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Crossing Borders on Cross Border Car Mobility

Frank Witlox[1] and Veronique Van Acker[2]
Department of Geography, Ghent University

"We live in a world of lines and compartments. We may not necessarily see the lines, but they order our daily life practices, strengthening our belonging to, and identity with, places and groups, while - at one and the same time - perpetuating and reperpetuating notions of differences and othering." (Newman, 2006, p. 143)

Researchers have always been interested and fascinated in the effects borders have on human behaviour. Whether defined as physical or natural, legal or political, psychological, cultural, social or economic, the existence of borders, and the effects of crossing these borders, fosters specific features and irregularities. After all, different regulations and habits on either side of a border result in the creation of bona fide, authentic economic opportunities (such as border trade, free trade zones), but also leads to corrupt, unethical and illegal side effects (such as smuggling, trafficking, infiltration). While some borders are open and completely unguarded (Schengen area), others are partially or fully controlled (Korean Demilitarized Zone). Szary (2007) noted that in a globalized, "borderless" world, borders and barriers are commonly said to be losing their 'fencing' function and allowing more flexibility of all kinds. And we also know that recent developments in the geographies of transportation and communication infrastructures have had a profound impact on the spatial organization of an increasingly globalized society (Derudder and Witlox, 2008). Clearly, the territorial subdivisions and geographic borders are essential for understanding current phenomena in economics, sociology, political science, and history (Thiemann et al., 2010).

A quick scan of the recent literature in which the issue of cross-border (whether international or state-border) mobility is involved reveals a multiplicity of research domains. Contributions can be found in which the effects of cross-border mobility are analyzed in relation to labour mobility; migration; housing and residential relocation; capital and equity flows; taxation and social security issues; trade, foreign direct investments, economic spillovers and services; knowledge-building, innovation diffusion, academic cooperation and student mobility; health care and patient mobility; marriage; shopping and tourism; pollution; cultural identity and awareness; regional distinctiveness and cooperation; and even links between cross-border mobility and crime, drugs, disease spreading and terrorism.

Apart from these thematic approaches, there are also a number of papers that take a more particular view on how the issue of cross-border mobility is linked to the construction of new or extension of existing transport infrastructure (e.g., Norman and Vickerman, 1999; Knowles, 2006; Knowles and Matthiessen, 2009); and how these processes contributes to the issue of the formation of cross-border (European) regions (e.g. van Houtum and van der Velde, 2004; van der Velde and van Naerssen, 2011). Cross-border transport infrastructure surely enhances and extends existing national transport infrastructure, and facilitates the flow of international traffic,

[1] Krijgslaan 281, S8, B9000 Gent, Belgium, E: frank.witlox@ugent.be
[2] Krijgslaan 281, S8, B9000 Gent, Belgium, E: veronique.vanacker@ugent.be

thus contributing to the overall increase in the accessibility and the economic and social cohesion of the region. A potential problem, however, is that cross-border links are not always considered a high priority in national transport planning policies. Moreover, the analysis of the positive and negative effects of border-crossing infrastructure is often hampered by the lack of available cross-border data (Ortúzar et al., 2011). It seems to be that national surveys are bounded by national borders, and that international, cross-border car-mobility origin-destinations traffic flows are not commonly found (let alone used).

To try to give some answers to the issues raised above, a one-day conference on "Cross-border (car) Mobility and Spatial Planning" was held in November 2009 at the Benelux headquarters in Brussels; the core of which forms the content of this themed issue. The seminar was co-organized by the Benelux Interuniversity Association of Transport Economists (abbreviated in Dutch-French as BIVEC-GIBET, see www.bivec.eu) and the Benelux (www.benelux.int). BIVEC-GIBET brings together lecturers, academics, researchers and policy makers from both government departments and the business community, all involved in transport-related research. Its objective is to promote cooperation in the field between educational and research institutions in the Benelux through the organization of joint activities. The Benelux is a cooperation that transcends the borders between Belgians, Dutch and Luxembourgers. Its objective is to be a region without borders, improving the well-being, mobility, safety and sustainable development of everyone.

The conference's goal was threefold. First, we wanted to get a clearer picture of what type of barrier effects exist (physical or psychological) and what effects these borders have on, for instance, trip purpose. Second, we sought to unravel the issue of data availability, and how different mobility models take account of cross-border effects. Here evidence from The Netherlands and Luxembourg is presented. Third and finally, we look at the effects from a spatial planning point of view (again using a number of case studies), and trying to explain the differentials that contribute to increasing/decreasing cross-border movements.

In his contribution, *Rietveld* investigates the nature of the barriers implied by borders, and sheds light on the implications borders have on the supply of border-crossing infrastructure (Rietveld, 2012). In other words, the key issue is to explain to what extent borders really discourage spatial interaction between regions, and to explore the implications of border effects for social cost benefit analysis (CBA) of international transport infrastructure projects. Various reasons of the existence of barrier effects of borders are distinguished that relate to different domains governing spatial interactions: preferences of consumers for domestic rather than foreign products and destinations, public sector policies in respect to taxation, institutions (both formal and informal), (lack of) information on foreign countries, and infrastructure-related costs. Apart from analyzing the effects cross-border transport services by various modes of collective transport have on the demand and supply side, the paper also identified why international links tend to perform less favorably than domestic links in CBA. Standard rules of social CBA imply that benefits accruing to foreign actors may be ignored since they do not contribute to the finance of the project as tax payers (except in the case of toll roads). Hence, this effect will easily provide a serious handicap for international projects implying a reduction in net benefits of up to 50%, and leads to the conclusion that international cooperation between border countries and active supranational parties such as the EU may help to overcome this bottleneck.

Pieters, de Jong and *van der Hoorn* focus in their contribution on cross-border car traffic in Dutch mobility models (Pieters et al., 2012). For the Dutch national transport model LMS (i.e., Landelijk Model Systeem), origin-destination matrices are required that include cross-border car travel. But due to the scarcity of these data, a particular procedure has been developed. First, a production model (by travel purpose) is used to calculate the total production of car journeys. Next, these journeys are distributed over domestic and foreign destinations using a simplified destination choice model. From the resulting matrix, domestic journeys are removed and only the border crossing journeys are kept. Domestic journeys are then replaced by the results of the existing

much more detailed mode- and destination choice models. The new models are estimated on the Dutch national mobility survey (MON) and are considered of reasonable quality. The predicted numbers of border crossing journeys to Belgium and Germany are lower than the numbers from traffic counts, and therefore an additional calibration to count data totals is carried out. The results indicate that for commuting the resistance to cross the border is equivalent to 35 (Belgium) or 46 (Germany) minutes extra travel time. Also for all other travel purposes in the model, it is found that the border resistance for journeys to Belgium is smaller than that for journeys to Germany, which can be explained by the additional factor of language difference. The smallest border resistance for both countries is found for shopping journeys.

In the paper by *Gerber* a further theoretical advancement is advocated to tackle the issue of cross-border mobility (Gerber, 2012), especially through the transfer of a theoretical model using a cross-scale analysis based on two complementary concepts. The first concept corresponds to 'border confirming' and is measured at the macro level, including the economic differentials on both sides of the border. The second notion is called 'border transcending' and focuses on the individual level. It is based on the assessment of the psycho-social barriers that may fade as the daily practices of the border rise. This exploratory approach is tested within the European context of Benelux. Although the results cannot be generalised due to a lack of comparable data, they offer interesting research perspectives. For one, by combining a macroeconomic level and a scale measuring the psychosocial outcome of a micro-individual distance, the cross-border phenomenon is further refined. Indeed, this overlapping of scales can be seen as a theoretical grid for new quantitative or qualitative surveys.

In the contribution by *Carpentier* the cross-border local mobility between the Belgian-Luxembourger border is analysed (Carpentier, 2012). It is found that the strong differentials on both sides of the border, both in terms of salaries and housing prices, have stimulated for more than two decades the cross-border links between the two countries. Whereas in 2008 nearly 40,000 residents of Belgium crossed the border each day to work in the Grand Duchy, between 2001 and 2007, more than 2,600 residents of Luxembourg went to live in Belgium, though they remained employed in Luxembourg. These cross-border movements, whether involving daily activities, such as journeys to work, or life cycle, such as moving home, are an indication of the influence of the border on spatial and social interactions.

Finally, in the paper by *Maksim*, attention goes to the issue of how spatial planning policies and procedures play a role in opening borders (Maksim, 2012). To this end, Geneva is taken as a case study. The policy paths of the urban area of Geneva is described by considering the evolution of successive master plans, the implemented technical solutions and projects and the different means used in favour of an inter-sectorial coordination. For this analysis, factors of change or inertia in terms of have been identified by focusing on three main variables: ideas, institutions and interests. The case of Geneva illustrates how planning procedures take an integral part in the policy-making process, with these procedures elaborated simultaneously with policies. Hence, torn between the renewal of public policy goals and the outcome of new territories, the reform of urban planning presents several contradictions. Conversely, sustainable development particularly fails to be addressed as a true political issue, limited to a definition of norms or legitimizing local policies.

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