Journal of Borderlands Studies
Vol. XV, No. 1, Spring 2000

An Overview of European Geographical Research on Borders and Border Regions

Henk van Houtum*

Abstract

The number of geographical studies on borders and border regions has increased over the last few decades due to the process of globalization. The European Union (EU) integration process in particular has created demand for such studies of its internal borders and the changing views about them. This research aims to define trends within these geographical studies in terms of the EU integration process and discover commonalities of themes and methods within them. Three approaches are identified (flow, cross-border cooperation, and people), geographical studies of borders and border regions are categorized within them, and the approaches are compared to one another in an attempt to better understand the trends in geographical research on European borders and border regions.

Introduction

Although one could argue that the globalization process has enlarged contact possibilities and widened the spatial consciousness of human beings, there is no doubt that countries and borders still exist, and maybe even in a more manifest way than ever before. In a world where societies and peoples are becoming increasingly interlinked, the perceived need to emphasize the differences and asymmetries between countries and people has also increased. It seems that the strengthening and securing of existing spatial borders (of identity) is not evened out, but rather invoked, by the convergence

* Van Houtum is Research Fellow at the Nijmegen Centre for Border Research and Department of Human Geography at the University of Nijmegen, the Netherlands. The author thanks Jan Buursink, Norris Clement, Stefan Dormans, Nicole Ehlers, David Molina, Anssi Paasi, Martin van der Velde, and two anonymous reviewers for their helpful comments. Dormans is also acknowledged for his help in collecting the literature.

process (see Harvey 1993). Illustrative of the tendency to "(re)territorialize" in a time of unification and globalization is the fact that the number of countries in the world has only increased during this century, as have the number of territorial conflicts, wars, and other manifestations of confrontation between territorial identities within state borders. Spatial borders still form an essential part of daily life and human behavior. They are an expression of the spatial demarcation of human places that is needed both socially, for reasons of certainty and protection, and politically, to sustain control and power over a territory and safeguard their own position in it.

The theoretical focus on borders and border regions has been neglected for a long time due to the widely held belief that every border and borderland should be seen as unique. Moreover, political attention on the internal borders of the European Union has shifted. As O'Dowd (1998) observes, between the 1950s—at the end of World War II and the beginning of the European integration process—and the 1980s, state and national borders in Europe were remarkably stable (see also Strassoldo 1988). The balance of power that existed between communism and capitalism during this period, although a tension in itself, brought relative stability to the borders of individual countries within the European Union. Yet, within the last decade of the twentieth century, things have changed radically (see Anderson and O'Dowd 1999). The capitalistic global process of increasing convergence and interdependence, along with the new élan in the European integration process in the late 1980s and the post-1989 breakdown of the Iron Curtain, generated a new and immense theoretical fascination with studying the influence of the state and national borders within the European Union, on the one hand, and the newly arising system asymmetries and border disputes in Eastern Europe, on the other. As a result, research institutes, networks, and special publications dealing with the subject have increased exponentially in Europe in the 1990s.

One of the difficulties in the search for trends and strands in European studies is that it is difficult to define what is really European. First, there is much debate on what belongs to Europe and what does not. What are the borders of Europe? Second, does the condition of the study imply that the topic is European or that the authors are European? This paper attempts to limit the focus by only taking into account those studies that deal with the perspective of the integration process within the European Union. Such a focus, however, has the consequence of thereby eliminating studies on the external borders of the European Union (see Grimm 1997, 1998; Stryjakiewicz 1998; Krätke 1999; Eskelinen, Liikanen, and Oksa 1999; Barjak and Heimpold 2000). Whether the scholar is European or not is not an issue in this paper.

Another factor that makes the search for trends and strands in this field of science problematic is its feasibility to encompass many different kinds of meanings of borders. For instance, borders can be interpreted in terms of territory, ethnicity, real/imagined, virtual/real, objects/subjects, identity, and gender to name but a few examples. It may therefore be difficult to define the borders of the interpretation of borders. What is more, it may be equally diffi-

cult to define the borders of the disciplines and approaches dealing with borders.

Many border scholars specifically demand a multi-, inter-, or transdisciplinary approach, making a monodisciplinary search for studies on borders and border regions almost inadequate. Nevertheless, the plea for fertilization between disciplines is still far ahead of its realization. Most of the studies on the subject continue to stem from just a few disciplines (see Clark 1994). Given that this paper's focus is on the analysis of views of national borders and border regions with respect to the integration process of the European Union, and looking chiefly at disciplines in which this topic is dealt with most, the choice is much more limited. It can be ascertained that especially within geography—a discipline that is essentially focused on the understanding of the relevance and meaning of spaces and places in society—the study of borders and border regions has gained considerable ground. This paper provides an overview of the European geographical literature on national borders and border regions. Moreover, this paper concentrates on the opening of the internal borders within the European Union, and less so on its external borders. The viewpoint taken by scholars working in or close to the disciplines of economic and regional geography is focused on in particular.[1] The purpose of this paper is not to refer to all of the studies conducted on the subject within these two fields, but rather to search for commonalities of themes and methods in the European geographical studies on borders and border regions.

A discussion on the geographical studies of borders and border regions is presented in the form of a categorization of the dominant strands of debate. Then, these different categories of studies are put on one line and compared with each other. In the conclusion, the insights gained by making an overview of the literature on borders and border regions are discussed and an attempt is made to evaluate the richness and shortcomings of the present debates.

Emphases in Border and Border Region Studies in Economic and Regional Geography

Three different theoretical strands of debates have been discerned from the rich geographical literature on borders and border regions. These three stands have been labelled the flow approach, the cross-border cooperation approach, and the people approach.

The Flow Approach

The first category of border (region) studies distinguished here is called the flow approach. This strand of study follows the classic European economic geographers, like Giersch (1949) and Lösch (1940) (see also Hansen 1977a, 1977b), with the physical flow of (economic) activities playing a central role. Although the European integration process was not yet an issue for

the classic regional and economic geographers, their theories have been used by geographers to analyze the impact(s) and effect(s) of borders on the integration process (see Hansen 1977a, 1977b, 1983; Zotti 1982; Clark 1994).

One of the most influential classical works in this respect is *The Economics of Location*, by August Lösch (1940). His work assumed a rather provocative view of the benefits of border locations. Lösch argued that state tariffs at national borders could be compared to lengthening the economic distance between two countries. "Tariffs are like rivers, which separate their banks economically more than would correspond to their actual width" (1940: 200). State borders, he argued, are distortions in the market networks, dividing the potential spatial market and resulting in economic losses. Consequently, a border region could best be seen as a desert, a wasteland attractive only to some activities (1940: 205). In an attempt to measure the impact of the border on the normal flow of economic activity, S. Whittemore Boggs (1940) reached similar conclusions. He too found that borders act as severe barriers to economic interaction. Another classical and often cited European scientist during this period was Herbert Giersch. He developed a theory including an analysis of the consequences of the location of political borders (1949). He argued that the lower the transportation costs of a product and the greater the internal economies of large-scale production, the larger the market areas would be and fewer the firms that would choose to locate near the border. In his view, the border reduces the size of the potential market area. In short, the classical border scholars focused on the impact of borders on the flow of economic activities, modeling the impact of borders as though it increased the physical distance.

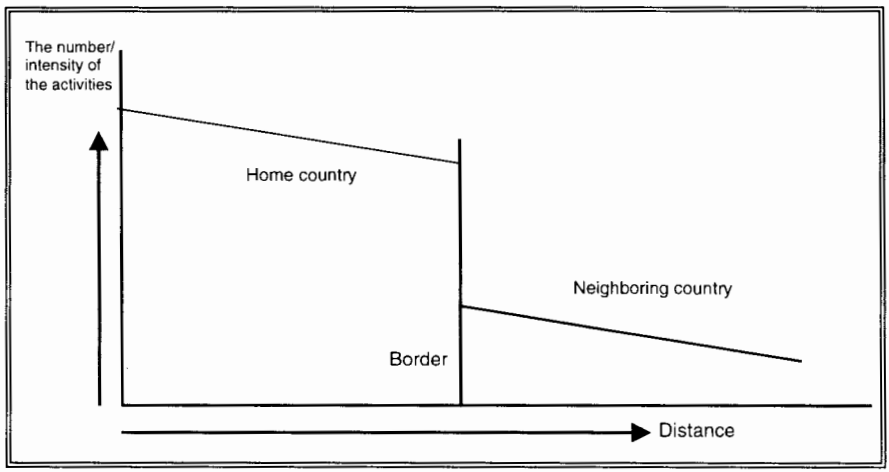
This classical way of thinking has had a tremendous impact on the geographical study of borders and border regions. In fact, physical distance became one of the key words in the spatial economic and regional (economic) approaches on borders and border regions. The physical positions of borders and border regions were principally measured in terms of physical distance. As a result, border regions were generally seen as peripheral in the national context. It was argued that the economic development of border regions was not necessarily lower (some might even profit from their location), but that, on average, border regions did suffer from their peripheral position and direct proximity of the border, causing a juxtaposition of differing national systems—arguments closely linked to those of Lösch and Giersch. With the flow approach, the inhibiting impact of the borders upon the mutual accessibility of European cities and their interaction patterns is quantified mainly in terms of transport costs (see Figure 1).

The basic idea of the flow approach is that (European) space can be seen as a homogeneous physical abstraction in which artificial obstacles prevent a natural continuity in the flow of activities. Thus, state borders cause *discontinuities* (see Figure 1) and an increase in the marginal cost of interaction (Nijkamp, Rietveld, and Salomon 1990).

It follows that an important subject of analysis using the flow approach is the density and missing links of infrastructure. The analysis of the link between regional accessibility and regional economic potential became a par-

ticularly important subject of study (see Clark, Wilson, and Bradley 1969; Keeble, Owens, and Thompson 1982; Cheshire 1990). Due to the dominance of the flow approach in regional economic science, borders became a synonym for barriers, just as they had in the sphere of general economics (see Clement 1996).

Figure 1. The Border and Flow Discontinuity



Where does this thinking in terms of borders as barriers in economic science come from? It can be traced back to the underlying assumptions of bounded rationality and maximization of utility, conventions notably common to mainstream economics, neoclassical economics, and the highly influential strand of utilitarianism within (political) philosophy. Human beings are assumed—given their perceived limitations of knowledge and cognitive capacity—to take the most effective actions to maximize their own utility; that is, the satisfaction of their preferences. The preferable societal structure is therefore one that would produce the greatest satisfaction for the largest number of people—the central premise of utilitarianism in its simplest form.

With regard to cross-border flows, the highest achievable economic utility would be attained by the freedom of flows of goods and services, thus optimizing economies of scale. According to these assumptions, borders can be considered barriers to the free market of flows, hindering the optimal allocation of a given set of resources and the balance of the spatial disequilibria in economic developments. This is not to say that all scholars studying cross-border flows would emphasize these assumptions regarding human behavior. It is not a necessary condition. A quite diverse group of scholars from different disciplines and backgrounds is involved in analyzing and determining the impact of the borders on the flows in space or time in the European Union.[2] Nevertheless, all subscribe to the reasoning of borders as

barriers to flows of interaction. What is more, the number of scholars working on this theme within the study of borders and border regions is relatively large. Needless to say, the conceptualization of borders as barriers has become mainstream thought in economic geography.

According to a definition from Nijkamp, Rietveld, and Salomon, key scholars in the flow approach, barriers are "... obstacles in space or time that—apart from normal average distance friction costs in spatial interaction—impede a smooth transfer or free movement of information and activities" (1990: 239). The impact of these barriers is primarily analyzed in terms of the accessibility of EU regions and cities. The distances of accessibility are either measured as direct estimates (Euclidean) or in terms of travel costs or time.

The empirical results found on the barrier-effect of borders in the European Union are striking. Bröcker (1984) found that the average impact of borders in Western European countries equaled a distance of 233 miles (375 kilometers), implying a reduction of international trade to one-sixth of the value expected if the respective trade flows did not have to cross a border. His approach takes two determinants of international trade barriers into account: the costs of covering geographical distance and the costs of crossing the border. He concluded that commodity flows and professional passenger travel between cities on either side of a border were as much as 75 percent less than those between domestic cities of comparable size.

One year later, this result was confirmed by Nuesser (1985), who indicated that the interaction between two cities on either side of a border is reduced to 25 percent of what exists when no border needs to be crossed. Bruinsma (1994) found that the restraining effect of borders upon the mutual accessibility of European cities amounts to approximately 30 percent. For telephone traffic, similar results have been found, showing that interaction is lessened to 30 percent (Mackay 1958; Rietveld and Janssen 1990; Rossera 1993). The proportion of international calls compared to the total number of calls per country is usually slight. In the Netherlands, it has been found that international calls amount to no more than 2 percent of the total (Bruinsma 1994).

In a published study on frontier impedance between the Netherlands, Belgium, France, and Germany, Plat and Raux (1998) estimated that road traffic is divided by at least a factor of two because of border effects. However, they maintain that there is no simple relationship between flow and border. To conduct a comprehensive analysis, the differences between intranational and international supply of infrastructure should be taken into account. Moreover, they argue, the border must be considered a witness of the trends in integration and disintegration of national and transnational socioeconomic systems. Bruinsma (1994) also contends that the barrier impact of borders should not be seen as primarily physical (see also Nijkamp, Rietveld, and Salomon 1990). He is convinced that other nonphysical factors, such as economic and sociocultural influences, play a more important role. These effects, he argues, could lead to an expansion of the distance and an increase in the distance costs.

Cross-Border Cooperation Approach

Another stream of studies on borders and border regions has evolved in economic and regional geographic studies since the early 1990s. The cross-border cooperation approach is clearly linked to a more general interest in integration and cooperation in (economic) geography. Terms and concepts such as clusters, districts, networks, trust, transaction costs, learning, embeddedness, cooperation, alliances, and so on, have become very popular in geography. This increased attention to the structures and processes of regional, national, and international integration cannot be understood apart from the popularity of the issue of scale enlargement processes in the economy in the form of internationalization, Europeanization, and globalization. The study of borders and border regions fits nicely into this trend.

The efforts to create a "Single European Market," along with the somewhat misleading rethoric of a "Europe without Frontiers" (see O'Dowd and Wilson 1996), have further stimulated the popularity of the cross-border regional approach within the discipline of geography. The Council of Europe has promoted cross-border cooperation since the 1960s. Since then, the study and promotion of cross-border cooperation has been notably conducted by French, German, and Swiss geographers and planners (see von Malchus 1975). The funding of the "program" policy by the European Commission in the late 1980s and early 1990s, however, implied an exponential increase of the number of cross-border cooperation programs within EU border regions. With the intensively promoted and financially well-supported INTERREG[3] programs, the commission principally targets the positive effects that economic relationships may have on the cross-border interaction and cohesion of member state economies and European (border) regions (European Commission 1990; Blatter and Clement 2000). For DG XVI, the regional policy department of the European Commission, cross-border networking has become an important objective in realizing a united Europe. The policy aims to "[provide] stimuli for the foundation and development of co-operative networks across internal borders, and to link these networks to larger community networks" (European Commission 1990).

Launching policy programs to stimulate cross-border cooperation within the EU has induced many scientific studies and reports on cross-border cooperation between border regions. Since the early 1990s, in fact, it has become generally acceptable to regard cooperation as a common virtue and an economically induced moral right for EU border regions to associate themselves with the "other side" as they share common problems. Disparities between border regions are no longer accepted and a social and economic equilibrium is sought. This voluntaristic approach can be traced back to the early writings of geographers and policymakers in the 1960s and 1970s, who, in their optimistic and sometimes romantic visions of a unified Europe, argued in favor of cross-border cooperation. As von Malchus wrote in 1975, "the construction of a vivid Europe should start at its borders" (author's translation). In the early 1990s, the cross-border cooperation approach, as it is termed here, became the dominant discourse in border studies as a sort

of moral geography. Although seldom manifested as such, the underlying assumption in many of the policy-oriented studies using this approach is that borders *can* be overcome, and what is more, they *should* be overcome in the seemingly "borderless" space of the European Union. Within these studies, borders are seen as barriers, not as physical barriers as the flow approach would argue, but as barriers to success or a prosperous integration and harmonization process. Building on the flow approach, which emphasizes the measurement of the extent to which borders hinder contact and integration, the cross-border cooperation approach searches for the appropriate analytical tools. It also searches for theories to understand the importance of cross-border cooperation between organizations and institutions in border regions and uses terms and concepts like trust, transaction costs, interaction costs, learning, and embeddedness to give structure to thoughts and ideas.

The view of human behavior thereby changed as well with this approach. Whereas the flow approach assumes man to be a cost-minimizing agent (*Homo economicus*), the cross-border cooperation approach perceives man as using those contacts and contracts that he has already established while exploring new ones to satisfy his own needs (*Homo cont[r]actis*). A great deal of these studies on cross-border cooperation are policy analyses and policy-oriented. Challenged by the idea of European integration, the strategies to describe and guide potential opportunities for contact, networking, and integration across borders are searched for, thereby reducing the barrier effect of borders.

The dominant view of border regions also changes with this approach. It argues that border regions in particular could profit heavily from the benefits of integration and cooperation. The national peripheral position of border regions would be altered to a more dynamic and central position in the European context by the opening of borders. The formation of economic relationships across borders could thus lead to a more cost-effective and efficient spatial division of labor (see von Malchus 1975; Anderson 1982; Martinos and Caspara 1990; Kamann 1993; Nijkamp 1993; Church and Reid 1995; Clement 1996). Border regions are then often seen and promoted as the new key areas, the micro-scale laboratories as it were, of the European integration process (see van Houtum and Boekema 1994). What is more, the argument is made that border regions ought to be "linked" to the European network of cities and regions. In this respect, the slogan of "Europe of the regions" is often cited. Nijkamp predicted the development of a European network economy, following the "mosaic-model" of Champion (1989), Illeris (1991), and Peschel (1992). "... In Europe, traditional patterns of competition—within national borders—are increasingly being replaced by vigorous competition on a multinational scale, since traditional boundaries disappear. Regions of different countries are becoming a transnational economic network"(1993: 158). As a result, border regions are no longer seen as buffer and protection zones; rather than "passive" spaces, they are seen as "active" spaces and key areas for cross-border policy development (see Ratti 1993a, 1993b; van Geenhuizen, van der Knapp, and Nijkamp 1996; De Boer 1996; Giaoutzi, Suárez-Villa, and Stratigea 1993; Suárez-Villa, Giaoutzi, and

Statigea 1992). It could be argued that such rhetoric within the cross-border approach symbolizes the emergence of a cross-border doctrine that aims to communicate and establish a kind of imagined community that goes beyond national borders. Euregions, also called Euregios or Euroregions, are examples of such communities. Increasingly, these institutionalized cross-border cooperative agreements between municipalities across borders have become the role model for cross-border cooperation in EU border regions (Scott 2000).

The following quotations may stand as discursive examples of this new and powerful emphasis in border (region) studies: "Until recently, interregional cooperation in Europe had not been identified as a major issue by public opinion and national policymakers. However, the process of fragmentation of many national entities, as has occurred in Eastern Europe, and the gradual removal of national *barriers* in Western Europe highlight the increasing importance, or even *the necessity* of, interregional cooperation as a *factor promoting the process of European integration*" (Cappellin and Batey 1993: 1, emphasis added). "I wish to express the hope that ... the experiences of interregional cooperation illustrated in this book may stand as *laboratory* for a process of *overcoming national difficulties and conflicts* in Europe" (Cappellin and Batey 1993: 19, emphasis added).

Fitting the image of border regions as laboratories, many studies within the cross-border cooperation debate analyze and evaluate the existing dissimilarities between the economic, political, social, and cultural characteristics of the regions, prohibiting cross-border integration. Studies in the field of administrative and political dissimilarities chiefly focus on the distance between the neighboring national and regional administrative systems as an obstacle to integration (see Anderson 1982; Duchacek, Latouche, and Stevenson 1988; Verberk 1991; Kessen 1992; Murphy 1993; O'Dowd, Corrigan, and Moore 1995; Perkmann 1999; Scott 1999; Church and Reid 1998). The measurement of this distance is chiefly at the level of regions or countries, which can then be compared. Obviously, within economic geography, most studies of border regions deal with economic dissimilarities. The focus of these studies is generally on the economic performance and development problems of a specific EU border region and its problems associating economically with the neighboring region (see Dagevos et al. 1992; Steiner and Sturn 1993; van den Tillaart and Busse 1994; Corvers, Dankbaar, and Hassink 1994; Dagevos, Brouwers, and Hulsinck 1994; Church and Reid 1996; van Houtum et al. 1996; van Houtum 1998; Janssen 1999).

Along with social distance, "objective" differences between characteristics of the population are included on either side of the border. These differences might exist in language, education level, population density, and so on (Cramer, Logie, and Mergaerts 1984; Passchier and van Amersfoort 1981; Smit 2000; de Gijsel et al. 1999). *Cultural distance* refers to the size of the objectivated differences among cultures. In the analysis of cultural differences between countries, the symbols, patterns of values, norms, and habits are compared (see van Beek 1996). This is the basic concept behind cultural sociologist Geert Hofstede's work (1980, 1991; see also Benito and Gripsrud

1992). Although Hofstede's work has become the international standard for the measurement of cultural distance in (international) business and organization studies, most of the geographical studies that emphasize the importance of cultural distance only seldom measure the cultural differences between neighboring regions or nations.

A large number of the studies on cross-border cooperation in general, and Euregions in particular, contend that the attitude of central governments toward developments in EU border regions is Janus-faced. While states are very keen to stimulate economic developments in border regions, readily taking advantage of EU funds, they are generally unwilling to hand over portions of their sovereignty and political authority to the structured forms of cooperation, sometimes prohibiting and frustrating direct and efficient dialogue between partners in the border regions. There is reluctance at the state level to see border regions as a regional issue (see also Blatter and Clement 2000; Verberk 1991; van Houtum 1993; O'Dowd, Corrigan, and Moore 1995; Perkmann 1999; Scott 1999). According to O'Dowd, Corrigan, and Moore, "the vast majority of border region initiatives came into existence because of EU and intergovernmental funding but were then hampered by the very political and administrative system which encouraged them in the first place" (1995: 278–79).

Filling this new space with political and economic constructions and cross-border strategies to overcome the dissimilarities on either side of the border has become a fashionable practice in this field of geography. In fact, the number of studies on borders and border regions that emphasize the importance of cross-border networking and cross-border development has, relatively speaking, become so large that one could best speak of the new mainstream within border (region) studies. What is more, the growing importance of and European financial support for cross-border regional initiatives and cooperative forms also have attracted business. A large number of consultancy agencies and professional lobbyists are currently advising on and/or lobbying for the development of EU border regions in general and Euregions in particular, thereby "selling" cross-border cooperative strategies and targets as marketing instruments to municipalities, provinces, and regions.

Over the past few years, however, doubts have begun to emerge. After more than a decade of efforts to create an internal market, an increasing number of counternarratives are produced, questioning whether the pursuance of policy for EU cross-border regional integration is indeed on the right track. Some scholars have put forward that the European integration process should not be seen as a mythical high-speed train, unifying and harmonizing the differences within Europe and bringing to it new faith and progress. Intensifying this skepticism are the many large-scale empirical studies conducted on the effectiveness of cross-border economic networking—nearly all of which have concluded that the border still should be seen as an immense barrier (van den Tillaart and Busse 1994; Corvers, Dankbaar, and Hassink 1994; Dagevos et al. 1992; Steiner and Sturn 1993; van Houtum 1998, 1999b; de Gijsel et al. 1999). Borders proved to be more persistent than initially as-

sumed after the launching of the internal market program. Communicating cross-border cooperation between border regions is still far ahead of its realization. Thus, it seems that the optimism and belief in a cross-border harmonic network between border regions loses some ground to critical or even skeptical approaches on the successes of cross-border cooperation (see Verberk 1991; van Beek 1996; Lensink 1994; Barendrecht and Gybels 1994; Corvers, Dankbaar, and Hassink 1994; van Houtum and Boekema 1994; van Houtum 1996; Baker 1996; Mønnesland and Westlund 2000; de Gijsel et al. 1999; Perkmann 1999; Scott 1999; van der Velde and van Houtum 2000).

People Approach

The third category of border studies from the perspective of European integration is termed the people approach. This strand of scholars is growing, especially within the field of regional geography. These scholars are working toward the inclusion of an analysis of human production and reproduction of borders as a way of understanding the persistence of borders and their meaning and implications for the European integration process. Emphasis is put on the (mental) creation, (symbolic) shaping, and reshaping of borders by human beings—including politicians, firms, consumers, and citizens.

Using this approach, the analysis of the border (region) as such is replaced by the analysis of the viewpoint and behaviors of individuals or groups of individuals taking part in cross-border (inter)action (Heigl 1982; Golledge and Stimson 1987; Huriot and Perreur 1990; Weichhart 1990; Rumley and Minghi 1991; Leimgruber 1980, 1991; Riedel 1994; Peschel 1998; Paasi 1996, 1999; Wilson and Donnan 1998; van Houtum 1998, 1999a, 1999b; van der Velde 1999; Brednikova 1999; Berg 2000; Ehlers and Buursink 2000, Schack 2000). Referring to this third strand as the "people approach" does not imply that the other two do not include the actions of human beings in their analyses. Rather, it places these studies in a debate that explicitly centers its attention on the behaviors, actions, and mind-sets of human beings concerning spatial borders. Categorizing these approaches as geographical does not do justice to their interdisciplinary reach. Studies using the third approach make use of different kinds of disciplines within geography, including political and social geography, as well as other disciplines—such as sociology, anthropology, and psychology—to grasp the essential elements of human spatial behavior. The differences among the many disciplines within economics and geography, and even among the social sciences, are therefore challenged. This proves the former claim that when trying to create an overview of specific disciplinary attention for borders and border regions, it is sometimes difficult to draw borders between the disciplines. This is even more so with the people approach, as it deals with different aspects of human behavior and thought, thereby exploring what human beings are and how they speak and feel. Clearly, the attention on borders is elaborated upon and inspired by an inter- and transdisciplinary base. Nonetheless, since this overview has the explicit aim of reviewing geographical studies, discussions will

concentrate only on those works within the people approach that focus on borders and border regions and are directly or closely related to the geographical debate on national borders in the European Union.

Studies that could be categorized by the people approach typically stay away from the fixation of borders as political lines in space (Paasi 1996, 1999). Borders are not regarded as political dividers or lines of separation with a direct visible function, but as separators and products of people with different nationalities and identities. Borders are interpreted as necessary constituents of social and individual life and are, therefore, studied in terms of their relevance rather than their barrier effect (see Rumley and Minghi 1991; Raffestin 1993; O'Dowd and Wilson 1996). A pivotal element of study in this approach, especially in light of the European integration process, is the analysis of the evolution—that is, the production and reproduction—and the influence of nations and national identity, as opposed to the influence of states (O'Dowd and Wilson 1996; Paasi 1996, 1999). Nations, generally defined as affective or emotional bindings to a certain territory, are distinguished from states, the legal binding of people in a territory, because it is believed that this distinction is crucial to understanding the influence of borders for people in their daily lives and their perceptions of integration and cross-border interaction. Reasoning in terms of national (and regional) identity on either side of the border, leads to the distinction between "us" and "them," a distinction chiefly based on social psychology (see Paasi 1996; van Houtum 1998).

In contrast to the cross-border cooperation approach, the focus of the people approach is on the (emotional) reactions, actions, and origins of individuals and groups confronted with the economic or political ambitions of cross-border (economic) integration. Political and social construction, cognition, perception, and identity are key words within these studies. In general, the people approach does not concern itself with the direct, manifest effects of a line in space, but rather with the dynamic process of differentiations in perception and identity caused or stimulated by the social production and reproduction of that line, and with possible consequences for the (inter)action and behavior of the people who occupy the space abutting that socially constructed line. In other words, this approach views mankind as *Homo socialis*. The following distinguishes sociopsychologically and sociologically inspired people approaches.

Sociopsychological People Approaches

Leimgruber (1980 and 1991) called for the inclusion of the (environmental and social) psychology of human agents in the study of geographical border issues. He argued that borders should be seen as human creations or social constructs, conditioned by human perceptions and attitudes toward space. Following Moles and Rohmer's publication on the psychology of space (1972), Leimgruber constructed a human shell-like spatial hierarchy, in which he expressed the view that human beings identify with and cannot live without a ranking in scales of spatial activities, ranging from the human body to the region or nation. According to Leimgruber, border regions should be seen as areas where centripetal and centrifugal tendencies come together and

different attitudes and values intermingle. In the case of the Swiss-Italian border area, he concludes that these often invisible, but nonetheless important, factors sometimes surface. He argues that the structuration and land use within the Swiss-Italian border landscape may stand as characteristic reflections of the different perceptions and values on either side of the border.

Rumley and Minghi's volume on the geography of border landscapes (1991) is particularly focused on the influence of borders on social-ethnic, cultural, and political distinctions and conflicts in border landscapes. The editors conclude that "... the present volume has emphasised the need to break out of the narrow confines of conceptual definition of the term border landscape. The term needs to be opened up to other influences and to scrutiny and criticism. As part of this process there is a need to connect not only with developments in cultural geography in terms of the landscape concept, but also with the other social sciences. In the final analysis, the fundamental question which has to be confronted is, does or can border landscape research have any relevance for social science in general and for geography in particular?" (1991: 298). This quotation clearly expresses the need to go beyond the study of the border as a political line in space, and take it into account as a product of different interactions and processes occurring in space.

The sociopsychological thoughts and concepts of borders within the people approach add other types of distance to the discussion: cognitive, affective, and mental. These three distances are typically asymmetric. The distance from A to B is not the same as from B to A, since the distance is not an absolute index, but relative and subjective.

The idea behind *cognitive distance* is that people have a cognitive perception of reality (Gould and White 1974; Evans and Pezdek 1980; Ewing 1981; Golledge and Stimson 1987; Cadwallader 1979). This representation of "reality" is based on knowledge and experience. Crucial to it is the idea that reality and the human perception of it are not congruent (Koffka 1935). That difference, the distortion between spatial estimation and spatial reality, is defined as cognitive spatial distance, or cognitive distance. There are many methods that can be used to measure cognitive distance (see Riedel 1994). One method frequently used involves measurement by means of the estimated physical distance between two real locations on a map—in this case, two cities (see Canter and Tagg 1975; Cadwallader 1979; Riedel 1994; van Houtum 1998). While the distances between a village and village A in the homeland, and between that village and village B across the border may be equivalent in reality, the estimations may diverge. The accuracy of the estimate of physical distance to a city across the border, according to these studies, should also express personal experience and knowledge of the places involved (compare with Evans and Pezdek 1980; Riedel 1994).

It has been estimated that the distance to cities across a border is greater than the distance to other cities within the homeland. An overestimation of the distance is interpreted as a low degree of personal experience and knowledge regarding those cities. Thus, the city in the neighboring country is relatively far away. An underestimation, by contrast, means that the city is closer

according to the subject's perception. It is generally found that the presence of a border increases the effect of the over- or underestimation.

Another measurement of cognitive distance is the difference between the estimation of the border location and the true location of that border in space (Riedel 1994; van Houtum 1998). Actors have an idea of the factual location of the state border on the map. The reasoning used here assumes that what is more familiar is more accurately estimated. The purpose of such studies is to establish the nature of the divergence with regard to the factual border to illustrate the cognitive influence of the existing relevance of the border. Within social and environmental psychology, much debate exists on the usefulness of cognitive distance indicators and cognitive maps to explain action (see Riedel 1994; Romann 1990). This discussion, however, has not yet entered the field of border and border region studies. Theoretical discussions on the usefulness and relevance of (parts of) the people-oriented approaches have only just begun.

Other studies within this third approach point to the degree of emotional connectivity with others, especially across the border (see Moles and Rohmer 1972; Riedel 1994; Leimgruber 1991; van Houtum 1998). This confrontation of the sociospatial identities of the neighboring regions with one another could be called the *affective distance* between people from different border regions. In this context, there are two extremes: either the affective distance, or dissimilarity, is not present at all among the people of the neighboring regions, or the distance is exaggerated, which may lead to stereotyping and prejudicing of the characteristics and behavior of those in the neighboring region. In the latter case, these simplified beliefs tend to be persistent since virtually no verification of reality is made when stereotyping occurs (compare with Paasi 1996). Moreover, a group usually sees advantages in depersonifying another group, making one's own group more cohesive. A preference for the familiar underlies this identification with and attraction to members of the in-group, or "us." Using this approach, it is generally argued that a better understanding of the confrontation and integration of national and regional identities is indispensable to analyze the influence of the border on human attitudes and behavior, and may help to explain why borders are generally so persistent.

Finally, the concept of *mental distance* is distinguished in the literature (van Houtum 1998, 1999a, 1999b). This type of distance concerns the estimation of the differences and consequences of the different conventions of two countries. Mental distance is similar to the concept of distance as categorized in the cross-border cooperation approach, in the sense that it deals with differences in social, cultural, or economic conventions. Where it differs is concerning the element of perspective. It focuses explicitly on the perception, estimation, and evaluation of the differences between two countries, and how this perception is related to absolute differences between territories. If and how differences are perceived and what consequences these perceptions have are the questions posed here (see Riedel 1994; van der Velde 1999; Janssen 1999). One of the most important conclusions of the research on the link between mental distance and the internationalization process of firms in border regions is that the international orientation of entrepreneurs should

be seen as a "mental learning process" (van Houtum 1999a, 1999b). Influenced by "belief sets" as well as the conventions and the socially constructed rationality of the society they live in, entrepreneurs draw their own subjective borders and build their own behavioral patterns that do not necessarily align with what is economically realistic or desirable. Entrepreneurs who have experienced cross-border economic cooperation generally have a more positive perception of, and attitude toward, their partners in other countries. Among entrepreneurs without cross-border experience, there is greater uncertainty and lack of confidence in the potential success of international economic relations compared to economic relations within their own country.

Sociological People Approaches

A fitting illustration of a sociologically inspired people approach on border and border region studies in geography is the extensive study Anssi Paasi conducted on the relevance of identity in the relationships between people of the neighboring regions at the Finnish-Russian border (1996). Drawing from the works of Leimgruber (1991) and Shields (1991), and social constructionists like Foucault (1972), Lefebvre (1991), Harvey (1989), Pratt (1991) and others, Paasi argues that borders and border regions are to be seen both as social spatializations (Shields 1991) and spatial spatializations. In his view, borders are spatial institutions that are both constructed and given meaning by human beings. He is particularly interested in the creation or institutionalization of nations and their identity, as well as their influence on the meaning of the border on the thoughts and behaviors of people. The space that borders represent is a process of social production and reproduction of mental representations, leading to the creation and prolonging of the images of "us" versus "them." Elaborating upon the role that language and discourse (as well as imagery) can play in the construction of regions, nations and their identities, Paasi explicitly makes use of what can be called "narrative geography"—using people's stories, maps, symbols, pictures, texts, photographs, and so on to support and illustrate his argument. Other scholars, notably those working in northern Europe (Finland, Russia), are also working on the social and political discourses of borders and identities (see Liikanen 1999; Berg 2000; Berg and Oras 2000; Brednikova 1999). Clearly, the discussion on the discursive concept of social construction is linked to the field of political geography, in which the debate of political identity of territories is well known (see Anderson 1996; Anderson and Port 1998; Murray and Holmes 1998). This constructivist turn in the study of borders and border regions could first of all be seen as a rejection of the use of the politic geographical concept of "natural" borders, which includes the argument that the state should be seen as an organism (Ratzel 1897). In addition, other geographers have observed that borders can be identified in physical natural conditions, justifying the usage of the term "natural" border. In contrast to these contentions, other (notably French) scholars held the conviction that boundaries do not exist in nature; that those borders that appear to exist naturally are those that one wishes to perceive as such (see Brunhes and Vallaux 1921; Hartshorne 1933; Broek 1941; Pounds 1951, 1954; Schöller 1957; Rykiel 1995).

The same natural phenomena may or may not be considered borders in different cultures, and at different times and places. In a more modern form, this latter conviction is again taken up by the people approach, regarding borders as social constructs.

Despite these first attempts to work with and explore the scope and depth of approaches focusing on behaviors, symbols, and perceptions of borderlands people, there is still some difficulty within the people approaches to overcome the narrow confines and case-character inclination of the local or community level. It is no wonder, then, that most scholars working on the subject from this perspective often call for more theoretical abstractions and systematizations as well as for the need to investigate the potential reach and limitations of such an approach. A fitting illustration of such a limitation is that the link between those approaches that analyze and explore individual attitudes, perceptions, and behaviors and those approaches that focus on the social construction of attitudes and behaviors is not yet well established. There is good reason to assume that these two strands of the psychological and the social constructions and dimensions of borders and border regions within the people-oriented approaches are closely related, but this relationship has only scarcely been explored within studies on borders and border regions. Another limitation of this approach is that borders, border regions, and human behavior are all seen as social or psychological constructs. However, the term "construct" is somewhat taken for granted in the people approach. If human actions, borders, and border regions are all human constructs, what then is the added value of the term "construct" itself when explaining the relevance of borders? Moreover, would that mean that the other approaches would necessarily disagree with the idea that the border is a human construct? Probably not, but assumptions on the relevance of the border using the people approach are, as was demonstrated previously, different from the other two approaches. This calls for further clarification of the newness and richness of the people-oriented approaches in the use and elaboration of the terminology regarding the other approaches (see van Houtum 2000). Another issue is that the emphasis within the people approach is, as in the others, very much on the "how." The central topic of debate is *how* borders come into being, be it in the construction process of a society and/or in the minds of individuals. The question that remains unattended is *why* borders are constructed. Why do humans need to construct and reproduce borders in the form of institutions or in their minds? It seems that the people-oriented approaches are still becoming a stream, whereas the flow and cross-border cooperation approaches appear to be more mature in their theories, thoughts, and possible applications. Rumley and Minghi's (1991) questioning of the relevance of border (region) research for social science in general, and geography in particular, still seems to be valid in this sense.

Comparing the Three Theoretical Emphases

Table 1 provides a summary of the most important and shared characteristics of the studies done within the three distinguished emphases on borders and border regions in geography.

Table 1. Emphases in the Studies on Borders and Border Regions

	Flow Approach	Cross-Border Cooperation Approach	People Approach
Problem Orientation	Analysis of the discontinuity in (physical) interaction flows across borders	Analysis of effective strategies to overcome borders and stimulate cross-border development and Euregionalization	Analysis of the territorially divergent constructions of social practices, spatial identity, and spatial cognition
Central Question	Do borders matter?	Borders matter! How can they be overcome?	How are borders constructed?
Theoretical Framework	-Core-periphery models -Location theories -Central places approach -Gravity models -Economic potential models	-Network approaches -Transaction costs approaches	-Social construciionism -Spatial identity approaches -Behavioral approaches -Action approaches
Assumption on Human Behavior	*Homo economicus*: Minimization of (distance) costs	*Homo cont(r)actis*: Maximization of cont(r)acts	*Homo socialis*: Human behaviors and affections are socially and spatially constructed
Assumption on Space	Space is homogeneous	Cross-border spatial networks have missing links	Space is affectively and cognitively divided
Key Terms	-Physical distance -Discontinuity -Transport costs -Economic potential -Accessibility	-Effectiveness, success -Tools, instruments -Connectivity, openness -(Dis)similarities, differences, synergy -Networks, cooperation, alliances	-Spatial cognition -Spatial perception -Spatial affection -Spatial identity -Social construction -Social practices
Choice of Method	Computational analysis	Descriptive/Prescriptive analysis	Mental/Societal discursive analysis
Methodological Characteristics	-Material -Objective -Manifest -Static	-Material/Nonmaterial -Objective/Subjective -Manifest/Latent -Static/Dynamic	-Nonmaterial -Intersubjective/Subjective -Latent -Dynamic/Evolution
Connotation of Borders	-Physical barriers -Artificial distortions of equilibrium -The penalizing barrier effect of borders is measurable	-Artificial barriers to integration -Borders are both chailenges and opportunities for contact and integration	-Borders are social constructs -Borders are relevant markers of identity -Borders are demarcations of certainty
Connotation of Border Regions	-Peripheral -Socially and economically marginal areas -"Passive" space	-Peripheral -Challenged to become central -Micro-scale laboratories -"Active" space	-Border regions are political and social constructs -Juxtapositioned, overlapping zones confronting national and regional identities
Types of Distances	-Travel or transport distance -Euclidean distance	-Economic distance -Administrative distance -Social distance -Cultural distance	-Affective distance -Cognitive distance -Mental distance

The three different angles on European economic and regional geographical border studies could thus be summarized as an emphasis on *flows and barriers*, representing chiefly the first approach, *regions and cooperation*, representing the second, and *people*, representing the third approach.

Conclusions

To categorize the different studies, concepts, trends, and strands, and to regard certain scholars as spokespersons of these categories, is a precarious undertaking. It might suggest that there are clear, distinct categories and that cross-linkages between scholars in the field would be the exception, rather than the rule. This is a somewhat hazardous assumption. There are no truly closed categories of scholars in the study of borders and border regions. Moreover, the individual scholars themselves are often more "fluid" in their topics and approaches than a categorization suggests. In addition, there is strong opposition toward the categorization of people among those who are being categorized. People do not want to be categorized. Paradoxically, that is exactly what scientists do. They select, interpret, describe, define, and classify. They are constantly producing and (often consciously) seeking for the construction of "boundaries" between groups, individuals, and objects to order. The implicit goal of the ordering process is to be able to structure one's thoughts and enable and further the discussion on the insights gained and the boundaries that are drawn. This paper is no exception to this scientific convention. Concretely, this paper categorizes the broad field of European studies on borders and border regions in regional and economic geography that deal with the subject of European integration.

Having studied the vast European geographical literature on borders and border regions with this focus in mind, and recognizing the general difficulties in constructing the categories described, it seems apt to conclude that certain theoretical trends and strands do exist. It has been put forward that the development of the study of borders and border regions within the economic and regional geographical field in the context of European integration is remarkable. Since the early 1990s, the literature on borders and border regions has greatly expanded. Without a doubt, the fascinating processes of the European integration and East-European disintegration can be seen as the main impetuses for this tremendous upswing in the attention given to the matters of borders and border regions in geography.

In this contribution, three influential emphases in the analyses on borders and border regions were distinguished. Needless to say, a wide variety of approaches can be discerned within these three strands. This paper, however, has restricted itself to the distinction between three different categories that have been treated as a primary endeavor to identify the dominant fields of European border and border region studies in regional and economic geography.

When looking at the three strands more closely, it is difficult to avoid thinking in terms of a correlation between the different emphases and focuses of study in terms of development. Often, studies of borders and border-

lands are rooted in time and space and understand science as a process. Despite the risks posed by neglecting the nuances and overlapping aspects of the three distinguished emphases in this paper, and the fact that some scholars work with models or concepts that include all three distinguished emphases, or at least claim to do so, thinking in terms of mutual dependencies is tempting.

The flow approach, with its strong emphasis on rationality and physical distance, has its roots in the classical approach of geography. This classical emphasis is still important in the geographical studies of borders and border regions. Some even claim that an autonomous discipline of geography can hardly be validated without the analysis of the influence of physical distance on social developments. The cross-border cooperation approach to borders studies is correlated to the flow approach in the sense that it perceives the border as a barrier. It stresses the need to understand the processes of cooperation and networking—topics that are heavily influenced by the push toward European integration—rather than estimating the effect of the presence of the border on cross-border flows. As such, the dynamics of interaction and networking, and the formulation of strategies to establish cross-border linkages between border regions became important topics.

The people approach evolved as a product of and a reaction to the first and second strands. Here, the emphasis is not placed on the physical line or the process of interaction between regions or organizations, but on the mind-set and mental binding of the human actors within a territory. Some scholars have pointed to the social construction of borders and border regions alongside this psychological dimension of borders, placing the process and the influence of the construction and reproduction of borders on behavior at the center of analysis. The current popular philosophy of social constructionism within the social sciences is undoubtedly inspired by the wave of postmodernism that is passing over science. The multidisciplinary focus of social constructionism draws upon the works of French writers such as Foucault (1972), Derrida (1978), and Lefebvre (1991) (see also Burr 1995). Here, both the sociopsychological studies and the social construction studies of borders have been categorized based on their commonalities in a thematic way as people-oriented approaches. A basic commonality between the studies on the psychological and social construction of borders and border regions is that the view of borders as "exogenous" impediments on interstate accessibility is replaced by the search for an understanding of the meaning and function of borders. In other words, the border has become "endogenized."

This article did not emphasize the differences *within* the three distinguished categories. It might even be found that the intragroup variance is larger than the intergroup variance, as is often the case when distinguishing groups. What is important here, however, is that the distinction of the three categories might enable the further development of the discussion on theories and concepts used in border research. From this perspective, it seems that the third strand of border studies, although not yet fully developed nor the dominant way of thinking among border scholars, could be seen as a base

for yet another approach. This description of path dependency between the three strands does not necessarily mean that they are sequential or hierarchical in terms of time, importance, or subject. The development process of dominant topics of study is not linear, but congruent. All three strands exist and are connected to one another by dialectics and overlapping concepts, and it is not to be expected that one of these strands will cease to exist in the near future. It thus seems worthwhile to deepen the understanding of the extent to which this path of dependency exists, and when and why changes in the balance of power between different strands of study take place.

The geographical study of borders and border regions has come a long way, growing rather rapidly in the last decades, in part due to the European integration process. Moreover, the subject has become crucial to the analysis of the EU integration process. It appears that border studies are overstepping the borders of disciplines themselves more and more often. Other disciplines (such as sociology, anthropology, economics, and political science) are increasingly being integrated in the geographical study of border(land)s and are integrating the insights of geographical studies with their own. Thus, border studies are potentially able to use concepts and insights from an increasingly richer format of theories, frameworks, and disciplines developed and tested over the last few decades, making the European geographical study of borders and border regions a flourishing and intriguing field of science.

Endnotes

1. Two other disciplines within geography that have also dealt extensively with the topic of spatial borders are cultural and political geography. Since this overview is mainly focused on the influence of national borders on and the position of border regions in the economic and regional integration process of the European Union, the studies done within these disciplines are not discussed separately here. See, for a somewhat older overview on the political geography of borders, Minghi 1963, and for a more recent overview on boundary narratives in political geography, Newman and Paasi 1998.

2. One could argue that the metaphor of "flows" in the last decade has been given new meaning and impetus by the debate on the globalization process, which is pictured as a "space of flows" (see Castells 1996), implying the flow of (cultural) goods, responsibilities, persons, services, capital flows, information, practices, ideas, images, symbols, and so on. In these studies of globalization, however, the barrier effect of national structures and policies is not an issue at all. It is assumed that borders have only a limited role, if any, to play (see also Lash and Urry 1994). The border here is considered to be a mere "speed bump"; an annoying obstacle in the way of further globalization that will slow down the process, but will not stop the process itself.

3. The INTERREG program began in 1990 and has concluded two funding periods. Recently, the European Commission has approved the initiation of the third period, covering 2000–2006. A total of ECU4,875 million (US$4.137 billion) is involved with the INTERREG III program, to be divided among border region programs of EU member states. Within the first draft of the INTERREG III program, its general aim is stated: "The overall aim of the INTERREG Initiatives has been, and remains, that *national borders should not be a barrier* to the balanced development and integration of the

European territory. The *isolation of border areas* has been of a double nature: on the one hand, *the presence of borders cuts off border communities* from each other economically, socially and culturally and hinders the coherent management of eco-systems; on the other, *border areas have often been neglected under national policy*, with the result that their economies have tended to become peripheral within national boundaries. The single market and EMU are strong catalysts for changing this situation. Nevertheless, the scope for strengthening co-operation to *the mutual advantage of border areas throughout the Union remains enormous*" (Inforegio 2000: 1, emphasis added).

References

Anderson, J., and L. O'Dowd. 1999. "Borders, Border Regions and Territoriality: Contradictory Meanings, Changing Significance." *Regional Studies* 33 (7): 593–604.

Anderson, M. 1982. "The Political Problems of Frontier Regions." *West European Politics* 5 (4): 1–17.

Anderson, M. 1996. *Frontiers: Territory and State Formation in the Modern World*. Cambridge: Polity Press.

Anderson, M., and E. Port, eds. 1998. *The Frontiers of Europe*. London: Printer.

Baker, S. 1996. "Punctured Sovereignty, Border Regions and the Environment within the European Union." Pp. 19–50 in *Borders, Nations and States*, Liam O'Dowd and Thomas Wilson, eds. Aldershot: Avebury.

Barendrecht, D., and K. Gybels. 1994. "Grensoverschrijdende samenwerking is geen panacee." *Geografie* 3 (2): 18–20.

Barjak, F. 2000. "Development Problems and Policies at the German Border with Poland: Regional Aspects of Trade and Investment." Pp. 13–31 in *Borders, Border Regions and People*, M. van der Velde and H. van Houtum, eds. London: Pion.

Benito, G., and G. Gripsrud. 1992. "The Expansion of Foreign Direct Investment: Discrete Rational Location Choices or a Cultural Learning Process?" *Journal of International Business Studies*: 461–76.

Berg, E. 2000. "Border-Crossing in Manifest Perceptions and Actual Needs." Pp. 151–65 in *Borders, Border Regions and People*, M. van der Velde and H. van Houtum, eds. London: Pion.

Berg, E., and S. Oras. 2000. "Writing Post-Soviet Estonia onto the World Map." *Political Geography* 19: 601–25.

Blatter, J., and N. Clement. 2000. "Cross-Border Cooperation in Europe: Historical Development. Institutionalization, and Contrasts with North America." *Journal of Borderlands Studies* 15 (1): 15–53.

Boggs, S. Whittemore. 1940. *International Boundaries: A Study of Boundary Functions and Problems*. New York: Columbia University Press.

Brednikova, O. 1999. "Smuggling of Ethnicity and 'Other' Russians: Construction of Boundaries." Pp. 153–65 in *Curtains of Iron and Gold. Reconstructing Borders and Scales of Interaction*, H. Eskelinen, I. Liikanen, and J. Oksa, eds. Aldershot: Ashgate.

Broek, J.O.M. 1941. "The Problem of 'Natural Frontiers.'" Pp. 2–20 in *Frontiers of the Future*. Berkeley: University of California, Committee on International Relations.

Bröcker, J. 1984. "How Do International Trade Barriers Affect Interregional Trade?" Pp. 219–39 in *Regional and Industrial Theories*, A.E. Andersson, W. Isard, and T. Puu, eds. North-Holland: Elsevier Science Publishers.

Bruinsma, F. 1994. *De invloed van transportinfrastructuur op ruimtelijke patronen van economische activiteiten*. Utrecht and Amsterdam: Nederlandse Geografische Studies.

Brunhes, J., and C. Vallaux. 1921. *La géographie de l'histoire.* Paris: F. Alcan.
Burr, V. 1995. *An Introduction to Social Constructionism.* London: Routledge.
Cadwallader, M. 1979. "Problems in Cognitive Distance and Their Implications for Cognitive Mapping." *Environment and Behaviour* 11: 559–76.
Canter, D., and S.K. Tagg. 1975. "Distance Estimations in Cities." *Environment and Behaviour* 7: 59–80.
Cappellin, R. 1993. "Interregional Cooperation in Europe: An Introduction." Pp. 1–20 in *Regional Networks, Border Regions, and European Integration*, R. Cappellin and P. Batey, eds. London: Pion.
Cappellin, R., and P. Batey, eds. 1993. *Regional Networks, Border Regions, and European Integration.* London: Pion.
Castells, I.M. 1996. *The Rise of the Network Society, The Information Age: Economy, Society and Culture.* Cambridge and Oxford: Blackwell.
Champion, A.G., ed. 1989. *Counterurbanization: The Changing Pace and Nature of Population Deconcentration.* London: Edward Arnold.
Cheshire, P. 1990. "Explaining the Recent Performance of the European Community's Major Urban Regions." *Urban Studies* 27: 311–33.
Church, A., and P. Reid. 1995. "Transfrontier Cooperation, Spatial Development Strategies and the Emergence of a New Scale of Regulation: The Anglo-French Border." *Regional Studies* 29 (3): 297–316.
Church, A., and P. Reid. 1996. "Urban Power, International Networks, and Competition: The Example of Cross-Border Cooperation." *Urban Studies* 33 (1): 297–316.
Church, A., and P. Reid. 1999. "Cross-Border Cooperation, Institutionalisation and Political Space across the English Channel." *Regional Studies* 33 (7): 643–55.
Clark, T. 1994. "National Boundaries, Border Zones, and Marketing Strategy: A Conceptual Framework and Theoretical Model of Secondary Boundary Effects." *Journal of Marketing* 58: 67–80.
Clark C., F. Wilson, and J. Bradley. 1969. "Industrial Location and Economic Potential in Western Europe." *Regional Studies* 3: 197–212.
Clement, N. 1996. "The Changing Economics of Borders and Border Regions." Pp. 41–52 in *Border Regions in Functional Transition, European and North American Perspectives*, James Scott, Alan Sweedler, Paul Ganster, and Wolf-Dieter Eberwein, eds. Berlin: Institute for Regional Development and Structural Planning.
Corvers, F., B. Dankbaar, B., and R. Hassink. 1994. *Nieuwe kansen voor bedrijven in grensregio's. Eindrapport.* Den Haag: COB/SER.
Cramer, N., F. Logie, and B. Mergaerts. 1984. "Grens en sociale relaties." *Geografisch Tijdschrift* 18 (3): 190–98.
Dagevos, J., S. Brouwers, and P. Hulsinck. 1994. "Grensoverschrijdende arbeidsmobiliteit tussen België en Nederland: fictie of realiteit?" Pp. 173–95 in *Benelux, quo vadis?, Institutioneel-economische beschouwingen over de plaats en toekomst van de Benelux naar aanleiding van haar vijftigjarig jubilieum*, F. Boekema, Henk van Houtum, and K. Veraghtert, eds. Groningen: Wolters-Noordhoff.
Dagevos, J., L. Oerlemans, P. Hulsinck, Henk van Houtum, and F. Boekema. 1992. *Grensoverschrijdend perspectief: Een kennismaking tussen en met het Midden-Brabantse—en Kempense bedrijfsleven.* Tilburg: Economisch Instituut Tilburg (EIT).
De Boer, E. 1996. *Personal Transport and Active Space, Dutch German Cross Border Networks.* Zurich: ERSA.
De Gijsel, P., M. Janssen, H.J. Wenzel, and M. Woltering, eds. 1999. *Understanding European Cross-Border Labour Markets, Issues in Economic Cross-Border Relations.* Marburg: Metropolis.
Derrida, J. 1978. *Writing and Difference.* Chicago: University of Chicago Press.

Duchacek I.D., D. Latouche, and G. Stevenson. 1988. *Perforated Sovereignties and International Relations: Transsovereign Contacts of Subnational Governments*. Westport: Greenwood Press.

Ehlers, N., and J. Buursink. 2000. "Binational Cities: People, Institutions and Structures." Pp. 192–201in *Borders, Border Regions and People*, M. van der Velde and H. van Houtum, eds. London: Pion.

Eskelinen, H., I. Liikanen, and J. Oksa, eds.1999. *Curtains of Iron and Gold. Reconstructing Borders and Scales of Interaction*. Aldershot: Ashgate.

European Commission. 1990. *Interreg, publikatieblad van de Europese Gemeenschappen, Nr. C 215/4, 30.0.1990*. Brussels: European Commission.

Evans, G.W., and K. Pezdek. 1980. "Cognitive Mapping: Knowledge of Real-World Distance and Location Information." *Journal of Experimental Psychology: Human Learning and Memory* 6: 13–24.

Ewing, G.O. 1981. "On the Sensitivity of Conclusions about the Bases of Cognitive Distance." *Professional Geographer* 33: 311–14.

Foucault, M. 1972. *The Archaeology of Knowledge*. London: Tavistock.

Frijda, N. 1987. "Emotions, Cognitive Structure and Action Tendency." *Cognition and Emotion* 1: 235–58.

Giaoutzi, M., L. Suárez-Villa, and A. Stratigea. 1993. "Spatial Information Aspects and Communication Barriers in Border Areas." Pp. 103–22 in *Theory and Practice of Transborder Cooperation*, Remigio Ratti and Shalom Reichman. Basel and Frankfurt: Verlag Helbing & Lichtenhahn.

Giersch, H. 1949. "Economic Union between Nations and the Location of Industries." *Review of Economic Studies* 17: 87–97.

Golledge, R.G., and R.J. Stimson. 1987. *Analytical Behavioural Geography*. New York: Croom Helm.

Gould, P., and R. White. 1974. *Mental Maps*. Harmondsworth: Penguin Books.

Grimm, F.D. 1997. "Grenzen und Grenzregionen im mittleren und östlichen Europa." Pp. 79–90 in *Regionale Transformationsprozesse in Europa*, A. Mayr, ed. Beiträge zur Regionalen Geographie 44. Leiprig: Institut für händerkunde.

Grimm, F.D. 1998. "Im Osten ist alles anders. Zur Situation der deutschen und polnischen Grenzregionen an Oder und Neiße." Pp. 185–98 in *Grenzüberschreitende Zusammenarbeit in Europa*, G. Brunn and P. Schmidt-Egner, eds. Baden-Baden: Nomos.

Hansen, N. 1977a. "Border Regions: A Critique of Spatial Theory and a European Case Study." *Annals of Regional Science* 11: 1–14.

Hansen, N. 1977b. "The Economic Development of Border Regions." *Growth and Change* 8: 2–8.

Hansen, N. 1983. "International Cooperation in Border Regions: An Overview and Research Agenda." *International Regional Science Review* 8 (3): 255–70.

Hartshorne, R. 1933. "Geographic and Political Boundaries in Upper Silesia." *Annals of the Association of American Geographers* 23: 195–228.

Harvey, D. 1989. *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*. Oxford: Basil Blackwell.

Harvey, D. 1993. "From Space to Place and Back Again: Reflections on the Condition of Postmodernity." In *Mapping the Futures, Local Cultures, Global Change*, J. Bird, B. Curtis, T. Putnam, G. Robertson, and L. Tickner, eds. London: Routledge.

Heigl, F. 1982. "The Border as a Sociological, Social or National Phenomenon—The Anthropogenous Region." Pp. 215–34 in *Cooperation and Conflict in Border Areas*, Raimondo Strassoldo and Giovanni D. Zotti, eds. Milan: Franco Angelli Editori.

Hofstede, G. 1980. *Culture's Consequences International Differences in Work-Related Values*. London: Sage.

Hofstede, G. 1991. Allemaal andersdenkenden. Amsterdam: Contact.
Huriot, J.M., and J. Perreur. 1990. "Distance, espace et representations." *Revue d'Economie Régionale et Urbaine* 2: 197–237.
Illeris, S. 1991. "Urban and Regional Development in Western Europe in the 1990s: Will Everything Happen in the London-Brussels-Frankfurt-Milan 'Banana'?" Paper presented at the Conference of the Regional Science Association, Portugal.
Inforegio. 2000. http://www.inforegio.cec.eu.int/wbdoc/docoffic/official/interreg3.
Janssen, M. 1999. "Obstacles and Willingness for Cross-Border Mobility, The Dutch-German Border Region." Pp. 143–64 in *Understanding European Cross-Border Labour Markets, Issues in Economic Cross-Border Relations*, P. Gijsel, M. de Janssen, H. J. Wenzel, and M. Woltering, eds. Marburg: Metropolis.
Kamann, D.J. 1993. "Bottlenecks, Barriers, and Networks of Actors." Pp. 65–102 in *Theory and Practice of Transborder Cooperation*, Remigio Ratti and Shalom Reichman, eds. Basel and Frankfurt: Verlag Helbing & Lichtenhahn.
Keeble, D., P. Owens, and C. Thompson. 1982. "Regional Accessibility and Economic Potential in the European Community." *Regional Studies* 16: 419–43.
Kessen, A.L.G.M. 1992. *Bestuurlijke vernieuwing in grensgebieden, Een onderzoek naar intergemeentelijke grensoverschrijdende samenwerking in het Nederlands/Belgisch grensgebied*. Kloosterzande: Drukkerij Duerinck.
Koffka, K. 1935. *Principles of Gestalt Psychology*. New York: Kegan Paul.
Krätke, Stefan. 1999. "Regional Integration or Fragmentation? The German-Polish Border Region in a New Europe." *Regional Studies* 33 (7): 631–41.
Lash, S., and J. Urry. 1994. *Economies of Signs and Space*. London: Sage.
Lefebvre, H. 1991. *The Production of Space*. Oxford: Basic Blackwell.
Leimgruber, W. 1980. "Die Grenze als Forschungsobjekt der Geographie." *Regio Basiliensis* 21: 67–78.
Leimgruber, W. 1991. "Boundary, Values and Identity: The Swiss-Italian Transborder Region." Pp. 43–62 in *The Geography of Border Landscapes*, D. Rumley and J.V. Minghi, eds. New York: Routledge.
Lensink, E. 1994. "Vingeroefeningen over de grens." *Geografie* 3 (2): 10–13.
Liikanen, I. 1999. "The Political Construction of Identity: Reframing Mental Borders in Russian Karelia." Pp. 357–73 in *Curtains of Iron and Gold. Reconstructing Borders and Scales of Interaction*, H. Eskelinen, I. Liikanen, and J. Oksa, eds. Aldershot: Ashgate.
Lösch, A. 1940. *The Economics of Location*. New Haven: Yale University Press.
Mackay, J.R. 1958. "The Interactance Hypothesis and Boundaries in Canada." *Canadian Geographer* 11: 1–8.
Martinos H., and A. Caspara. 1990. *Cooperation between Border Regions for Local and Regional Development*. Brussels: Commission of the European Communities, DG XVI.
Minghi, J.V. 1963. "Boundary Studies in Political Geography." *Annals of the Association of American Geographers* 53: 407–28.
Moles, A.A., and E. Rohmer. 1972. *Psychology de l'Espace*. Paris: PUF.
Mønnesland J., and H. Westlund. 2000. "Cross-Border Co-Operation in Low-Density Areas." Pp. 116–36 in *Borders, Border Regions and People*, M. van der Velde and H. van Houtum, eds. London: Pion.
Murphy, A. 1993. "Emerging Regional Linkages within the European Community: Challenging the Dominance of the State." *Tijdschrift Economische en Sociale Geografie* (Journal of Economic and Social Geography) 84 (2): 103–18.
Murray, P., and L. Holmes, eds. 1998. *Europe: Rethinking the Boundaries*. Aldershot: Ashgate.

Newman D., and Anssi Paasi. 1998. "Fences and Neighbours in the Postmodern World: Boundary Narratives in Political Geography." *Progress in Human Geography* 22 (2): 186–207.

Nijkamp, P. 1993. "Towards a Network of Regions: The United States of Europe." *European Planning Studies* 1 (2): 149–68.

Nijkamp, P., P. Rietveld, and I. Salomon. 1990. "Barriers in Spatial Interactions and Communications. A Conceptual Exploration." *Annals of Regional Science* 24 (4): 237–52.

Nuesser, H.G. 1985. "Die Bedeutung von Hemmnisfaktoren für die Entwicklung des Verkehrsaufkommes." *DFVLR-Nachrichten* 45: 32–34.

O'Dowd, L. 1998. "Negotiating State Borders: A New Sociology for a New Europe?" Inaugural lecture, Queen's University, Belfast, Northern Ireland.

O'Dowd L, J. Corrigan, and T. Moore. 1995. "Borders, National Sovereignty and European Integration: The British-Irish Case." *International Journal of Urban and Regional Studies* 19: 272–85.

O'Dowd, L., and T. Wilson. 1996. "Frontiers of Sovereignty in the New Europe." Pp. 1–18 in *Borders, Nations, and States: Frontiers of Sovereignty in the New Europe*, Liam O'Dowd and Thomas Wilson, eds. Aldershot: Avebury.

Paasi, A. 1996. *Territories, Boundaries, and Consciousness: The Changing Geographies of the Finnish-Russian Border*. Chichester: John Wiley & Sons Ltd.

Paasi, A. 1999. "Boundaries as Social Practice and Discourse: The Finnish-Russian Border." *Regional Studies* 33 (7): 669–80.

Passchier, N.P., and J.M.M. van Amersfoort. 1981. "De sociale betekenis van de Nederlandse nationale grenzen: twee onderzoekingen in Midden-Limburg en de aanliggende Duitse en Belgische Grensgebieden." *Geografisch Tijdschrift* 15 (2): 119–30.

Perkmann, M. 1999. "Building Governance Structures across European Borders." *Regional Studies* 33 (7): 657–67.

Peschel, K. 1992. "European Integration and Regional Development in Northern Europe." *Regional Studies* 26 (4): 387–97.

Peschel, K. 1998. "Perspectives of Regional Development around the Baltic Sea." *The Annals of Regional Science* 32: 299–320.

Plat, D., and C. Raux. 1998. "Frontier Impedance Effects and the Growth of International Exchanges: An Empirical Aanalysis for France." *Papers in Regional Science: The Journal of the RSAI* 77: 155–72.

Pratt, A.C. 1991. "Discourses of Locality." *Environment and Planning A* 23: 257–66.

Pounds, N. 1951. "The Origin of the Idea of Natural Frontiers in France." *Annals of the Association of American Geographers* 41: 146–57.

Pounds, N. 1954. "France and 'Les Limits Naturelles' from the Seventeenth to the Twentieth Centuries." *Annals of the Association of American Geographers* 44: 51–62.

Raffestin, C. 1993. "Autour de la fonction sociale de la fontière." *Espaces et Sociétés: Identités, Espaces, Frontières* 70–71: 157–74.

Ratti, R. 1993a. "Spatial and Economic Effects of Frontiers: Overview of Traditional and New Approaches and Theories of Border Area Development." Pp. 23–54 in *Theory and Practice of Transborder Cooperation*, Remigio Ratti and Shalom Reichman, eds. Basel and Frankfurt: Helbing & Lichtenhahn.

Ratti, R. 1993b. "Strategies to Overcome Barriers: From Theory to Practice." Pp. 241–67 in *Theory and Practice of Transborder Cooperation*. Remigio Ratti and Shalom Reichman, eds. Basel and Frankfurt: Helbing & Lichtenhahn.

Ratzel, F. 1897. *Politische Geografie oder die Geografie der Staaten, des Verkehrs und des Krieges*. München: Oldenbourg.

Riedel, H. 1994. *Wahrnehmung von Grenzen und Grenzraumen: eine kulturpsychologisch-geographische Untersuchung im saarländisch-lothringischen Raum*. Saarbrücken: Geographisches Institut.

Rietveld, P., and L. Janssen. 1990. "Telephone Calls and Communication Barriers, The Case of the Netherlands." *The Annals of Regional Science* 24: 307–18.

Romann, M. 1990. "Divided Perception in a United City: The Case of Jerusalem." Pp. 182–201 in *The Behavioural Environment: Essays in Reflection, Application and Re-evaluation*. London: Routledge.

Rossera, F. 1993. "The Border Effect in the Analysis of Telephone Flows: The Swiss Case." Pp. 167–95 in *Theory and Practice of Transborder Cooperation*, Remigio Ratti and Shalom Reichman, eds. Basel and Frankfurt: Helbing & Lichtenhahn.

Rumley, Dennis, and Julian V. Minghi. 1991. "Introduction: The Border Landscape Concept." Pp. 35–47 in *The Geography of Border Landscapes*, Dennis Rumley and Julian V. Minghi, eds. New York: Routledge.

Rykiel, Z. 1995. "European Boundaries in Spatial Research." *European Spatial Research and Policy* 2 (1): 35–47.

Schack. 2000. "Borders in a Multi-Contextual View." Pp. 202–20 in *Borders, Border Regions and People*, M. Van der Velde and H. Van Houtum, eds. London: Pion.

Schöller, P. 1957. "Wege und Irrwege der politischen Geographie und Geopolitik." *Erdkunde* 17: 497–529.

Scott, J. 1999. "European and North American Contexts for Cross-Border Regionalism." *Regional Studies* 33 (7): 605–17.

Scott, J. 2000. "Euroregions, Governance and Transborder Co-operation within the EU." Pp. 104–15 in *Borders, Border Regions and People*, M. van der Velde and H. van Houtum, eds. London: Pion.

Shields, R. 1991. *Places on the Margin: Alternative Geographies of Modernity*. London and New York: Routledge.

Smit, J.G. 2000. "Sociaal-culturele problemen achter de Nederlands-Duitse grensoverschrijdende arbeidsmarkten." Pp. 109–23 in *Grensregio's en arbeidsmarkten, theoretische en empirische perspectieven*, F. Boekema, ed. Assen: Van Gorcum.

Steiner, M., and D. Sturn. 1993. "From Coexistence to Cooperation: The Changing Character of Austria's Southeastern Border." Pp. 347–76 in *Theory and Practice of Transborder Cooperation*, R. Ratti and S. Reichman, eds. Basel and Frankfurt: Helbing & Lichtenhahn.

Strassoldo, R. 1988. "Border Studies: The State of the Art in Europe." Pp. 383–95 in *Borderlands in Africa: A Multidisciplinary and Comparative Focus on Nigeria and West Africa*, A.I. Asiwaju and P.O. Adeniyi, eds. Lagos: University of Lagos Press.

Stryjakiewicz, T. 1998. "The Changing Role of Border Zones in the Transforming Economies of East-Central Europe: The Case of Poland." *GeoJournal* 44 (3): 203–13.

Suárez-Villa, L., M. Giaoutzi, and A. Stratigea. 1992. "Territorial and Border Barriers in Information and Communication Networks: A Conceptual Exploration." *Tijdschrift voor Economische en Sociale Geografie* 83 (2): 93–104.

Van Beek, C. 1996. *Samenwerking? Er zijn grenzen!* Tilburg: Syntax Publishers.

Van den Tillaart, H., and G. Busse. 1994. *Unternehmer ohne Grenze?* Nijmegen: ITS.

Van der Velde, M. 1999. "Searching for Jobs in a Border-Area: The Influence of Borders in a Dutch-German Euregion." Pp. 165–82 in *Understanding European Cross-Border Labour Markets, Issues in Economic Cross-Border Relations*, P. Gijsel, M. de Janssen, H.J. Wenzel, and M. Woltering, eds. Marburg: Metropolis.

Van der Velde, M., and H. van Houtum, eds. 2000. *Borders, Border Regions and People*. London: Pion.

Van Geenhuizen, M., B. van der Knaap, and P. Nijkamp. 1996. "Transborder European Networking: Shifts in Corporate Strategy?" *European Planning Studies* 4 (6): 671–82.

Van Houtum, H. 1993. "Het Euregionaal beleid: Stimulans voor een nieuw ruimtelijk elan?" Pp. 67–83 in *Sociale Economie: markten, instituties en beleid*, F. Boekema, ed. Groningen: Wolters-Noordhoff.

Van Houtum, H. 1994. "De Benelux; Een Grenzeloze Economische Unie?" Pp. 23–62 in *Benelux, quo vadis?, Institutioneel-economische beschouwingen over de plaats en toekomst van de Benelux naar aanleiding van haar vijftigjarig jubilieum*, F. Boekema, H. van Houtum, and K. en Veraghtert, eds. Groningen: Wolters-Noordhoff.

Van Houtum, H. 1998. *The Development of Cross-Border Economic Relations; A Theoretical and Empirical Study of the Influence of the State Border on the Development of Cross-Border Economic Relations between Firms in Border Regions of the Netherlands and Belgium*. Tilburg: CentER.

Van Houtum, H. 1999a. "The Action, Affection, and Cognition of Entrepreneurs and Cross-Border Economic Relationships; The Case of Zeeland-Gent/Eeklo." Pp. 61–92 in *Grensoverschrijdende activiteiten in beweging, onderzoek en beleid*, G. Allaert and F. Boekema, eds. Nederland-Vlaanderen: RSA.

Van Houtum, H. 1999b. "Internationalisation and Mental Borders." *Tijdschrift voor Economische en Sociale Geografie* (Journal of Economic and Social Geography) 90 (3): 329–35.

Van Houtum, H. 2000. "Current Issues and Debates on Borders and Border Regions in European Regional Science." Pp. 1–12 in *Borders, Border Regions and People*, M. van der Velde and H. van Houtum, eds. London: Pion.

Van Houtum, H, and F. Boekema. 1994. "Regions Seen as Laboratories for a New Europe: The Applicability of the Flexible Specialisation Model." Pp. 85–109 in *Changing Business Systems in Europe, an Institutional Approach*, J.J.J. Van Dijck and J. Groenewegen, eds. Brussels: VUB Press.

Van Houtum, H., M. Donkers, F. Boekema, R. Hassink, F. Corvers, and H. van den Tillaart. 1996. "Ondernemen over de Grens." *Tijdschrift voor Economie en Management* 41 (4): 535–60.

Verberk, V.A.M. 1991. "Interreg: zinvol of de zoveelste dans rond het gouden kalf?" *Rooilijn* (October): 292–96.

Von Malchus, V.F. 1975. *Partnerschaft an europäischen Grenzen, Integration durch grenzüberschreitende Zusammenarbeit*. Bonn: European Union Verlag GmbH.

Weichhart, P. 1990. *Raumbezogene identität, Bausteine zu einer Theorie räumlicher sozialer Kognition und Identifikation*. Erdkundliches Wissen, Heft 102. Stuttgart: Franz Steiner Verlag.

Wilson, T.M., and H. Donnan. 1998. "Nation, State and Identity at International Borders." Pp. 1–30 in *Border Identities, Nation and State at International Frontiers*. Cambridge: Cambridge University Press.

Zotti, G.D. 1982. "Transnational Relations in a Border Region: The Case of Friuli-Venetia Julia." Pp. 25–60 in *Cooperation and Conflict in Border Areas*, Raimondo Strassoldo and Giovanni D. Zotti, eds. Milan: Franco Angelli Editori.