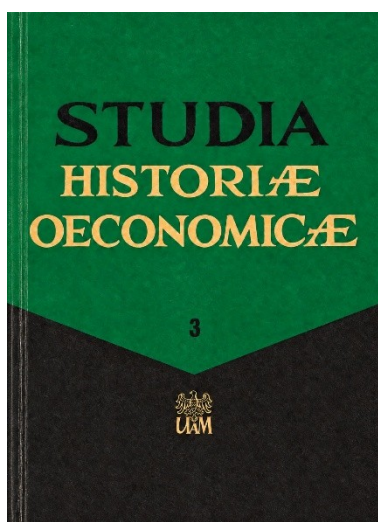




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Spółeczna  
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Nauki II

Stanisław B o r o w s k i

## DEMOGRAPHIC DEVELOPMENT AND MALTHUSIAN PROBLEM IN THE POLISH TERRITORIES UNDER GERMAN RULE, 1807—1914

I. *The aim, scope and source materials of the paper.* In this paper the author endeavours: 1) to analyse population development in the area between the Nysa, Odra, Lower Wisła and Lower Niemen in the years of 1807—1914; 2) to confront the Malthusian population theory in the first century after its publication with the long run demographic development in the area under research.

The subject of the analysis comprises: marriages, births and deaths; the total, natural and migrational increase of population; changes in population density, in its age and sex distribution as well as in its division according to residence and source of living.

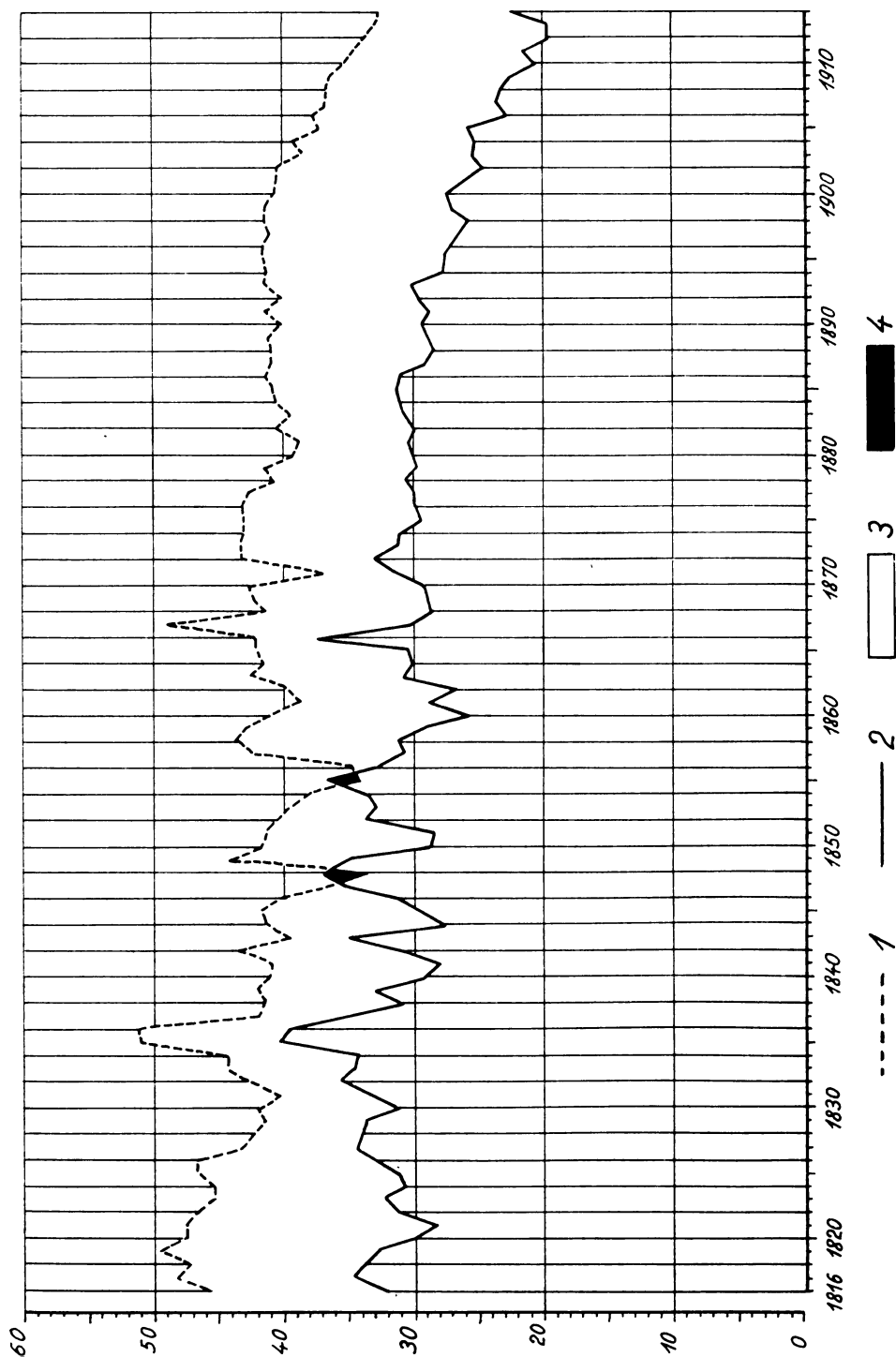
The Malthusian theory has become a basis of a debate lasting until present days. In that debate have participated i.a. theoreticians in demography, experts in the national and international population policy and historical demographers. From the long range of problems discussed we have chosen only three questions.

The first one concerns the mutual relation between the development of resources, especially of food, and the development of population. The Malthusian model: food production increases according to arithmetic order, and population, however, in geometrical order — has been seldom verified in post-Malthusian times in Europe. The point of our discussion shall be: when and how far the Malthusian model and the demographic development have diverged in the investigated area.

The second question refers to relation between the socio-economic and demographic factors. We will examine which factors had checked and which stimulated the demographic development.

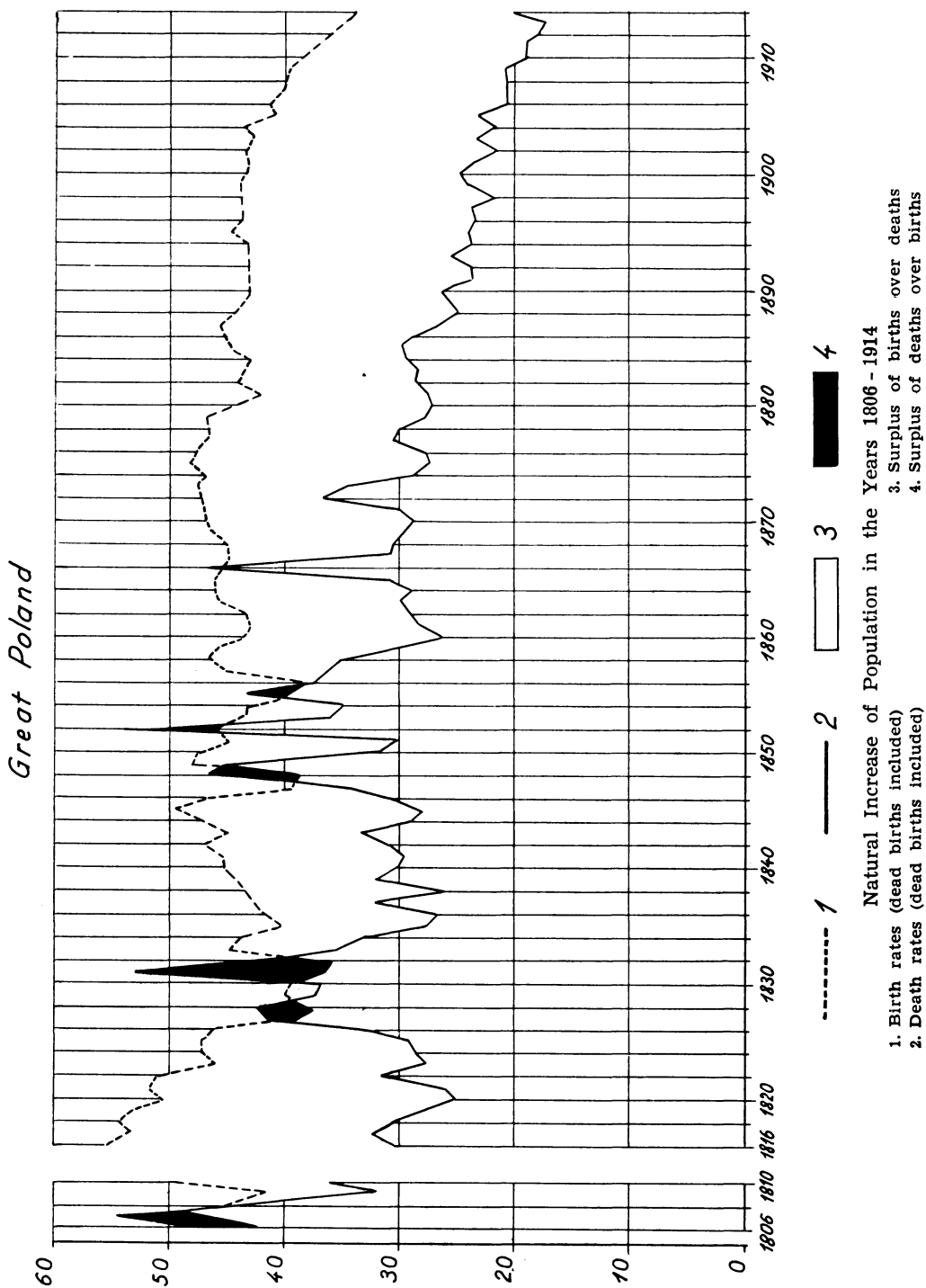
The third question refers to demographic influence on economy and social conditions in the said area.

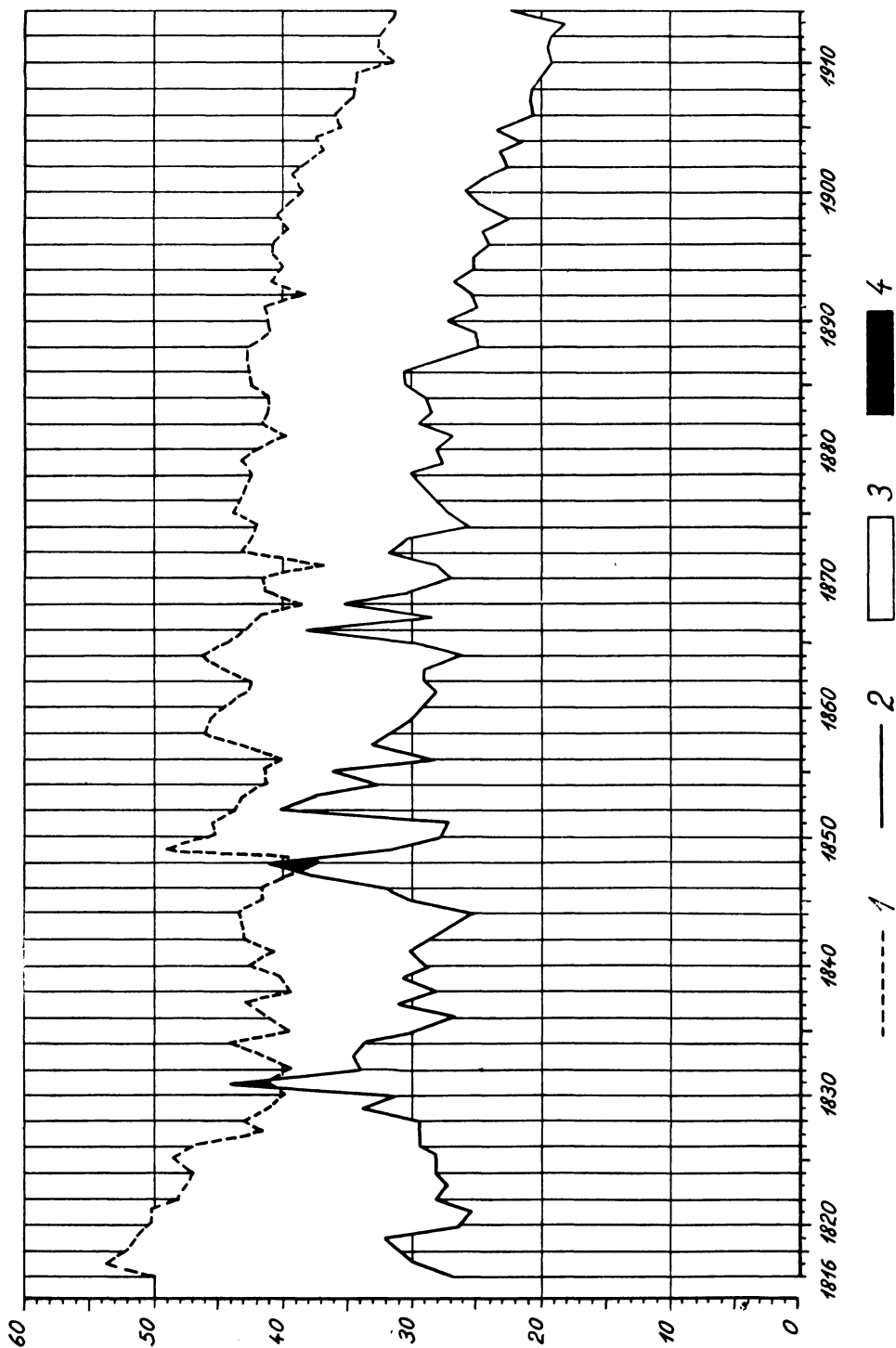
For comparison purposes we have divided that area into three regions corresponding to former administrative units, namely, Silesia equal to Prussian province of Schlesien, Great Poland in the boundaries fixed by Vienna Congress 1815 as those of Grand Dukedom of Poznań,

*Silesia*

Natural Increase of Population in the Years 1806 - 1914

1. Birth rates (dead births included)
2. Death rates (dead births included)
3. Surplus of births over deaths
4. Surplus of deaths over births



*Pomerania*

Natural Increase of Population in the Years 1806 - 1914

1. Birth rates (dead births included) 2. Death rates (dead births included)
3. Surplus of births over deaths 4. Surplus of deaths over births

Pomerania comprising three Prussian provinces: Pommern, Westpreußen and Ostpreußen. Nowadays except for four districts belonging to the German Democratic Republic, Silesia is a part of Poland. Similarly total Great Poland and the major part of Pomerania belong to Poland. Some western districts of Pomerania (Regierungsbezirk Stralsund) are situated in the German Democratic Republic and an eastern part of Pomerania (approximately Regierungsbezirk Königsberg) belongs to the USSR. Thus about 90% of the investigated area constitutes the western and northern territories of Poland. Today, the total area is a point of scholarly scientific and political interest in Europe.

In the time period of 1807—1914 we can distinguish three periods of demographic development: 1807—1840, 1840—1871, 1871—1914.

During the first period the state authorities managed to centralize the results of parish registration of natural movement but they had no interest in migratory movements of population. During the censuses population had been counted but not registered. Until beginning of 1830's the census work was done by great landowners or their officials who in those times also performed state administrative duties.

Population development was approximately of stationary character. Years of birth surplus and years of death surplus alternated. As a rule there was also migrational surplus.

In the same time several economic and social reforms took place which indirectly resulted in diminishing checks and in shaping stimuli of population development. That time we shall regard as a period preceding the demographic revolution in the investigated area.

In the second period of 1840 - 1871 the registration and statistics of natural movement of population had been improved and observation of migrational movement for statistical purposes began. During censuses population was registered by name and the results aggregated by administrative units. The census work was done by state officials of the regional administration.

The population stationary by development was slowly changing into a progressive one. The surplus of deaths over births has occurred from time to time but it was not significant. The number of emigrants, especially after 1860 has grown from year to year.

In that time the agricultural production increased, the development of modern industry began, the home market became larger and larger, and the capitalistic system prevailed. It was a transitional period from demographic situation with nearly equal levels of mortality and natality to demographic development with considerable surplus of births over deaths; from traditional socio-economic system including feudal elements to a modern system based on growing industry.

In the third period the statistics of natural movement have been completed by establishing in 1874 the marital status offices for registration of births, deaths and marriages. Current reports from these offices were sent to the Prussian Royal Office of Statistics. The population census was perfected. Persons and their characteristics were registered in individual forms which were elaborated in the central office. Because of non-reliability of current registration of migrants the Prussian authorities ceased to collect data of this kind in 1880's except for figures on overseas emigration.

In that period the death rates began to fall. On the contrary, the birth rates were growing at first and later on followed the death rates. In the progressive development of population the emigration caused ever greater losses.

Simultaneously further development of agriculture, industry, transport, trade and commerce and of other services was observed.

The beginning of a permanent fall of death rates marks the demographic revolution and the fall of birth rates — the beginning of demographic counter-revolution. Therefore the years of 1871 - 1914 will be subsequently referred to as the period of demographic revolution and of counter-revolution.

The sources of our investigation mentioned above consist of hand written and printed materials comprising results: of registration of births, deaths and migration, of population, occupational and agricultural censuses, of the estimates of agricultural production and of the agrarian reforms.

Those source materials were collected and elaborated by Statistical Offices of the Warsaw Dukedom, of the Prussian state and of the German Reich. The reader will find detailed information about those sources under the enclosed statistical tables.

II. *The period preceding the demographic revolution. 1807—1840.* During the whole period the natural movement of population showed great and rapid changes, whose amplitude was small in the rather developed Silesia and very large in more under-developed Great Poland. Yearly changes have been presented in diagrams enclosed. When considering five years changes we may find that the death rates changed between 27,3 and 42,1 deaths per thousand population and the birth rates between 41,2 and 53,3 live and dead births per thousand population (table 6). The death rates in towns were approximately 12% higher than in the rural areas.

There exists a doubt that the high birth and death rates have been caused by incomplete census results of population. Some demographers estimated the number of omitted persons during the mostly incom-

plete census of 1816 as 5% to 13% of the total population. We will not undertake any discussion on details and only say that the mentioned percentages are not overestimated.

In the years of 1816—1819 the population censuses were taken each year. The next census was in 1821 and the following ones took place every third year. The birth and death rates have been based on average population calculated from three censuses. Therefore the greatest difference between the calculated rates and the true ones should be less than 5%.

Assuming full information about number of births, deaths and number of census population we have calculated the net migration. It was positive in all regions (table 8). The positive net migration, especially in Silesia, recently has become a subject of controversy. For its unreliability there were mentioned: incompleteness of population censuses, economic under-development of Silesia, a considerable emigration and lack of information about immigration or on investments in new buildings making indirectly probable positive net migration.

According to our appraisal the calculated net migration is highly probable. The incompleteness of census results has been not sufficiently proved. It concerns chiefly the first censuses between which the positive net migration was rather low. But the highest net migration occurred between the later censuses which were rather complete and reliable.

It is true that the area under research was economically under-developed in those times and that there was a considerable emigration of population, especially of population living from textile trade. But we have to keep in mind that the area represented a higher level of development in comparison with the territories east and south of the investigated regions. The historical regularity in migrational movements is that the population flows from low income areas to regions with high incomes per capita or square kilometer. In the investigated area the pull factors for immigrants from the eastern and southern territories were demand for labour force caused by agrarian reforms, construction works and the beginning of modern industry. As a rule those immigrants inflowed illegally and therefore were not registered by public authorities although tolerated. As concerns the most under-developed region of Great Poland we have found plentiful information on migrational inflow mainly from the east and on construction of new houses in rural and urban areas. As concerns the regions of Silesia and Pomerania the problem of immigration and housing development has not been yet thoroughly examined.

Population density decreased from the south to the north. In 1816 it amounted in Silesia to 48, in Great Poland to 29, in Pomerania to 22 persons per square kilometer and in 1840 — to 70,43 and 35 respectively (table 3).

The percentages of persons in the age group of 14 years and younger used to oscillate between 37% and 41% of the total population. Those percentages were slightly lower in the town than in the country-side. Population in productive age of 15-60 amounted to 54%-57% but those percentages were higher in towns than in the country-side. Elderly persons in the age of 61 years and over represented about 5% of the total population.

In Silesia, the percentages of urban population oscillated about 20%, in Great Poland 28% and in Pomerania 24%. During the whole time period preceding the demographic revolution those percentages did not change evidently. As the natural increase of the urban population was significantly lower than the increase of the rural population the stable distribution of population between towns and country-side was possible thanks to little migrational surplus in towns (table 4).

In that period detailed information on distribution of population according to means of living is available for Great Poland only. About 78% of population made their living from agriculture and 12% from industry and handicraft (table 5). Those percentages did not change likely in Pomerania; in Silesia, however, the part of population living from non agricultural sources was probably slightly higher.

Many social and economical factors limited population capacity of the investigated regions. The feudal agrarian order and the three fields system were the main causes of the low food production. The primitive land and water carriage made difficult the transportation of agricultural products. Therefore in each decade of the first half of the XIXth century (1806-1807, 1825-1828, 1831-1832, 1847-1848), famines occurred, usually together with wars (1806-1807, 1831, 1848) or epidemics (1831-1832). In the diagrams enclosed one can see a rapid increase of death rates and even a surplus of deaths over births. In the sense of Malthusian theory the positive checks limited the population growth. This situation became better and better from the end of 1830's.

A characteristic trait of the agricultural feudal society at the beginning of the XIXth century was the considerable percentage of non marital population. In the country only the farm owners and tenants, functionaries and handicraftsmen attached to landlords and a part of free workers and cottagers could marry and maintain a family. An important part of the rural population constituted the adult but non-

-married peasant children and agricultural servants staying with the peasants or with the landlords. These peasants with their children and their servants cultivated their farm areas and those of the landlords. In the towns on the other hand only the handicraftsmen and traders and a part of free workers and cottagers were married. The servants staying with handicraftsmen and traders and the other part of free workers and cottagers were not able to maintain a family. Thus we see some other checks of population development similar to the Malthusian preventive checks. About 1840 their impact on population growth began to fall.

In the time period preceding demographic revolution there were also some factors stimulating demographic growth. The high death rates caused naturally high birth rates. The years of famines, wars and epidemics were followed by compensatory time periods with a high natality. Those time periods were the longer and the natality the higher when the famines, wars and epidemics had lasted longer and caused more victims of death. The percentages of elderly people, of 61 years and over, were very low (ca 5%). Thus the population was rather young what contributed to a high fertility.

In the years of 1807—1840 the economy and social life were always under the pressure of demographic factors. In the investigated regions there was a surplus of population which in the conditions of those times could not find job, sufficient food and house.

Under the impact of French revolution, some interests of the state and especially under the demographic pressure the rural population gained the personal freedom in 1807—1809, and the economic freedom in 1811—1823. Thereafter some other agrarian reforms were introduced. The freedom of moving from place to place, the new division of rural population into the landowners and the landless, the abolishment of *corvée* and of other peasant services to the landlords as well as of the rights of common gave a start to technical progress, growth of employment and production in the agriculture.

All those and the urban overpopulation caused at the beginning of 1830's similar reforms in industry, commerce and trade. I. a. the towns have been liberated from the feudal authority and the handicraftsmen from the last dependences of the guilds.

Consequently, the labour force resources and reserves had been used for capital accumulation which was the basis of capitalistic system, progress and exploitation.

Confronting all these changes with the Malthusian population theory one may say that Malthus tried to examine the nature of poverty. He saw its basis in overpopulation. But he did not foresee that from the

poverty and victims of human mass could arise a new economic system with technical progress and production growth. All those could enlarge the population capacity of regions and improve the standard of man's living.

III. *The transition period, 1840 - 1871.* The natural movement of population became more stable than in the previous time period. The change range of birth and death rates diminished mostly in the more developed Silesia and Pomerania but remained almost unchanged in Great Poland. In the total area, the five years average numbers of death per thousand population alternated in the limits between 28.1 and 39.3, the same average of dead and live births between 38.7 and 46.6 (table 6). As a rule the death rates in towns were higher than in country, the birth rates, however, higher in the rural areas than in the urban ones.

As the contrary to the former period the completeness of census results may not be discussed and there is no doubt about the natural and migrational increase resp. decrease in population.

The investigated area was becoming a scene of lively migrational movement. More and more emigrants were leaving for different regions, especially for the western and overseas countries. They were replaced by immigrants flowing in from regions east and south of area under research. The net migration was negative and grew permanently (table 8).

In 1840 - 1871, the population density increased considerably: in getting industrialized Silesia from 70 to 92 persons per square kilometer, in Great Poland from 43 to 55 in Pomerania from 35 to 49 (table 3).

Except for some local areas the number of females was equal or higher than that of males.

The percentage of children in the age of 14 years and less increased slightly in comparison with the previous time period. Those percentages were in towns about 4% lower than in the country. The share of population in the age of 15 - 60 was about 4% higher in towns than in the country-side. The part of old people, 61 years and over, remained on the level of 5%. Those percentages of age structure show the influences of country-towns migration.

The share of urban population in Silesia rose from 20% to 25% of the total population, in Pomerania from 23% to 25%, but in Great Poland there were no significant changes (table 4). In 1861, 44% of the total population in Silesia found their source of living in agriculture, in Great Poland — 54% and in Pomerania — 58%. In the same year industry and handicraft were the source of living for 38% of the to-

tal population in Silesia, for 28<sup>0</sup>/<sub>0</sub> in Great Poland and for 20<sup>0</sup>/<sub>0</sub> in Pomerania (table 5).

In the transitional period famines (1847 - 1848), epidemics (1852, 1856, 1866) and war appeared suddenly causing higher level of mortality, even a surplus of mortality over natality. The calamities, however, lasted during a very short time and between those the increase of population was considerable. Thus the calamities did not check the population growth to the same extent as in the previous period.

The number of unmarried people, rather large in the pre-revolutionary time period, was diminishing relatively. Ever more extensive and intensive agriculture, lively construction development, the development of industry and transportation enabled the employers to offer more jobs with possibility of maintaining a family. The demand for labour force, growing production of food, houses, and of other consumer goods, developing land and railway transport resulting in exchange of people, products and culture between rural and urban areas and especially the demographic youth of the society — all those were the basic stimuli of population growth in the transition period.

The population growth animated mutually the socio-economic life. Great labour force resources and reserves favoured the basic capital formation. Human masses not entirely employed and receiving relatively low wages in comparison with growing properties were getting radical. Those who became landless during former agrarian reforms were demanding that the lost or still cultivated farm areas should be their own. Those who kept the farm areas as their own after reforms were organizing peasant circles for self-help purposes. The urban proletariat was demanding solution of social problems. The first steps in organizing cooperatives and trade unions were made. The demographic and socio-economic growth was correlated with development in education, health service, literature and arts.

Thus in the transition period the Malthusian positive and preventive checks were exerting ever lower pressure on population growth. There also appeared new factors stimulating that growth.

IV. *The period of demographic revolution and counter-revolution 1871—1914.* The rapid changes in natural movement of population were stopped and the falling tendency appeared. At first the death rates began to fall. Later on the birth rates started to follow but more slowly. The curve formed by those rates took a shape of a falling arm of a convex parabola (See diagrams). When comparing the years of 1871—1875 and of 1911—1914 we may see that the death rates were fallen: in Silesia from 31.1 to 21.0, in Great Poland from 31.6 to 18.5 and in Pomerania from 28.5 to 19.8 At the same time the birth rates dimin-

ished: in Silesia from 41.7 to 33.2, in Great Poland from 46.0 to 35.2 and in Pomerania from 41.5 to 32.0 (table 6).

The natural increase, sometimes amounting to 2% of the average population was absorbed in a great part by emigration to the western and overseas countries.

In the total investigated area the yearly migrational losses of 57 thousand in 1872—1880 rose to 107 thousand in 1880's and then the losses were falling to 78 thousand in the first decade of the XXth century. Otherwise the losses absorbed from 41% to 78% of the total natural increase (table 8).

In 1871—1910 the population density in the most industrialized Silesia rose from 92 to 130 persons per square kilometer, in Great Poland from 55 to 72 and in agricultural Pomerania from 49 to 58 (table 3).

In the whole area the number of females was higher than the number of males. The surplus of females was caused by natural factors, by urbanization and by a great number of male emigrants.

Important changes may be observed in the age distribution. In 1900 the percentages of children in the age of 14 years or less oscillated about 40%. In the towns those percentages were falling to 34 and in the country they rose to 43. In the same time the percentages of population in working age in the total area amounted to 53, in towns to 59 and in the country-side to 50. The population was ageing evidently; the share of elderly people in the age of 61 and over increased to 8%.

In 1910 the percentages of urban population in all regions under research oscillated about 35% (table 4). In 1907 the population living from agriculture in Silesia amounted to 36% of the total population, in Great Poland to 57% and in Pomerania to 51%. The industry and handicraft in Silesia constituted a source of living for 37% of population, in Great Poland for 19% and in Pomerania for 20%.

In 1871—1914, in comparison with the previous time periods, the socio-economic factors influencing the demographic processes had been greatly changed. One of the most significant results of agrarian reforms was the increase in food production. In Great Poland, for instance, in 1810—1910 the production of the four basic grains (wheat, rye, barley and oats) increased more than fourfold, of the potatoes more than 60 times and of cattle, sheep and pigs jointly — almost doubly. Besides the numerical increase the higher and higher quality of the products, especially of the animal products, was of great importance. In the same period the population of Great Poland increased 2.5 times. Similar changes were noticed in other regions (tables 1, 2 and 3). From the beginning of the transition period one may observe a very quick development of railway communication. Simultaneously with the increas-

ing in food production the railway transport facilitated the creation and development of great human agglomerations making their living from non-agricultural production. This resulted in the specialization of regions, subregions, centres and towns such as typically industrial centres in Silesia, agricultural Great Poland with food processing industries, agricultural and commercial centres in Pomerania. The agglomeration of population improving transport and economic specialization had a beneficial effect on the development of the regional markets, on the increase in agricultural and non-agricultural production, in employment and incomes.

As mentioned above the agrarian reforms gave a start to an intensive process of housing development in the country. The landlords were building more and more houses for the landworkers' families. The peasants, freed from the old dependences began to build their own houses adapted to all the evolution phases of their families. From the 1830's the increasing tendency of housing development may be observed in towns. At last the lively housing development was beneficial for the frequency of marriages and for family size.

On the contrary to the pre-revolutionary time period in rural and urban areas many demographically more valued work places were created. The landlords and owners of great peasant farms tried to secure the manpower during the whole year offering family houses or dwellings to married workers. Chiefly the seasonal labourers and foreign workers were single. In the towns on the other hand in the conditions of a developing market the skilled servants were able to found their own workshops and to maintain families. Simultaneously with the handicraft there developed a competing industry, assuring stable and slowly rising wages which allowed an important part of employed workers for marriage in young age and for maintaining a family.

The economic growth favoured the development of the material and of the non-material culture and especially offered an ever better health protection. The number of the sanitary personnel and particularly of physicians, accoucheurs and midwives grew as well as the level of the medical education and the efficiency of health service. In Great Poland, for instance, in the years of 1810—1898 the number of physicians per 10 000 inhabitants grew from 1 to 2.5, of the accoucheurs and midwives from 0.7 to 3.6, whereas in the years of 1825—1905 the number of health establishments increased from 1 to 5 per 100 000 inhabitants.

Thus the high production of food and of other goods, development of transport, construction of houses, school education and ever more efficient health service, increasing number of working posts and rising

incomes — all those favoured falling of mortality and kept high fertility.

In 1871—1914 we may observe not only the fall of mortality but also, although with some lag, a permanent decrease of fertility. In those times a positive correlation of incomes with family size had consolidated and lasted to the World War II.

In the same time the aspiration to an ever higher standard of living seemed to weaken that correlation. In the area under research the world-wide regularity that the birth rates follow the permanently falling mortality, appeared very evidently. The emigration of rather young people, the demographic ageing of population, the surplus of females in urban and industrialized areas — all those caused the decrease of fertility.

On the other hand the demographic development created ever greater demand for goods and favoured saving and investment.

The animated migrational movement between country-side and towns, the outflow of emigrants to the western and overseas countries and the inflow of immigrants from the eastern and western regions mean the transfers of population from low income regions to high income ones. In the investigated area a scarcity of labour force was noticed. There were attempts to replace the lacking manpower by mechanization in agriculture and by technical progress in the total economy.

## V. *Conclusions*

Let us elaborate conclusions from our confrontation of the examined demographic development with Malthusian theory.

In the area between the Nysa, Odra, Lower Wisła and Lower Niemien the thesis on the mutual relation between the development of resources, especially of food, and the development of population has been verified as concerns the pre-industrial period and preceding the demographic revolution. In the transition period that thesis was corresponding to the historical reality only to some extent. But in the period of demographic revolution and counter-revolution, the thesis discussed and the demographic development fully diverged. In the latter period the resources grew much faster than the population in the investigated area. The growth of resources became the real basis for demographic growth.

It is possible to see there the Malthusian positive checks (famines, epidemics and poverty) and the preventive ones (keeping back from marriage) in the pre-revolutionary period and in a minor degree during the transition period. Those checks ceased to exert any influence on population development during the demographic revolution and counter-revolution. In the last period there appeared a new type of checks

corresponding to the changed socio-economic conditions, namely: personal income modulating number of children in a family, aspiration to ever higher standard of living, women surplus in the industrialized and urbanized areas, emigration of young people and the beginning of demographic ageing of population.

Malthus treated onesidedly the relation between the socio-economic and demographic factors. He saw the negative influence of the relative overpopulation, overlooked, however, its consequences for the building of new economic system. In the period preceding the demographic revolution, in the case of investigated regions, the relative overpopulation exerted heavy pressure on the agrarian order, contributed to reforms in agriculture and to those in industry, in commerce and trade, in transportation and in other services. The great labour force resources made possible the basic capital accumulation, technical progress and prevailing of capitalism. In the capitalistic system the pushing role of demographic factors was resulting in creation of ever growing demand for consumer goods, in tendency to saving and investment.

The Malthusian theory arose in concrete conditions of space and time. During his long life the author has revised many times its theses following the historical experience. For socio-economic conditions of his own times and for similar conditions of later time periods the theory may play a diagnostic role. That theory could not and cannot be a basis for diagnosis and forecasting purposes in time periods with more developed conditions.

Table 1

Principal Crops per Capita (in 100 kilogram)

| Year                                      | Silesia                         |          | Great Poland                    |          | Pomerania                       |          |
|-------------------------------------------|---------------------------------|----------|---------------------------------|----------|---------------------------------|----------|
|                                           | The Four Basic Grain Production | Potatoes | The Four Basic Grain Production | Potatoes | The Four Basic Grain Production | Potatoes |
| Per Capita of the Total Population        |                                 |          |                                 |          |                                 |          |
| 1810                                      | .                               | .        | 2.0                             | 0.4      | .                               | .        |
| 1878                                      | 4.4                             | 8.9      | 5.5                             | 12.9     | 5.6                             | 7.3      |
| 1910                                      | 4.7                             | 16.7     | 8.4                             | 23.5     | 8.7                             | 14.6     |
| Per Capita of the Agricultural Population |                                 |          |                                 |          |                                 |          |
| 1810                                      | .                               | .        | 2.6                             | 0.5      | .                               | .        |
| 1882                                      | 6.5                             | 10.8     | 6.4                             | 12.1     | 6.4                             | 9.2      |
| 1907                                      | 15.1                            | 36.4     | 16.7                            | 45.3     | 15.4                            | 25.4     |

Source: Archiwum Główne Akt Dawnych, Archiwum Zamojskich (AGAD, AZ) 96. Wojewódzkie Archiwum Państwowe, Poznań (WAPP), Maj. Biała 243 b. Preußische Statistik (PS), H. 4; 5; 66; 81; 211; 225; 234. Statistik des Deutschen Reichs (S.D.R.), Bd. 4; 204; 210; 240.

Table 2

## Cattle, Sheep and Pigs per 100 persons\*

| Year | Per 100 Persons of the<br>Total Population |                 |           | Year | Per 100 Persons of the Agri-<br>cultural Population |                 |           |
|------|--------------------------------------------|-----------------|-----------|------|-----------------------------------------------------|-----------------|-----------|
|      | Silesia                                    | Great<br>Poland | Pomerania |      | Silesia                                             | Great<br>Poland | Pomerania |
| 1816 | 45.2                                       | 34.6            | 64.4      | 1849 | .                                                   | 81.0            | .         |
| 1861 | 40.6                                       | 53.5            | 53.6      | 1882 | 92.6                                                | 86.5            | 92.0      |
| 1910 | 36.6                                       | 60.8            | 68.1      | 1907 | 131.1                                               | 121.6           | 140.3     |

\* One unit of cattle = 10 sheep = 4 pigs (based on practice of the Prussian Statistical Office) „Zeitschrift des Königlich Preußischen Statistischen Bureau's". (ZKPSB) 1961, p. 215.

Source: ZKPSB 1961. PS, H. 218, 219, 234, SDR, Bd. 4, 212. Tabellen und amtliche Nachrichten, Berlin, 1849-1858.

Table 3

## Population Growth and Density per sq km

| Year | Population in thousands |                 |                | Index numbers |                 |                | Density per sq km |                 |                |
|------|-------------------------|-----------------|----------------|---------------|-----------------|----------------|-------------------|-----------------|----------------|
|      | Silesia                 | Great<br>Poland | Pome-<br>rania | Silesia       | Great<br>Poland | Pome-<br>rania | Silesia           | Great<br>Poland | Pome-<br>rania |
| 1810 | .                       | 781.2           | .              | .             | 95.3            | .              | .                 | 29              | .              |
| 1816 | 1942.1                  | 820.2           | 2139.9         | 100.0         | 100.0           | 100.0          | 48                | 29              | 22             |
| 1822 | 2194.7                  | 958.8           | 2596.2         | 113.0         | 116.9           | 121.3          | 54                | 33              | 27             |
| 1831 | 2464.4                  | 1056.3          | 2938.1         | 126.9         | 128.8           | 137.3          | 60                | 36              | 30             |
| 1840 | 2858.8                  | 1233.9          | 3366.7         | 147.2         | 150.4           | 157.3          | 70                | 43              | 35             |
| 1849 | 3061.6                  | 1352.0          | 3685.0         | 157.6         | 164.8           | 172.2          | 75                | 46              | 38             |
| 1861 | 3390.7                  | 1503.5          | 4256.6         | 174.6         | 183.3           | 198.9          | 83                | 51              | 44             |
| 1871 | 3707.2                  | 1583.8          | 4569.2         | 190.9         | 193.1           | 213.5          | 92                | 55              | 49             |
| 1880 | 4007.9                  | 1703.4          | 4879.9         | 206.4         | 207.7           | 228.0          | 99                | 59              | 53             |
| 1890 | 4224.5                  | 1751.6          | 4913.2         | 217.5         | 213.6           | 229.6          | 105               | 61              | 52             |
| 1900 | 4668.9                  | 1887.3          | 5195.1         | 240.4         | 230.1           | 242.8          | 116               | 65              | 55             |
| 1910 | 5226.0                  | 2099.8          | 5484.6         | 269.1         | 256.0           | 256.3          | 130               | 72              | 58             |

Source: AGAD, AZ 96. Mittheilungen des Statistischen Bureau's in Berlin 1848-1859 (Mittheilungen) ZKPSB 1861. PS, H. 5-234.

Table 4

## The Urban and Rural Population

| Year | Percentages of Urban and Rural Population <sup>a</sup> |                  |                  |                  |                  |                  | Index Numbers for Urban Population |              |           |
|------|--------------------------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------------------------|--------------|-----------|
|      | Silesia                                                |                  | Great Poland     |                  | Pomerania        |                  | Silesia                            | Great Poland | Pomerania |
|      | urban population                                       | rural population | urban population | rural population | urban population | rural population |                                    |              |           |
| 1810 | .                                                      | .                | 25.3             | 74.7             | .                | .                | .                                  | 82.2         | .         |
| 1816 | 20.4                                                   | 79.6             | 29.3             | 70.7             | 26.7             | 73.3             | 100.0                              | 100.0        | 100.0     |
| 1822 | 20.0                                                   | 80.0             | 27.4             | 72.6             | 24.7             | 75.3             | 110.8                              | 109.5        | 112.1     |
| 1831 | 20.2                                                   | 79.8             | 27.5             | 72.5             | 24.2             | 75.8             | 125.9                              | 121.1        | 124.0     |
| 1840 | 19.5                                                   | 80.5             | 28.6             | 71.4             | 23.1             | 76.9             | 141.4                              | 135.6        | 136.1     |
| 1849 | 20.1                                                   | 79.9             | 26.6             | 73.4             | 23.3             | 76.7             | 156.1                              | 149.9        | 150.6     |
| 1861 | 21.5                                                   | 78.5             | 28.0             | 72.0             | 24.6             | 75.4             | 184.8                              | 175.3        | 183.7     |
| 1871 | 24.6                                                   | 75.4             | 26.9             | 73.1             | 25.4             | 74.6             | 230.5                              | 177.3        | 203.6     |
| 1880 | 27.0                                                   | 73.0             | 28.0             | 72.0             | 27.4             | 72.6             | 273.8                              | 198.5        | 235.9     |
| 1890 | 29.9                                                   | 70.1             | 28.9             | 71.1             | 29.6             | 70.4             | 319.6                              | 211.1        | 254.5     |
| 1900 | 33.3                                                   | 66.7             | 32.6             | 67.4             | 32.9             | 67.1             | 393.9                              | 256.0        | 299.2     |
| 1910 | 34.8                                                   | 65.2             | 34.4             | 65.6             | 36.4             | 63.6             | 460.1                              | 300.7        | 349.2     |

<sup>a</sup> The Total population = 100

Source: See Table 3

Table 5

The Occupational Structure<sup>a</sup> of Population in Silesia, Great Poland and Pomerania in 1810–1907  
(The main occupations only. Indoor domestic service treated in the source as economically inactive persons)

| Year         | Total | Of Whom in the Following Occupations |                                 |                              |                                                                          |                                            |                                              |
|--------------|-------|--------------------------------------|---------------------------------|------------------------------|--------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------|
|              |       | Agri-<br>culture                     | Industry<br>and Handi-<br>craft | Commerce<br>and<br>Transport | Profes-<br>sions,<br>Public Ad-<br>ministra-<br>tion, Army<br>and Clergy | Indoor<br>Domestic<br>Service <sup>b</sup> | Without<br>or Unspec-<br>ified<br>Occupation |
| Silesia      |       |                                      |                                 |                              |                                                                          |                                            |                                              |
| 1861         | 100.0 | 43.9                                 | 37.5                            | 3.7                          | 3.5                                                                      | 2.7                                        | 8.7                                          |
| 1882         | 100.0 | 45.8                                 | 33.8                            | 6.6                          | 4.5                                                                      | 2.4                                        | 6.9                                          |
| 1907         | 100.0 | 35.6                                 | 36.5                            | 8.9                          | 4.6                                                                      | 1.5                                        | 12.8                                         |
| Great Poland |       |                                      |                                 |                              |                                                                          |                                            |                                              |
| 1810         | 100.0 | 78.5                                 | 12.2                            | 3.4                          | 1.7                                                                      | 2.0                                        | 2.2                                          |
| 1861         | 100.0 | 54.2                                 | 27.8                            | 3.6                          | 5.2                                                                      | 3.8                                        | 5.4                                          |
| 1882         | 100.0 | 64.0                                 | 16.9                            | 5.4                          | 5.0                                                                      | 3.1                                        | 5.6                                          |
| 1907         | 100.0 | 56.6                                 | 18.5                            | 7.1                          | 5.8                                                                      | 1.4                                        | 10.6                                         |
| Pomerania    |       |                                      |                                 |                              |                                                                          |                                            |                                              |
| 1861         | 100.0 | 57.8                                 | 28.0                            | 3.3                          | 3.2                                                                      | 2.7                                        | 4.9                                          |
| 1882         | 100.0 | 58.0                                 | 19.6                            | 6.7                          | 5.0                                                                      | 3.5                                        | 7.2                                          |
| 1907         | 100.0 | 50.5                                 | 20.0                            | 8.5                          | 6.4                                                                      | 1.8                                        | 12.8                                         |

<sup>a</sup> In 1810 and 1861 economically active persons without permanently helping family members; in 1882 and 1907 all economically active persons.

<sup>b</sup> in 1882 and 1907 also labourers at changeable job

Source: AGAD, AZ 96. PS H. 10. S.D.R., H. 4, 210.

Table 6

## Birth Rates, Death Rates and Rates of Natural Increase (in ‰)

| Years     | Silesia                 |                         |                          | Great Poland            |                         |                          | Pomerania               |                         |                          |
|-----------|-------------------------|-------------------------|--------------------------|-------------------------|-------------------------|--------------------------|-------------------------|-------------------------|--------------------------|
|           | Birth <sup>a</sup> rate | Death <sup>a</sup> rate | Rate of natural increase | Birth <sup>a</sup> rate | Death <sup>a</sup> rate | Rate of natural increase | Birth <sup>a</sup> rate | Death <sup>a</sup> rate | Rate of natural increase |
|           |                         |                         |                          |                         |                         |                          |                         |                         |                          |
| 1806—1810 | 47.4                    | 32.3                    | 15.1                     | 45.3                    | 42.1                    | 3.2                      | 50.7                    | 28.8                    | 21.9                     |
| 1816—1820 | 45.9                    | 30.7                    | 15.2                     | 53.3                    | 29.1                    | 24.2                     | 47.8                    | 27.3                    | 20.5                     |
| 1821—1825 | 42.9                    | 33.0                    | 9.9                      | 48.5                    | 28.6                    | 19.9                     | 42.1                    | 30.6                    | 11.5                     |
| 1826—1830 | 41.9                    | 33.8                    | 8.1                      | 40.2                    | 38.0                    | 2.2                      | 40.9                    | 35.1                    | 5.8                      |
| 1831—1835 | 41.2                    | 31.8                    | 9.4                      | 40.3                    | 37.9                    | 2.3                      | 40.8                    | 29.1                    | 11.7                     |
| 1836—1840 | 41.2                    | 30.0                    | 11.2                     | 46.6                    | 20.1                    | 16.5                     | 42.0                    | 28.1                    | 13.9                     |
| 1841—1845 | 39.1                    | 33.2                    | 5.9                      | 43.7                    | 37.6                    | 6.1                      | 42.3                    | 33.8                    | 8.5                      |
| 1846—1850 | 38.7                    | 33.0                    | 5.7                      | 43.3                    | 39.3                    | 4.0                      | 43.3                    | 35.1                    | 8.2                      |
| 1851—1855 | 40.2                    | 30.0                    | 10.2                     | 43.6                    | 32.8                    | 10.8                     | 43.7                    | 30.3                    | 13.4                     |
| 1856—1860 | 40.7                    | 29.2                    | 11.5                     | 44.7                    | 29.4                    | 15.3                     | 43.8                    | 28.2                    | 15.6                     |
| 1861—1865 | 43.2                    | 30.7                    | 12.5                     | 45.6                    | 33.0                    | 12.6                     | 41.2                    | 31.9                    | 9.3                      |
| 1866—1870 | 41.7                    | 31.1                    | 10.6                     | 46.0                    | 31.6                    | 14.4                     | 41.5                    | 28.5                    | 13.0                     |
| 1871—1875 | 41.4                    | 30.1                    | 11.3                     | 46.4                    | 28.6                    | 17.8                     | 42.7                    | 28.6                    | 14.1                     |
| 1876—1880 | 40.0                    | 30.7                    | 9.3                      | 43.3                    | 28.6                    | 14.7                     | 41.2                    | 28.8                    | 12.4                     |
| 1881—1885 | 40.8                    | 29.3                    | 11.5                     | 44.3                    | 26.3                    | 18.0                     | 41.9                    | 27.1                    | 14.8                     |
| 1886—1890 | 41.2                    | 28.8                    | 12.4                     | 42.8                    | 24.0                    | 18.8                     | 40.3                    | 25.4                    | 14.9                     |
| 1891—1895 | 41.2                    | 26.8                    | 14.4                     | 43.6                    | 23.6                    | 20.2                     | 39.7                    | 24.5                    | 15.2                     |
| 1896—1900 | 39.2                    | 25.4                    | 13.8                     | 42.3                    | 22.4                    | 19.9                     | 37.5                    | 23.1                    | 14.4                     |
| 1901—1905 | 36.5                    | 22.5                    | 14.0                     | 39.5                    | 19.9                    | 19.6                     | 34.5                    | 20.2                    | 14.3                     |
| 1906—1910 | 33.2                    | 21.0                    | 12.2                     | 35.2                    | 18.5                    | 16.7                     | 32.0                    | 19.8                    | 12.2                     |
| 1911—1914 |                         |                         |                          |                         |                         |                          |                         |                         |                          |

<sup>a</sup> Dead births included.

Source: AGAD, AZ 96. ZKPSB 1961, PS, H. 5-245.

Table 7

Rates of Total and Natural Increase of Population (in ‰)

| Years     | Silesia        |         |       |                  | Great Poland   |         |       |                  | Pomerania      |         |       |                  |
|-----------|----------------|---------|-------|------------------|----------------|---------|-------|------------------|----------------|---------|-------|------------------|
|           | Total Increase |         |       | Natural Increase | Total Increase |         |       | Natural Increase | Total Increase |         |       | Natural Increase |
|           | Towns          | Country | Total |                  | Towns          | Country | Total |                  | Towns          | Country | Total |                  |
| 1817-1822 | 17.1           | 21.2    | 20.4  | 16.0             | 15.2           | 30.2    | 26.0  | 23.4             | 19.0           | 36.6    | 32.1  | 21.7             |
| 1823-1831 | 14.2           | 12.5    | 12.9  | 10.8             | 11.2           | 10.6    | 10.7  | 5.4              | 11.8           | 14.4    | 13.7  | 16.4             |
| 1832-1840 | 12.9           | 17.4    | 16.5  | 9.0              | 12.5           | 19.0    | 17.2  | 11.1             | 10.0           | 16.7    | 15.1  | 10.1             |
| 1841-1849 | 11.0           | 6.8     | 7.6   | 8.0              | 11.1           | 9.8     | 10.2  | 10.8             | 11.0           | 9.8     | 10.0  | 10.4             |
| 1850-1861 | 14.1           | 7.0     | 8.5   | 8.8              | 13.0           | 7.3     | 8.8   | 8.7              | 16.5           | 10.6    | 12.0  | 11.0             |
| 1862-1871 | 22.0           | 5.0     | 8.9   | 11.6             | 1.1            | 6.7     | 5.2   | 13.6             | 10.4           | 6.0     | 7.1   | 11.8             |
| 1872-1880 | 19.1           | 5.0     | 8.7   | 11.6             | 12.5           | 6.4     | 8.1   | 16.5             | 15.4           | 4.4     | 7.3   | 14.1             |
| 1881-1890 | 15.4           | 12.1    | 5.3   | 10.4             | 6.2            | 1.4     | 2.8   | 16.3             | 8.5            | 2.4     | 0.7   | 13.6             |
| 1891-1900 | 20.8           | 5.0     | 10.0  | 13.5             | 19.2           | 2.2     | 7.5   | 19.4             | 16.2           | 0.8     | 5.6   | 15.0             |
| 1901-1910 | 15.8           | 9.1     | 11.3  | 13.9             | 16.1           | 7.9     | 10.7  | 19.7             | 15.4           | 0.1     | 5.4   | 14.4             |

Source: ZKPSB 1961. PS, H. 5-245.

Tabc 8

## Yearly Average of Net Migration by Regions, 1816—1910

| Years                           | Silesia | Great Poland | Pomerania | Total    |
|---------------------------------|---------|--------------|-----------|----------|
| Number of Persons               |         |              |           |          |
| 1816—1822                       | +3 957  | —1 157       | +15 145   | +17 945  |
| 1823—1831                       | +4 448  | +5 418       | +3 014    | +12 880  |
| 1832—1840                       | +20 016 | +7 068       | +15 993   | +43 067  |
| 1841—1849                       | —1 376  | — 878        | —1 795    | —4 049   |
| 1850—1861                       | —1 146  | —1 983       | +1 055    | —1 174   |
| 1862—1871                       | —9 551  | —11 111      | —21 672   | —42 335  |
| 1872—1880                       | —11 456 | —13 883      | —31 747   | —57 086  |
| 1881—1890                       | —21 068 | —23 294      | —63 163   | —107 525 |
| 1891—1900                       | —15 102 | —21 813      | —48 011   | —89 925  |
| 1901—1910                       | —12 994 | —18 028      | —46 908   | —77 930  |
| Per 1000 Population             |         |              |           |          |
| 1816—1822                       | +1.9    | —1.3         | +6.4      | +3.4     |
| 1823—1831                       | +1.9    | +0.5         | +1.1      | +2.0     |
| 1832—1840                       | +7.4    | +6.0         | +5.1      | +6.1     |
| 1841—1849                       | —0.5    | —0.7         | —0.5      | —0.5     |
| 1850—1861                       | —0.4    | —0.8         | +0.3      | —0.2     |
| 1862—1871                       | —2.7    | —7.2         | —4.8      | —4.4     |
| 1872—1880                       | —2.9    | —8.4         | —6.7      | —5.5     |
| 1881—1890                       | —5.1    | —13.4        | —12.9     | —10.0    |
| 1891—1900                       | —3.3    | —11.7        | —9.4      | —7.4     |
| 1901—1910                       | —2.6    | —8.8         | —8.7      | —6.2     |
| Percentages of Natural Increase |         |              |           |          |
| 1816—1822                       | +10.4   | —4.8         | +24.9     | +14.6    |
| 1823—1831                       | +17.4   | +100         | +8.6      | +19.5    |
| 1832—1840                       | +84.0   | +55.8        | +50.6     | +6.3     |
| 1841—1849                       | —5.8    | —6.3         | —4.8      | —5.4     |
| 1850—1861                       | —4.0    | —8.9         | —2.3      | —1.3     |
| 1862—1871                       | —23.2   | —53.1        | —40.9     | —36.8    |
| 1872—1880                       | —25.5   | —51.1        | —4.8      | —41.3    |
| 1881—1890                       | —49.3   | —82.8        | —95.0     | —78.3    |
| 1891—1900                       | —25.4   | —61.7        | —63.0     | —49.6    |
| 1901—1910                       | —18.9   | —45.9        | —61.8     | —42.4    |

Source: Calculated from: Mittheilungen 1848 - 1859. ZKPSB 1861. PS H. 5 - 234.

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