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## THE DIFFERENCES BETWEEN DEPOPULATION PROCESSES IN THE POLISH PART OF THE SUDETEN MOUNTAINS

### Introduction

Depopulation is often discussed by geographers in the context of living conditions in mountainous regions. The intensity of the process is closely related to the altitude on which people live [Ciok, 1988]. The extent of reduction and its reasons were discussed, for example, by Eberhard [1986], Jałowiecki [1984], and other researchers. The depopulation in the Sudeten area was considered in the context of the situation in Poland [Eberhard, 1975, 1986], Lower Silesia [Ciok, 1994; Miszevska, 1989; Zbieg, 1983], and the Odra Basin [Miszevska, 1983, Rauziński, 1987]. Different areas of the Sudeten Mountains were discussed at length as one of the elements which influenced geographical environment, and especially, local population [Chachaj, 1978; Miszevska, 1979, Salwicka, 1983].

The causes of depopulation can be associated with restrictions imposed by the government after WWII, according to which there were quotas for settlers who could live in border zones. Also, it can be associated with a lack of significant investment, the de-capitalisation of property value [Jałowiecki, 1984], the closing of factories in recent decades, and the limitation of resort and spa role in small towns. Also, geographic conditions were considered difficult, and agricultural land was considered poor in quality. Before WWII, however, the region had been densely populated and people enjoyed economic prosperity. In the 19<sup>th</sup> century, there was a depopulation trend in the area. The devastation associated with WWII was not big, and the immigrants from the eastern territories of Poland that were lost in consequence of the war, could easily settle

here. Unfortunately, farmers from eastern Poland were not used to cultivating land on high altitudes.

The following themes seem worth discussing:

- the turning point in the population history which divides the latter into two phases, increase and decrease in population (Fig. 1);
- the speed and range of depopulation (Fig. Fig. 2, 3);
- the demographic causes of the reduction; birth to migration ratio (Fig. 4).

The last mentioned subject was discussed in 1975 with regard to the change in administrative divisions, and the fact that the data were not collected, therefore, the demographic changes could not be described. There were 76 administration units included in the study (30 towns and 46 counties) which were located in the southern part of Silesian and Opole Provinces. The area under consideration is located above 350 metres above the sea level. That altitude is considered in studies on agriculture as the borderline of mountainous regions.

## Demographic Changes from 1950 to 2000

Changes over 10-year periods were analysed, although the year 1946 was not considered because, after WWII, migration was very dynamic. I considered time factor for territorial changes, and established the decisive moment (the population maximum growth point) (Fig. 1). One of the border dates between the decades was the date of maximum population growth, because I adopted ten-year periods as time measurement units. In fact, the data of maximum population growth was within a decade.

There are 15 units among the Sudeten towns and communes which can be characterised in terms of population increase, and that is 20% of all the units. The group includes two communes (Czarny Bór, Szczytna), and thirteen towns. Other towns and communes reached their population maximum growth points during past decades (Table 1, Fig. 1).

**Table 1.** Towns and communes according to maximum population growth

Towns and communes	Total	Towns and communes with population decrease	Maximum population growth from - to				
			1948-1950	1951-1960	1961-1970	1971-1980	1981-1990
Towns	30	17	1	3	5	8	13
Communes	46	44	19	8	9	8	2
Total	76	61	20	11	14	16	15

Source: author's own statistics, based on *The Polish Statistics, No. 70*, GUS 1989, and *Statistics Yearly for Jelenia Góra, Opole, and Wałbrzych Provinces*, 1981, 1991.

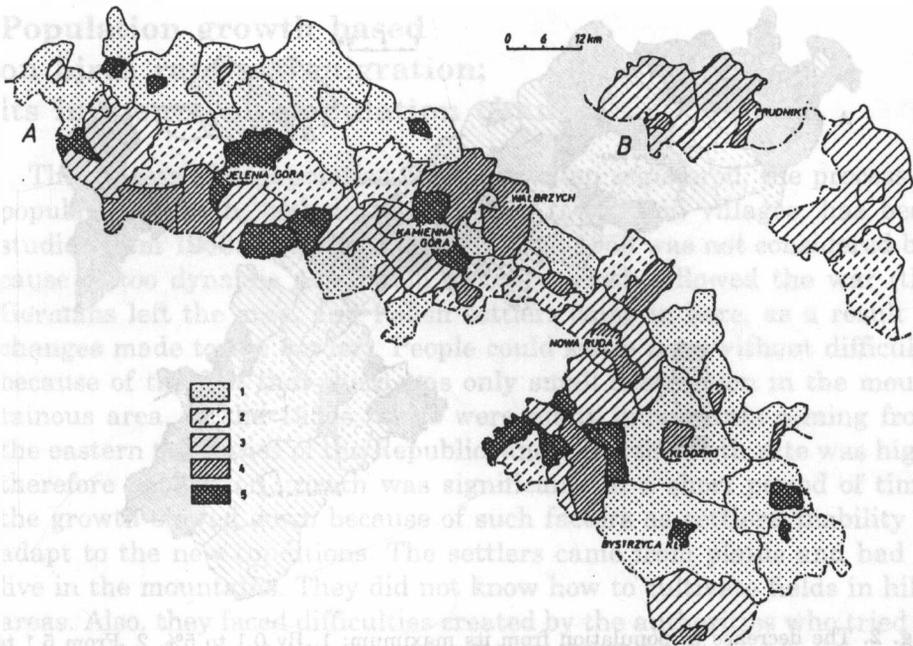


Fig. 1. Urban and village communes, according to periods of maximum population growth, a) Lower Silesian communes, b) Opole communes; maximum to 1. 1960; 2. 1970; 3. 1980; 4. 1990; 5. communes with growing population

The chart illustrates the process of population decrease, which, in village communes, started about 20 years before the depopulation of towns. The process of depopulation was longest in the southern communes, in Kłodzko Valley, and Northern communes which were not well urbanised.

The decrease in the population is illustrated in Fig. 2. It was from less than 1% to over 20%. The decrease is proportional to the length of depopulation process. Most numerous are the units with 5% decrease (20 units), and with 10 to 20% decrease (16 units). The biggest decrease was in such communes as Leśna – over one third of their population, Bardo – one fourth of their population, Głuszyca, Lubomierz, Wleń – one fifth of their population. In all those communes, the depopulation process and its range were the basis of calculation of median yearly depopulation rate (Fig. 3). Communes with less than 0.20% per year rate are considered medium stagnate areas, communes with 0.21 to 0.50 rate are considered medium depopulatory, and above 0.50% rate are considered depopulatory. Most intensive depopulation was recorded in Głuszyca (0.87%). The location of communes with decreasing population follows one clear pattern: depopulation trend is very strong in the North.

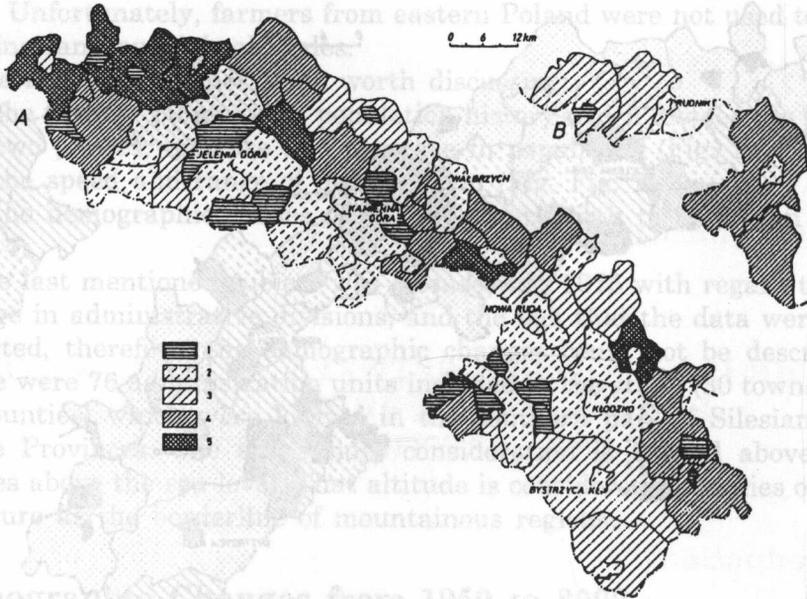


Fig. 2. The decrease in population from its maximum: 1. By 0.1 to 5%, 2. From 5.1 to 10%, 3. From 10.1 to 20%, 4. From 20.1 to more, 5. Population growth

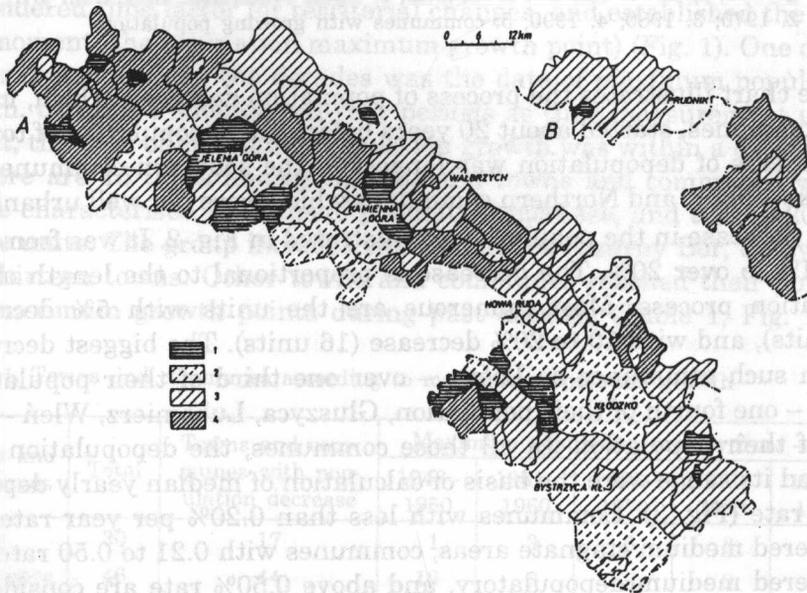


Fig. 3. Communes according to the decrease rate (from maximum), medium yearly decrease, 1. Stable, 2. medium de-populatory, 3. Strongly de-populatory, 4. Units with a growing indicator

## **Population growth based on birth rate and migration; its influence on population change**

The process of depopulation, and, less often registered, the process of population growth, both in the Sudeten towns and villages, has been studied from 1950. The period from 1945 to 1950 was not considered because of too dynamic population mobility which followed the war (the Germans left the area, and Polish settlers came in here, as a result of changes made to the border). People could settle here without difficulty because of the fact that there was only small destruction in the mountainous area. In the 1950s, there were many immigrants coming from the eastern territories of the Republic, and, also, the birth rate was high, therefore population growth was significant. In a short period of time, the growth slowed down because of such factors as settlers' inability to adapt to the new conditions. The settlers came from plains and had to live in the mountains. They did not know how to cultivate fields in hilly areas. Also, they faced difficulties created by the authorities who tried to limit settlement in the border zone. Limited availability of services and closing of industrial facilities, contributed to a further decrease in the population. In the 1960s, the decrease in the population coincided with the migration of people who left the area. The trend was different in different parts of the region, and it was stronger in towns than in villages. The connection between population growth and migration was studied only for the period from 1975 to 2000. The administrative changes in 1975, and lack of data regarding real population growth and its components, made the research difficult. The relationship between population growth based on birth rate and migration was illustrated in a nomogram based on Webb's diagram. The nomogram shows the ratio participation of village and city communes and the relationship between both kinds of communes (Fig. 4). The nomogram shows the situation in 1975, 1990, 2000. There is an evident trend towards negative real population growth on all levels. In 1975, negative population growth based on migration was bigger than positive population growth based on birth rate. In 1990, there were communes with negative tendencies in both sectors. In 2000, negative tendencies dominated both sectors. I can conclude, therefore, that depopulation will continue and will be stronger in the future. The depopulation of villages is connected with a small increase in the population in towns and their suburbs. That tendency is not limited to the area I studied, but, it is dominant in many parts of Poland. The number of regions grows.

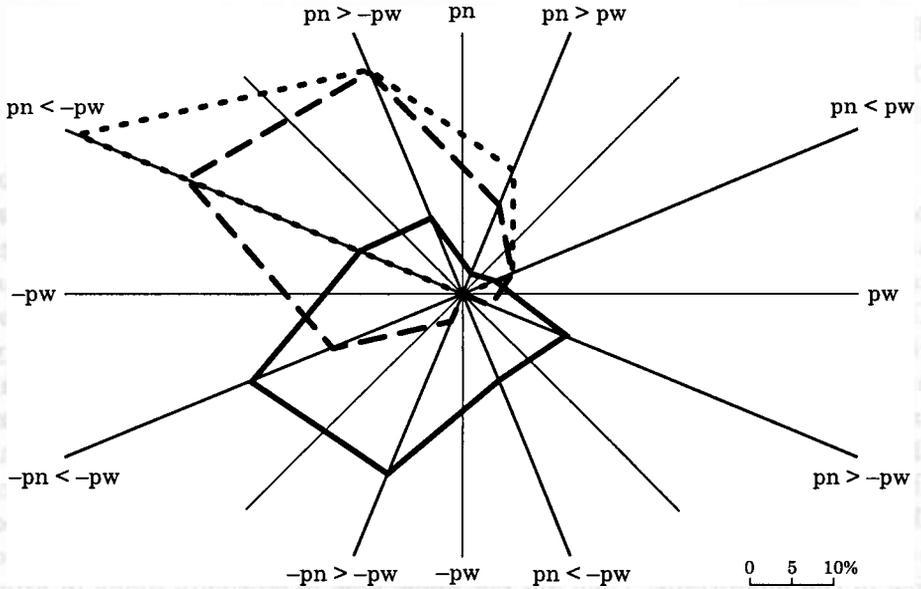


Fig. 4. The Sudeten communes according to the types of real growth in 1. 1975, 2. 1990, 3. 2000, 4. pn – natural increase, pw – net migration

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## POPULATION AGEING IN LOWER SILESIA: TRENDS AND REGIONAL DIFFERENCES

One of the most significant social phenomena is the process of population ageing. In the growing percentage of old people in numbers. Many scientists study this phenomenon in Poland. Z. Długosz, a representative of the so-called "Kraków School", analysed the process of population ageing in 1997 and 1998. He studied regional differences according to different types of the ageing process. S. Kozak, who also represented the Kraków School, investigated the problem in 1998 and 2000. He compared the results of his research with the data from different countries in Europe and south-western Poland. In 2000, J. Knapowska studied the ageing process of Lower Silesian population. She adopted a few indicators, such as demographic age and age median. Moreover, she collected data from four provinces (Voivodeships) in the area, and took into account the former administrative divisions. In 2002, M. Cieślak edited a compilation of studies whose parts were written between 1978 and 1989, and which were based on data provided by former Lower Silesian provinces. The writers compared the results of their research with the results from other regions in Poland and from abroad.

The authors of this study decided to analyse the differences between ageing processes in various voivodeships ("provinces") and counties ("powiaty"). In our research, we considered the new administrative divisions which had been introduced in 1998. We analysed the parameters of dynamic changes in the ageing process from 1975 to 1998. The data for the twenty years came from towns and counties. The data for 2000 came from counties and were regarded as recent. We considered the following indicators:

— demographic age indicator —  $W_1$  (percentage ratio of post-working citizens per population in general);