It is a paradox that in the period when in united Europe state borders become of little or no importance, Polish political geography undertakes studies on historic borders. It should be, however, kept in mind that in Western Europe the issues of borders have been examined since the early 20th century, whereas in Poland, apart from pioneering studies in the pre-war period, writings on this subject are very scarce (Sobczynski 1993a). This results from political restrictions in the communist period, when political geographical researches were practically banned.

The above-mentioned studies from the pre-war period were inspired by American political geographer Richard Hartshorne (1933) and were concerned with Upper Silesia. This publication gave rise to widespread discussion in geographical literature, which led Hartshorne to precise more accurately the terminology pertaining to borders. In the paper presented at the congress of the Association of American Geographers in December 1935 he defined the relict boundary as ‘an antecedent boundary which has been abandoned for political purposes but is still evident in the cultural landscape’ (Hartshorne 1936). Nowadays the term relict boundary is more broadly understood and may denote subsequent boundaries too.

In the course of history Poland has experienced particularly frequent border shifts, which left visible marks on the country’s cultural landscape. This widely known fact appears clearly, for instance, on the map of railway system in Poland: very dense network on the areas that after the partitions were occupied by Germany stands in sharp contrast with underdeveloped railway system in Russia-occupied sector. Unfortunately, political geography in Poland, like in other countries, exhibits little interest in investigations on durability and changeability of borders and their impact on cultural landscape.

As J.R.V. Prescott, Australian political geographer, expressed it: geographers are aware of great impact that border can exert on cultural landscape. Nevertheless, very often examination of this impact is only a part of studies on border shifts and problems they induce” (Prescott 1965). The influence of borders on cultural landscape is given somewhat more attention in studies carried out in the USA (Augelli 1980; Frazier 2000; 2001), Switzerland (Gallusser 1983; Leimgruber 1983) and Austria (Weigend 1950; Kaluski 1983).
Some singular studies devoted to relict boundaries in Poland have been undertaken as early as the 1960s. No extensive field researches, however, have been done until the mid-1980s.

The first study on this subject was published at the University of Lodz – the pioneer academic centre in the field of relict boundary studies. Its author, Ludwik Straszewicz, analysed the historical boundary (in the partition period and between the two world wars) along the Prosna River from the point of view of economic system of the former borderland and pendular migrations. The research was based on traditional methodology of socioeconomic geography dominated by descriptive method (Straszewicz 1964; 1965; Straszewicz, Kucharska 1972).

An interesting research undertaking was carried out by history students from the University of Warsaw under scientific supervision of Jerzy Holzer (who later became one of most distinguished Polish historians). They examined the relict boundary in the urban structure and consciousness of population of Golub-Dobrzyń – a dual town, once divided by the border between Russian and Prussian sector of occupied Poland. This pioneering attempt, although fragmentary and hardly profound, represented a certain turning point, as it showed that taking advantage of weakness of the communist regime (it was the period of the Solidarity movement formation) such investigations were possible at all.

Publication of the results of the above-mentioned researches encouraged geographers from the University of Lodz to embark on deeper and more comprehensive studies on relict boundaries (without realizing the consequences of probing this issue without the permission of the communist authorities). Fortunately, the final report was published after Poland regained democracy, whereas preliminary reports were only presented in the form of conference contributions, thus avoiding censoring. Communist authorities forbade any investigations, which could demonstrate failure of the country’s unification process. Despite consistent efforts to erase relict boundaries, their traces endured in the space and consciousness of the inhabitants, thus belying the official propaganda that heralded that the post-war boundaries were unanimously accepted by the society.

It was at the faculty of geography of the University of Lodz that the first department specializing in researches and teaching in the field of political geography was established by Professor Marek Koter. Studies on relict boundaries were conducted in the mid-1980s by Marek Sobczynski (1984; 1986; 1988). Due to political restrictions and scientist (statistic-mathematic) methodology that dominated in Polish geography at that time, those pioneering investigations had very little to do with humanist approach. Researches were concentrated on identification, inventorying (Sobczynski 1984) and characteristics of relict boundaries, basing
mainly on analysis of land use forms and physiognomy of built-up areas on former borderlands (Sobczynski 1993b). Moreover, a study of durability of relict boundaries in inhabitants’ consciousness has been conducted, although for the above-mentioned reasons its results could not have been published and remained in the form of the manuscript of doctoral dissertation (Sobczynski 1988).

In the course of the above-mentioned studies made by Polish political geographers some terms related to relict boundaries have been defined:

Administrative landscape – particular administrative system along with its spatial manifestations such as territorial divisions of different kinds (governmental and municipal administrative units and special divisions employed by the army, churches, etc.) (Sobczynski 1994a; 2000).

Stability of boundary – permanence of a section of border during a relatively long period of time, resulting in cultural, economic and often ethnic diversification of borderland. The term durability of boundary (relict boundary) denotes continuous diversification of borderland despite abolition of political function of a border. Relict boundary manifests itself in space by direct border remains (border stones, border roads, clearings, customs houses, watch-towers, etc.) and indirect border remains that include various forms of differentiation of borderland e.g. different land use forms and architecture physiognomy.

A mathematic index of border effect has been devised and employed in the investigations. Ranging from 0 to 100 the index is computed according to the following formula:

\[
E = \frac{x_2 - x_1}{x_2 + x_1} \times 100
\]

where \(x_1\) and \(x_2\) are relevant values of certain measurable characteristics for each side of the borderland divided by relict boundary (Sobczynski 1993b).

M. Sobczynski pursued researches on different administrative units (districts in macro-scale investigations and villages in field investigations) adjoining former political borders within the entire territory of Poland. The analysis of land use diversification was based on statistic data for districts, taking into consideration 15 characteristics (e.g. arable lands, orchards, rivers, roads, railways, built-up areas, etc.).

The analysis of physiognomy of built-up areas has been conducted using the field inventory in villages adjoining relict boundaries, with regard to dwellings, farm buildings,
form and situation of housing plots. The analysis included the total of 58 features characterizing the building physiognomy of borderlands.

General conclusions emerging from Sobczynski’s researches allowed to formulate some regularities concerning relict boundaries in Poland. It was found that the durability of relict boundary is correlated with stability of political border, but only with regard to land use forms. This regularity does not apply to the diversification of building physiognomy. This results from the fact that in Poland’s cultural landscape, due to numerous war destructions, land use forms are much more persistent than architecture. Another regularity consists in correlation between diversification of building forms and the amount of time that had elapsed since the border ceased to perform political function: the longer the period, the smaller diversification. In the cultural landscape of Poland most marked are those relict boundaries that existed in the early industrialization period. Although the pace of this process was different in each sector of partition Poland, nevertheless its spatial effects are still visible. Relict boundaries persist as well in people’s consciousness, in spite of the fact that in some areas the population has been totally replaced as a result of forcible displacements after the Second World War.

After the fall of the communist system in Poland, since the early 1990s all restrictions on investigation of relict borders have been cancelled. In the faculty of geography at the University of Lodz several master’s theses on this subject have been written. Adopting the same general research pattern as in the Sobczynski’s studies, these works employed methodology developed in social sciences, mainly sociological methods used to examine the perception of relict boundaries in the consciousness of inhabitants of former borderlands (Supernat 1989; Antonowicz 1996, Kozlowski 2004). This series of investigations confirmed previous findings described by M. Sobczynski, but also proved remarkable durability of relict boundaries in the mentality borderland population. It was also found that interstate borders exerted much greater influence on cultural landscape than inner borders e.g. between Poland proper and the Grand Duchy of Lithuania (Kaczynski 1997, Barwinski 2002, 2004) and the Duchy of Siewierz or between areas incorporated to the Third Reich and General Government’s territory (Orlowski 2002).

Many studies conducted in Lodz academic centre analyzed relict boundaries at lower levels of administrative division (Sobczynski 1994a; b; 1997; 2000; Rochminska 1993; Machlak 1996; Pawlaczek 1997). Another research was devoted to the border along the Prosna River – one of most durable relict boundaries in Poland (Koter 1999). The same author introduced to the English literature Polish term ‘kresy’, which denotes a particular type of frontier featuring
some specific political, social and economic characteristics (Koter 1997, Koter, Kulesza 2001). **Kresy** is characterised by geographical distinctness, peripheral situation, difficult accessibility, isolation, scarce population and low urbanization, social and economic retardation, dependence on other regions, multiculturalism, particular sense of frontier ethos, special legal regulations and political instability. Later on the issue of **kresy** analysed Zbigniew Rykiel (1997; 2000) from Warsaw, who was involved in researches of durability of relict borders in inhabitants consciousness of Silesia as well (Rykiel 1988).

Notable achievements in the field of studies of relict boundaries and cultural landscape of border areas encouraged the scholars from the Department of Political Geography of the University of Lodz to organize international politico-geographical conferences focused on borderland issues. The first conference held in 1988 in Łódź and Wielun was entitled **Boundaries and frontiers - social, political and economic problems.** The second conference in 1990 in Bialowieza was focused on **Minority problems within borderlands.** The 1992 conference held in Ksieże Młyny concentrated on **Inner borders, region and regionalism.** The 1994 conference in Wisła and Jabłunków (Czech Republic) discussed **Borderlands and transborder regions - geographical, social and political problems.** The conference held in Bogatynia and Görlitz (Germany) in 2000 dealt with **Changing role of border areas and regional policies.** The themes of the last two conferences were also related to borderlands: the 2002 conference in Krynica and Bardejov (Slovakia) debated **Role of ethnic minorities in the border regions** and the one organized in 2004 in Wigry and Vištītis (Lithuania) was about **Role of the borderlands in the united Europe.** The conference proceedings have been published in seven volumes of the periodical „Region and Regionalism“ (Sobczynski 2006).

Taking advantage of the collapse of the communist system, some other academic centres in Poland took interest in relict boundaries. In Wrocław Brygida Moj (Solga) (1993) once again embarked on investigation of the Prosna River as a relict border. Using terminology introduced by Sobczynski, she rejected purely scientist approach, in favour of methods of social sciences.

In the same university researches on relict borders were conducted also by Gerard Kosmala (1999; 2000; 2001; 2003; Kosmala, Spallek 2005) from the Department of Regional Geography and Tourism. Apart from methods employed by Sobczynski, he introduced innovative methodology e.g. **biographical method** for analysing durability of relict borders in people’s mentality. Questionnaire surveys conducted on both sides of a relict boundary yielded very interesting results, allowing to confront different border perception among inhabitants of former borderlands. The analysis was based on typological method aiming at
selection of most durable elements of political boundary that persistently remain in the mentality. This method produces a complete picture of a boundary in the consciousness of inhabitants, taking into account mutual relations, causes and consequences. In University of Wroclaw, the researches on cultural borders of south-western Opole Silesia (Koronczak 1998) and civilisation frontier in Eastern Poland (Odelga 2002; Sakowska 2002) was conducted too.

Most recently studies on relict boundaries have been undertaken in Cracow. Tomasz Padlo (2003) from the Department of Regional Development of the Jagiellonian University explored a section of relict boundary from the partition period north of Cracow, 20 years after an analogous investigation was conducted by M. Sobczynski. Padlo’s work was largely focused on social issues, much more than previous investigations. It probed not only into people’s consciousness but also analysed social behaviour as modified by the relict boundary. Padlo proved variations in voting behaviour of the inhabitants living on opposite sides of former borders, verified stability of former partition boundary as an administrative (not political) border and provided evidence that it still represents a real barrier that hampers social contacts (Padlo 2005). The relict boundary as field of research appears in Cracow university also in the issue of regional consciousness of the Polish parts of Orawa and Spisz regions (Moskal 1999) and Bieszczady Mountains as well (Janas 2005). Similar investigations of voting behaviour in the light of historical division of the country were made in the Institute of Geography and Spatial Organization of the Polish Academy of Sciences in Warsaw (Kowalski 2000).

In conclusion it can be stated that relict boundaries do not represent a long-established field of interest in Polish geography. Initiated incidentally in the late 1960s, studies on this subject developed only in the middle of the 1980s. At first Lodz was the only academic centre dealing with relict boundaries using definitely scientist methodology. M. Koter and M. Sobczynski, the leading scholars dealing with relict boundaries in the faculty of geography in Lodz, developed it into the most important research centre of political geography in Poland. Since the 1990s investigations of relict boundaries conducted in Lodz have increasingly employed sociological methods, which allowed to include into research programmes the question of people’s consciousness.

Political transformation after the fall of the communist system brought about increase in number of geographic institutions dealing with relict boundaries. Researches undertaken in Wroclaw and Cracow, although adopting the methodology used by scholars from Lodz, more broadly resorted to sociological methods, breaking with purely scientist approach. Most active researchers in the two centres are G. Kosmala (Wroclaw) and T. Padlo (Cracow). Although there are several centres of geographical studies in Poland, none of the remaining centres
embarked on investigations of relict boundaries, whereas politico-geographical researches in general are developed only in Warsaw, Gdansk, Poznan and Opole.

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