	0,2	0,1	-	0,1	0,2
35-39	16,0	-	-	0,3	0,2	0,4	0,6	0,7	0,8	0,2	0,2	1,4	1,0	5,2	5,2	7,8	6,4	-	-	-	-	-	0,2	0,1
40-44	9,8	0,1	0,1	0,1	-	0,3	0,2	0,5	-	0,1	1,4	0,9	3,0	3,1	4,4	4,1	-	-	-	0,2	0,1	-	-	0,2
45-49	7,9	0,3	-	-	0,1	-	0,4	0,3	0,5	-	0,7	1,0	2,8	2,4	3,5	3,4	-	-	-	0,1	0,1	-	-	0,1
50-54	5,4	0,2	-	-	-	0,2	0,2	0,4	0,2	0,1	-	1,4	2,3	1,1	3,1	2,5	-	-	-	0,1	0,1	-	-	0,1
55-59	3,8	0,1	-	-	0,2	0,2	0,4	0,3	0,5	0,1	-	1,7	0,6	0,7	1,6	1,2	0,1	-	-	-	-	-	-	0,1
60 and above	7,1	0,1	-	0,2	0,1	0,6	0,4	0,9	0,5	0,3	0,1	1,1	1,1	1,1	1,9	2,2	3,1	-	-	0,1	0,3	-	-	0,1
Total	100	1,4	1,0	2,2	1,7	2,3	3,8	5,9	6,5	1,5	0,9	7,2	15,1	22,4	41,0	40,8	0,3	-	2,2	1,4	0,2	0,9	2,7	2,3

a - local-born
b - in-migrated during last five years
c - in-migrated sooner

attracted the "fresh" small-scale-worker in-migrants to both Počaply and Králův Dvůr was the comparatively rapidly expanding small-scale production sector, providing small services to the population which kept growing as a result of high in-migration²⁰). In the social status categories of factory workers and small-scale production workers, the proportion of local-born persons decreases (or even disappears in the case of Počaply) with increasing age, whereas the proportion of those who had come more than five years before 1910 decreases.

However, in the factory worker and smallscale-production worker categories some differences occur, influenced to some extent by in-migration. An almost regular decrease of the proportions of separate age groups out of the total population in these two worker categories was recorded in the case of Beroun where the in-migration was not as high as in the two villages. The decline in the number of persons older than forty, or forty-five, was not so great at Beroun as at Králův Dvůr or Počaply. Beroun and Králův Dvůr had the highest number of inhabitants in the 15-19-year group but at Počaply the largest age group was that from 35 to 39 years - a consequence of the in-migration of the skilled and qualified workers from Teplice. In the remaining two localities in-migration did not affect so strongly any of the age groups. This allows to draw the conclusion that in-migration events like the single transfer of manpower from Teplice are the only type of migration to increase appreciably any of the age group living at localities such as those under study. Hence, in industrialized areas of the type of the Beroun industrial centre (and probably also in other types), the nature of age structure of the studied social status categories appears to have depended on the intensity of in-migration and on the period of time when it took place.

x x x

The results of this analysis have showed, in particular,

that in the population of the Beroun industrial centre there was a large proportion of those in-migrants who came from other villages of the Beroun district. The importance of other districts in Bohemia as sources of migration to the three localities under study varied. Apart from the Beroun district itself, the adjacent district of Hořovice was the most important source of manpower to Beroun, followed by the city of Prague, by the Kladno-Unhošť region, and by the districts of Křivoklát and Rokycany. The important sources of in-migrants to Králův Dvůr (again apart from the Beroun district) were the Rakovník and Hořovice districts, the city of Prague, the Rokycany district, the Kladno-Unhošť region, and the Příbram district. Hence, both Beroun and Králův Dvůr received most of their in-migrants from not very distant places. Migration to Počaply was entirely different from that to the other two localities. In-migrants came to Počaply from a smaller number of districts and the district which supplied the largest number of in-migrants was none of those around Beroun but the distant district of Teplice. Then followed in-migration from the districts of Rakovník and Hořovice, located quite close to the Beroun district, but some people also came from the very distant districts of Stříbro and Planá. As said, this was due to the fact that a whole rolling mill plant was moved from Teplice to the Králův Dvůr iron works.

Generally it can be said that the extent and nature of migration to a region depended mainly on the number of the local population, on the job opportunities, and also on the nature of production in the given region - whether it was homogeneous or heterogeneous. These are in fact the reason why in 1910, Beroun with 11 177 inhabitants and with fairly varied job opportunities had a much wider labour market than Králův Dvůr and Počaply, both with less than 2000 inhabitants that time; the only job opportunities at Králův Dvůr and Počaply were, more or less, in the iron works and cement works, industries which re-

quired many workers of equal or at least similar professions (a homogeneous type of production).

High in-migration influenced, among other things, the social status structure and age structure of the population of the area. This was the case in the Beroun industrial centre, although the situation had its peculiarities in each of the three localities. In-migration intensified the industrial features of Beroun and Králův Dvůr. At Počaply which had not been industrialized at all, the industrial features came with the in-migration, which was high between the 1900 and 1910 censuses. The industrial character of the population is documented by the high prevalence of households whose bread-winners belonged to a branch of industry; households of workers, especially factory workers, dominated among them. The average household was represented by a married couple, children up to an age of 15 years²¹⁾ and very often also older children of whom the men were as a rule gainfully employed and could contribute to the family budget. In families where wage-earning children stayed in the household, these children were in fact "hidden subtenants" whose earnings served the same purpose as income from the subtenant: they improved the income of the family, irrespective of whether it was necessary or not.

It was shown by the analysis of the age structures of the localities under review that in Beroun the investigated social status categories exhibited the largest difference between the number of children up to 15 years of age and the number of other persons²²⁾. Králův Dvůr and Počaply had more children in the age group up to 15 years because the population of these villages was generally younger: in the category of factory workers (the largest part of the population), the proportion of the younger age groups was much larger in the two villages than in Beroun²³⁾.

In almost all age groups of the social status categories under study, in-migrants prevailed over those born locally. It

was only in the 15-19-year group of independents, factory workers and small-scale production workers that persons of local origin markedly prevailed over the in-migrants, but this was the case only at Beroun. The ratio of those who had come in the last five years to those who had in-migrated sooner was mostly larger in the younger age groups; the number of persons in the different age groups declined with increasing age, and those who had come before more than five years prevailed.

Notes

1. Major project no. IX-7-2 of the State-sponsored Plan of Basic Research.
2. In 1910, the Beroun district comprised 38 towns and villages. Of this number, 7 had a population above 1000 (Beroun, Hýskov, Králův Dvůr, Liteň, Loděnice, Počaply and Tetín). Compared with the 1900 census, a decline was recorded in 16 localities, stagnation in 10 and increase in 12.
3. Cf. J. Matějček, Hlavní rysy vývoje územní struktury výroby v českých zemích v období 1848-1902. (Main features of the development of the territorial structure of production in the Czech countries in 1848-1902). In: Slezský sborník, Vcl. 83/1985, no. 4, pp. 241 and above.
4. The blast furnaces were built in 1870, 1886-1888, 1896-1902, and 1906. In: Company Archives of Králův Dvůr Iron Works (hereinafter referred to as PA KŽ), Králův Dvůr ČMS 11/12 and ČMS 26; steel works built during 1895-1898. Ditto ČMS 29/12, 2/12, 7/12 and 45/12; sheet rolling mill built during 1904-1905. Ditto 14/12, 34/12.
5. Léta bojů a zrání. (Years of struggle and ripening). Published by Králův Dvůr Iron Works National Corporation, Králův Dvůr 1971, p. 21; see also Monografie Hořovicka a Berounska (Monographs on the Hořovice and Beroun districts), Vol. VI, pp. 13-18.
6. E. g. quartzite mines Hybl and Boucek (80 workers), Ignatz Roubíček Steam Mill and Bakery (150), Ant. Duslo's Son Timber Trade, Steam Sawmill, Parquet Factory (40), Sugar Mill Seligman Elbogen, First Beroun Lime Factory of J. Jíra & Co. (50), Franz Kopriva Ball Bearing Factory (35), Vincenc Pišvejc Farm Machinery Plant (30-40), Jan Šimonek Iron Works (80-120) and others. In: Compass Jg. 39/III 1906.
7. Evidence of increased activity of the Beroun worker class can be seen e.g. in celebrations of May Day (May 1, 1906) which were held on mass. The number of participants of the May Day parade was 10 000, including a high number of workers of the Králův Dvůr iron works. In: Léta bojů a zrání, p. 51, and other sources.
8. In 1890, Počaply had 279 inhabitants, including 103 persons dependent on agriculture and 119 dependent on industry.
9. Léta bojů a zrání, pp. 21, 41 and 42.
10. PA KŽ Králův Dvůr, PZS 19/27 - řed.
11. Léta bojů a zrání, p. 32.
12. Cf. maps on annex.
13. The in-migrants born in Prague also comprise those who were born at Smíchov, Žižkov and Královské Vinohrady which unlike in that time, are now parts of Prague.
14. The highest numbers of in-migrants came from the villages Popovice (7.9%), Trubín (4.3), Bykoš (2.5), Karlova Huť and Králův Dvůr (2.2) etc. On the whole, 22 villages of the Beroun districts itself contributed to the in-migration.
15. Among these districts, those which supplied the highest numbers of in-migrants were Hořovice (6.5%), Prague (2.5), Křivoklát (2.1), Kladno-Unhošť and Chrudim (1.4), Rakovník (1.1) and others.
16. The number of districts from which the in-migrants had come to Počaply increased from 19 in 1890 to 54 in 1910.
17. The individual households were classified according to the profession of the bread-winner (in the census the tenant or owner of the flat was referred to as "representative of household"); most of them were men. The census also counted the numbers of children up to 15 and above 15 years of age, number of relatives and other persons living in the household, numbers of subtenants, lodgers and boarders. In Beroun the households were classified according to dependence on the following activities: A. Agriculture, B. Industry and artisans, C. Trade, D. Miscellaneous, E. No employment, and F. Clerks (except civil servants). Households under A-D are subdivided according to the bread-winners being "independents" or "workers", or hired labour. At Králův Dvůr and Počaply, a sample of population living in some of the houses owned by the employer organization was chosen for the analysis of household structure.
18. The remaining 1187 persons belonged to the category of civil servants, clergy and the like.
19. According to sporadically preserved records on the earnings of workers of the Kubinszky spinning mill, a turner earned 10-12 guilders (i.e. 20-24 crowns) for 14 days in 1910-1911, a weaver earned 23.81 crowns at the minimum and 31.41 crowns at the maximum for 12 days in 1911, a former weaver earned from 48.84 to 70.15 crowns. In: PA TIBA Cotton Mills National Corporation Kocbeře; J. Splí-

chal, Chronicle of the Kubinszky plant, and shelf no. 2-59/496, or records on works.

According to records in the Chronicle of the Králův Dvůr Iron Works (manuscript deposited with PA KŽ n.p. Králův Dvůr), the earnings per one shift were as follows in July 1909:

in puddle iron works - puddler and furnaceman	4.15 K
in sheet rolling mill - fine rolling mill operator	4.12 K
- sorter at fine rolling mill	2.98 K
- medium rolling mill operator	4.32 K
- sorter at medium rolling mill	2.83 K
- cutter at shearing machine	2.90 K
- engine operator and stoker	2.79 K
in auxiliary plants - locksmith and turner	3.92 K
- smith	4.72 K
- boiler smith	4.47 K
- carpenter	2.88 K
- bricklayer	3.15 K
- labourer in workshop	2.66 K
- wagon unloader	3.45 K
- yard labourer	2.34 K
- gatekeeper	2.09 K
- gardener	3.22 K
- coachman and driver	2.84 K

(K= crown)

The author of the Chronicle also says on page 375: ...The actual buying value of Austrian crowns of that time and the purchase power of the salary of a clerk and wages of the workers can only be evaluated in comparison with the prices of what people needed for their life. In the solid retail shops in the Beroun district, these prices were as follows, with small fluctuations, during the first decade of the 20th century:

potatoes	8.50 for 100 kg
wheat flour (coarsely ground)	0.42 for 1 kg
rye flour	0.31 for 1 kg
sugar	0.34 for 1 kg
lentils	0.39 for 1 kg
peas	0.38 for 1 kg
whipped sweets to the Christmas tree	4.00 for 1 kg
walnuts	2.00 for 1 kg
hazel nuts	0.90 for 1 kg
raisins	1.60 for 1 kg
almonds	3.80 for 1 kg

beef (rear)	1.90 for 1 kg
pork cutlet	2.10 for 1 kg
kerosene	0.25 for 1 kg
figs	0.39 for 1 kg
lemons	0.35 for 10 pieces
oranges	9.00 for three score
Christmass tree candles	0.35 for 1 dozen
wool fabric Cheviot	2.20 for 1 m
children's laced shoes	7.00 for 1 pair

Unfortunately, there are no sources of information on the remaining costs needed for what could be regarded as "life minimum" (hire, fuel, light and the like), so the survey of wages and prices mentioned above can serve just for general orientation.

- These were, for example, workers in tailor's, shoemakers' and locksmiths' workshops, seamstresses, shop assistants and the like.
- The average number of persons below 15 years is not indicated because any "mean" value would be far from actual situation in individual household types in this case.
- Beroun: 33.9 : 66.1, Králův Dvůr 41.7 : 58.3, Počaply 43.1 : 56.9 %.
- In Beroun the category of factory workers included 37.6 % of persons in the age groups of 15-19 to 40-44 years; at Králův Dvůr this proportion was 58.5 %, and at Počaply 62.0 %.

Ludmila F i a l o v á

AGE STRUCTURE OF THE BALANCE OF MIGRATION
IN THE CZECH LANDS IN 1870-1910

When the Napoleon wars were over, the population of Czech Lands grew rapidly for the whole 19th century. On a long-term average the natural increase was almost permanently as high as 8 ‰ as a result of a decrease in mortality; though this decrease in mortality was very low, it was steady and at the same time, fertility was comparatively high (it started decreasing at the very end of the 19th century). In absolute values, the natural increase reached as a rule 800 thousand persons in almost all decades of the latter half of the 19th century, with the exception of the eighteen-eighties when it declined to 702 thousand. ¹⁾ The economy of the Czech Lands was not able to absorb such a high population growth. Although there was successful industrial development, agricultural production still remained the main feature of Bohemian economy: in the mid 19th century, two thirds of the population were permanently engaged in farming. By the year 1910 the proportion of per-

sons economically active in agriculture decreased to one-third, but the economy of the Czech Lands remained agro-industrial. There was a permanent lack of capital which hindered more dynamic development of both industry and agriculture. In such circumstances, demand for jobs was highly above the number of job opportunities, which affected the price of labour, the wage. High latent overpopulation was characteristic of the rural regions where - in villages and towns up to a population of 5000 - more than 74 % of the country's inhabitants lived in 1910. The standard of living of both industrial workers and farm labourers was poor. One of the ways how to escape from the hardships of such life was to leave the country.

Thus emigration became a permanent feature and integral part of population development in the Czech Lands and remained so until the outbreak of World War I. The decline due to emigration in the period of 1850-1910 is estimated at about 1593 thousand persons, which was about one-third of the natural increase (Tab.1). ³⁾

Tab. 1 Balance of the population of the Czech Lands, 1870-1910

Years	Live births	Deceaseds	Nat. increase	Census on beginning
a	1	2	3	4
1870-1880	3409 569	2533 798	875 771	7 615 547
1881-1890	3155 774	2453 178	702 596	8 230 818
1891-1900	3254 334	2345 749	908 585	8 673 309
1901-1910	3175 427	2180 957	994 470	9 436 825
Years	Estimate on end	Census on end	Net migrat.	The share of migration of nat.increase
a	5	6	7(6-5)	8/(7:3).100
1870-1880	8 491 318	8 230 818	-260 500	30
1881-1890	8 933 414	8 673 309	-260 105	37
1891-1900	9 581 894	9 436 825	-145 069	16
1901-1910	10 431 295	10 148 768	-282 527	28

The first emigration waves went to Lower Austria where Vienna was the most attractive city as the capital of the Hapsburg Monarchy of which the Czech Lands were a part. ⁴⁾ Later, early in the eighteen-fifties, emigration outside the Monarchy began to increase progressively. The main stream headed overseas, mainly to Canada and the USA. ⁵⁾

An idea of the extent of migration can be obtained only indirectly, using the balance method. There was no official monitoring of emigration, and where some records were made by the Austrian authorities, their data are not very reliable. It is likewise impossible to get exact data from the receiving country where further complications would arise from the fact that the immigrants' countries of origin within the Hapsburg Monarchy were hard to distinguish. ⁶⁾ Possibilities to trace other characteristics of the emigrants, including their age structure and sex ratio, are also limited. Emigration can be studied to some detail only from the eighteen-thirties because the records from earlier periods are not sufficiently trustworthy. ⁷⁾ This study refers to the period after 1869, because the 1869 census was the first source to provide data on the age structure of the population.

Data on the migration balance, i.e. data on the group of persons remaining as a difference between the emigrants and immigrants, were used as a basis for estimation of the age structure of emigration from the Czech Lands. On the assumption that emigration highly prevailed over immigration, it would not be incorrect, in my view, to regard with some measure of tolerance the migration balance, or net migration, as representative of the structure of the emigrants.

This consideration is based on the analysis of population of Czech Lands in the latter half of the 19th and early in the 20th centuries. In 1900, the 9437 thousand persons present in the Czech Lands included just 243 thousand (i.e. 2.5 %) persons born outside. ⁸⁾ In 1830-1900 the balance of migration

was 1206 persons; if the 243 thousand born abroad were added to the balance, the volume of emigration would be 1446 thousand persons. Of course this is a very rough estimate because mortality is not taken into account: more people certainly moved to the Czech Lands but many of them did not live to see the census of 1900. Nevertheless, it will not be a mistake to believe that emigration was much higher than immigration.

Another factor that effected the reliability of calculation of the balance of migration was the quality of data on the age of the people. The age structure of the actual population, recorded during the census, as well as the age structure of the deceased, was affected by great inaccuracy still in the latter half of the 19th century. However, the rounding of age to some values remained typical of older persons of both sexes. Though age data with the figures 0 and 5 at the end were preferred, some exceptions did exist, e.g. there was a tendency in the age data on older women recorded in 1869 to over-use numbers where the figures 9 and 4 were at the end. This is an interesting exception; otherwise 0 and 5 absolutely prevailed in the rounded data.

Tab. 2 Index of the concentration (age at the census and age of the deceaseds)

Sex	Census					Deceaseds				
	1869	1880	1890	1900	1910	1869	1880	1890	1900	1910
Age 23-62 (0 - 5)										
M	1.03	1.06	1.03	1.01	0.99	1.13	1.12	1.08	1.04	1.00
F	1.03	1.10	1.07	1.04	1.01	1.14	1.13	1.08	1.07	1.00
Age 23-62 (9 - 4)										
M	1.09	1.01	1.00	1.01	1.02	1.02	0.97	0.95	0.96	0.98
F	1.14	0.98	0.99	1.00	0.98	1.00	0.99	0.97	0.96	0.99
Age 63-82 (0 - 5)										
M	0.97	1.06	1.08	1.10	1.09	1.12	1.07	1.13	1.09	1.09
F	0.95	1.14	1.15	1.19	1.16	1.25	1.16	1.18	1.13	1.07
Age 63-82 (9 - 4)										
M	1.26	1.08	1.04	1.02	1.03	1.19	0.95	0.98	1.01	1.03
F	1.37	1.07	1.03	1.03	1.00	1.07	1.06	1.00	1.01	1.03

The accuracy of the data improved progressively and in the first decade of the 20th century they were much more reliable than in 1869. In particular, the age data reported by the respondents in the censuses were comparatively trustworthy unlike the age of the deceased older persons as alleged by the current demographic statistics.

Table 4 shows the results of the attempt to determine the age structure of the balance of migration. The age groups were wider in order to level off the inaccuracies of the age data records. The calculation was based on the age structure of the population published after the census in the starting year minus the persons who died during the subsequent decade. The census was made as of the 31st of December, so the set of persons who died at a certain age during the calendar year can be regarded as corresponding to the number of the deceased of the generation born in the respective calendar year. Until 1894 (and including that year), the deceased were classified only by age at death. Starting from 1895, double classification was available: by age and by the year of birth. This was another reason to divide the population just into ten-year age groups and to include all persons above 60 into a single group. Thus the third major set of the deceased was divided only in every tenth cohort. For the period until 1894 - to obtain the respective age groups from the available third main set of the deceased - the lower and upper elementary sets were estimated by using the ratio of these sets as they appeared in 1895-1896, and in the older persons the third main set was divided into halves. ⁹⁾

Although the informative value of data obtained in this way is limited, a brief idea of the age structure of the emigrants (the migration balance) can be derived from them. This is demonstrated, for example, by their comparison with the structure of emigrants in populations today: the major features are similar. Younger persons up to 30 years of age highly

prevailed in the total number of persons who changed their residence in the Czech Socialist Republic in 1971-1973, or 1981-1983, as well as in the net migration in the Czech Lands in 1870-1910. 10)

Throughout the period under review, there was a greater emigration of men than women: of 1 million persons who left the Czech Lands, 53 % were men. A reverse sex ratio was recorded only during 1891-1900 when the proportion of men was 49.7 %. It follows from the balance of migration that the age at which the losses due to migration were the highest showed little difference between the sexes. Most of the men who migrated abroad were 20-29-year-old and many were younger than 20. The proportion of the age group of 10-20 years kept decreasing while that of men above 30 increased. Men above 40 seldom moved abroad, their proportion of the total decline was about 6 %, and only in 1891-1900 was it slightly higher, which was probably associated with the decrease of the proportion of 30-39-year-old men.

Tab. 3 Sex ratio of the net migration, 1870-1910

Years	On the whole		Men		Women	
	in thous.	on 1000	in thous.	%	in thous.	%
1870-1880	-269	-3.4	-138	51.3	-131	48.7
1881-1890	-257	-3.0	-137	53.5	-120	46.5
1891-1900	-197	-2.2	-98	49.7	-99	50.3
1901-1910	-283	-2.9	-157	55.4	-126	44.6
1870-1910	-1006	-2.8	-530	52.7	-476	47.3

As to women who emigrated from the Czech Lands, there was also a prevalence of the age group of 20-29 years. Like in the case of men, the proportion of this age group kept increasing, though it was never so large as that of the emigration men of the same age. In 1869-1880, women between 20 and 29 years of age accounted for more than one-third of the net migration and women between 30 and 39 years accounted for slightly more than a quarter. Girls up to 20 made up one-fifth. During later deca-

Tab. 4 Estimate of the age structure of the net migration in the Czech Lands, 1869-1910

Age (on the end of the period)	Year of birth	Males		Females		Age structure of the net migration	
		deca sed I)	net migra tion I)	deca sed I)	net migra tion I)	M	F
1869 - 1880							
0-9	1871-1880	-370	+ 0	-330	+ 1	30.0	18.7
10-19	1861-1870	-160	- 42	-147	- 25	55.2	36.1
20-29	1851-1860	- 74	-101	- 68	- 61	8.1	28.7
30-39	1841-1850	-109	- 19	- 94	- 58	4.0	9.2
40-49	1831-1840	-139	- 11	-114	- 22	1.9	5.2
50-59	1821-1830	-204	- 6	-161	- 15	0.8	2.1
60 +	- 1820	-481	- 2	-461	- 4	100.0	100.0
Total		-243	- 25	-215	- 23		
1880 - 1890							
0-9	1881-1890	-370	+ 1	-332	+ 4	29.6	15.7
10-19	1871-1880	-101	- 42	-103	- 19	55.8	40.2
20-29	1861-1870	- 67	-101	- 68	- 62	7.5	23.8
30-39	1851-1860	- 94	- 17	- 88	- 44	2.9	7.1
40-49	1841-1850	-127	- 8	-103	- 16	4.2	9.7
50-59	1831-1840	-187	- 14	-143	- 26	3.5	3.5
60 +	-1830	-477	+ 5	-442	- 6	100.0	100.0
Total		-226	- 24	-204	- 20		
1890 - 1900							
0-9	1891-1900	-332	+ 5	-296	+ 8	25.7	6.7
10-19	1881-1890	- 86	- 27	- 87	- 8	61.5	48.9
20-29	1871-1880	- 60	- 77	- 62	- 64	0.5	26.2
30-39	1861-1870	- 82	- 1	- 82	- 44	8.7	11.4
40-49	1851-1860	-111	- 17	- 95	- 23	3.6	6.8
50-59	1841-1850	-171	- 9	-130	- 16	.	.
60 +	-1840	-462	+ 3	-440	+ 8	100.0	100.0
Total		-204	- 17	-180	- 16		
1900 - 1910							
0-9	1901-1910	-281	+ 1	-250	+ 3	17.8	7.5
10-19	1891-1900	- 61	- 25	- 66	- 9	61.5	56.2
20-29	1881-1890	- 54	-108	- 60	- 80	15.8	26.4
30-39	1871-1880	- 76	- 34	- 80	- 45	4.6	7.5
40-49	1861-1870	-104	- 12	- 90	- 16	0.3	2.4
50-59	1851-1860	-167	- 1	-123	- 6	.	.
60 +	-1850	-456	+ 1	-442	+ 3	100.0	100.0
Total		-178	- 25	-168	- 20		

1) per 1000 of age grouping in initial period

des the proportion of girls below 20 decreased and the proportion of women between 20 and 29 increased proportionately; the percentage of older women did not change substantially, ranging between 15-17 % until the end of the century, and decreased further (to 9 %) in the first decade of the 20th century.

For the youngest age groups the migration balance was on the positive side throughout the period under study, and the same is true of the persons above 60 (until the eighteen-nineties). The total numbers of emigrants in these age groups was low, so the data could be distorted by lack of reliability of the sources: the new-born children might be under-registered and the age of the older persons could be overstated during the census. The over-all data on children in the 0-9-year age group might also be influenced by migration to the Ostrava region where often whole families moved from Galicia.¹¹⁾ It is likewise possible that some old people returned to Bohemia after many years spent abroad.

Emigration weakened the population at an age when the people were on the top of their creative forces. The emigrants had usually finished their professional preparation before they left. The steady decrease of the proportion of the age group of 10-12 years among the emigrants corresponded with the prolonging school attendance and with longer training for professional qualification. Thus a considerable part of the money invested in the education of new generations was in fact exploited abroad.

A still better illustration of the age structure of the emigrants is obtained when the data are converted per 1000 inhabitants in the respective age group. The age group of 20-29-year-old men was regularly reduced by 10 %, the age group of boys between 10 and 20 first declined by 4 % and later by 3 %. The age group of men between 30-39 years also decreased by 3 % early in the 20th century.

In women the decrease was not so great but was spread

over a wider range of ages. Again, the group of women old 20-29 years decreased most intensively (by 6-8 %), followed by the group of women old 30-39 years (4-5 %, on average), and by those between 40 and 49 years (about 2 %). The proportion of girls up to 20, on the other hand, decreased from 2.5 % in 1869-1880 to 0.9 % in 1901-1910. On the whole, the generations of men and women born after 1860 decreased by about 14-15 %.

If the conversion of the balance of migration per 1000 persons is compared with the level of specific mortality, it is seen that in the group of 20-29-year-old men the decline caused by emigration highly prevailed over the losses caused by death throughout the period under review. In the remaining age groups the losses due to emigration, compared with losses due to death, were very low; this fully corresponds with that time's mortality in the respective age groups.

Hence, emigration permanently weakened mainly the younger age groups. Considering that throughout the period under study the age at first marriage was comparatively high (28 years in men, 25 years in women, on an average),¹²⁾ it can be assumed that emigrants mostly left their country while they were still single. A smaller proportion of emigrants was represented by families with children, as can be derived from the proportions of emigrants above 30 years of age and from the migration balance in children. It might also happen frequently that women followed their husbands or fiancés somewhat later, when their existence in the new country was already provided for. This is suggested by the fact that the sex ratio of emigrants from the Czech Lands was fairly balanced, whereas in many other typically emigrant countries (Portugal, and also Slovakia) men highly prevailed in the emigration stream.¹³⁾ However, it was also in the Czech Lands that males prevailed among the young people who emigrated, so the femininity of the population grew even in the younger age groups more rapidly than would correspond with the mortality.

Emigration obviously affected mainly the nuptiality of the population. Part of the men and women who would contract a marriage left the country to marry abroad. This slightly reduced the crude nuptiality rate as well as the proportion. On the other hand, the level legitimate fertility rate was not affected significantly by emigration. Temporary migrations, rather than emigration, might be involved in this, but temporary migrations cannot appear in the censuses. One of the reasons why the censuses were regularly made in Austria-Hungary as of December 31 was that most of the people were present in the place of their residence on that day. The workers (mainly bricklayers and day-labourers) who worked in other parts of the monarchy and abroad usually returned to spend winter at home. At the same time, workers from Slovakia were leaving the Czech Lands (the proportion of Slovak workers of large farms in Bohemia kept increasing from the eighteenth-eighties). 14)

On the other hand, the high rate of emigration of young people probably worsened the mortality conditions: it increased mainly the crude death rate.

The estimation of the structure of the balance of migration in Czech Lands for the period from 1870 to 1910 confirmed the assumption that those who prevailed among the emigrants were young people who had finished their professional preparation but failed to find adequate jobs. Up to one-seventh of the persons of the generations born after 1860 emigrated, mostly at the top of their physical and psychic forces.

Notes

1. For sources of data on the development of population in the 19th century cf. Demografická příručka (demography manual), Praha 1982, 314 pp.
2. Kárníková, L., Vývoj obyvatelstva v českých zemích 1754-1914: (Development of population in the Czech Lands 1754-1914). Praha 1965, p. 354
3. Srb V. - Kučera M., Vývoj obyvatelstva v českých zemích v XIX. století (Development of population in Czech Lands in the XIX century). In: Statistika a demografie 1, 1959, p. 130. For the problems of emigration from Czech Lands cf. Pitronová B., Migrace a populační vývoj v českých zemích v období kapitalismu (do vzniku samostatného Československa) (Migration and population development in Czech Lands during the period of capitalism /before the rise of independent Czechoslovakia/). Slezský sborník 73, 1975, pp. 12-20. Kořalka J. - Kořalková K., Basic features of mass emigration from the Czech Lands during the capitalist era. In: Les migrations internationales de la fin du XVIII^e siècle a nos jours. Paris C.N.R.S. 1980; p. 504-525
4. Kárníková L., Vývoj obyvatelstva ... p. 132, 212 n.
5. Ditto, p. 133
6. Ditto, pp. 133 and 211
7. Srb V. - Kučera M., Vývoj obyvatelstva ... p. 130
8. Ottův slovník naučný (Otto's Encyclopaedia), Vol. 63, p. 47
9. Conversion of the numbers of diseased children (0-7 years of age) in 1870-1894 per the numbers of the deceased according to age and year of death was based on situation in 1895-1896:

Age	Boys		Z	Girls		Z
	1895	1896		1895	1896	
7	290 336	277 265	51.46	327 344	265 287	51.59
8	360 413	354 340	51.33	408 419	341 338	50.27
5	496 525	366 525	54.92	459 541	409 488	54.24
4	608 744	556 640	54.32	674 759	598 631	52.22
3	861 1062	795 909	54.34	894 1025	790 946	57.93
2	1428 1727	1297 1660	55.42	1417 1783	1296 1624	55.67
1	3353 4589	2679 4386	59.80	3178 4430	2572 4534	60.94
0	10291 33405	10920 33253	74.17	10030 26164	9065 25833	73.14

Z - percentage of children who had died on a previous calendar year, out of the number of the deceased at the given age

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PROBATE FILES OF FORMER DISTRICT COURTS AS A DEMOGRAPHIC
SOURCE: THE DECEASED OF THE SMÍCHOV DISTRICT OF 1911

Historical demographic investigation is usually based on analyses of series of parish registers which refer to a single place or a comparatively small area.¹⁾ However, when emphasis is laid on problems of social development and migration, it is interesting to study also the characteristics of larger territorial units, e.g. districts. Such research is based on analyses of parish registers, but although vital records from all parishes are analyzed, many persons still escape analysis because they "went to die" in hospitals elsewhere outside the district of their fixed abode. This is particularly significant in suburban districts where the people use the health services available in the nearby city. A similar situation in fact arises for example when a war waged outside the country is studied for its effect on the demographic conditions of a given region.

One of the sources that can be used to learn the structure of the deceased in a larger area, say in one-year cross sections, are the death certificates in the 1850-1949 probate files of the former district courts. ²⁾ These documents were intended mainly to record the property of those who had died. With only some exceptions, deaths were recorded according to the permanent addresses of the deceased. ³⁾ Hence, these records cover all persons, including those who died somewhere else, e.g. when in military service, whereas those who died in the region in question but had permanent addresses outside it are eliminated, because their death certificates were sent with the probate documents to the district where the deceased had his or her permanent address. Hence, generally, the probate files contain information on the deceased persons of the resident population. Children are usually not included because of the orientation of these records to property rights.

There is some difficulty in defining a "complete set of records" for a given district and time. It is caused by the movement of documents which was mentioned above: about a third of the probate files was sent to another district (materials on persons who had died in another place got a new shelf mark, so they stay within the line). Part of the probate files became part of the guardian files, because of situation in the families of the deceased. The documents were marked by the date of the first filing, not the date of death. Thus it often happened to courts in rural areas or judges responsible for the rural parts of districts that some documents were one or two months behind the date of death. This delay has to be taken into account in examining the frequency changes and comparing different environments. ⁴⁾

The objective of this investigation was to explore the possibilities and limits of the source. As the bulk of documents were archived, one year (1911) files of the District Court of Smíchov ⁵⁾ seemed especially interesting, so they were

re picked for detailed investigation because of the heterogeneity of the environments within the area of the Court's jurisdiction. The core of the area was Smíchov itself, one of the important industrial suburbs of Prague, which was in fact a separate town of the Prague agglomeration. Next to Smíchov was the commuter belt - the actual periphery of the city, which passed into the purely rural area in the plains west of Prague. ⁶⁾

The territory of the Smíchov district was specifically elongated, stretching from north to south, and the Unhošť district was wedged into it. In 1910 the Smíchov district had 55 towns and villages with a total population of 140 000. The largest town was Smíchov itself with a population of 52 000; Košíře (12 000) and Radlice (above 3000) adjoined Smíchov as if they were its suburbs. The structure of housing and density of population at Košíře were much like at Smíchov. There were 44.2 persons per one house at Smíchov, at Košíře even 44.8. Košíře had the highest concentration of population per one flat of the whole district: 4.82 persons. Radlice had less people in one house (only 28), but as many as 4.23 people per flat. Břevnov with a population of 11 000 and Střešovice with almost 3 000, the two settlements at the height above Smíchov and the Lesser Part of the City of Prague, also had urban features: more than four persons in one flat and 26 (Břevnov) and 21 (Střešovice) persons per house. Northeast of Břevnov and Střešovice were fields and behind them Dejvice with 6 400 inhabitants and Bubeneč (almost 11 000). Bubeneč was a large modern middle-class town. Though there were less than four persons per flat, both Bubeneč and Dejvice were fully urban settlements with 23 (Dejvice) and 35 (Bubeneč) persons per house.

The judges of the Court had a sort of labour division: one of them was responsible for settling the inheritance matters associated with deaths in Smíchov itself and another one

was responsible for cases in the rest of the district, including the suburban settlements described above and villages in the rural areas behind them; thus a primary classification of the sources ensued from the division of responsibility within the Court. A finer subdivision was used in some cases in the latter group in order to draw distinction between the Smíchov periphery and the purely rural areas.

The files provided mass data on the sex, nationality, religion, age and date and place of death of every person; there were also data on the deceased persons' marital status, profession, native parish, and property. Of course, the weight and quality of some of them, e.g. religion, and also property, were lower, compared with the standard.

Death certificates of 496 persons from Smíchov and 605 from the outer part of the district were analyzed, which was 75 and 60 %, respectively (65 % in total) of the original 689 and 1082 entries in the Smíchov files. According to the statistical report of 1911, the total number of persons who died in the town Smíchov was 782. The difference is associated mainly with children below 5 years: statistics say 153 small children died at Smíchov but only 31 are included in our set. Some difference is ascribed to the definition of the Smíchov area. The statistics were also influenced by the fact that the town Smíchov was entered in the documents as the native parish of only a third of the deceased; after all, only a quarter of the deceased had been born there. 7)

In 1911, the population of Smíchov was 52 794; 46 % of this number were men. Smíchov ranked third in size among the towns of the "outer belt" of Prague. Modern Vinohrady (population 77 thousand) ranked first, second was Žižkov (72 thousand), followed by Smíchov, and far behind it was Karlín (22 thousand), a "classical" suburban town. The structure of the population at Karlín was similar to that of Smíchov: at Smíchov there were 15.0 deceased per 1 000 persons, at Karlín 15.5,

and in the new-built parts of Vinohrady 12.5. At Žižkov the situation was bad - 18.2 deceased per 1 000 inhabitants. 8)

An important role in this was played by the quality of housing and the social structure of the people; of course, a great importance is also attached to the social structure of the immigrants coming on mass to the future Greater Prague. These characteristics are documented in Tab. 1 in which data from the Statistical Report are compared with the results of our investigation.

Tab. 1 Basic characteristics of Smíchov and its periphery

Town/Village	No. of population	No. of persons per house	No. of inheritance entries per 1 000 persons
Smíchov	52 794	44.2	9.4
Košíře	12 293	44.8	7.7
Radlice	3 370	28.1	5.1
Břevnov	11 116	26.0	3.6
Střešovice	2 735	21.2	4.0
Dejvice	6 402	22.5	7.2
Bubeneč	10 657	33.5	5.6

Our investigation comprised 1 101 persons of whom 634 (57.6 %) were women and 467 (42.4 %) were men. The difference was larger than in the statistical report, which was not caused by demographic processes but by the fact that when a man died the orphans were more often entrusted to guardians than when a woman died. Hence, the set under study will have to be complemented by looking through the guardianship files or at least through the indexes to identify the cases transferred to another district and the guardianship cases that refer to the set under study.

Now that the source has been critically surveyed and the

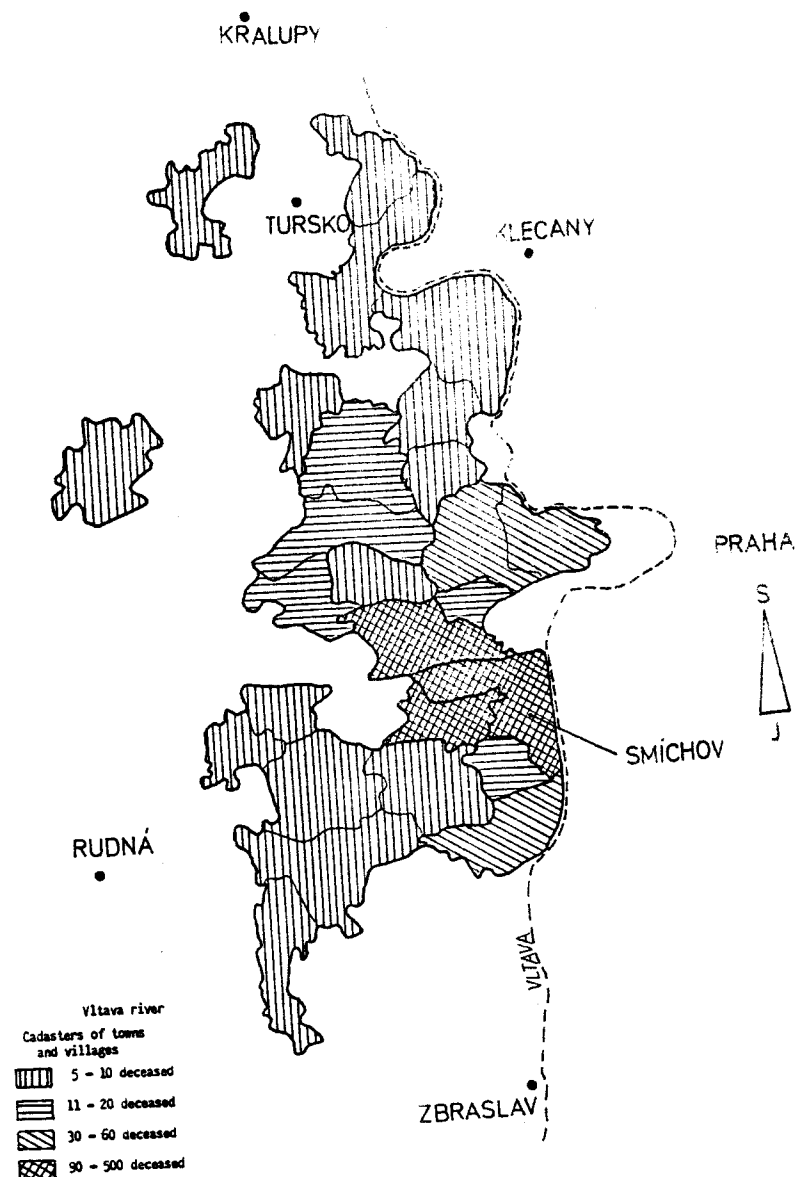
completeness of the set has been defined, it will be useful to scrutinize the characteristics which are not affected significantly by incompleteness, and to study the specific sub-groups.

Limitations of the set of deceased, described above, had little effect on the distribution of the deceased over the district, on the identification of the areas of Smíchov's immigration sources according to the native parishes of the deceased, and on the basic characteristics of the place of death of the persons in the set.

Frequency distribution of the deceased in the district is shown in Map 1. The town Smíchov with 496 deceased is the core. The belt with we called periphery had a population of 46 000 people, with 332 deceased. The population of the rural part of the district was 42 000 with 273 deceased. There were 12 villages above 1 000 inhabitants in the rural part of the district; Hlubočepy with Zlíchov as its part was the home of 4 099 people, followed by Jinonice (2 234) and Řeporyje (1 823). As the map shows, the highest numbers of deceased were recorded at Hlubočepy-Zlíchov, followed by Nebušice, Horoměřice, Dolní Liboc and Roztoky.

Cartogramme suggests from where people immigrated, as far as this could be judged from the entries concerning the native parishes outside the Smíchov district. Of the 1 101 deceased, the native parishes of 629 persons (57.1 %) were different from their permanent addresses. Of the 605 people who died in the priphery and in the rural part of the district, 146 (24.1 %) had their native parish at Smíchov. On the whole, the death certificates of 483 deceased contained data on native parishes outside the Smíchov district. Though indication of the native parish certainly cannot replace that of the place of birth, it does suggest with which areas the fate of the people was associated. The importance of migration for the Smíchov district is proved by the very fact that the native parish of 44 % of the deceased was outside its confines.

Fig. 1 Towns and villages of the Smíchov district with more than 5 deceased in 1917

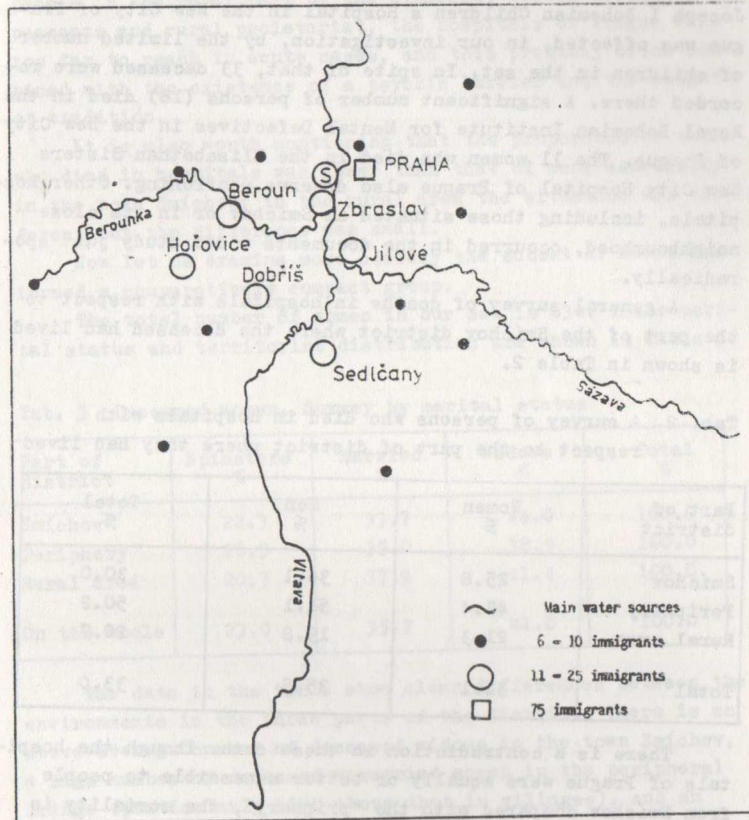


For the town Smíchov the proportion of the deceased with native parish outside Smíchov itself was as high as 65 % (the 1911 Statistical Report), though of course the might come from somewhere else within the Smíchov district. 9)

Naturally, native parish in Prague was indicated in the death certificates of most of the deceased (75). The districts with native parishes of a high number of persons in our set (the map includes districts native to more than five persons who had died in the Smíchov district in 1911) made up two distinct areas. One of them was larger and comprised the native parishes of more than a hundred deceased; it spread westward from Unhošť and Křivoklát up to Plzeň and southward up to Blatná. Districts native to the highest numbers of our Smíchov deceased included Zbraslav (22), Hořovice (20), Dobříš (13) and Beroun (11). The other area which was smaller comprised native parishes of more than 50 of the persons who had died in the Smíchov district in 1911. It extended on the right side of the river Vltava between Jílové and Tábor. Of this area, the district which supplied the highest number of persons to our set (16) was Sedlčany. Both these areas were important sources of immigration to the city of Prague; surprisingly, this was true of the smaller second area rather than the first one which was larger; the importance of the area west of Prague was so high in our study probably because of the contacts of the non-urban part of the Smíchov district. 10)

Data on the place of death will tell much about the character and mentality of the persons concerned. On the eve of the First World War, a substantial part of the population died in hospitals. Of the 1 101 persons in our set, 364, i.e. a third, died in hospitals and asylums. The famous Imperial & Royal General Hospital of the New City of Prague was mentioned most frequently in the death certificates (187 deceased). Another hospital important for the people of Smíchov

FIGURE 2 DISTRICTS WITH THE HIGHEST NUMBERS OF SMÍCHOV IMMIGRANTS AMONG THE 1911 DECEASED



was the Filial Hospital of the Sisters of Charity in the Lesser Part of Prague (92 deceased). The importance of Franz Joseph I Bohemian Children's Hospital in the New City of Prague was affected, in our investigation, by the limited number of children in the set. In spite of that, 33 deceased were recorded there. A significant number of persons (18) died in the Royal Bohemian Institute for Mental Defectives in the New City of Prague. The 11 women who died in the Elisabethan Sisters New City Hospital of Prague also deserve mentioning. Other hospitals, including those situated at Smíchov or in its close neighbourhood, occurred in the documents under study just sporadically.

A general survey of deaths in hospitals with respect to the part of the Smíchov district where the deceased had lived is shown in Table 2.

Tab. 2 A survey of persons who died in hospitals with respect to the part of district where they had lived

Part of district	Women %	Men %	Total %
Smíchov	25.8	36.1	30.0
Periphery	49.4	51.1	50.2
Rural area	21.3	19.8	20.7
Total	31.1	35.8	33.0

There is a contradiction in these data. Though the hospitals of Prague were equally or better accessible to people from Smíchov compared with the "periphery", the mortality in hospitals was much smaller among the inhabitants of Smíchov, especially women. This is caused by the better average economic situation of the Smíchov people: a richer family could afford to call a doctor in and the people could die in the

relative comfort of their homes. The poor people at Košíře or Radlice had no choice when they sought medical care. For people in the rural part of the district, mostly indigent peasants and rural proletariat, the hospitals of Prague were too far to reach in acute cases, and this probably often combined with the existence of a psychic barrier and the weight of tradition.

It is also worth mentioning that the proportion of women who died in hospitals was lower than that of men, especially in the town Smíchov; in the rural area the situation was different but the difference was small.

Now let us examine more closely the subset of women who formed a comparatively compact group.

The total number of women in our set is 634. Their marital status and territorial distribution are shown in Table 3.

Tab. 3 Deceased women. Survey by marital status

Part of district	Spinsters %	Married %	Widows %	Total %
Smíchov	22.3	33.7	44.0	100.0
Periphery	26.5	35.0	38.5	100.0
Rural area	20.7	37.9	41.4	100.0
On the whole	23.0	35.2	41.0	100.0

The data in the table show clear differences between the environments in the three parts of the district. There is an above-average number of deceased widows in the town Smíchov, a high number of deceased unmarried women in the peripheral fringe (particularly high above that in villages), and an above-average number of deceased married women in the rural area.

Even more conspicuous differences occur in the age structure of the groups of women in the three parts of the dis-

tract. 11) The situation, characterized by percentual data, is shown in Table 4.

Tab. 4 Deceased women by age and marital status

Age	Smíchov			Periphery			Rural area		
	spin.	mar.	wid.	spin.	mar.	wid.	spin.	mar.	wid.
- 5	6.2	-	-	15.2	-	-	11.4	-	-
6-10	3.1	-	-	2.2	-	-	-	-	-
11-20	4.6	1.0	-	36.9	-	-	34.2	-	-
21-30	15.4	3.2	-	26.0	14.8	1.5	37.2	20.3	-
31-40	7.7	16.3	3.1	-	32.8	6.0	-	15.6	1.4
41-50	12.3	21.4	2.3	2.2	13.1	4.5	5.7	10.9	4.3
51-60	9.2	19.4	7.8	8.7	16.4	17.9	2.9	17.2	8.6
61-70	12.3	22.5	28.9	4.4	11.5	34.3	-	20.4	20.0
71-80	15.4	9.2	39.9	2.2	9.8	23.9	-	7.8	41.4
80+	13.8	2.0	16.4	2.2	-	11.9	2.9	3.1	18.6
Unsp.	-	-	1.6	-	1.6	-	5.7	4.7	5.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Data in Table 4 should of course be interpreted with respect to differences in the general structure of the whole population (including men) in the three environments.

At Smíchov, the mortality of unmarried women was distributed quite evenly from the start of the 3rd decade of life to the highest age, with some peaks in the 3rd and 8th decade. In the peripheral fringe and in the country two-thirds of all deaths of unmarried women were concentrated at about 20 years of age and in the towns and villages of the periphery the maximum was recorded even below 20. This was most probably associated with births outside wedlock or with abortions. At Smíchov, on the other hand, 51 % of unmarried women died after the age of 50.

As to married women, at Smíchov the period of increased mortality started after the age of 30 and culminated in the 7th decade. In the periphery an increased mortality came already after the 20th year of age with a peak between the 30th and 40th year. In the rural area increased mortality of married women stretched between the 3rd and 7th decade of life, with slight peaks at the start and end. Perhaps the care of women in childbed also affected the mortality data of married women: at Smíchov less than a quarter of the deceased married women died between the 3rd and 4th decenium whereas in the periphery the proportion of those who died at this age was almost a half and in the villages 36 %.

Large differences were recorded in the mortality of widows. At Smíchov and in the rural area only 5-6 % of widows died before the age of 50 but in the periphery this proportion was twice higher and some of the widows there were younger than 30.

Table 5 shows the age of the deceased women on the whole for the different environments in comparison with the data of the 1911 Statistical Report on the town Smíchov. 12)

Tab. 5 Deceased women surveyed by age and permanent address

Age	Probate files				Statistical Report the town Smíchov
	Smíchov	Periphery	Rural area	Total	
- 5	1.4	4.0	2.3	2.4	17.6
6-10	0.7	0.6	-	0.5	0.5
11-20	1.4	9.8	7.1	5.2	5.2
21-30	6.2	12.6	15.4	10.4	7.5
31-40	8.6	13.8	6.5	9.5	9.0
41-50	11.0	6.9	7.1	8.8	5.7
51-60	11.7	14.9	10.7	12.3	13.6
61-70	23.0	18.4	16.0	19.8	14.3
71-80	24.0	13.2	20.1	20.0	18.9
80+	11.3	5.2	9.5	9.2	5.9
Unsp.	0.7	0.6	5.3	1.9	1.1
100 %	291	174	169	634	455

The differences between the Statistical Report and our set are of course the largest in data on the youngest deceased. However, it is interesting to note also the large differences (especially in comparison with our urban Smíchov group) in the second and fifth decenium of age and, naturally, in the group of the oldest deceased women.

Investigating the occupational groups of the deceased women, we gave up detailed territorial differentiation of the part of district outside Smíchov itself. On the other hand, we took into account the age of the women under review, because inside Smíchov women up to 50 years of age made up just 29.9 % whereas outside the town the group of women up to 50 was as large as 44.3 %. The results of the social status analysis are shown in Table 6.

Tab. 6 Deceased women surveyed by occupational groups

Occupational group	The town Smíchov			Periphery and rural area		
	age			age		
	- 50	50+	total	- 50	50+	total
workers a)	13.8	0.5	4.5	26.3	10.5	17.5
maid servants b)	10.3	7.8	8.6	8.6	2.6	5.3
tradesmen's female c)	2.3	2.0	2.1	-	3.1	1.8
intelligentsia d)	5.8	1.5	2.8	0.7	0.5	0.6
women of means	4.6	22.1	16.8	2.6	11.0	7.3
clerks' female e)	13.8	19.6	18.2	2.0	4.7	3.5
workers' female f)	44.8	32.8	36.0	40.7	36.7	38.3
no indication	3.5	1.0	1.7	17.8	22.0	20.1
women of charges of charitable institutes	1.1	8.8	6.5	1.3	-	0.6
beggar women	-	3.9	2.8	-	8.9	5.0
100% =	87	204	291	152	191	343

Note: a) including outworkers; b) including housekeepers and cooks; c) including saleswomen, shop-girls, milk women; d) clerks, women teachers, midwife and actress; e) wives, widows and daughters; f) wives, widows and daughters of workers and tradesmen

In the Smíchov part of the table, workers' and tradesmen's female dependants ranked first. This is most marked in the group of women up to 50 where the proportion of these dependants is 44.8 %. The second largest group (about half the size of the first) was that of the dependants of clerks where, unlike in the first group, women above 50 prevailed. Then followed women living on independent means (16.8 %). In this group of spinsters and widows living on pensions and rents, women above 50 highly prevailed over the younger ones - a fact associated with the generally large proportion of spinsters above 50 years in the Smíchov population. Next came maid servants, cooks and housekeepers among whom younger women slightly prevailed over the older ones, and workers and outworkers, naturally with a high prevalence of those of younger age. The average age in the comparatively large group of charges of charitable institutes, and beggar women, was of course high.

In the data concerning the part of district outside the town, the prevalence of workers' and tradesmen's dependants among the women was even greater than at Smíchov. Surprisingly, the second largest group included persons with no indication of occupational status in the death certificates. There were much more workers, including women above 50, outside the town. It should be assumed that the majority of these workers were engaged in agriculture. Naturally, there was a lower number of women of their own means in the part of district outside Smíchov. There were also less women belonging to intelligentsia, less maids, and less wives of clerks. The number of the charges of charitable institutes was low but there were more beggar women and women living on alms.

The Smíchov Germans constitute a specific small subgroup¹³⁾ in our set. According to the List of population, there were only 7.5 % of persons of German nationality among the inhabitants of Smíchov, but in our urban Smíchov set they

made up 10.7 %. In the district outside the town there were only two Germans.

At Smíchov itself, there were 53 Germans of whom 18 were men and 35 women. Old people prevailed among them. Only 4 persons (7.5 %) were younger than 50 years: most of the Germans were older than 60. The median age of the deceased women of the German group was higher by about ten years than that of men. Accurate data are shown in Tab. 7.

Tab. 7 Deceased Germans surveyed according to age (%)

Age	Men	Women
up to 50	22.2	5.8
51-60	11.1	8.6
61-70	33.4	22.9
71-80	22.2	39.8
above 80	11.1	22.9
Total	100.0	100.0

The Germans also had a specific occupational structure.¹⁴⁾ One-third of the men were clerks and officers and another third were people living on their own means. There were three (17 %) representatives of intelligentsia. The only representative of the group of tradesmen was one publican. Two of the Smíchov male Germans were charges of the Franz Joseph Institute for the Blind. More than a quarter of the women were wives (or widows) of clerks (25.7 %), followed by women of independent means (22.9 %), and wives of men who belonged to technical and free-lance intelligentsia. 17.1 % of the women lived in the Institute for the Blind. The remaining women included two wives of tradesmen, three maid servants, a piano teacher and a nun of the St. Gabriel Monastery.

The property owned by the Smíchov Germans corresponds with their employment status. With the Czech inhabitants of

Smíchov, property (money savings, capital, real estates) was indicated in the death certificates just in 12.6 % of cases, whereas in the German group in 41.5 %. In the majority of cases the sums were large: the mean value of the Germans' property ranged about 10 000 crowns and the maximum value was above 150 crowns. This corresponds with the fact that only 5 persons died in a hospital; others, except those in the Institute for the Blind, died in their private home.

The occupational structure of the group corresponds with the fact that only 10 of the persons under review had their native parish at Smíchov (18.9 %). Native parish in Prague was indicated in the death certificates of about the same number of Germans. The native parish of 13 % of them was outside Bohemia and many others came from the German border region.

On the whole, these Smíchov Germans more than correspond with the characteristics formulated for the Prague German minority by J. Havránek and G. Cohen.¹⁵⁾ They belong to a stratum of a higher occupational and social status with no demographic prospects; they depended, in the essence, on the Czech tradesmen and workers.

Our insight in the probate files has perhaps demonstrated the specific attractiveness of this type of material for demographic investigation. We have also tried to suggest the importance of the study of the relationships and peculiarities of the "old" suburbs and the periphery of the agglomeration, as well as the rural area around it. The periphery has been found to be a specific demographic and social entity, not just a transition belt between a fully urban environment and rural area around.

Notes

1. Classical examples are works by E. Čánová - P. Horská, Obyvatelstvo obce Břevnova v církevních pramenech z let 1652 - 1800 (Population of the village Břevnov in ecclesiastical sources of 1652 - 1800), AUC Phil. et Hist. 1972/3, pp. 81-100 and P. Mužík, Obyvatelstvo města Domažlic v letech 1651 až 1830 (Population of the town Domažlice in 1651 to 1830), SAP 36. 1986, pp. 103-207.
2. Summarized information on the problems of district courts and their documents is available in V. Solle, Státní archiv v Praze. Průvodce po archivních fondech. (State Archives in Prague. A guide to archive collections.) Praha 1958, pp. 77-117.
3. Exceptions occurred mainly in those cases when the deceased person had no substantial property in the place where he/she had lived and had been bound by family and property ties to another place. However, it should be noted that there is much inconsistency in the documents, especially in those of the indigent deceased.
4. There was disorder mainly in the affairs associated with deaths in the rural area. Deaths from November and December were cleared only during the first quarter of the following year (in our case 1912, which was outside the range of our investigation). Hence, analysis of the frequency of deaths had to be given up for the time being.
5. Files with shelf marks of O.S. Smíchov A I., A II are deposited with the Archives of the City of Prague.
5. Global characteristics of the territory are given by V. Hlavsa in Pražské teritorium v druhé polovině 19. století. Rozvoj zástavby (The Prague territory in the latter half of the 19th century. Development of built-up area). PSH 1969-70, pp. 5-51. Statistical material for our investigation was taken from Seznam míst v království Českém (List of places in the Kingdom of Bohemia), Praha 1913 (a publication based on the 1910 census) and Statistická zpráva královského hlavního města Prahy a spojených obcí Karlína, Smíchova, Král. Vinohrad, Vršovic a Žižkova za rok 1911. (Statistical report of the Royal City of Prague and the united towns of Karlín, Smíchov, Král. Vinohrady, Vršovice and Žižkov for 1911), Praha 1913.
7. Statistical Report, p. 82.
8. Statistical Report, pp. 60-61, 81.

9) Statistical Report, p. 82.

10. Cf. P. Horská - Vrbová, Fražský průmysl v druhé polovině 19. století (Prague industry in the latter half of the 19th century), PSH 1969-70, p. 66; L. Kármíková, Vývoj obyvatelstva v českých zemích 1754 - 1914 (Development of the population of the Czech Countries 1754 - 1914), Praha 1965, p. 223, and J. Fešek - D. Saman, Chudina vinohradského okresu v letech 1885 - 1913 (The poor of the Vinohrady district in 1885 - 1913), PSH 20 - 1987, pp. 76 and 79.
11. Aware of the fact that the part concerning men will include just approximate data, we offer a table of the average age of women and men in the urban and rural-peripheral parts of the Smíchov district, with respect to the marital status of the deceased.

Marital status	Women		Men	
	Smíchov town	Rural part	Smíchov town	Rural part
Spinsters / Pech.	50	24	32	22
Married	52	46	60	60
Widowed	70	67	72	69
Total	59	49	55	46

It follows from the table that the average age at death of both men and women at Smíchov itself was higher than that of the inhabitants of the periphery and the villages. Differences are particularly marked in the group of spinsters. For this, cf. Table 4 inside text.

12. Statistical Report, p. 87.
13. In accordance with Stremayer's language decrees of 1880, the probate files were, in the essence, kept in the language native to the person concerned, i.e. the deceased and his relatives. Hence documents written in German can be regarded as concerning persons of German nationality.
14. Israelite (mosaisch) religion was indicated only by two persons.
15. Cf. J. Havránek, Social Classes, Natality Ratios and Demographic Trends in Prague 1880 - 1900, Historica 13, 1966, pp. 171-208; J. Havránek, Demografický vývoj Prahy v druhé polovině 19. století (Demographic development of Prague in the latter half of the 19th century), PSH 1969-70, pp. 70-75; G.B. Cohen, The politics of ethnic survival: Germans in Prague 1861 - 1914, Princeton 1981.

Helena S m í š k o v á

SOME FEATURES OF THE DEMOGRAPHIC DEVELOPMENT
OF THE VILLAGE JANOV IN THE DĚČÍN DISTRICT

A wider study is being prepared the objective of which is to identify the basic features of the demographic development of an aggregation of population and to compare them with data from similar published studies which are still scarce in Czechoslovakia.

This paper presents partial results of investigation of the village Janov near Děčín. The place has had no special historical development, but the number of its population was adequate to the purpose of the study and the available sources allowed to start the investigation and compare the results with other historical demographic studies which have already been finished in Czechoslovakia. The main studies with which the Janov data were compared are that on the population of Budyně n. O. by Ladislav Dušek and that on Domažlice in western Bohemia by Petr Mužík. ¹⁾ These authors studied their objects maximally up to the mid 19th century, but I have

attempted to analyze somewhat more recent development, so the resultant study is intended to cover the period from 1800 to 1930. As the village is located in the North Bohemian border region, the investigation should terminate with 1938 at the latest, because the demographic continuity of the border region was broken that year.

Janov is a village 9 km northeast of Děčín in the territory of the Děčín district. Its most interesting architectural features are a Late baroque chapel and a windmill, a structure of sandstone ashlar built in 1844 in the fields southwest of the village.

The village rose during the period of German colonization waged from the Ostrý Castle. Its name was first mentioned in documents in 1446 when the village belonged to another castle, Schaustein. In the latter half of the 15th century Janov became the property of the Ostrý Castle again, but later, starting in 1634, although it was located in the middle of the Bynovec estate of the house of Clary, it belonged to the Česká Kamenice demesne, held by the house of Kiský of Vohynice and Tetov until 1945.

The inhabitants of Janov earned their living from the processing and selling of wood (especially the production of shingles). There were also some shipwrights among the farmers and artisans. Sixteen farms made up the core of the village and the free local magistrate was its chief authority. The village belonged to the Arnoltice parish. In the 1808 list of population, Janov had 773 inhabitants who lived in 129 houses. The highest number of population, about 1200, was recorded around the year 1880, and at the end of the period under study, in 1930, the village had 962 inhabitants living in 214 houses.

Today Janov has less than 100 inhabitants and is a part of the village Arnoltice.

Parish registers remain the main source of data for demo-

graphic analyses. Census materials of 1921 were used as additional sources, and lists of the populations of the Česká Kamenice demesne, the oldest dating to 1308, provided information on the older part of the period under study.

Some of the partial results of the investigation are shown in the tables concerning the age and marital status of the couples who first married in 1800-1929, the relative distribution of the age of the couples who intended to marry, and the combined age of such couples; all these data were obtained by direct excerption from the marriage registers referring to the years concerned. It is an advantage that in this comparatively recent period the data on the age of the newly married couples are accurate.

Table 1 shows the first marriages with respect to age in fifty-year intervals. It is shown by the data that at the beginning of the period under review the average age of men at marriage was comparatively high (30.7) and still increased during the subsequent fifty years (31.7); towards the end of the whole period it declined again (28.4). A similar tendency was observed in the average age of marrying girls: from the starting 26.8 years it increased to 27.9 and declined again to 25.5 in the first half of the 20th century. Comparison of these data with those on other places shows about the same thing as the available literature: age at marriage had an ascending trend during the 18th and 19th century, depending on the economic conditions. Since the turn of the 19th and 20th centuries, the age at marriage has decreased considerably; further comparative studies on this subject should be performed before reliable conclusions can be drawn.

As to the difference in age between the spouses, it was interesting to note at Janov that there were many marriages in which the wife was older than the husband: in 1800-1849 this was the case in as many as 22 % of all marriages, in 1850-1889 in 18 % and in 1890-1929 in 15 % of the marriages. In the

first period most marriages had a difference of 3 years and the same age of both spouses ranked second. In 1830-1889 the most frequent difference was 1 year, followed by the difference of 3 years, and in 1890-1929 the one-year difference was the most frequent again, followed by 2 years. As stated in L. Dušek's paper, the average difference between the newly married spouses at Budyně n. O. was 3-4 years in 1701-1850.

Like in other places, it is also at Janov that extreme age differences between the spouses occurred in some cases: a 56-year old widower married an 18-year old girl, or in the reverse case, a 32-year old man married a 55-year old widow and the like. For the whole period under study (150 years), there were only two cases of marriage of 15-year old girls. The youngest age at which a man married was 19 years and the oldest bridegroom was a 71-year old widower who married a 35-year old spinster. The oldest age at first marriage was 65 years in men and 60 years in women. Leaving these extremes aside it can be said that the situation remained about the same for the whole period studied: most of the men married at an age of 25 - 29 years and most of the women at an age of 20 - 24 years; this is similar to situation at Budyně n. O., whereas at Domažlice, Jablonec n. N. and Břevnov most of the men as well as women married at an age of 20 - 24 years. ²⁾ The fact that men married later at Janov than at Domažlice or Jablonec throughout the period under review is due to worse economic conditions with very little job opportunities (See Table 2). Interesting conclusions can be drawn from comparison with data on Domažlice, Budyně and Břevnov: registers from these three places show that there was some percentage of persons who married at an age up to 19 years whereas at Janov the number of such cases is minimum not only among men but also among girls, in whom this difference from other villages of towns is even more conspicuous. Within about the same historical period of the first half of the 19th century the pro-

portions of girls who married before the age of 19 years were 22 % at Domažlice, 10.3 % at Jablonec, 16.9 % at Budyně, and only 6.1 % at Janov.

It is shown by data in Table 3 that men between 20 and 24 most frequently married girls of the same age group, which is a situation similar to that at Budyně n. O., but the next most frequent group of brides for the 20-24 year old men were women old 25-29 years at Janov, whereas at Budyně men of the 20-24-year group married most frequently girls of the age group of 15 - 19. This situation prevailed at Janov throughout the period under review.

It has been demonstrated in the studies quoted that widowed men married again more frequently than widowed women. The same was observed at Janov, and it can be stated in addition, as distinct from data on other places, e. g. Budyně, that at Janov the marriages between widowers and women who married for the first time were several times more frequent than marriages between widows and bachelors. This fact is much more distinct in the first half of the period under review.

Now let us examine the interval between marriage and the birth of the first child (Table 4). The data refer only to the fifty-one-year period of 1880-1930, as the family lists could be compiled only for that period. Nevertheless, some conclusions can be drawn from these data. The average interval is 13.2 months after marriage, but if only women with at least two births are taken into account, the interval from marriage to first birth will drop to 11.5 months. When only intramarital conceptions are taken into account, i. e. only children born in the 8th month after wedding or later, the average interval is extraordinarily long, 20.3 months, as compared with Dušek's data on Budyně n. O. (15.7, 16.5, 15.5). It must be added that the percentual data are not very illustrative because in reality, as seen in the table, the distribution is entirely different from that at Domažlice and Budyně. The highest number of children were born from premarital conceptions

(41 %); the proportion of those who were born 8 - 10 months after wedding was only 14 %, and if just those conceived inside wedlock are counted, the proportion is 31 % (at Budyně it was above 60 %). Thirteen percent of all children born to couples who had married in 1880 - 1930 were born three years after wedding or later. The following conclusions can be drawn from these data: At the turn of the 19th and 20th centuries, most of the marriages were contracted when the bride was already pregnant. If the couple married without pregnancy, the first child was born much later, sometimes even after several years of the existence of the wedlock.

It can be stated on the basis of these partial results that situation at Janov on the turn of the 19th and 20th centuries differed in some features from the data in the hitherto published historico-demographic studies on the 18th and early 19th centuries. There were differences in the nature of both nuptiality and fertility. Late marriages can be regarded as characteristic of the situation at Janov in the given period. The prolonging interval from wedding and the birth of the first child as well as the comparatively high proportion of marriages with a small number of children suggests a tendency to the formation of family pattern where the number of children was low, which was characteristic of the nineteen-thirties.

Notes

- 1) Ladislav Dušek, Obyvatelstvo Budyně n.O. v letech 1701-1850 (Population of Budyně n. O. in 1701-1850), Ústecký sborník historický 1985, pp. 143-239; Petr Mužík, Obyvatelstvo města Domažlic v letech 1631-1830 (Population of the town Domažlice in 1631-1830), SAP 1986 (XXXVI/1), pp. 103-207.
- 2) See the quoted paper by P. Mužík, p. 133 (table).

Tab. 1a The first weddings in relation to age - males

Age	1800-1849			1850-1889			1890-1929		
	marital status of the bride/groom								
	bach.	wid.	tot.	bach.	wid.	tot.	bach.	wid.	tot.
15									
16									
17									
18									
19	1		1						
15-19	1		1						
20	5		5						
21	8		8	2		2	1		1
22	10		10		1	10	14		14
23	14		14	15		15	22		22
24	33	2	35	19		19	46		46
20-24	70	2	72	45	1	46	83		83
25	21		21	24		24	58		58
26	18		18	18		18	40		40
27	22		22	30		30	22	1	23
28	17	1	18	31		31	22		22
29	11	1	12	13		13	18		18
25-29	89	2	91	116		116	161	1	162
30	10		10	31		31	18		18
31	5	1	6	18		18	15		15
32	7	2	9	18		18	7	1	8
33	7	1	8	13	1	14	9	1	10
34	9		9	14	3	17	9	1	10
30-34	38	4	42	94	4	98	58	3	61
35	3		3	9		9	3		3
36	4	1	5	10		10	4		4
37	3		3	6		6	3		3
38	8		8	6		6	3		3
39	2		2	7		7	1		1
35-39	20	1	21	38		38	14		14
40	6		6	5		5	1	1	2
41	4		4	8		8	8		8
42	3		3	3	1	4	2		2
43	3		3	2		2	2		2
44	3		3	1		1		1	1
40-44	19		19	19	1	20	3	2	5
45	2		2	5		5	1		1
46	1		1	2		2	2		2
47	1		1	1		1	1		1
48	3		3	1		1	1		1
49				1		1	1		1
45-49	7		7	10		10	6		6
50	1		1	1		1	1		1
51				2		2			
52	3		3						
53	1		1	3		3	1		1
54	1		1				1		1
50-54	6		6	6		6	3		3
55+	5		5	5		5	3		3
Total	255	9	264	333	6	339	331	6	337
Average age	30.6	34.1	30.7	31.6	33.7	31.7	28.3	35.5	28.4

Tab. 1b The first weddings in relation to age - females

Age	1800-1849			1850-1889			1890-1929		
	marital status of the bride								
	spin.	wid.	tot.	spin.	wid.	tot.	spin.	wid.	tot.
15	1		1	1		1			
16									
17							1		1
18	6	1	7	2		2			4
19	7	1	8		1	10			7
15-19	14	2	16	12	1	13	12		12
20	16		16	13		13	11	1	12
21	18		18	23		23	31		31
22	25		25	22		22	49		49
23	23	3	26	20	1	21	42	1	43
24	24	3	27	29	2	31	49	1	50
20-24	106	6	112	107	3	110	182	3	185
25	14	5	19	26	1	27	28	1	29
26	14	3	17	28	3	31	20		20
27	15	3	18	14	3	19	17	1	18
28	5	5	10	21	1	22	14		14
29	11		11	18	2	20	17		17
25-29	59	16	75	107	12	119	96	2	98
30	9	2	11	5	1	6	11	1	12
31	5	2	7	9	3	12	4	2	6
32	3	3	6	12	2	14	4		4
33	4		4	11	2	13	4		4
34	4	3	7	7	1	8	1		1
30-34	25	10	35	44	9	53	24	3	27
35	4		4	6	3	9	1		1
36	2	1	3	6		6	3		3
37		2	2	4		4			
38	3		3	2	1	3		1	1
39	1		1	3	3	6			
35-39	6	7	13	21	7	28	4	2	6
40	1		1	2	1	3	1		1
41	2		2	2		2	1	1	1
42	1	3	4	1		1	1		1
43				1	1	4		1	1
44	1		1	1	3	3		1	1
40-44	5	3	8	10		13	2	2	4
45	1		1						
46		1	1		1	1	1	1	2
47					1	1			
48		1	1						
49							1		1
45-49	1	2	3		2	2	2	1	3
50					1	1			
51	1		1						
52									
53									
54									
50-54	1		1		1	1	2		2
55+	1		1						
Total	218	46	264	301	38	339	324	13	337
Average age	26	30.8	26.8	27.3	32.9	27.9	25.4	29	25.5

Tab. 2 Weddings in relation to age of the couple (in %)

Age	1800 - 1849		1850 - 1889		1890 - 1929	
	M	F	M	F	M	F
- 19	0.4	6.1		3.8		3.6
20 - 24	27.8	42.6	13.8	32.5	24.8	55.2
25 - 29	35.2	28.5	34.7	35.1	48.5	29.3
30 - 34	16.2	13.3	29.3	15.6	18.3	8.0
35 - 39	8.1	4.9	11.4	8.3	4.2	1.8
40 - 44	7.3	3.1	6.0	3.8	1.5	1.2
45 - 49	2.7	1.1	3.0	0.6	1.8	0.9
50 - 54	2.3	0.4	1.8	0.3	0.9	
Total	100.0	100.0	100.0	100.0	100.0	100.0

Tab. 3a Weddings in relation to age and marital status (1800-1875)

Age of the bride	Age of bridegroom								Total
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	
A. Weddings of bachelors and spinsters									
15 - 19		10	8	1					19
20 - 24	1	68	70	26	7	2			174
25 - 29		17	53	40	10	4	2		126
30 - 34		2	15	29	10	2			58
35 - 39			5	5	6	4	1		21
40 - 44			1		1	5	2	1	10
45 - 49							2		2
50 - 54									
55+									
total	1	97	152	101	34	17	7	1	410
B. Bachelors - widows									
15 - 19									
20 - 24									
25 - 29									5
30 - 34		2		2		1			3
35 - 39			2	1					2
40 - 44				2					
45 - 49					1				1
50 - 54				1					1
55+									
total		2	2	6	1	1			12
C. Widowers - spinsters									
15 - 19				1					1
20 - 24				3		2		2	9
25 - 29		1	2	2	7	8	2	1	24
30 - 34				3	4	6	2	1	15
35 - 39				1	2	3	2	1	9
40 - 44				1			1	1	3
45 - 49									1
50 - 54				2	2	2	1		8
55+	1								
total	1	1	4	13	15	21	7	8	70

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Tab. 3b Weddings in relation to age and marital status (1876-1930)

Age of the bride	Age of bridegroom								Total
	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55+	
A. Weddings of bachelors and spinsters									
15 - 19	6	11	1						20
20 - 24	79	119	23	3	1		1		226
25 - 29	13	77	30	7	1	2			130
30 - 34	3	4	14	8	1	1			31
35 - 39		1	2		1		1		5
40 - 44				1					1
45 - 49						1			1
50 - 54								1	1
55+									
total	103	213	70	17	5	5	3	2	418
B. Bachelors - widows									
15 - 19									
20 - 24			1						2
25 - 29	1		1						1
30 - 34					1				1
35 - 39			1					1	2
40 - 44					1				1
45 - 49									
50 - 54								1	1
total	1		3		2			1	7
C. Widowers - spinsters									
15 - 19			1						1
20 - 24			2						3
25 - 29		1	1	3	1	1			6
30 - 34			4						4
35 - 39			1	1					5
40 - 44			1	1					3
45 - 49				1					1
50 - 54								2	3
55+	1								1
total	1	1	10	5	1	5		4	26

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Tab. 4 Interval between wedding and the first birth
(marriages contracted in 1880 - 1930)

Interval in finished months)	All weddings	Two - and higher-parity women
0	8	8
1	19	17
2	22	19
3	21	15
4	17	11
5	17	15
6	9	9
7	9	8
8	14	11
9	17	13
10	11	7
11	5	5
12	8	8
13	9	8
14	4	4
15	5	3
16	10	8
17	3	3
18	3	3
19	9	6
20	6	3
21	1	1
22	3	3
23	5	5
24	5	3
25	2	2
26	3	2
27	1	1
28	4	2
29	-	-
30	1	1
31	1	1
32	-	-
33	1	1
34	1	-
35	-	-
36+	40	18
Total	294	221
mean interval		
- all	13.2	11.5
- children conceived in wedlock only	20.3	17.8

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Annex

Fig. 1 Origin of the in-migrants who lived in BEROUN in 1910

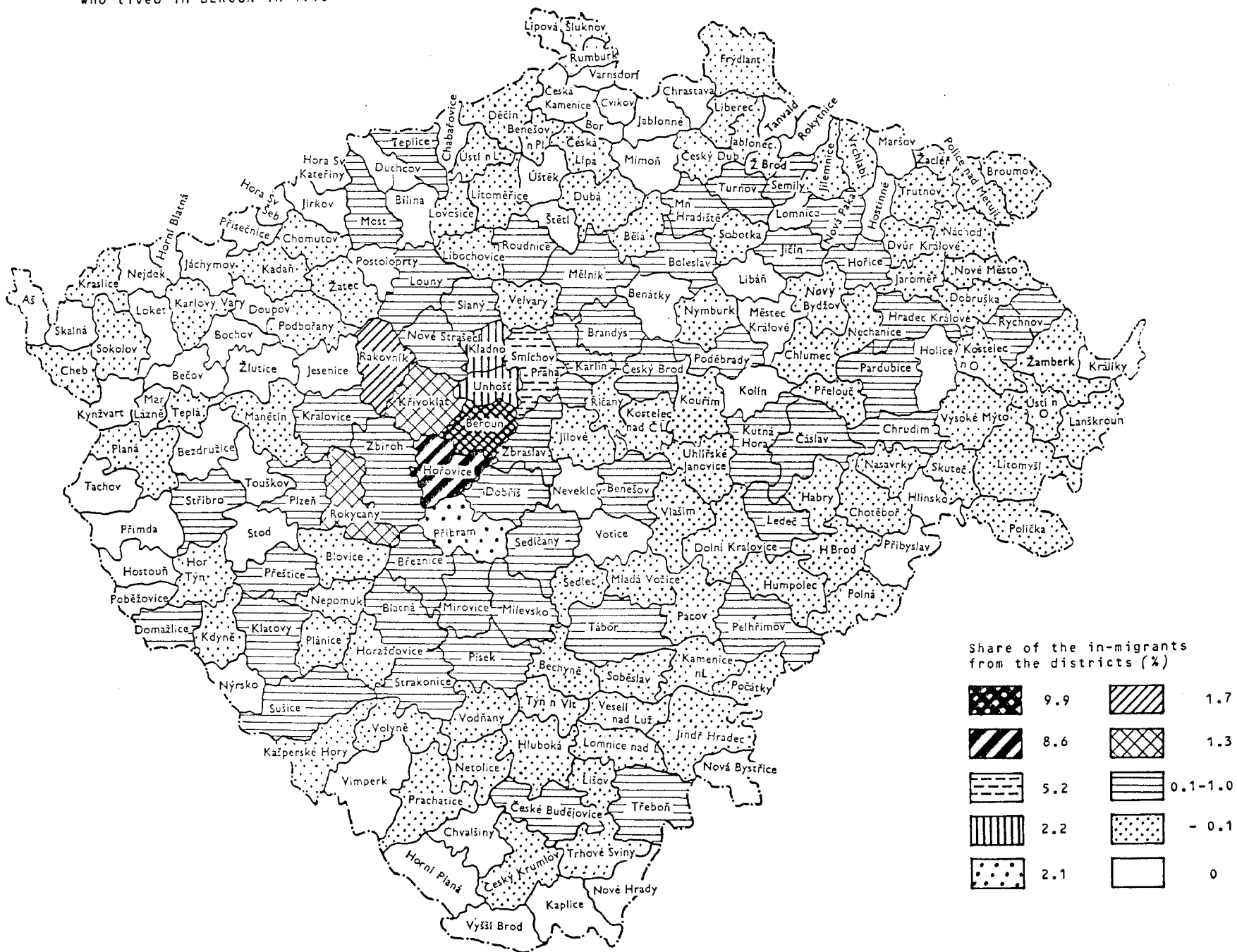


Fig. 2 Origin of the in-migrants who lived in KRÁLŮV DVŮR in 1910

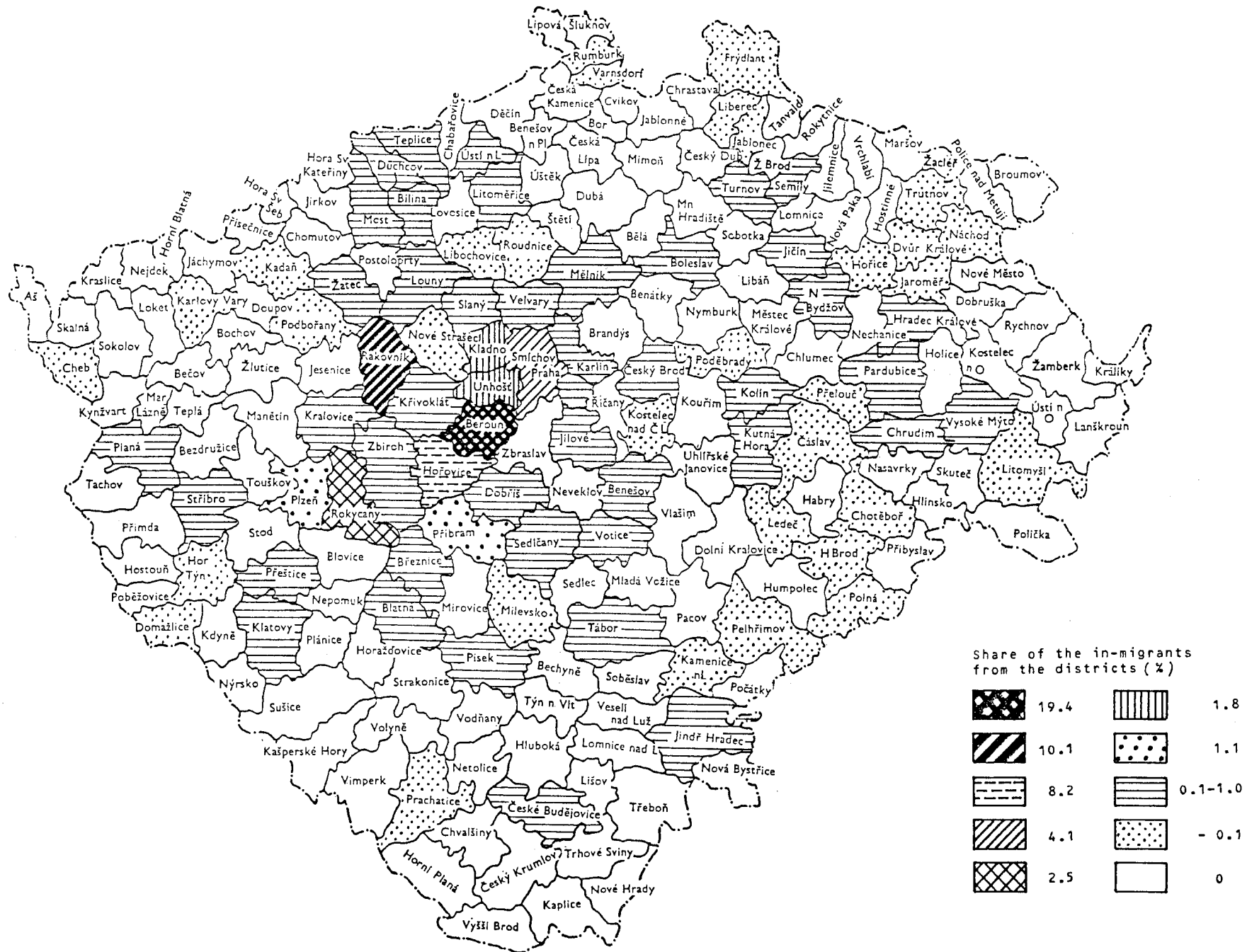


Fig. 3 Origin of the in-migrants who lived in POČAPLY in 1910

