Geographic and Political Boundaries in Upper Silesia

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INTRODUCTION

Problems connected with political boundaries have frequently elicited the interest of geographers. In all countries with chronic or acute boundary problems the geographers are drawn into the general discussion, more or less as experts, and in some cases the professional geographer has actually been called upon to assist in the determination and demarcation of boundaries. The interest of the geographers in this subject appears to be strikingly practical rather than academic. While almost every geographer in Europe has concerned himself at some time in the past twenty years with some particular boundary problem, very few have attempted any systematic theoretical study of the problem as a whole.\(^1\) It could easily be shown that the practical contributions

\(^1\)The late Professor Sieger (Graz) stimulated the most valuable discussion of terminology in political geography, particularly in reference to boundaries, both in his teaching and in his scattered publications. The most important references in this discussion are listed below, together with other recent studies of significance on this subject. An excellent brief analysis of the suggestions of various writers is given by Sölch; the fullest discussion and bibliography by Maull.


*The field work on which this study is based was made possible by a Fellowship for the year 1931-32, from the Social Science Research Council.
of geographers to the specific problems have suffered greatly from this lack of academic preparation. For the most part their work shows the earmarks of knowledge expert but unorganized; lack of technique, no recognized terminology, and no means of measurement. Hence the pursuit of such vague concepts as "natural boundaries," a term seldom defined and usually meaning something different to each writer, and which Sieger, Maull, and Sölch have all admirably demonstrated should be banned from scientific literature.

The purpose of this paper is to suggest a method and some terminology that might be applicable for any border study. Upper Silesia will serve as the specific case study to be treated from the laboratory point of view.

This area is a part of the great border belt between Germans and Slavs, more specifically a border corner where Germans, Poles, Czechs, and Slovaks meet and mix. Divided politically before the war among three empires: Germany, Austria-Hungary, and Russia, it is likewise divided now, but with different lines, between Germany, Poland, and Czecho-Slovakia (Fig. 1). Although in many respects geographically united, the area has never had political unity within itself, but rather was always a peripheral zone subject to the political expansion of neighboring states. In the course of the latter Middle Ages the various feudal duchies into which Silesia was divided were controlled successively by the kings of Poland, Bohemia, and finally, Austria. The separation of Silesia from Poland dates, for practical purposes perhaps from 1163, formally certainly from the renunciation of Silesia by Casimir the Great in 1335. Prussia entered the area first in the early


eighteenth century when Frederick the Great, by means of the Silesian Wars, forced Maria Theresa to cede him the rich lowland of Lower Silesia, together with the then unimportant lowland of Upper Silesia. The highland areas, together with the Moravian Gate between them, remained however with Austria. Silesia therefore has been separated from Poland on the east for six or seven

Symbols:
1. Present international boundary
2. Former international boundary
3. Provincial boundaries
4. County (Kreis) boundaries in Upper Silesia only (not shown in industrial district)
5-8. Cities and towns:
5. Nearly 100,000 population or more
6. From 25,000 to 75,000
7. From 10,000 to 25,000
8. Less than 10,000
Towns underlined are centers of counties of the same name
centuries and united more or less closely, to different states, chiefly German, on the south and west. It had no part in the historic divisions of Poland of the eighteenth century, which gave Galicia to Austria, Posen to Prussia, and the area between to Russia.

**NATURAL DEFENSE BOUNDARIES**

Perhaps because European boundaries are most commonly determined after armed conflict, the first consideration in drawing them has usually been their defensive character. In the Upper Silesian border area, strong natural lines or zones of defense are not to be found. The low mountains of the Sudetes and the Beskides, broken by many valleys, offer but minor aids to defense—in comparison say, with the High Tatra farther east between Poland and Slovakia. Far more open is the plain on the north, continuous from Germany into Poland, for the most part sufficiently well-drained by the headwaters of the Oder and the Vistula, and offering no obstacles excepting the minor ones presented by those streams (Plate A).

Likewise for the purposes of peace-time control of the boundaries—against smuggling, etc—little assistance is offered by nature. Only the rivers, where large enough to be uncrossable except by bridge or boat, are of some aid to the border patrol, and smuggling flourishes as one of the ordinary occupations of the region.

**BOUNDARIES MARKED IN NATURE**

International boundaries, particularly in well-populated areas, must be clearly and accurately marked. In former times boundary commissions depended so far as possible on any natural lines that could be used. In some parts of the Sudetes and the Beskides the crest-line is sufficiently well-marked to furnish such a line, but more commonly neither crest-line nor watershed is readily visible. This is particularly true on the plain, so that though the division there between Germany and Poland is roughly that of the drainage basin of the upper Oder on the one hand, and the Vistula and the Warta on the other, the actual watershed, hardly visible in the landscape, has never functioned in boundary drawing. Only the streams offer this second type of natural boundaries, which can better be called *naturally marked boundaries, or boundaries marked in nature*. For this purpose small streams are as suitable as large

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8From Sölch’s “naturgemarkten” or “natur-marken,” corresponding to Sieger’s “naturentlehnten.”
ones, perhaps even more so because more accurate. The centuries-old boundary between Silesia and Poland utilized such smaller streams through most of its course, whereas the most recent boundaries largely ignore them. These were drawn in the age in which international boundaries are marked with lines of stones each visible from the next. Even then, however, the careless pedestrian, or child, may unwittingly find himself in the wrong country and be arrested under suspicion of smuggling or espionage (Plate B).

The discussion so far has treated boundaries from the point of view of the bounding states as space-organisms requiring a defensive epidermis, so to speak, against undesirable invaders, whether armies, smugglers, or immigrants. But this point of view overlooks the original, primary function of boundaries, namely, to bound, i.e. to determine the limiting line on the earth’s surface on one side of which all men and things are subject to the jurisdiction of one state, whereas the moment that line is crossed everything is subject to another state. Such a line has therefore enormous effect on the lives of the people whose citizenship it alone determines. Not merely under what government they must live, for what state be ready to fight and die, but even where they may sell their products, where purchase their supplies, what language their schools must, for the most part, use, what history, literature and songs their children will be taught, under what national, cultural, and moral influence they will be brought up—all of these are determined for millions of people by the exact location of an international boundary line in such an area as this.

The remainder of this paper, therefore, is based on the assumption that where international boundaries run through settled areas, it is those areas rather than the bounding states that are most concerned, the inhabitants of the border regions rather than those in the internal areas of the states who are most to be considered in studying or locating boundaries.

The proper study of an international boundary is, then, primarily concerned with the associations, of all kinds, of the different parts of the border area with each of the bordering states. The geographer in particular is interested in those associations

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which he observes in the features of the landscape, but he may not leave out of consideration other very important associations. In both cases the associations are of two kinds: those similar in character and those which, though perhaps dissimilar, have mutual interests. Each of these groups will be studied in detail.

BOUNDARIES BASED ON AREAS SIMILAR IN LANDSCAPE FEATURES

Along margins of areas similar in landscape features, "natural boundaries" of a third sort can be drawn. Sölch calls these choren

Fig. 2.—Major Landscape Forms of the Upper Silesian Border Area

Symbols:
1. Watershed between the basins of the Upper Oder, Warta, Vistula, and March (Danube)
2. Present international boundary
3. Former international boundary
4. Provincial boundaries
grenze or chorographic boundaries. The map (Fig. 2) shows six major types of landscape forms. Four are rural landscapes resulting from combinations of two principal contrasts: that between the low mountains and hill country on the south, and the level to gently rolling plain on the north, and that between cleared and cultivated land and extensive forests—the latter covering great stretches of sandy soil on the plain as well as the rougher parts of the highlands. Though these differ notably in appearance, they produce no major differences in interest such as would be served by, or of themselves justify, separation into different states. Quite different is the case of the mining and industrial landscapes developed on the continuous coal-field in one small part of the area. Here the population has in many respects more in common with that of Westphalia, the Black Country of England, or the Pittsburgh area than with its neighboring rural districts.

Something, therefore, might be said for a political separation of the entire mining and manufacturing region as a separate political unit were it not for the lack of any historical basis. But certainly the division of the industrial district into different states causes constant difficulties because of the multiplicity of associations that normally tend to develop between adjacent industrial towns. These will require more detailed treatment later.

Although the rural landscapes offer no major differences east and west of the border zone, they do show minor differences in the character and extent of development that are highly significant in reflecting differences in the social character of the populations. Some of these are suggested by the maps and pictures.

Fundamental is the marked decrease in accessibility to both

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5Corresponding, in part, to Sieger's "Naturgebietsgrenzen" or Maull's "Strukturgrenzen."

6The map is drawn from the official German maps (Reichsamts f. Landesaufnahme, Berlin) chiefly the Top. Karte 1: 200,000. The distinction between plains and hill country is based on slopes, rather than mere elevation, though the boundary follows roughly the 400-meter contour.

7The classic geography of the area is Partsch, J.: Landeskunde von Schlesien. (Breslau, 1903). Excellent maps are to be found in Wirtschafts- und Verkehrsgeographische Atlas von Schlesien, Geisler, W., ed. (Breslau, 1932), but these include only the parts of the area now in Germany.

8A small organized movement in 1919-21 for a free-state of Upper Silesia, to include also Teschen Silesia, met apparently with little support.
railroads and road, east of the old Polish frontier (Figs. 3 and 4). Even more marked is the difference in the quality of the roads. There are no paved roads, hard-surfaced roads are few, even the main routes between the largest cities are sometimes little more than field tracks.\(^9\) In consequence rural life is on a much more primitive subsistence basis.

While the fields show the same crops: rye, wheat, oats, hay, and the all-important potatoes—lesser care in cultivation and less use of fertilizers are reflected in notable decrease in crop yields, 

\(^9\)The maps, both German and Polish, on which the road map is based proved to be very liberal in designating roads in Poland that were “passable at all times for motor vehicles.” For several days after rains in April, the official Tourist Bureau in Krakow advised against attempting any of the main routes west to Upper Silesia.
as shown on the maps of Polish geographers.\textsuperscript{10} Livestock are notably less in importance—the boundary shown on Finch & Baker’s map of swine\textsuperscript{11} remains clearly marked today, though the political basis for it has been removed.

Farmyards and farm buildings reflect likewise the more primitive stage (Plates C and D). In contrast to the predominating brick or stone houses west of this line are the frame and rough-

\textsuperscript{10}Ormicki, Wiktort: “Mapa intesywnosci gospodarki rolnej w Polsce, 1924/5” (La carte d’intensité de la production agricole en Pologne), in \textit{Wiadomosci Geograficznych} R. 1929, Nr. 4; “Produktywnosé rolna w Polsce, 1924/5” (Die Agrarproduktivität in Polen, in the same, 1920 Nr. 1; Romer: \textit{Atlas of Poland}, 1916.

hewn log huts, commonly with thatched roofs, that predominate east of this cultural divide.\textsuperscript{12}

Similar differences are seen in the towns. One is impressed, as was De Martonne,\textsuperscript{13} by the frequent lack of sidewalks, by dwellings which would not be tolerated west of the divide, the workers’ barracks with bare dirt between them, and by the incompleteness of water and sewerage systems, developed only since the war, even in larger centers (Plates E and F). In general all parts of the industrial towns look like the worst parts of those west of the former German frontier.

The total impression of all these differences is such that anyone travelling ten miles across this cultural landscape boundary between Silesia and old Poland, feels that he has travelled farther than from Chicago to Silesia.

**HUMAN BOUNDARIES**

The boundaries of the different population groups of the region—Germans, Poles, Czechs, Slovaks—have little manifestation in the landscape; are, if you like, non-geographic (though some students include these also in “natural boundaries”). Even the language seen on the street signs, in the railroad stations, and in other public places, reflects in many cases not the language of the inhabitants but merely the official language of the state. Nevertheless in studying a boundary problem the geographer must not ignore these factors since they may, as in this case, constitute the very cause of the problem.

Race, in the strict anthropological sense, has in this district, as in general in Europe, no geographical, and perhaps no cultural significance. Teutonic and Slavic stocks are hopelessly intermixed with no more correlation with present language or nationality groups than blondes and bruettes in England. All the differences in the population that are of significance for the border study are of cultural, not of biological origin.\textsuperscript{14}

\textsuperscript{12}A map drawn by Ormicki shows 75-95\% masonry buildings in Polish Upper Silesia, and 50-95\% wooden buildings in the areas north and east. Ormicki, Wiktor: “Zewnetrzne oblicze wsi polskiej (Physiognomie des polnischen Dorfes),” in *Wiadomosci Geograficznych*, R. 1929, Nr. VI i VII. Krakow.

\textsuperscript{13}De Martonne, Emm.: *Europe Centrale*, 2ème Partie, (Tome IV de la Géographie Universelle), pp. 651-5.

\textsuperscript{14}Even the names of individuals, whatever they may mean historically, are no sure indication of present nationality. Thus, of those referred to here, Uhlitz and Lukaschek are the names of important German leaders, Romer that of the patriotic Polish geographer.
The important boundaries in this area are those of language, of folk (Volk, as the Germans say) as distinct from language, of religion, and of nationality, the last being in large part a product of the others. The religious boundary, elsewhere on the German-

Fig. 5.—Languages in the Upper Silesian Area

Symbols:
1. Eastern and southern limit of area in which cities have, or had until recently, German majorities, in rural areas of Polish or Czech majorities
2. Present international boundary
3. Former international boundary
4. Provincial boundaries
5. Western boundary of the plebiscite area
Polish border zone so important, is hardly found here, as almost the entire area, regardless of nationality, is strongly Roman Catholic.  

In Upper Silesia, as generally in Eastern Europe, the language boundary is exceedingly difficult to draw (Fig. 5). Except for the definitely German county of Leobschütz and the district of Moravian dialect in Hultchini, the entire plebiscite area of 1921 was a region of two languages, with predominately Polish or predominately German communities close together, and with many people using both languages. Before the division German predominated in the middle-class urban centers, Polish in the poorer workers’ districts, in the coal-mining towns, and for the most part in the poorer farming areas. In total, the overwhelming majority are the descendants of Polish-speaking peasants native in the area, and retain a Polish dialect as their native tongue. The German population did not originate from political colonization but rather: first, in small part from centuries-old settlements of Middle German farmers who maintained their language and culture in the midst of the Poles; second, from the middle-class urban population who migrated from other parts of Germany into the growing cities during the past century and a half, and finally, not least, from the voluntary Germanization of thousands of Polish workers who, in moving from the country to the industrial cities,

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15 Only the county (Kreis) of Kreuzburg has a Protestant majority, practically all the remainder of Upper Silesia is over 90% Roman Catholic. *Atlas von Schlesien*, op. cit.

16 The conclusions for the former German area are based largely on the Prussian Census for 1910 (and previous years) and the census of school-children in 1915. Too much doubt has been cast on the validity of post-war censuses of languages on either side of the new boundary to permit using them. The German-Polish language boundary on the map is based largely on Weber, Paul: *Die Polen in Oberschlesien* (Berlin, 1913) and Partsch, op. cit.; both the work of German scholars accepted and used by Polish propagandists. See Weinstein, J.: *Upper Silesia, the land of contrasts.* (Paris, 1931). Also published in French and German.

17 That the great increase in population of the past century was not the result of immigration was shown by M. Vogt. See Volz, W.: *Die wirtschaftsgeographische Grundlage der oberschlesischen Frage.* (Breslau, 1921), pp. 48-54. Also published in French, English, and Italian.

18 Frederick the Great did found German, as well as Polish, settlements to develop Upper Silesia economically, but most of the German settlements became Polonized, adding to the original Polish population. Zimmermann, A. W.: *Beiträge zur Reschreibung von Schlesien.* (Brieg, 1783).
took on German language along with city ways. The latter tendency was so marked as to warrant the conclusion in 1915, that the industrial district itself would within one or two decades show a German majority.  

The Czechish-German boundary lies for the most part well within Czecho-Slovakia so that the western part of the province of Silesia in that country is almost solidly German in language. Where the linguistic line crossed north of the pre-war boundary, in the Hultchini district, the political boundary was changed, in the Treaty of Versailles, to conform roughly to it—though without consulting the wishes of the inhabitants, later shown to be opposed to the change. But where the language line lies south of the political line, in the Sudetes, no such changes were considered.  

In Teschen Silesia there is considerable mixture of Polish and Czechish speaking peoples. The new state boundary dividing the area between Czecho-Slovakia and Poland was drawn somewhat east of the language divide. Most extraordinary is the case of the city of Teschen, where all three language groups are present, the German predominating, and which has been split between Poland and Czecho-Slovakia.

The Polish spoken in Silesia differs greatly from standard Polish, as would be expected in an area separated from Poland for over seven centuries and ruled by peoples of different tongues. Some Moravian and many German words are used with Polish endings, and many old Polish words are found which are obsolete elsewhere (cf. Canadian French). But careful students, including Germans, agree that the difference between this so-called "Wasser-polnish" and standard Polish is no greater than that between Bavarian and High German. The important point is that when the Silesian

21In a plebiscite held voluntarily under local auspices, 93.7% of the adult population, it is claimed, voted to remain with Germany. Bollacher, E.: Das Hultschiner Landchen in Versailler Friedensvertrag. (Stuttgart, 1930).
22That "Wasser-Polnisch" is not Polish but only a corrupt German with Polish endings is a major element in German propaganda for Upper Silesia. Actually the term is used loosely to cover a wide range of language mixtures so that in certain districts west of the Oder it is perhaps more German than Polish, but on the other hand in Teschen Silesia is Polish mixed with considerable Moravian, but little or no German. The author's conclusion that it must, on the whole,
Pole speaks his dialect, Poles from the outside can, with some difficulty, understand and speak with him, Germans cannot. The essential community of language must therefore be recognized as one major factor connecting most of the population of the region with Poland.

On the other hand in such elements of social culture of the whole population (as distinct from individuals) as education, social character and standards, living conditions, etc., there is a marked cleavage between the Silesian Poles and those of Galicia and former Russian Poland. The pre-war frontier remains as the boundary between the area of nearly universal education and that of high illiteracy, between the countries in which cleanliness is considered essential and those where dirt and insects are easily accepted, between the areas where social welfare is an important function of the state and those where beggary is a regular profession. It is also the western boundary of the area in which the large Jewish population represents a separate folk or even nationality, speaking their own language, Yiddish, wearing distinctive costumes, and living apart from the rest of the population.

All these differences, some of which are manifested in the cultural landscape as previously noted, are well recognized by the inhabitants on both sides of the cultural divide. They constitute a main reason for the fight of Polish Upper Silesia (Slask), including the Poles, to maintain autonomy within Poland. Certainly in many such ways, including the background of literature and art within the area, it can with some reason be maintained that Upper Silesia, though Polish in language, is German in culture. German writers commonly assume that this is the result of the many centuries of partial connection with the ancient German

empire, but comparison with other sections along the former Polish-
German border of more recent date, and the descriptions of
Upper Silesia when taken over by Prussia from Austria, indicate
that the present differences are largely the result of the century
and a half of Prussian rule.24

Most difficult of the human boundaries to determine is that
of nationality. No country of Central Europe has made a reliable
count of its nationalities.25 Some indication is given by minority
party votes at parliamentary elections,26 but several of the post-
war plebiscites showed that such votes were not trustworthy. Per-
sonal observations must be ruled out, both as inadequate and as
unreliable. In Upper Silesia there is the official record of the
national views of the inhabitants recorded in the plebiscite of
March 21, 1921.27 The reliability of that vote has been disputed
from both sides because of the undeniable pressure brought to
bear on the voters by landlords, employers, priests, officials, and
terroristic bands. Nevertheless the fact that over 90% of those
eligible to vote actually cast their votes in what was generally
admitted to have been a peaceful and secret vote, honestly counted,
appears to justify accepting the results as fairly representative of
what the population felt at the time. Particularly significant is
the fact that, in addition to practically the entire German-speaking
population, a large proportion, perhaps 40%, of those speaking
Polish likewise professed German nationality28 as many even in
the now Polish part still do. Geographically the results of the
plebiscite were so confused as to make it impossible to draw a
definite nationality boundary (Fig. 6). Simplifying the map on
the basis of combining districts with important geographic con-
nections brings out two boundaries (Fig. 7). West of one of these,
German nationality clearly predominates, east of the other,
Polish. But between them is a large rural area with a small Polish
majority, and the all-important industrial district practically sur-

24Zimmermann, A. W.: Beiträge zur Beschreibung von Schlesien, (Brieg,
1783), Bd. 2, pp. 200ff.
25The census of native language (Muttersprache) is frequently miscalled a
census of nationalities.
26The Polish party was listed in Upper Silesia first in the election of 1893.
It reached its highest percentage of votes in 1907 with 39.4%, in the last pre-
war election, 1912, was 30.7%.
27"Resultats numeriques du plébiscite," Journal Officiel de Haute-Silésie,
28Volz, Wilhelm: op. cit., pp. 56-76.
RESULTS OF THE PLEBISCITE
IN UPPER SILESIA
MARCH 20, 1921

Symbols:
1. Limits of the main geographic districts (Fig. 7)
2. Eastern limit of area in which every community of more than 100 voters showed a marked German majority, and western limit of similar Polish area
3. International boundary ultimately drawn
4. International boundary unchanged
5. Former international boundary
6. Western boundary of plebiscite area
7. Northern boundary of district to be given to Czecho-Slovakia if cut off from Germany

Fig. 6.—Results of the Plebiscite in Upper Silesia, March 20, 1921
Fig. 7.—Summary of the March Plebiscite in Upper Silesia, by Districts. Figures in circles represent thousands of voters, and percentage total for the majority. The size of the circles is proportionate to the total number of voters in each district. Note the strong German majorities in districts IA and IB, the strong Polish majorities in districts IV and IIC, the slight majorities for one side or the other in districts IIA, IIB, and III. Rounded by Polish areas, but with a definite German majority (54%).

The actual boundary finally determined, by recommendation of the Council of the League of Nations, compromised by splitting
the industrial district, although it was not possible to do so without having a slight German majority in the portion of that district awarded to Poland. The central rural area of small Polish majority was of necessity then left to Germany. Another rural district, around Lublinitz, with a slight German majority, was however, quite unnecessarily awarded to Poland. The new political boundary could not therefore be claimed to conform to a nationality boundary.

Since the partition there has been considerable change, both in sentiment and in shift of population. The study of the minority movement of each side indicates, I think, that no district including both town and country on either side of the line could now show a majority vote for the foreign nationality. In other words, the new political boundary has perhaps forced the nationality boundary to conform to it.

BOUNDARIES OF AREAS ASSOCIATED BY TRADE

In determining political boundaries it is obviously desirable, in addition to maintaining the unity of regions of similar character to associate together so far as practicable, regions having important economic interrelations. Thus more significant than the landscape boundary between the plain of Silesia and the Sudetes hill and mountain region would be, according to some students, an “organic” or “harmonic” boundary (also held to be a type

20 Defined in Minutes of the Special Session of the Council of the League of Nations devoted to the Question of Upper Silesia. Aug. 8, Oct. 12, 1921. For the procedure and principles used to arrive at this decision see Bourgeois, Leon: L’oeuvre de la Société des Nations, 1920-23, pp. 247-78.

80 The declining interest of the Polish minority in German Upper Silesia is shown by the decrease in votes for the Polish party from over 30% to less than 10%, and by the complaints of the Polish paper Katolik (Beuthen, O. S.), quoted in Kuester, Rudolf: Die polnische Irredenta in Westoberschlesien (Berlin, 1931). For the situation in Polish Upper Silesia see Ulitz, Otto: in Das Deutschum in Polnisch Schlesien, Plauen i. Vogtl. and Katowice. 1923, p. 251. The political changes in Germany in the past year have unquestionably lessened the number of adherents to German nationality in Polish Upper Silesia.

81 Changed political or economic conditions might change this conclusion completely. A considerable percentage of the population is not as strongly minded nationally as socially and economically, so that assurance of much better economic conditions in one country might swing a vote to that country. But the results of every free election (in Poland until 1936, in Germany until 1933) indicate that the minority on each side is, in fact, a minority.
of natural boundary) which would include a major portion of the highland area with the plain.32

Likewise it is claimed the industrial district should be included with the country with which it was organically developed on the basis of sources of capital, technical equipment and management, and which provided, in comparison with the present Poland, the greater markets for the coal, iron, and zinc.

TABLE. PRE-WAR SHIPMENTS FROM UPPER SILESIA33

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<thead>
<tr>
<th>Areas</th>
<th>Percentage of Total Shipments</th>
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<tbody>
<tr>
<td></td>
<td>Coal</td>
</tr>
<tr>
<td>Germany (present boundaries)</td>
<td>39</td>
</tr>
<tr>
<td>Poland (present boundaries)</td>
<td>25</td>
</tr>
<tr>
<td>Inland exports, south or southeast</td>
<td>36</td>
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<tr>
<td>Overseas exports</td>
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A more significant conclusion, attested by the economic difficulties of this district both before and since the war, is that no boundary which excludes any of the surrounding territories from the market area of Upper Silesia—which any international boundary under present conditions would do—can be called an "organic boundary."

Upper Silesia suffers from the fact that it has politically a peripheral location with respect to each of the states concerned, but in consequence of its mineral deposits in the interior of the continent, it has an industrial development, a density of population, and an economic and strategic importance which can best be associated with a politically central location.

LOCAL ASSOCIATIONS WITHIN THE AREA

The more immediate local associations of different localities and districts within the border area was studied from several different angles. An attempt was made to find trade divides based largely on the road and railroad patterns (Fig. 8). Natural barriers to trade,34 such as that found farther east in the High

32Geisler, W.: Schlesien als Raumorganismus. (Breslau, 1932). For a discussion of these terms as used by Sieger, Penck, and Vogel, see Sölch, op. cit., pp. 35-46.


34Sölch includes these with natural defense barriers under the term "Naturschranken" or "schrankentreue Staatsgrenzen."
Symbols:
1. Present international boundary
2. Former international boundary
3. Provincial boundaries
4. Larger rivers (Oder and Vistula only)
5. Trade divide cutting the least number of routes
6. Watershed
7. Single- or double-track railroad, as indicated

Tatra separating Slovakia from Galicia, are not to be found within this area, since roads and railroads find no impassable obstacles. Nevertheless natural communication divides of a lesser degree of effectiveness are to be noted.86 Thus the crest-lines of

86 Judged by the numbers of crossings, rivers such as the Oder appear to be a form of such natural communication divides, as in a limited and very local sense they are. But the crossing points, unlike those over hill crests or political divides, are each centers of concentration of many routes from both sides, in several cases constitute important trade centers whose tributary area is always on both sides of the river. In addition, of course, the important river traffic (below Cosel) is of mutual interest to both banks.
the Sudetes, the Beskides, and the Tatra, coinciding for the most part with the watershed between the streams of the northern plain and those of the Danube Basin, appear as well-marked, though not complete, trade divides. But where the low mountains break down in the Jesinky (Gesenke) and disappear entirely in the Moravian Gate no such divide is found. On the plain the original poverty of Upper Silesia east of the Oder, together with the mere factor of distance, led early to the development of all of eastern Upper Silesia as a dividing zone between the areas influenced from Breslau on the one hand or Krakow on the other. The modern development, particularly in the industrial area, has tended to break down the separating force of this zone, but a strong remnant remains following the pre-war frontier.

This former Polish frontier, one of the oldest boundaries in Europe, is still one of the strongest divides on the map. Fewer roads and railroads cross it than almost any other divide in this part of Europe, outside of the high mountains. This is true not merely in respect to the number of roads and railroads crossing the line, even to-day, but also in the amount of traffic on them. The force of long established connections, together with the influence of the marked social differences already noted on either side of this line are stronger than the newer forces for national economic unity. Somewhat similar is the case of the former Russian-Austrian frontier, so that two of the strongest divides on the map (Fig. 8), which may be called "antecedent boundaries," are no longer used for international frontiers, but are included within the territory of Poland.

Far less effective is the boundary which formerly divided Silesia between Prussia and Austria, now the frontier of Germany and Czecho-Slovakia. This is a "subsequent boundary" drawn less than two hundred years ago as a compromise between the sword of Frederick the Great and the diplomacy of Maria Theresa, passing through previously developed and united areas. Probably few boundaries in Europe show as little relation to the road pattern. Local trade areas of principal centers are artificially limited and farmers forced to trade in more remote towns; highways in several places are cut by salients of the other country; even villages are cut in two. (Compare this line on Figure 9 with the road divide drawn southwest of it, notably in the western part of the area, centering on Freiwaldau, indicated by "F."
This boundary was changed by the peace treaties in two places. For linguistic reasons the Hultchini district was separated from Germany and added to Czecho-Slovakia. This improved the situation of Troppau and Ostrava but at the expense of Ratibor (which was likewise damaged by the new Polish boundary on its other side). Unfortunate was the additional salient in the boundary seriously interfering with the shortest trade routes from several small villages to the market center of Ratibor. The conflict

\footnote{From Steuberwitz and Rössnitz in Germany the short route to Ratibor through Zauditz, now in Czecho-Slovakia, is still used in spite of the handicap and occasional complications resulting from passing through customs stations twice each way. The inclusion of this salient with the Hultchini area was apparently an accident of the boundary definition in the Versailles Treaty, as the two villages included in it are claimed to be German in language in contrast to the Moravian dialect used in the rest of the district.}
between Poland and Czecho-Slovakia over Teschen Silesia resulted in dividing that area and splitting the town of Teschen in two along the small river flowing through it.

Although the road pattern appears largely unaffected by the boundary, the traffic of course is greatly hindered by the tariff walls, customs and pass stations. The change since the war at the former Austrian stations from German-speaking officials to Czechish has intensified the hindrances by introducing a narrow language barrier where, for the most part, none existed before.

Along the new German-Polish frontier there are, to be sure, few such extreme instances, but the actual disruption is far greater because of the importance of the industrial district through which the line passes (Fig. 10 and Plate G). In its curious doubled

![Diagram of Industrial Area of Upper Silesia]

**Fig. 10.—The Industrial Area of Upper Silesia**

Symbols:
1. Coal mine
2. Zinc mine
3. Lead mine
4. Iron mine (very small)
5. Zinc washery
6. Coke oven
7. Zinc roaster and furnace
8. Zinc rolling mill
9. Blast furnace
10. Steel mill
11. Iron or steel fabricating plant
12. Electric power plant
13. Chemical industry
14. Main water pumping station (wells)
15. Other industrial plant
16. Boundary of total industrial district
17. Boundary of inner industrial district
course through this district the boundary crosses surely more lines of transportation than any other equal stretch of international boundary in the world (Fig. 11). Although a few of those shown on the map—one railroad and six or seven roads—have been closed, the general pattern remains unchanged and the traffic, on the roads at least, although certainly less than before, is vastly greater than that passing even now across the abandoned, antecedent boundary.

In addition to the dense network of roads and railroads the economic unity of the industrial triangle in the formerly German area was strengthened by a narrow-gauge freight line connecting the mines and factories, an interurban electric system, electric power systems, and water supply systems covering, in each case, almost the entire district (Figs. 12 and 13). All of these were inevitably seriously affected by the new boundary cutting across them, breaking the street-car lines at five points, each of the other systems at about a dozen points. In each case the separate parts
have been reorganized on either side of the line and many of the connections permanently broken, but a large measure of connection and interrelation still remains, particularly across the peninsula of German territory at Beuthen. On the other hand, of all these systems only one has developed any connections across the old frontier, the interurban line to Sosnowiec and the Dombrowa area (Fig. 11).

Unique is the relation of the new boundary to the mining operations (Figs. 14 and 15). Property lines in this area are independent at three different levels: on the surface, in the overlying zinc-lead formations, and in the lower coal measures. In consequence it was impossible to avoid cutting many mining properties by the new boundary. Many workings have been definitely closed at the line, except for vital water and air connections; in nine coal mines and four zinc-lead mines mining has continued across the line underground, under special agreement, terminating in

![Electric Power System Diagram](image.png)

Fig. 12.—The Electric Power System of Upper Silesia in Relation to the New International Boundary.

Symbols:

1. Former power lines
2. New lines made necessary by the boundary changes
3. Former division between areas served from Zaborze and Chorzow power stations
4. Eastern limit of the Polish area receiving its power from Chorzow but across the Beuthen (B on the map) salient
5. Power station
Fig. 13.—Water Supply in Relation to the New Boundary

Symbols:
1. Water mains carrying water that has not crossed the boundary
2. Mains receiving (in 1922) water from sources in the other country
3. Mains receiving water from sources in the same country, but brought across territory belonging to the other country
4. Southern limits of areas reserved from mining in order to protect the water supply
5. Eastern and southern limit of Polish area still receiving water through mains crossing Germany at Beuthen (B on the map)
6. Former international boundary

Fig. 14.—Coal Mines Cut by the New Boundary
Fig. 15.—Zinc and Lead Mines Cut by the New Boundary

Symbols:
1. Zinc-lead mine, main shaft
2. New zinc-lead mine resulting from boundary change
3. Main water shaft pumping water that formerly drained underground from mines on both sides of the boundary
4. Southern limit of area in which all lead produced is the property of the Prussian (or now Polish) state
5. Unworkable because of important surface features, or already worked out when boundary was drawn
6. Not yet reached by underground workings
7. Mining operations on the German side from a mine in Poland
8. Mining operations on the Polish side from a mine in Germany
9. Mining operations formerly carried on across the boundary, but discontinued after construction of a new mine

1937: and two new mines, one coal and one zinc mine, though economically quite superfluous, have been constructed at a cost of several million dollars, in order that important coal and zinc deposits might be retained for Germany.

The mines and factories in the former German industrial district were closely tied together in major units, both vertically and horizontally, throughout the entire district, while there was almost

Symbols for Figure 14:
1. Unworkable because of important surface features
2. Not yet reached by underground working; will presumably be sold or exchanged
3. Mining operations in Germany from mine in Poland
4. Mining operations in Poland from mine in Germany
5. Operations planned for the near future
6. Main shaft
7. New mine constructed because of alteration in boundary
no connection with those in the Dombrowa and Krakow districts across the old border. In the iron and steel industry adjustments to the new boundary have led to almost complete separation, in operations as well as ownership, of the plants on the now Polish side from those on the German side, but little or no connections have been made with individual plants across the former international, now merely provincial boundary. In the zinc industry, however, the fact that all the furnaces happen to be on the Polish side while some of the mines, washeries, and rolling mills, and nearly all of the markets, are located in Germany has caused this industry, even though divided corporately, to continue the movement of commodities back and forth across the new boundary (Fig. 16).

For the individual inhabitants of this almost continuous urban district countless connections have been disrupted. Thousands of workers in mines and factories became foreigners with no rights of citizenship in the places of their work, and obliged to pass border inspection daily on their way to and from their homes (Plate H). Thousands of related families living in neighboring towns, or in town and country, found themselves likewise separated from each other by the restrictions of the new boundary. The children of two such families are more or less forced to receive education in different languages, and taught to hate or despise each other's country.

The conclusion with reference to local associations is obvious. The former frontier, as an antecedent boundary, conformed to an extraordinarily strong and clearly marked divide, which has been but little altered after ten years; the new subsequent boundary was drawn across a great complex of intimate associations, many of which still remain. The old line separated locally, districts and peoples who were in many, though not all, important respects different from each other, whereas the new line through the industrial district conformed to no geographical or human boundaries. The force of this boundary, as built up by the tariff wall, by passport and other governmental restrictions, make it, in spite of the ameliorations of the Geneva Treaty, extraordinarily disruptive to local associations. With the termination of that agreement in 1937, the boundary will presumably be greatly strengthened as a barrier.
Fig. 16.—Diagram of Operating Connections Across the New Boundary of One of the Principal Zinc Companies (not exact as to scale).

Symbols:
1-4 as indicated on the diagram
5. Abandoned, in whole or in part because of boundary change
6. Movement of commodities little changed
7. Movement discontinued because of new boundary
8. New movement resulting from the boundary
W. Several rolling mills in Germany, considerably west of this area
B. S. The new Blei-Scharley mine built because of the new boundary
Recent consolidation of the Neue Victoria washery with the Neuhof washery is omitted to avoid confusion

CONCLUSION

Upper Silesia, to summarize, is a border area in which the various geographic and human boundaries significant to states, instead of converging closely, diverge over a wide marginal zone which includes within it a major industrial district of dense popu-
lation. The political boundaries, representing diplomatic compromises, add to the confusion, geographically, by neglecting for the most part any one geographic boundary, and thereby developing a new one, and, in particular, by cutting through the very type of cultural landscape least suitable for boundary location.
PLATE A.—The Oder River a few miles above Ratibor where the new German-Polish boundary follows it. A "naturally marked boundary" but not an important "natural defense boundary."

PLATE B.—A "Green Boundary." The international boundary runs along the edge of the grain field; a boundary stone can be seen in the background at the left. The woman kept carefully on her (German) side of the line, but let her two cows crop the grass on the Polish side as well.
PLATE C.—A Russian Polish Farmyard, a few miles east of the former German boundary.

PLATE D.—Gallician Polish Farmhouses, a few miles east of the former German boundary.
Plate E.—Workers Dwellings in the Dabrowa Industrial District, former Russian Poland.

Plate F.—The Market Place of a Town in former Russian Poland.
Plate G.—The New German-Polish boundary in the Industrial District. The line follows the small ditch, between the parallel freight railroads, between a mine and workers' houses, and is crossed by an electric power line.

Plate H.—Workers going through pass inspection at a border gate on the new German-Polish boundary in the industrial district.