

The formation of the birth and death-rate -- which common event cannot be controlled by the governments -- is of a considerable importance in the lives of nations. It is in close connection with the growth of population, with the smaller or larger number of new workers of each year, and accordingly with the change of employment: the lack or excess in workers. The excess results in the compulsory speed, in the swing of economic life, the lack of workers in its compulsory slowing down. This is responsible for the distribution of population according to age, and consequently for the relations being within a society between those capable of work and the incapable ones, between the people of age, as well as between children and aged people. The rate of births and deaths forms the average age of life within a community and it may be high or low. From the point of view of economical and political life it results in the fact that in one community the change of generations is faster than in the other; young groups bringing new ideas and new will turn up more frequently, whereas in the other one the change and regeneration is slower; in one community the number of old, experienced people is continually diminishing, while in the other it is increasing.

Moving from the northwest towards the south and the east of Europe, the rate of births is gradually increasing. There is the same continuous, though not so rapid increase in the rate of deaths as well; in consequence of both facts the natural increase, as a result of the differences between the two, is gradually increasing from the northwest towards the south and the east. About 1930 in Sweden the rate of births per 100 souls was 14, in Germany 15, in Great Britain 16, in Belgium and France 17; at the same time in the European part of the U.S.S.R. 44, in Roumania and Jugoslavia 33, in Greece 30, in Poland 28, in Dismembered Hungary lying in the middle of the Carpathian Basin 23. Thus, the Central European territory forms

even in this respect a transition area between the portions of Northern Europe with a slight increase and those of Eastern and Southern Europe with a rapid increase.

Although the formation of the birth- and death-rate shows in places considerable changes from year to year, in the combined data of one larger territory it still has its quiet regular course. Especially regular is the appearance of the birth- and death-rate in the civilised areas, while it shows fluctuations in the poor and less civilised regions. In general, the birth-rate has fallen steadily all over Europe. This decrease is naturally slower in the western states being the birth-rate lower there, while it is more rapid in the southern and eastern countries showing a tendency toward being counterbalanced. In the number and rate of deaths too, there is a decrease in Europe; in most places, however, this annual decrease does not follow that of the birth-rate, consequently the rate of natural increase is slowly decreasing from year to year. In the western and more civilised states there is a regularity in the formation of death-rate, while in that of the eastern and southern countries large fluctuations may be noticeable; this occurs in the formation of natural increase as well.

The differences in the birth- and death-rate of the various states and regions, and at the same time the dynamism and vitality in the numerical progress of the communities are due to various causes.

These causes may be racial differences, the intermingling and sectarian distribution of the population, the diversity in economic conditions, occupational distribution and social structure, differences in civilisation, moral conditions and in the administration of justice, the development of health conditions and that of social work and family protection, differences in the rates of the rural and townspeople, conjunctural changes in economic life, the liberty of restriction in the migration movements, and con-

sequently the possibilities for a balance between the overpopulated and depopulated areas regulated by the political boundaries and relations among the different states.

None of these causes is decisive and exclusive. The totality of known and unknown causes may be said to have played its part in the development of the conditions; and as some of these causes influence or destroy each other, this phenomenon is impossible to be controlled. No doubt, in the formation of birth-rate the external influences, the conditions of living and the possibilities for movement are just as important factors, as the social and physiological qualities, the view of life and spiritual behaviour. As both the external circumstances and inner influences are equally important factors, it cannot be said that one nation is more prolific than the other, and from the momentary conditions no conclusions can be drawn relating to the far future.

Especially in Central Europe where numerous nationality groups and communities belonging to different denominations are living together in diversified geographical regions, with different standards of civilisation and social structure, in different settling and occupational conditions, it may be well noticed that the same nationality may be prolific in some regions, while in some other regions it is less prolific. Persons belonging to different ethnical or religious groups, show the same rapid or slow increase in some regions. The rate of natural increase changes according to time as well.

Our maps reflecting the conditions of popular movements, have been constructed on the basis of average data of a longer period. This is the only way to provide a reliable picture of the phenomena showing great fluctuations. Where data were available, the average data of a ten years' period between 1926 and 1935 were used, in some other cases the available average data of the years from the same period. The sources give an information about the years. In the average data covering a longer period, the tendency toward the chronological formation of the conditions disappears. Thus

the development of natural increase relating to time has also been illustrated by special maps per larger regions.

#### SOURCES:

- 1/ Dismembered Hungary: Magyar Statisztikai Évkönyv./Hungarian Statistical Yearbook.- Budapest.1926-35.
- 2/ Czecho-Slovakia: Pohyb obyvatelstva v Republice Ceskoslovenské v letech 1928-33. Praha,1936-38,1928-33.
- 3/ Roumania: Miscarea populatiei Romaniei.- Bucuresti, 1931-33.
- 4/ Jugoslavia: Statisticki Godisnjak.- Beograd,1930-36. /Supplementary data by districts from 1938/
- 5/ Austria: Atlas des deutschen Lebensraums in Mitteleuropa.Leipzig, 1937-1933.
- 6/ Germany: Atlas des deutschen Lebensraums in Mitteleuropa.Leipzig,1937. About 1933.
- 7/ Poland: Zagadnienia demograficzne Polski.- Warszawa 1936. For the year 1931-32.
- 8/ Bulgaria: Annuaire statistique du Royaume de Bulgarie Sofia.For 1925-1928, 1933-36.Statistique du mouvement de la population.-Sofia.For 1936-33.
- 9/ Italy: Atlante Fisico Economico d'Italia.- Milano, 1940. For 1929-1933.
- 10/ Ukraina: Mouvement de la population de l'U.S.S.R.en 1926.Moscou,1929.- For 1925-26.

A birth-rate above 40 per cent is to be found in White Russia, in the South of the Ukraine, in the middle portions of Moldavia and Bessarabia, further at the outer feet of the Southern Carpathians, in the district of the Danube-delta and in the western sections of Bosnia. The regions of the Máramaros Mountains in the northeastern part of the Carpathian Basin form a separate small spot with the same high rate of births. These areas are inhabited by different nations; in general, they are all sparsely populated, and extensive agriculture and livestock-breeding is to be found there.

The lowest birth-rate is to be found in Lower Austria, in the northern portion of the Styrian Basin and in Saxony. These regions are not of the same character. Saxony has a very dense population, 356 souls per one square kilometre; Lower Austria only 123, but in the Alpine districts where the rate of the population growth is also very low, on an average 20-25 souls live per one square kilometre. Saxony has, for the most part, an industrial population, whereas the inhabitants living in the regions of the Alps and Lower Austria having a slight increase, are devoted chiefly to agriculture and livestock-raising. As regards religion, Saxony is Protestant, the Lower Austrian portions are Roman Catholic; from nationality point of view both are pure German territories.

Especially striking is the difference between the natural increase of the regions of the Eastern and Southern Carpathians. In the western portions of the Southern Carpathians, on the inner and outer slopes as well, the majority of the population is Roumanian. These primitive, agricultural and live-stock-breeding mountain-people living on the outer slopes of the Carpathians have a rate of births twice as high as those living on the inner slopes of the mountains, in the Hungarian Basin.

In spite of the fact, that the Roumanians belonging to the same religious group, are living in the same occupational and social conditions, in the same geographical regions within and outside the ridges, their vitality is absolutely different. The only reason for it may be that while the Roumanian surplus population living on the outer slopes of the Southern Carpathians finds a good and natural settling territory in Wallachia, in the plain of the Lower Danube, the Roumanians of the highlands facing Transylvania find by no

means adequate settling areas in the poor and relatively over-populated areas of Transylvania. This non-prolific population living in the regions of the Southern Carpathians and at the southeastern edge of the Great Hungarian Plain, is in striking contrast with the high prolificness of the eastern portions of Central Europe. The majority of this less prolific population are Roumanians, the rest include Germans, Serbians and Hungarians.

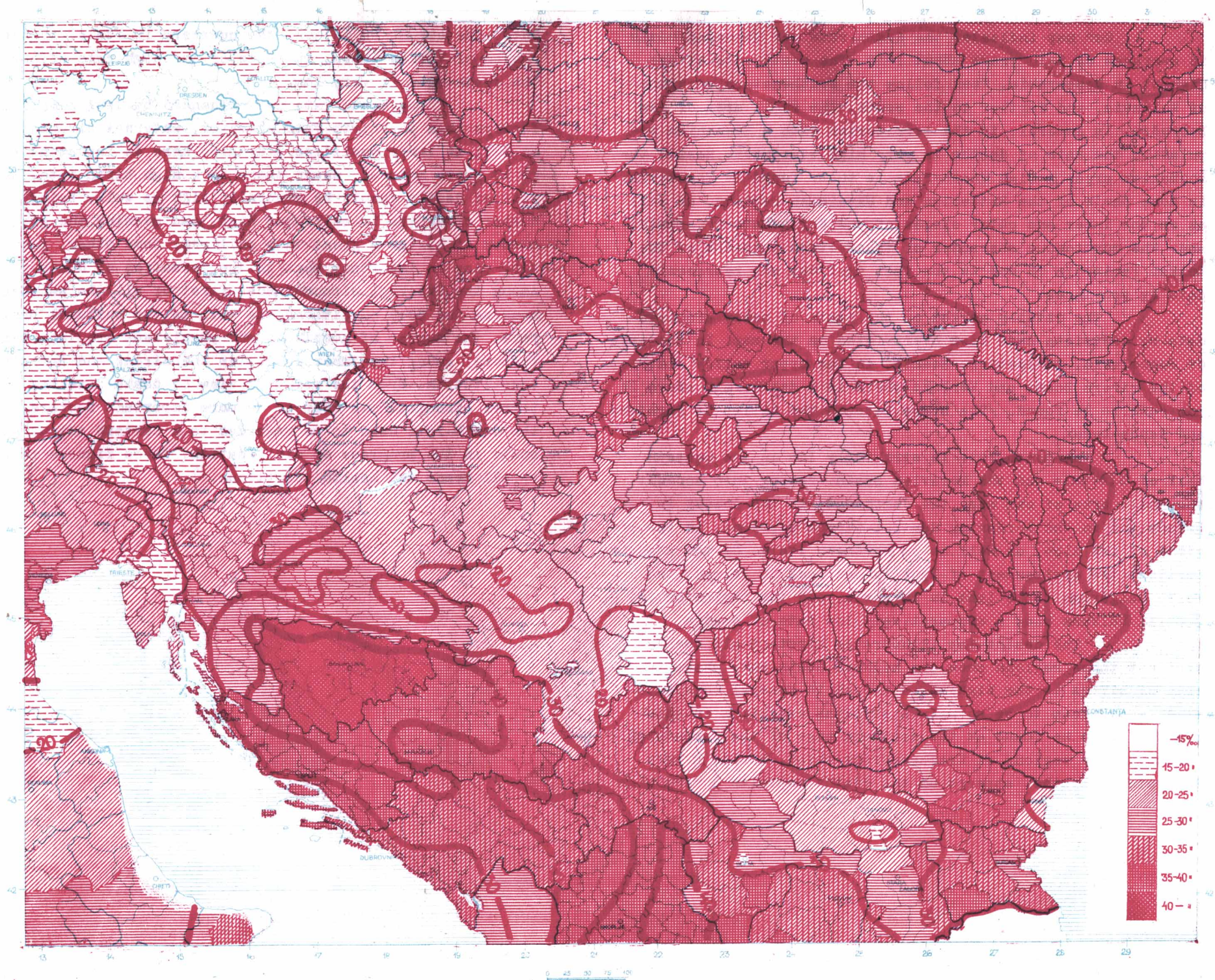
In the southeastern area of Central Europe the densely populated Polish territories of Galicia show a slight rate of increase. The sparsely populated highland areas of the Balkans similarly show a slight rate of increase, although they are inhabited by the same Bulgarian population who are living in the North Bulgarian table land, and in the basins lying south of these highlands having a high rate of births. In the portions of the Italian Peninsula facing Central Europe, the Po Plain shows a high birth-rate, higher than that of the highlands of the Alps. However, especially striking is the very low rate of increase to the north of Ancona between the Apennines and the sea-coast.

Within the Carpathian Basin the rate of births is very changeable. It does not follow either the nationality, or the religious or occupational conditions. In general, the northern portions are more prolific than the southern ones, as a consequence, there is a constant migration from the northern highlands down towards the regions of Transdanubia and the Great Hungarian Plain. A similar migration movement, though to a smaller extent, tends from the eastern borders towards the middle portions of the country. The levelled lands in the middle of the Carpathian Basin are suitable for the subsistence of a larger population, and the commercial and industrial centers, developing at the junctions of different economic regions, attract the population. This steady migration movement carries the population of the borderlands of different nationalities towards the middle portions of the Carpathian Basin having a Hungarian population. This fact results in a continuous mingling of nationalities, and in the slow absorption of these migrating sporadic groups by the Hungarians.

Our map represents the average rates of births of several years, in general of ten years /1926-1935/. However, in most places, we had to be satisfied with data of shorter period.



## LIVE-BIRTHS ABOUT 1930





Our map indicates the death-rate per thousand souls in averages of 5-10 years about 1930. The death-rate is the highest in Bessarabia. Then follow the southeastern portions of Moldavia, and farther to the south, the small area of New Dobrudja. In general, in the territories with a Roumanian population the rate of deaths is very high everywhere. Beside the Roumanian areas a high death-rate is to be found in Macedonia, in some parts of the Ruthenian and Ukrainian regions, as well as on the inner and outer slopes of the Northeastern Carpathians. The monotonous character of the western portions of the Balkan Peninsula is due to the fact that our map represents data by provinces.

The details worked on the basis of newly acquired data by districts have been overprinted on the map. In the area of Yugoslavia, in Southern Bosnia, in the upper valley districts of the rivers Bosna and Verbasz there is a death-rate above 24 per cent to be found. /The space between the cities of Sarajevo and Banja-Luka/

The death-rate is strikingly low in the western half of Slavonia and the Moravian Basin. Taking into account the whole area of our map, the death-rate is the lowest in Saxony and in the bordering Central-German portions, in the regions of the Alps, as well as in Northern Italy. Of the western portions the environment of Ljublin and Luck in Poland, the North Bulgarian table land in Bulgaria, and the region of the Central Balkans show a comparatively low rate of deaths.

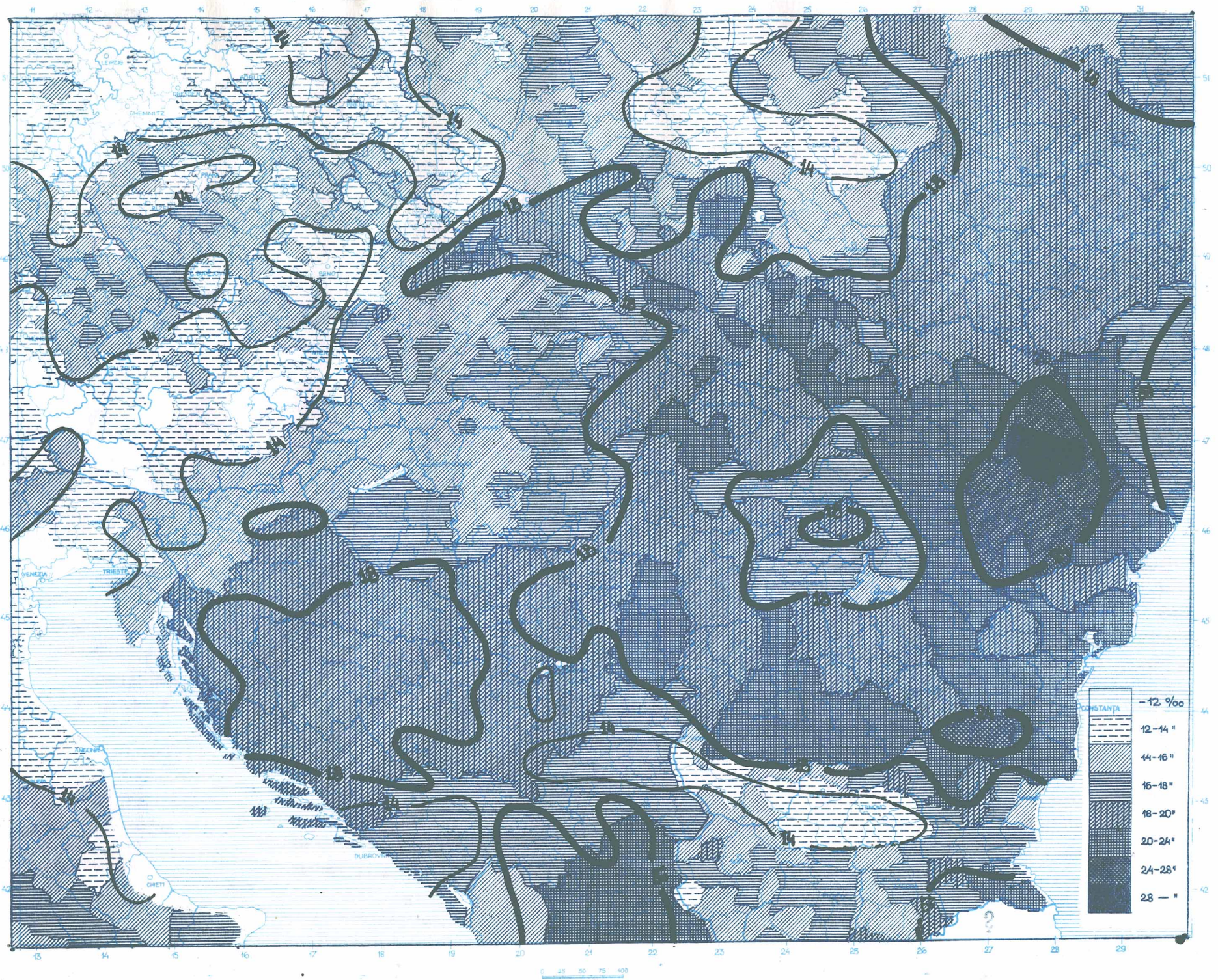
The deaths-map illustrates first of all the fact that not those regions show the highest death-rate where the rate of births is the highest, although in general this situation would seem to be normal. A striking exception in this respect is to be found at the southern edge of the Carpathian Basin, in the regions of Krassószörény which, beside a very low rate of births, appears on the deaths map with a very high

rate. The situation is just the contrary in Italy, in the region of Venice where, in spite of the high rate of births the death-rate is very low.

The death-rate is influenced by less complicated factors than the birth-rate. However, external circumstances, as well as inner qualities play also here an important part. It is quite natural, where there is a high birth-rate, the rate of deaths should be generally high as well, being the number of deaths in childhood high, and meaning the great number of births a great many children. Some other factors too, play an important part in the formation of death-rate. Among the external circumstances first of all the sanitary-, housing and food conditions, as well as the cultural progress, the number of hospitals and physicians are important factors; among the inner qualities the strong and resistible constitution. From the point of view of death-rate the external circumstances seem to be more important factors, thus the death-rate used to be regarded to a certain extent as a scale in the progress of civilisation. These figures reflect by all means the health conditions.



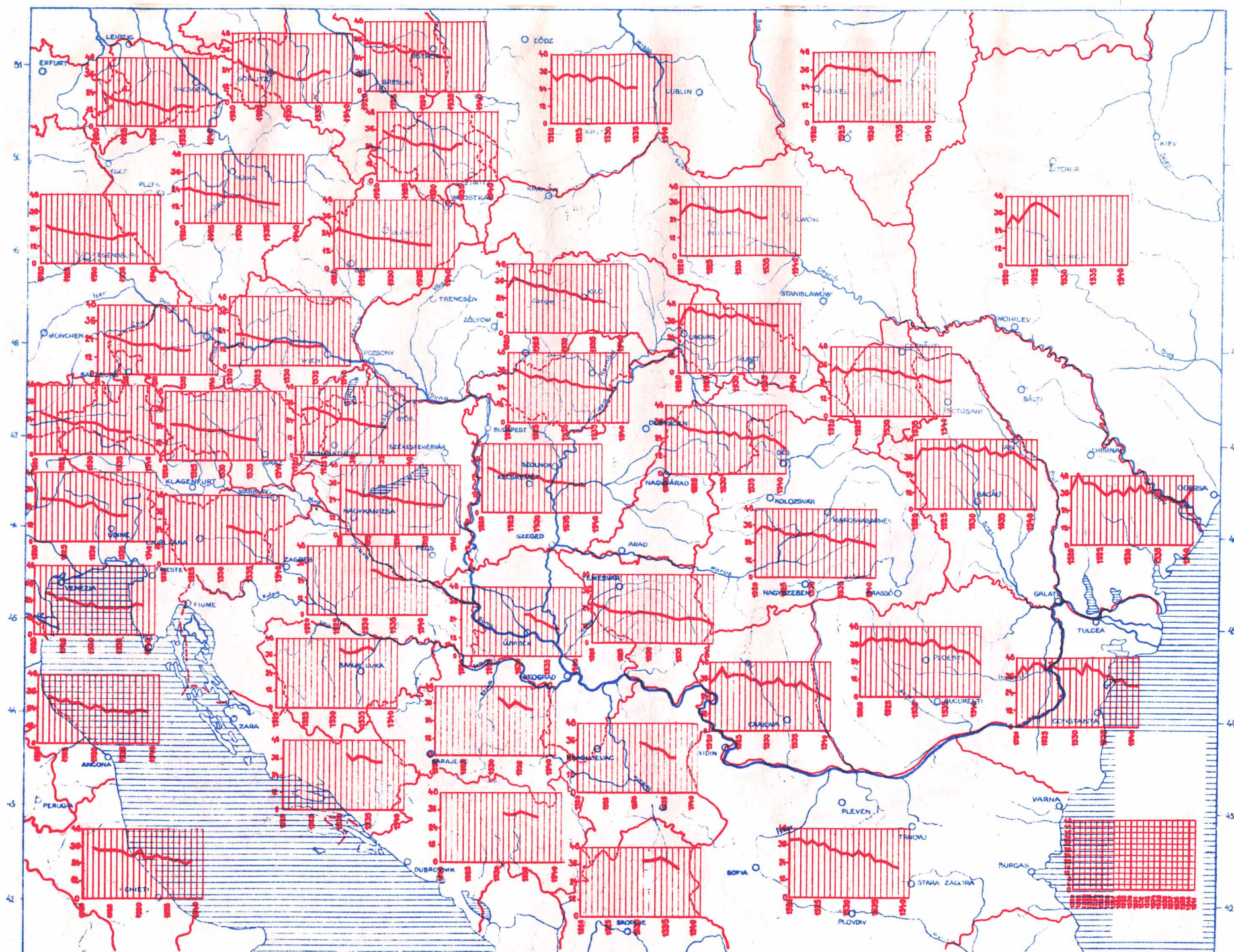
# DEATHS





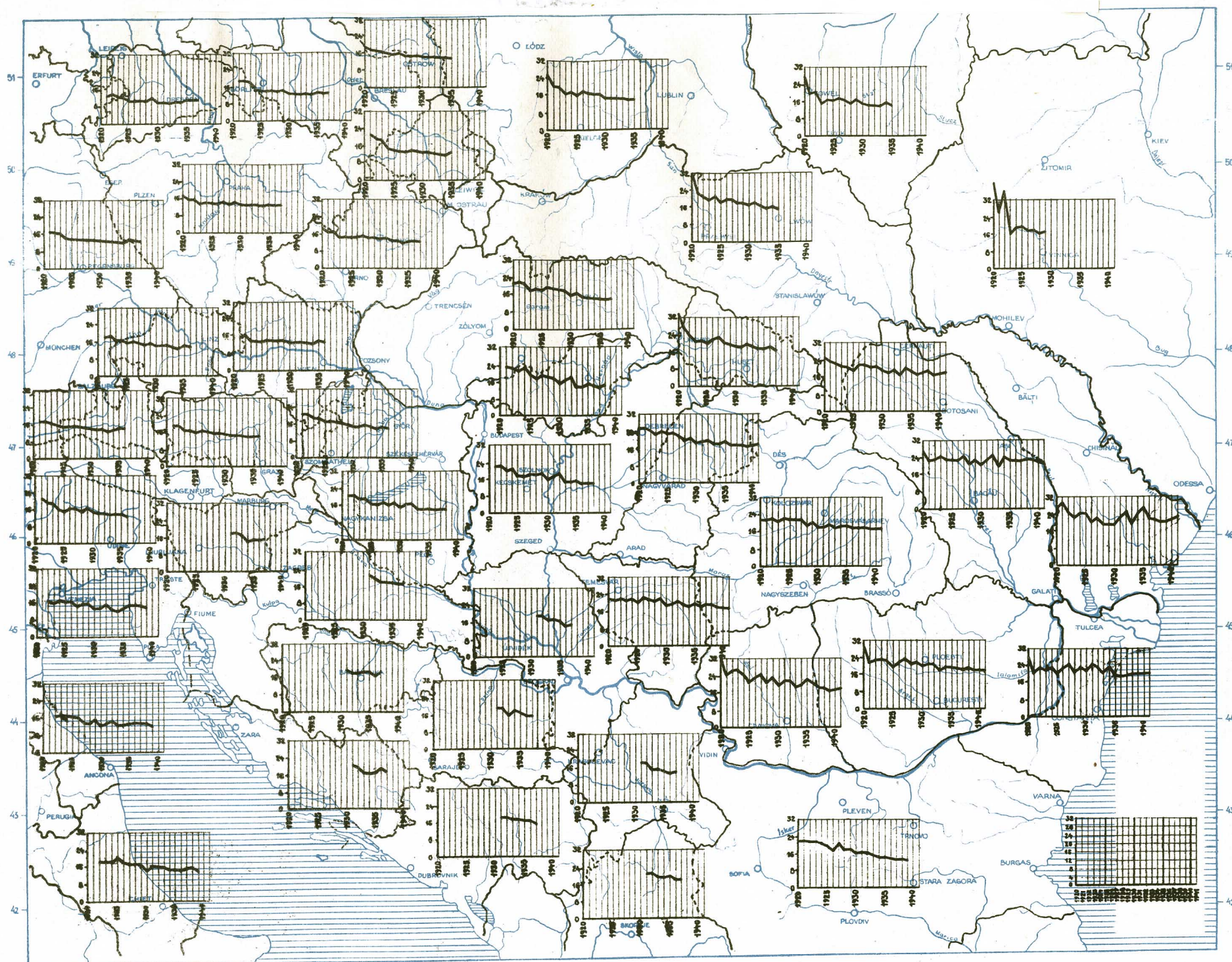
# RATE OF BIRTHS BY REGIONS BETWEEN 1920—1941

(Per 1000 inhabitants)





(Per 1000 inhabitants)





The difference between the number of births and deaths gives the rate of the natural increase of population. It is due to the same causes which account for the formation of the birth- and death-rates. As the northwestern territories showing a low birth-rate are culturally advanced areas with a comparatively low death-rate, from the point of view of propagation they are fairly well-off in this map. /Especially Saxony and the portions of Lower Silesia./

Among the western territories having a low birth-rate the Austrian areas show the lowest rate in the map of natural increase. Here, the population is decreasing, the number of deaths exceeds that of the births. In the southern portion of the Carpathian Basin, at the southeastern edge of the Great Hungarian Plain and at the western end of the Southern Carpathians there is a considerable spot of non-prolific areas. This is the area of the so-called Bánság where the birth-rate is very low, while the rate of deaths is high, consequently the natural increase is very slight or there is even a decrease. However, in Bulgaria the low rate of deaths is favourable to the increase, although the birth-rate is not very high.

In comparing the map of natural increase with the births-map, in general, the northeastern portions of our territory have a favourable position having a high birth-rate with a relatively not too high death-rate. On the Balkan Peninsula the two pictures are rather congruent. The Carpathian Basin is also from the point of view of population movements a transition area. Showing a very great internal variety, in general, the rate of live-births is more favourable than that of the natural increase which is spoiled by the fairly high death-rate.

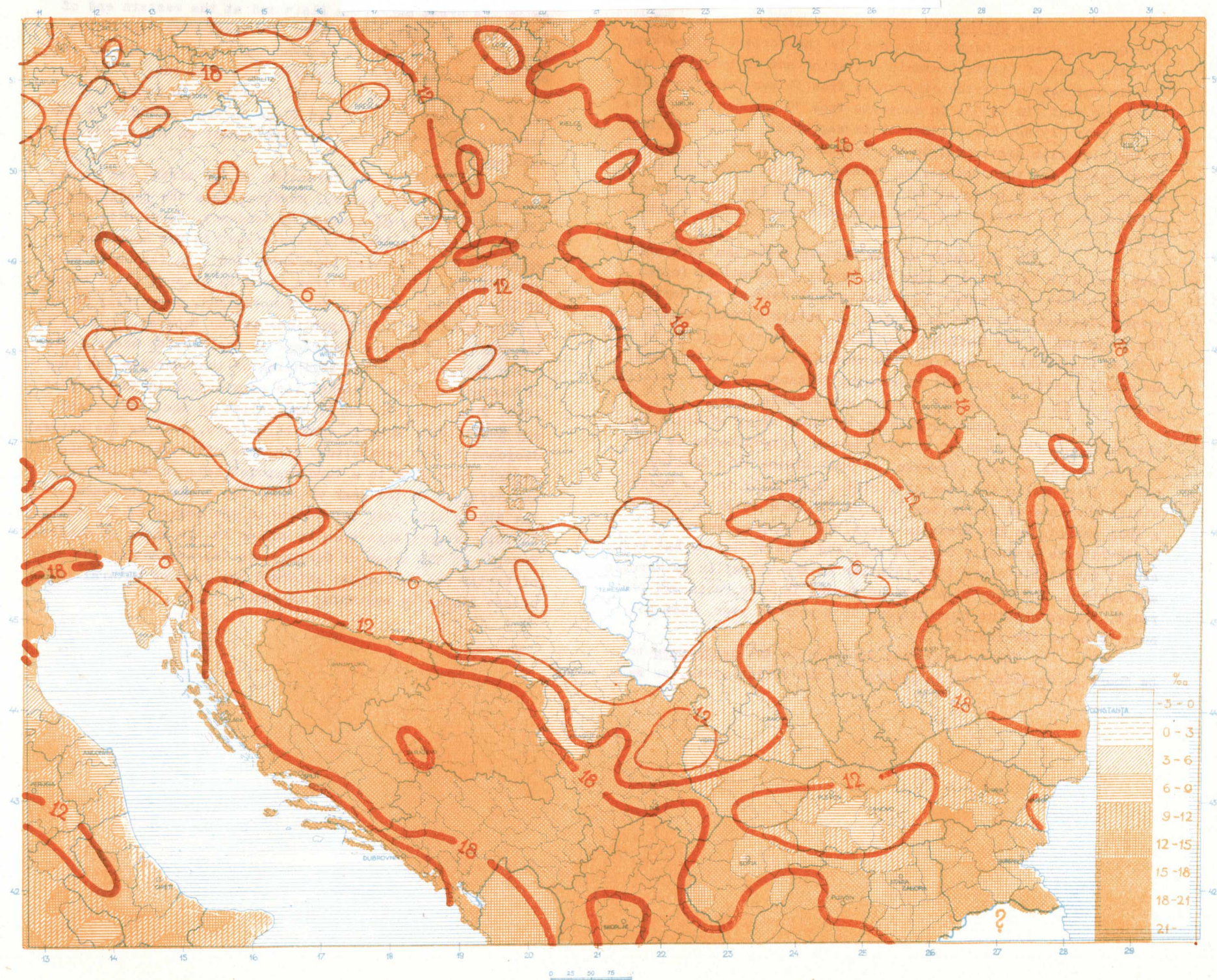
The areas with a high rate of natural increase - apart from the Po Plain - are sparsely populated regions every-

where. Thus, the high rate of prolificness in absolute number - in masses - does not mean so much, as it is shown by the map. Nevertheless, these sparsely populated areas gradually get filled up. They also serve as the most important areas of emigrations of our territory. It cannot be expected from the conditions of the population movements, though - as it had been said about this territory in some essays with a political tendency - that within a short time the nationality problem of Central Europe in the mixed areas would be solved by the fact itself, that the more prolific nationalities thrust the less prolific ones into the background, into minorities of no importance.

The dashed overprint in the map serves to provide a more detailed picture on the basis of recently acquired data by districts.



# NATURAL INCREASE





The Chronological Development of the Rate of Natural

Increase by Regions between 1920-1941.

The birth-rate shows a decreasing tendency all over Central Europe. Especially great is the decline in the very prolific areas of Little Roumania /Oltenia/ and in Bulgaria. In Oltenia the rate of births diminished from 30 per cent /in 1922/ to 20 per cent /in 1939/; in Bulgaria from 39 per cent /1922/ to 20 per cent /1939/. The birth-rate is especially on the decline in the Slovakian highlands, in the northern part of the Carpathian Basin. The same decreasing tendency may be read from the data of some years being at our disposal about the provinces of Jugoslavia. The Eastern European data show considerable fluctuations.

The estimates of the western areas are more uniform, while in the eastern ones the yearly fluctuations in the rate of births are greater. The statistical data of the German areas illustrate the fact so typical of entire Germany that with the beginning of the National Socialistic rule the decline in the rate of births has stopped and was tending toward an increase. Especially striking was the increasing tendency in Lower Silesia, as well as in Upper Silesia, Saxony and Bavaria.

The same decreasing tendency which affected the chronological formation of birth-rate may be noticeable in the rate of deaths as well. However, in most places this decline is not so great as in the case of births. Especially in the western states the rate of deaths has been on the same level throughout a long period. In the Bohemian Basin, for example, where the birth-rate is gradually diminishing, the rate of deaths has been almost invariable since 1933. Similar is the situation in Moravia and Austria. The very high rate of deaths in Bessarabia and Dobrudja, though showing fluctuations from year to year, does not seem to be on the decline.

There is a great decrease in the death-rate to be found in Galicia, and in general in the Polish areas, as well

as in the Great Hungarian Plain and at the western end of the Roumanian Plain /Oltenia/. The death-rate especially decreased in the Ukraine between the beginning and the end of the twenties of this century. This high rate of deaths is due to revolutions, famines, conflicts in inner politics and food supply having taken place in the beginning of the twenties. Unfortunately, the development in the thirties is unknown.

Owing to the formation of the birth- and death-rate, in the entire Central European area the prolificeness rate shows a general decreasing tendency. Especially great is the decline in the Bulgarian areas, in the Roumanian regions, in the Slovakian highlands, and - so far as we were able to draw conclusions from the data of some years being at our disposal - in the Serbian regions, especially in the Morava Basin and in the portions around Beograd. Striking is the picture of natural increase in the Ukraine where, after a few bad years, at the beginning of the twenties the line of natural increase reached its culmination in the year of 1926. From this time on it had fallen in the same rapid way until 1932, when it sank below zero, meaning the natural decrease of the population. The rate of natural increase of Austria came also to a turning-point between the increase and decrease in the year of 1936. The natural increase of the Bánság also sank below zero in the course of the thirties. In this respect this area is unique in the whole of Central Europe. In the areas of Germany the improvement in the rate of births has favourably affected the rate of natural increase since the beginning of 1930.



(Per 1000 inhabitants)





Infant Mortality.

One of the best characteristics of the sanitary, as well as of the cultural conditions is the rate of infant mortality which shows that of hundred live-born babies how many died at the age under one. The statistics of infant mortality have not been drawn up on the same basis. Especially the estimate of the still-born infants leads to considerable differences. Nevertheless, beyond a certain limit of faults the statistical data of the different countries may be compared.

The greatest infant mortality, and consequently the most backward conditions are to be found in the Roumanian territories at the southern edge of the Carpathian Basin, especially in the district between the Drava and Sava, in the Bácska and in the highlands lying between the Great Hungarian Plain and Transylvania. The population of this latter area is also Roumanian. The rate of infant mortality is rather high in the regions of the Northern Carpathians, in Galicia and chiefly in the Ruthenian-Ukrainian territories, but it is fairly high in Bavaria and in the Bohemian Basin as well.

The Alpine regions, further the North German territories lead with their very low rates. The low rate of infant mortality is especially striking in the Morava Basin /Serbia/, it is below 10 per cent /in the averages of the years 1934-37/. In the Carpathian Basin, in the western portions and in Transylvania a low infant mortality is to be found. On the Balkan Peninsula Bulgaria has fairly low rates. As for the Ukraine, only combined data are available, which being incomplete, are not sufficient for drawing accurate conclusions.

Especially the large cities modify the picture; having physicians and hospitals in sufficient number to their disposal, the rate of infant mortality is much lower than in

the villages and especially in the sparsely populated regions with scattered settlements. In some cases again the cities distort the picture in the opposite direction, as in the hospitals, in the obstetric departments and at the clinics not only the data of deaths of the urban people are to be found, but also of those coming from the environment and often from long distances.

The rate of infant mortality - just like the death-rate in general - depends on the number of births too. Where there is a low birth-rate, much better care can be taken of one or two children per families from their birth on, than there, where the number of children per families is high.

Further there is a close connection between the infant mortality and the climatic conditions. In places having generally hot summers, many infants die of colitis.

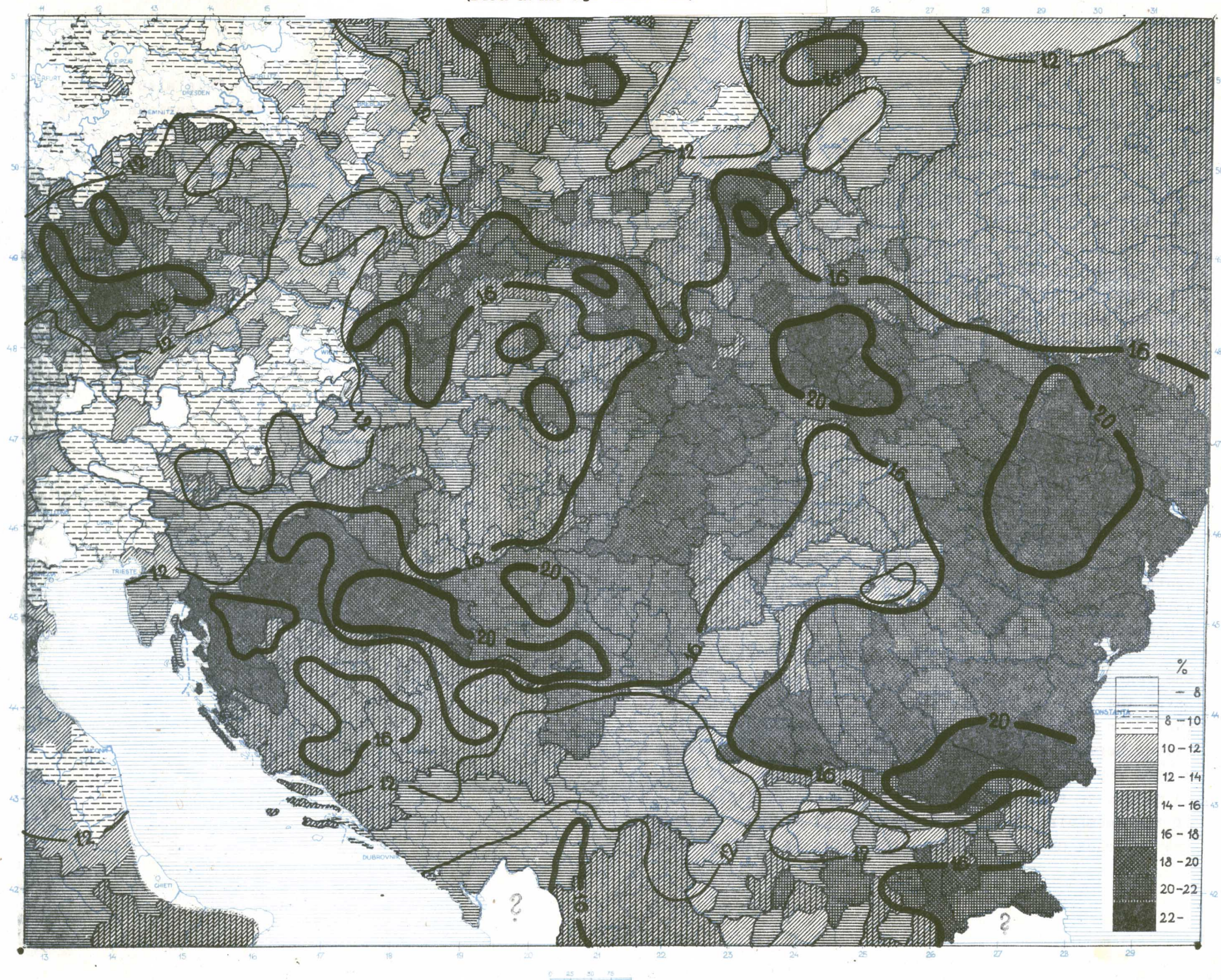
The number of deaths under one year is also increased by the high number of illegal births. Death is more frequent among the illegal infants than among the legal ones. The rate of illegal births is very high in the Bácska, Bánát and Moldavia.

From the point of view of public health those regions are said to be the best, where beside a high or fairly high birth-rate, the rate of infant mortality is low. Such areas in our map are the southern slopes of the Alps on the Italian Peninsula. /Environment of Udine-Belluno-Venezia/. Health conditions, however, are not satisfactory at those places, where beside a low rate of births, there is a high rate of deaths, especially a high rate of infant mortality. /The Roumanian area in the western end of the Southern Carpathians, the Roumanian regions of Northern Transylvania and some portions of Central Poland./



# INFANT MORTALITY

(Died at the age under one)





Population Density and Natural Increase.

The rate of births, as well as the natural increase is generally higher in the sparsely populated territories, than in the densely populated ones. This illustrates the fact that the development tends toward a counterbalance; on the other hand, it means that those large spots which in the maps of births and natural increase appear in the eastern and southern portions of Central Europe, and which seem to threaten the central and western parts by their dynamism, do not represent such an important weight as it is indicated in the maps. The high birth- and death-rates refer to a comparatively small number of population, while in the west, the lower rates refer to a very dense one. The increase recurring from year to year in the western and eastern regions, do not show in absolute values such differences as one would conclude from the rates. However, there is a belt in the north-eastern portion of our territory extending from Silesia up to Kiev, where a comparatively dense and fairly prolific population is living all over. These portions indeed, show a strong popular dynamism, consequently in these regions the migration movement and the spread of the surplus population is very lively. We find the same situation on the smaller spots of areas, e.g. in the Roumanian Wallachia, in the Morava Valley in Serbia, as well as in some portions of the Italian Peninsula. /Po Plain/.

Sparsely populated and less prolific areas are the regions of the Alps, the district between the Drava and Sava, the area of Transylvania and some part of the North Hungarian highlands. In case the Roumanian parts would not belong here too, one should say that in spite of having a sparse population, they are civilised and advanced regions, belonging to the western culture. The non-prolific population of the Roumanian areas in Transylvania, however, belong to the Orthodox Church, and from the point of view of culture

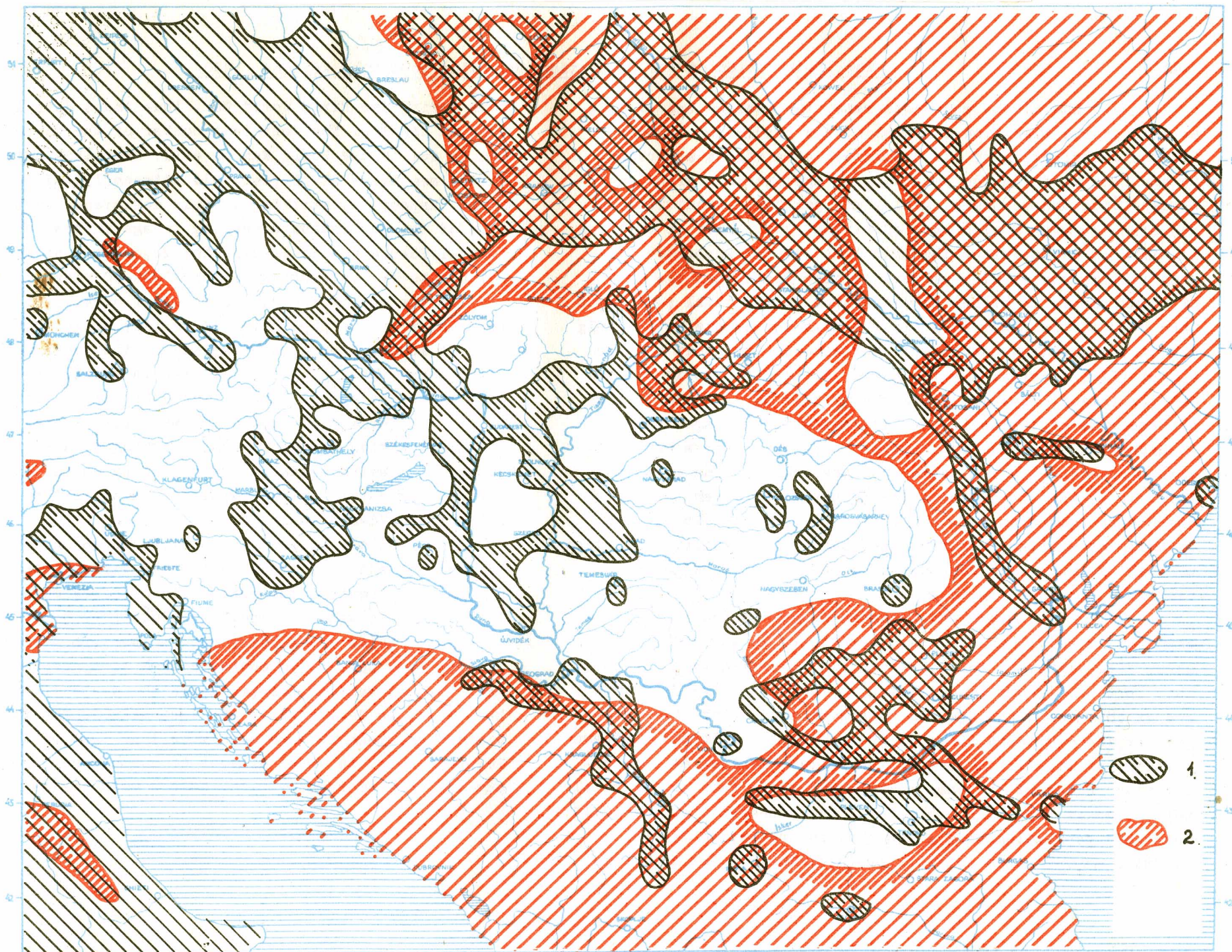
they are very primitive. This also illustrates the fact that prolificness is due to various causes, and is influenced by them. Among the complicated resultants of this phenomenon we cannot see today quite clear yet.

State	Number of births	Deaths per 1000 souls	Increase between 1931-35.	Population density per one squ.km. about 1930.
Austria	14.4	13.5	0.9	80.6
Poland	27.6	14.6	13.0	82.7
Czecho-Slovakia	19.6	13.8	5.8	104.9
Hungary	22.4	15.8	6.6	93.4
Roumania	32.9	20.6	12.3	61.6
Jugoslavia	31.8	17.9	13.9	55.9
Bulgaria	29.3	15.5	13.8	59.0
Germany	16.6	11.2	5.4	139.1
Italy	23.8	14.1	9.7	132.9
Ukraine x/	37.1	17.0	20.1	72.0

x/ Data of 1926-1928.



# POPULATION DENSITY AND NATURAL INCREASE



1. Population density, more than 75 per one square kilomeire    2. Natural increase, over 12 per mille



The birth- and death-rate, the average age of life, as well as the migration movement of the population account for the distribution of the population of a region according to age. The distribution according to age exerts a great influence upon the economic, social and political conditions. In the areas showing a high rate of births, the number of children is high. It demonstrates the fact that several supported persons fall to one working person. It also means that the rate of young people is higher in proportion to the total population than that of the older ones. If the high death-rate is not only due to bad sanitary conditions, but also to the short average age of life, it means the low number of aged people in the total population. However, where the average age of life is high and the rate of deaths is low, the number of the aged people is higher in the total population. These differences may exercise a considerable influence upon the economic and political life. If we want to estimate the number of children with a compulsory education and that of the persons capable of work or being of military age from the number of the total population, we ought to take into consideration the differences in the distribution according to age.

In Eastern and Southern Europe the rate of little children is very high all over, especially in the category under five years. In the Roumanian and Ukrainian territories this latter category is decimated by the mortality of infants and of children under age, in consequence of which, the category of the 5-9 years old ones is much smaller. In the southern portions of the Balkans and in the Polish territories both categories represent the same number, and their rate in the total population is very high everywhere. The categories of the 10-14 years old population show a low rate in the entire Central European map. To this category belonged in 1930 the children

born during the First World War, thus these data indicate the loss of the War. The deficient number of the 35-50 years old men is due to the World War as well. From this category most of the men being 20-35 years old between 1914-1918, went to front. Especially striking is this deficiency in the distribution of the population according to age in the states of the Central Powers and in Serbia. The major part of the population belongs to the categories of the 20-40-50 years old people, viz. to the age of the most capable of work. From this age the number of the population is rapidly or moderately decreasing. It is decreasing more rapidly in the south and in the east, where the average age of life is short, while in the west where the age is longer, the decrease is slower.

These differences are best illustrated by comparing the distribution of population according to age in the Ukraine with the Bohemian Basin or Saxony, or by comparing the data of the Western Balkan population with that of the population of the Vienna Basin.

On the base of these differences one used to speak of youthful and aged societies; these differences determine how many per cent of the population of a region or country contains children with a compulsory education, or persons capable of work or being of military age. In Eastern Europe, for example, the same population contains much less persons of military age, than in Western Europe. Again the death of the same number of people destroyed by the War, affects the future of western European nations much more than that of the Eastern European ones, as those classes of society who should carry out the work of regeneration, have a much smaller rate.



# DISTRIBUTION OF POPULATION ACCORDING TO AGE (1930)

Years Males Females

