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Delimiting Cross-Border Areas for policy implementation: a multi-factor proposal.

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Abstract:

This article debates the concept of border area and identifies a number of factors which should be considered when delimiting cross-border areas for policy implementation (CBAPI). These include historical, spatial, demographic, cultural, data, institutional, economic, infrastructural and environmental factors. The relevance of this debate for the border studies is twofold. Firstly, it covers a void in existing literatures, thus adding a valuable conceptual contribution to the delimitation of cross-border areas. Secondly, it provides a concrete theoretical platform for interested entities such as the European Commission to appropriately delimit CBAPI, for programmes like the INTERREG-A.

Keywords: Cross-Border Area, Border Area, Cross-Border Programmes, INTERREG, Borderline, Borderland.

1. Introduction

Taking the example of the European continent, the process of cross-border cooperation (CBC) has been gaining increasing political interest, visibility and intensity, mainly since the INTERREG-A Community Initiative (CI) was set up (Medeiros, 2010; 2011) in order to prepare the European Union (EU) border areas for the opening of the Single Market (EC, 1990). While initially, the European Commission (EC) used the border NUTS (nomenclature of territorial units for statistics) III to delimit these initial INTERREG-A programmes, along its five phases, on many occasions these programmes saw a systematic territorial enlargement (beyond the border NUTS III) of their intervention area, which now covers around 80% of the EU territory.

This need for valid criteria which appropriately delimit the policy intervention area for the INTERREG-A programmes is not new. This is explained by a large variation of the size of EU NUTS III, leading to the INTERREG-A coverage of almost all the Scandinavian peninsula. In this context, the EC has advanced a potential 25 km from the borderline buffer zone (Gramillano et al., 2016) as a more appropriate criterion to delimit the policy intervention area for the INTERREG-A. The question is: does this criterion makes sense in view of the large territorial diversity of the EU border regions? Moreover, does the ongoing debate to delimit EU CBC programmes based on existing cross-border functional areas (see Mehlbye and Böhme, 2018) make sense in view of the territorial diversity of the EU cross-border areas?

It is in this context that this article advances a novel place-based and flexible methodological approach to delimit cross-border areas for policy implementation (CBAPI), based not on only one, but on a multi-factor criterion, thus adding a theoretical contribution to the border studies. In more detail, this paper identifies 10 main potential factors which should be taken into consideration when delimiting CBAPI. At the outset, the proposed methodology prompts some reflection on how to prioritise the selection of those factors in a given cross-border region. In the end, the article presents a synthetic approach which can provide a concrete output for a more efficient policymaking process in delimiting CBAPI, which can be understood as: ‘the optimal cross-border geographical area to implement a programme or policy, aiming at promoting territorial development and reducing border obstacles in a cross-border territory’.

Before that, however, it is important to clarify the meaning of key concepts which are central to border studies. This clarification is especially important in view of the fuzziness of several ‘border area’ related concepts, such as ‘borderline’ and ‘border’. In this regard, available literature makes use of both these concepts with similar meanings. According to the Microsoft Encarta Encyclopaedia (2009), a ‘border’ can both be understood as: (i) a line dividing two areas:

the line that officially separates two countries or regions, or the land on each side of it across the border country; or (ii) a land at the edge: the edge of an area of land (...). For Paasi (2009: 217), a 'boundary' differs from a 'border' in a way that the former is defined as physical or imaginary lines of contact between states, and the latter denotes the adjacent areas lining boundaries.

In his seminal work on the theory on border areas, Lundén (2018: 98) debates the language origins and clarifies the mainstream border concepts. For instance, he advances that, in British English, a 'boundary' is a "territorial line, and in American English a broader concept including non-territorial interpretations; and 'border,' originally a zone along a boundary (the Scottish border), but in American English a territorial line dividing (independent) states. In recent times, the American concept has gained dominance. With this interpretation, a boundary is thus a line indicating any difference between two co-lateral delimitations, e.g. between states, regions, disciplines, ethnicities, or religion. (...) by definition, a boundary is a line, usually in terrestrial space, at which a certain state of affairs is terminated and replaced by another state of affairs".

Crucially, the notion of 'border' is far more complex than a simple abstract line dividing a territory. Amongst a wealth of literature on border studies, we highlight the remarks of Winder (2009: 330) who defines 'borders' as sites in which difference is produced and disrupted. As is known, boundaries tend to change over time, but when legally defined, they may persist long after the forces which create them have changed (Haggett, 2001). Moreover, they should not only be seen as peripheral regions which suffer or benefit from the close proximity of borderlines. Instead, they are integral elements of border dwellers' daily lives (Anderson et al., 2003: 3). They also have the ability to generate marginalisation processes (Danson and De Souza, 2012), and "should be seen as part of a transnational spatial fabric with a changing position in the system of (competing) regional economies" (Krätke, 2002: 125).

In turn, a 'borderland' signifies a "transition zone within which a boundary (line) is located". This can also be designated by the 'border area' or 'border region'. As Lundén (2018: 90-1) claims, "the concept of region, as an area defined by a certain type of homogeneity or centralised connections (which are often two sides of the same coin), is central to the interest in and exercise of cross-border transgression. (...) This means that the creation of trans-border regions, as a reality or as a symbol, has to overcome the state territorial indoctrination, symbolised metaphorically by the traditional map where each country is given a different colour". In this academic arena, Scott (2009: 653) recognizes that "internal and external borders of the EU represent a specific case of regionalization".

Based on his theoretical background, this article intends to advance a methodological proposal to delimit CBAPI, and to identify the main factors which can be used to produce that

delineation. To organise our analysis, the next section is mostly focused on a theoretical debate of the border region concept. The following section identifies and justifies the selection of the factors that should be regarded when delimiting CBAPI. Moreover, it advances a concrete theoretical approach to guide policymakers in delimiting cross-border areas, by prioritising the identified factors. Finally, a last section presents a concrete case-study (Portugal-Spain border area) which demonstrates a practical implementation of the presented methodology.

2. The border area: a theoretical debate.

A chief criticism of the current delimitation of the EU INTERREG-A programmes is based on a clear mismatch between the EU administrative areas used to delimit EU CBC programmes and the areas where cross-border relations (social, economic, cultural, institutional, environmental, etc.) are meaningful for implementing these programmes. Emanating from this reality, a few questions arise: What is critical in a delimitation of CBAPI? Is it possible to offer a cross-border area theory that is conclusive, incisive and innovative? Is it possible to show how this theory informs planning objectives? Along this and the following sections, the article presents a list of critical factors which can be seen as the most relevant to delimit CBAPI, with two complementary goals. Firstly, to add a theoretical contribution to the debate of the border area. Secondly, to serve as a guideline for policymakers which intend to implement cross-border programmes and policies. As expected, and due to the diversities and idiosyncrasies of each border region, as well as the diverse policy goals associated with CBC policies, no one can expect a conclusive proposal to define CBAPI. This, instead, needs to follow a place-based approach, in which some factors are more or less relevant, according to each case.

This need for focusing on a more fluid, shifting and complex, rather than a static and mainstream border analysis, is at the core of the ‘borderscapes’ concept (Brambilla, 2015). By going beyond a modernist idea of clear-cut national territories (dell’Agnese & Szary, 2015), the ‘borderscapes concept’ can be regarded as a valid conceptual framework for defining optimal CBAPI. However, the ‘borderscapes concept’ (see Rumley, 2010) does not necessarily advance a complete set of factors in an organised and comprehensive manner, which can easily be used by policymakers to delimit CBAPI. In the same manner, other concepts associated with border literature, whilst invoking the need for soft borders (Paasi, 2011; Paasi & Zimmerbauer, 2016), a continual readjustment of border scales in view of social relations and cross-border activities (Bürkner, 2019), and a reality of a multiscalar border construction, systematically negotiated and

reconfigured by its actors at different levels (Laine, 2016), does not always provide a clear-cut solution to appropriately delimit CBAPI.

Looking more closely at existing border literature, for Makkonen et al. (2018) a cross-border region refers to areas consisting of neighbouring territories belonging to different nation states. In a more simplistic manner, Malloy (2010) labels it as regional spaces for politics across national borders, which are collectively mobilized to build cross-border capacity. Rather than being static, cross-border regions are characterized by variable and fuzzy geographic scales (Blatter, 2004). Understandably, the process of cross-border regionalization depends on many different factors, some of local character, some of regional and national significance (Bryant, 1992).

Also understood as “physical locations or discursive spaces along historically developed political and material borders, where differences are constructed especially between nation-states” (Wastl-Walter, 2009: 232), ‘borderlands’ or ‘border areas’, are functional spaces where normative systems meet, and are usually asymmetrical and therefore complementary. They are also commonly subordinated to national administrations (Wastl-Walter, 2009). For De Sousa (2013) a border region is a special area characterised by fluxes and exchanges of a cultural, social, economic and political nature. This author does not offer concrete criteria to delimit a border area. Instead, in his study of the US-Mexico border region, Wilder (2013) defines a “border area buffer zone” of 100km from the borderline in both directions, which basically covers the area of the border counties from both sides of the borderline (Figure 1).

Drawing upon the US-Mexico border area, Dicken (2011: 47) highlights the strong incentive for development which occurs on the Mexico side of the borderline, to take advantages of benefits on the US side. For his analysis, however, he only indicates the main Mexican border cities and their employment levels. Most of those cities are located just next to the border. A few, nevertheless, are located quite far from the US-Mexico borderline: Chihuahua - 190km; Torreón - 370km; Guadalupe: 138km; and Monterrey - 140km. No criterion is advanced by the author on this selection. But it is not difficult to understand that all those areas, located far from the borderline, are economically influenced by the US-Mexico border’s high socioeconomic disparities, namely in attracting US companies looking for cheap labour. This might suggest that the US-Mexico border area is far wider than a 100km buffer zone.

Figure 1 - The United States of America-Mexico border area - own elaboration

For Europe, Krätke (1999) delimits the German-Polish border area by joining several border NUTS II, as a way to encompass the Berlin-Poznan cross-border urban axis. The same criterion is used to define the North of Portugal-Galicia Euroregion, one of the oldest in Europe (Pires and Nunes, 2018). Indeed, the large majority of cross-border regions in Europe tend to be micro-regions, according to González-Gómez and Gualda (2014), and are delimited by border NUTS II in which local and regional actors commonly operate. On some occasions, however, there is a mixed use of both NUTS II and NUTS III administrative limits to encompass EU cross-border regions, as is the case of the German-Polish-Czech border region (see Knippschild, 2011).

On certain occasions, however, the border area delimitation results from the aggregation of municipalities alongside both sides of the borderline, or by a mixed selection of different territorial levels (municipalities + NUTS III + NUTS II), as is the case of the Eurometropolis Lille-Kortrijk-Tournai border area (Durand and Lamour, 2014). Curiously, Krätke (2002) delimits a border area between Germany and Poland that is not coincident to the border NUTS III or II. Instead, it is an approximate 50km buffer zone from each side of the borderline, as he argues that there is a need to distinguish different scales of cross-border economic interaction. For the delimitation of the French-Belgian CB metropolis, Heddebaut (2004) identifies a group of municipalities around Lille (F) and Mouscron (B) in an 80-100 km circumference. In effect, the cross-border area depends on the type of cross-border flow that is analysed, which adds to the complexity of the problem.

3. Factors delimiting cross-border areas for policy implementation

The previous topics discussed and unveiled the complexity involved in the definition of CBAPI. This can be important to:

1. Increase policy efficiency: in order to concentrate CBC investment in solving relevant border region's problems and increase their territorial capital;
2. Favour border dwellers and cross-border commuters: in order to shed light on those problems that citizens experience in relation to the presence of the borderline;
3. Promote the principle of subsidiarity: in order to support the voice of border citizens and entities in the cross-border multilevel governance process;
4. Support the implementation of cross-border planning: order to prevent cross-border plans extend their areas to territories with little cross-border relevance;

5. Facilitate policy impact evaluation processes: in order to make possible a relevant policy evaluation procedure to identify the main impacts of CBC investments in border areas (see Medeiros, 2017).

However, this exercise for defining and proposing universal delimitation criteria for a border area faces numerous challenges, as all border regions and territories vary considerably by several different factors. Furthermore, as the reading of Figure 2 highlights, some of the proposed 10 factors overlap significantly. Here, for instance, statistical data is a cross-cutting issue which is valid for all types of factors, whereas the spatial factor is very much linked with the demographic factor. The following section is dedicated to briefly identifying and discussing these factors:

Figure 2. Potential factors influencing the delimitation of border areas - Own Elaboration

4.1 Historical Factors

Boundaries are legally defined and they may persist long after the forces which create them have changed (Haggett, 2001). This means that the historical factors that forged them affect the delimitation of the border area. These can be seen, for instance, in cross-border regions affected by military or other conflicts (e.g. Russia-Ukraine), which might undermine cross-border flows of all sorts, and hence influence the border catchment area. Also, long-term established and unchanged borders (e.g. Portugal and Spain) might contribute to limit the extension of the border's influential area, due to high levels of barrier effects. Conversely, in areas when borderlines have changed considerably over time, it could be expected that a border area could tend to cover vaster areas due to, for instance, enlarged territorial cover of cultural similarities (e.g. German ethnic groups in Belgium, Poland and the Czech Republic). Likewise, when supranational entities such as the EU, support measures to open borders, this could have a tremendous impact in increasing CB intensity and integration, thus leading to widening the influence of the border areas. Finally, mature CBC processes, which take place over a relatively long time (e.g. Nordic countries), could contribute to broaden CBAPI.

4.2. Spatial factors

CBAPI often extend their limits to close-to-the-border medium-large cities or, sometimes, encompass cross-border functional urban regions, which are often defined through existing cross-

border commuter flows (Möller et al., 2018). Similarly, the production of these cross-border spaces can be identified by the development of cross-border interactions over time, which gives way to a process known as ‘cross-border integration’. As regards this latter concept, Durant (2015) asserts that it remains an elusive and delicate notion, whereas Decoville et al. (2013: 222) claim that CB integration related “interactions are not necessarily limited to the economic sphere, but rather can also include cultural or political relations or migrations”. Likewise, Möller et al. (2018: 13), conclude that “commuting as well as other forms of cross-border mobility, such as cross-border shopping, tourism, and migration across the Swedish–Norwegian border, contribute to spatial integration”. To increment this CB integration process, however, it is crucial that cross-border barriers to labour mobility (Pires and Nunes, 2018) and other flows are mitigated.

In a similar vein, Mehlbye and Böhme (2018: 3) acknowledge the fact that territorial cooperation arrangements can be relevant at all territorial scales, which include city networking, and cooperation between larger, functional rural and urban areas. This cross-border process in cross-border functional areas enables cross-border regions to identify solutions to joint problems, namely related with the need to implement and administer joint infrastructural projects (De Sousa, 2013). This contributes to reducing legal-administrative barriers and, in certain cases, to stimulating the implementation of cross-border planning (Durand and Decoville, 2018; Medeiros, 2014a; Medeiros et al., 2018b). Crucially, there are many examples of cross-border areas that function dynamically from a socioeconomic standpoint, thus providing job opportunities, and functioning as everyday functional spaces (Wastl-Walter, 2009).

Other compelling evidence that shows the importance of medium and large towns to define the boundaries of border areas is the intervention areas of the INTERREG-A projects, which tend to favour CBC processes between these towns, sometimes located quite far from the borderline (Medeiros, 2014c). The reasons for this are evident: (i) these towns concentrate non-existent critical mass and knowledge (universities and main regional DGs) on the remainder part of the border area, most often largely depopulated; (ii) the administrative and audit requirements of EU funding imply that INTERREG-A programmes have become excessively bureaucratic, and competing candidacies require necessary administrative capacity to be successfully selected; (iii) cross-border flows are especially intense between these cross-border main city hubs, because they concentrate labour markets and economic activities.

4.3 Demographic factors

European border regions are, by and large, known to have fewer demographic densities than non-border areas (Figure 3). From a border area delimiting criterion, the demographic factor is particularly important. Firstly, it is difficult to contradict a territorial reality in which the presence of high levels of cross-border demographic densities can delineate a specific border area. The question would be: how many kilometres from the borderline should it stop being relevant for this delimitation process? As in all situations, each case will provide a unique answer. One possibility we advance to make such a decision is to make use of cross-border commuting data. Here, the border area would be defined by the confines of these cross-border commuting patterns across a cross-border territory. Clearly, the demographic and spatial factors are closely aligned in this regard.

Figure 3 - Population density in Europe - 2015 - Own elaboration

4.4. Cultural factors

Lundén identifies a number of different factors that influence what he defines as boundary behaviour. Amongst them are culture and communication factors. The latter includes language. As Lundén (2004: 99) claims, “the state tries, through linguistic indoctrination, to influence its citizens to modify their linguistic behaviour so as to create ‘common understanding’. A successful policy will lead to linguistic homogenisation within the state territory, and as sometimes conscious result, alienation towards the population on the other side”. From the reading of Figure 4, one could extrapolate that there seems to be strong “linguistic homogenisation” areas across the European states. The reality is, however, far more complex as similar language families are not always mutually comprehended. This is the case, for instance, of the Latin languages.

Also evident is the presence of several borderlines which separate populations speaking languages with a quite different origin. This, indeed, justifies the fact that language is seen by EU citizens as one of the three most important border barriers within the EU territory, alongside legal-administrative and accessibilities related barriers (Medeiros, 2018a; Svensson and Balogh, 2018). Therefore, language, at least in Europe, tends to function more as a barrier to the forging of cross-border areas, rather than a centripetal force to agglutinate them. There are, however, a few exceptions, such as the case of the Hungarian-Romanian border region, where a ‘language string’ of Hungarian speaking people can be used as a concrete factor to help in defining CBAPI. Indeed, when it comes to languages encounters at the boundary, Lundén identifies six different cases (Lundén, 2004: 101):

1. Language is the same on both sides of the border (e.g. Austria and Germany);
2. Language is the same, but on one side it has a lower status (Finland-Sweden);
3. Language is the same, but on one side is not recognised as a state language (e.g. Hungary-Ukraine, or Russia-Estonia);
4. Languages are officially different but mutually intelligible (Norway-Sweden);
5. Languages are both officially different and mutually unintelligible (Austria-Hungary);
6. Official languages are different, mutually unintelligible, but along both side of the border there is a third language group (parts of Estonia - Latvia speak Russian).

Figure 4 - The languages of Europe - 2019 - Own elaboration

4.5. Statistical data factors

The access to statistical data is essential to properly evaluate the impacts of public investments. This fact could present problems, for instance, if the EC puts in place the intention to delimit EU border areas within a 25km buffer zone from the borderline. Ultimately, the lack of comparable statistical data at the municipality level across Europe, in many crucial policy evaluation indicators, can undermine a proper policy evaluation process of the main impacts of the cross-border programmes. Likewise, there are problems related with data incompatibility due to the use of different statistical methodologies. Also, the size of EU municipalities and NUTS vary significantly within and across EU member states. In this context, we regard the availability of statistical data, in particular, the data related with cross-border flows, as a relevant component to define a cross-border area.

4.6. Institutional and administrative factors

Coalitions of cross-border areas in Europe have mainly come to fruition for the purposes of economic interests. Initially, these European cross-border institutional and formal coalitions took the name of Euroregions, since the first one was created on the Dutch-German border, in 1958 (Lange and Pires, 2018). Intended to promote coordinated actions focused on the key CBC priorities, these so-called Euroregions have spread across all European borders, mainly after the implementation of the INTERREG-A programmes (Medeiros, 2011). For some, this rise of EU cross-border entities can be linked to the alleged decline of the nation state and also as a practical

measure to remove the obstacles imposed by national borderlines to economic development (Terlouw, 2012).

According to Perkmann (2002: 3) “the classical form of a Euroregion is the ‘twin association’: On each side of the border, municipalities and districts form an association according to a legal form suitable within their own national legal systems”. Since 2008, however, EU cross-border regions have experienced a systematic progress in the implementation of European Groupings of Territorial Cooperation (EGTC). By then and until December 2017, there were 68 EGTCs implemented in Europe (CoR, 2018), mostly covering border regions in Spain, France, Czech Republic, Hungary and Italy (Medeiros, 2018a). This relatively recent and novel EU legal figure has become a central policy tool for cross-border authorities to organise territorial cooperation processes in the EU (Evrard and Engl, 2018). This has to be strongly taken into consideration, together with other existing CBC entities, when delimiting border areas for policy implementation, for the following main reasons:

1. Geography: cross-border entities already cover more than 80% of the European territory, thus encompassing all European border regions and the INTERREG areas (Figure 5);
2. Time: a large part has been in operation for more than a decade, thus having institutional recognition and operative capacity for policy implementation;
3. Policy implementation experience: many of them were forged with the ultimate goal of absorbing and managing EU funding for CBC processes, and have managed INTERREG projects;
4. Institutional: these entities should have a crucial role in integrating local CB stakeholders with limited administrative capacity, that otherwise would be left outside the crucial EU funding for CBC processes (Medeiros, 2014a).

Figure 5 - Cross-border programmes and entities in Europe - 2019 - own elaboration

In sum, and taking the EU example of the importance of CBC entities in implementing CBC development processes, there is a strong case to use their coverage area as a factor to delimit a CBAPI. So why not use only this criterion, that is already established in a formal way in many European borders? Again, we can point out several reasons for not using it by itself:

1. Politics over Reason: in some cases, existing cross-border entities serve regional political interests that overlap genuine CBC citizens' interests, leading to the inclusion of many areas that do not have a cross-border character;
2. Money over Relevance: in some cases, cross-border entities serve more as 'money absorbing sponges', rather than relevant and efficient cross-border development platforms;
3. Sub-regional vs Regional supremacy: in a few cases, cross-border entities resulted from 'policy egoisation' from local politicians' personal ambitions to establish political careers, rather than contributing to an additional territorial governance layer for the development of the cross-border area.

4.7. Economic factors

The economic factor is always seen as a major lever for implementing policies. Indeed, the reading of the main goals of all INTERREG-A phases reveals the EC intention to prioritise the economic development of EU internal and external border regions (Medeiros, 2018b). The question is: which economic sub-factors can influence the delimitation of a CBAPI? In our view, one major economic element that can provide important information on the border influential area is the cross-border trade flows. Indeed, despite being less scrutinized than other cross-border flows, due to lack of available data, cross-border trade relations not only have a full potential, are also emerging, according to Ferreira (2016).

Crucially, one evident benefit expected to result from boundary removal and socioeconomic linkage between regions is improved trade (Haggett, 2001). As Lafourcade and Paluzie (2011) claim, for the French border regions, as European integration progressed, the ones located near the EU core generated new trade surpluses. Looking more closely, it is also known that economic cross-border relationships are stronger within more developed countries (Capello et al., 2011). Indeed, the EU "border barriers currently limit the use of productive assets or make it difficult to achieve economies of scale. They also generate costs for individuals and businesses. This negative economic impact varies between member states, but is clearly higher in countries where border regions generate a significant proportion of national GDP" (EC, 2017: 6).

Besides cross-border trade flows, another type of economic related activity has gained increasing relevance in certain cross-border regions: cross-border shopping tourism. It is a fact that border dwellers, for many decades, have used to their own advantage the fact that product prices vary when crossing boundaries (see Lundén, 2004). However, only in recent decades, have a few entrepreneurs capitalised from this chronical reality, by investing in very large commerce infra-

structure (shopping centres) located right across the borderline, where prices are commonly lower in many products. As mentioned above, this has given rise to this new cross-border phenomenon called shopping tourism (Szytniewski et al., 2017; Braunerhielm et al., 2019). Due to their relevance, cross-border shopping tourism flows should also be included in the formulation of border areas, where they exist.

4.8. Infrastructural factors

One of the most striking realities of cross-border collaboration is the need for appropriate cross-border accessibilities related infrastructure, not only to facilitate face-to-face contacts, but also to maintain CBC processes and flows in the longer-term. Expectedly, cross-border mobility requires the existence of appropriate cross-border road/rail infrastructure vis-à-vis cross-border commuters' needs (EC, 2018). Likewise, the lack of presence or reduced amount of cross-border public transport is viewed by Europeans as one major persisting cross-border barrier across Europe (Medeiros, 2018c). Under this scenario, it is easy to realise how important is the presence of these elements to forge cross-border catchment areas, and ultimately to delimit CBAPI.

In the absence of a theoretical model that fully explains cross-border commuting (Gerber, 2012), several authors propose generic explanations and models to explain its relationship with cross-border accessibilities infrastructure (Rietveld, 2012). A recent study, nevertheless, advances a cross-border permeability index based on a relation between cross-border commuters' needs and availability of cross-border road and rail transport (Medeiros, 2018c). Figure 6 maps this index in all EU+EFTA border areas. Here, there are only two cross-border areas where cross-border transport permeability was considered as high: Germany–Czech Republic and Germany–Denmark. Nevertheless, the most important elements to help delimit the border area are the presence of important (large capacity) cross-border road and rail infrastructure, because of their direct effect in stimulating cross-border flows.

Figure 6 - Cross-border transports permeability - based on (Medeiros, 2018c) - own elaboration

4.9. Environmental Factors

CBC processes are thematically holistic. They encompass socioeconomic, institutional, planning and also environmental issues (Castanho et al., 2017). The latter domain covers the management of cross-border national protected areas, the implementation of environmental planning (Hansen,

2000), as a way of improving environmental conditions in the cross-border area. Sometimes, there is also the need to solve environmental cross-border policy issues, such as the management of the water resources between shared rivers (De Sousa, 2013). Crucial evidence of the importance of the environmental element to foment CBC processes is the large amount of funding allocated by the INTERREG-A programmes to environmental related projects.ⁱ All the above-mentioned cross-border environmental aspects should be taken into consideration when delimiting CBAPI. Inevitably, the presence of a large cross-border natural protected area is the most territorially visible element of them all.

4.10 Social Factors

The sharing of cross-border social services in EU border areas is not new. For instance, for a long time, the Portuguese and Spanish authorities have established formal protocols to allow the use of the Badajoz (S) hospital by people dwelling on the Portuguese side of the border (Elvas area). Another eloquent example is the Cerdanya CB Hospital EGTC, which results from a partnership between France and Spain. Hence, the territorial influence of these cross-border social services also needs to be taken into account when delimiting CBAPI. For this, the reading of a recent ESPON report (2019a) provides a detailed cartographic perspective of the EU border crossings where their intensity (understood as the amount of cross-border initiatives during a certain period of time) is stronger. Moreover, this report provides an inventory which includes a total of 579 CB public services across Europe, where the majority are assigned to three policy fields: (i) environment protection, (ii) civil protection and disaster management or (iii) transport (ESPON, 2019a: 8).

The methodological approach to identify the optimal CBAPI can vary from case to case. Furthermore, in the presence of several factors, it is inevitable that a few are prioritised over others. Following from the experience in analysing and assessing the implementation of EU CBC programmes, however, the author proposes the following general considerations for delimiting a border area:

1. Identification of the cross-border links where the project intensity is stronger (number of projects approved between localities on both sides of the border). The mapping of these flows normally provides a clear picture of the space when the CBC is actually taking place. In other words, this provides a clear indication of the area where cross-border entities tend to cooperate more intensively;

2. Identification of the cross-border catchment area where cross-border commuting is more intense (measured by the number of cross-border commuters). In the end, this data will signal the area where policy measures to improve the socioeconomic development of the cross-border areas could be more effective;
3. Identification of potential cross-border functional areas. These are normally associated with more intense cross-border commuting areas and populated areas. Unlike what is refereed in the previous point, they can extend further away from the borderline, and include areas which do not have relevant cross border commuting flows. Indeed, functional areas are not only defined through commuting, but also via the present of cross-border social services, shopping and leisure activities. If an integrated development plan exists for the cross-border functional area, it makes sense to include the entire territory covered by this plan;
4. Identification of cross-border natural protected areas. Here again, the border area should include the natural protected areas which extend on both sides of the border in order to allow an effective management of those spaces;
5. Identification of factors which can complement the previous ones. In detail, the border area should also encompass the: (i) potential presence of areas with strong cultural affinities; (ii) the presence of cross-border entities, even though some tend to extend their territory to non-cross-border areas due to political reasons; and (iii) the possibility to obtain statistical data to assess the impacts of CBC programmes.

4. Applying the cross-border area theory to the Portuguese-Spanish border region

Based on all the previous factors, the proposed methodological approach was applied to a concrete case (Iberian Peninsula - Portugal (P) - Spain (S)), which could then be adjusted other regional idiosyncrasies related to borders'. In this particular case, previously collected information was used to analyse border regions over the past 30 years (Medeiros, 2010) for analysing each factor, which can be summarized as follows:

1 – As can be seen in Figure 7, the main intensity cross-border project flows (institutional factor) have been established between the main regional capitals of the border NUTS II, some of them located outside the border NUTS III. In this stance, the cross-border area is first and foremost delimited within the space covered by these flows. The delimitation of the area covered by existing cross-border entities (more than 100) in the P-S cross-border region is not used since the three Euroregions cover all their border NUTS II (North of Portugal-Galicia; EUROACE and

EUROAAA). If that criterion is applied, that would mean, for instance, that all the Andalusian territory would be included. It is indeed easy to conclude that most of that territory does not have a border character.

2 - There are three main cross-border urban axes (the spatial and demographic factors), which can act as cross-border functional urban areas: Porto-Vigo, Évora-Mérida and Faro-Seville. This means that their catchment area should be included in the delimitation of the P-S cross-border border area. However, all these territories are already included when using the previous criterion;

3 – There are only three relatively small cross-border natural protected areas (environmental criterion) which do not extend much across the borderline. As such, this criterion ends up not being very relevant to the delimitation of the CBAPI.

As regards the other factors, from an historical standpoint, the P-S border area is a unique case worldwide of an almost unchanged borderline over the past 800 years. Hence, the CBC maturity process was largely affected by a back-to-back CBC process until the implementation of the first INTERREG-A programme in 1990. From then on, the CBC process has increased significantly, meaning that this factor is not very relevant to define the border area anymore.

In relation to the cultural factor, language can be regarded as a barrier, due to the differences between Portuguese and Spanish. However, these differences are not strong enough to affect cross-border flows, since the relative similarity of Spanish and Portuguese makes it possible for understanding, depending on the interest of the population. However, there is one small portion of the Spanish side of the border which is not formally recognized as Spanish territory by the Portuguese authorities (Olivenza area) where a mix of Portuguese-Spanish is still spoken, and that should be used as a factor to delimit the CB area. Moreover, the Galician language, even if weak, is a 'bridge' of understanding in the north,

As in almost all case-studies, data availability at the local level (municipalities) is limited for a proper analysis of the territorial impacts of CBC programmes. Even so, in this case, it is clear that several areas of the border NUTS III do not have a border character (e.g. - west of Algarve - P and east of Extremadura - S). In other instances, the CBC process has been established between cities that are located outside the border NUTS III (e.g. Coimbra - P and Valladolid - S). This could present an obstacle to appropriately assess the implementation of CBC programmes if the proposed cross-border area is selected. However, for simplification purposes, the NUTS III border areas' data will continue to be used.

Cross-border commerce in the Iberian Peninsula is mostly processed between the major urban areas. Indeed, only the North of Portugal-Galicia border axis has a relatively high exchange of commercial flows. This makes this factor not very relevant for delimiting most of the P-S cross-border area. Equally, with regard to the cross-border rail infrastructure, there are only three cross-border passages between P-S, and all of them with no more than two trains per day. The cross-border road infrastructure is, however, more abundant, but only four passages (Valença-Tui; Vilar Formoso-Ciudad Rodrigo; Elvas-Badajoz and V.R. Santo António-Ayamonte) have large enough cross-border traffic flows to influence the delimitation of a cross-border area. Furthermore, the presence of cross-border transport is reduced. However, some Galicians use the Porto International Airport and also Andalusians use the International Airport of Faro. Likewise, there are a few cross-border shared social services across the P-S borderline. The most relevant example is the aforementioned Badajoz hospital. But there are also other health services being used by the Portuguese population in the North of Portugal-Galicia border region. In this regard, the already mentioned ESPON report on CB public services presents, as an example, two municipalities (Tui - S and Valença - P), which share their health care equipment (ESPON, 2019a: 32). In the same area, there are several soft infrastructure services in fields of spatial planning, economic development, tourism and culture (ESPON, 2019b: 12). Further south, in the Alentejo-Extremadura-Andaluzia cross-border region, besides the Luso-Spanish partnership signed in 2006 to allow the ‘Hospital Materno Infantil de Badajoz’ to replace ‘Elvas maternity’ after its closure in 2018 (ESPON, 2019c). In the following, a “Memorandum of Understanding on Cross-Border Health Cooperation” was signed “between the Ministry of Health of the Portuguese Republic and the Consejería of Health and Social Policies of the Junta de Extremadura (Spain)” (ESPON, 2019b: 12) with the goal to reinforce the sharing of health services between both Iberian countries in this part of the border.

Based on all the previous considerations, Figure 7 presents a simplified proposal for the delimitation of a CBAPI between Portugal and Spain. As seen, it does not necessarily follow the delimitation of the border NUTS III, and comes closer to the current P-S INTERREG-A area (Fig. 5).

Figure 7 - A proposed CBAPI for Portugal-Spain - own elaboration

6. Conclusion

In this article, we debated the concept of ‘border area’ and the related notion of ‘cross-border area’, which includes border areas from both sides of a borderline. Ultimately, we intended to present a theoretical solution to better delimit pertinent and relevant cross-border territories for the

implementation of CBC programmes, such as the INTERREG-A, which has been implemented in EU internal and external border regions since the early 1990s. In essence, the intended added value of the proposed methodological approach is to provide a more efficient and place-based criteria to delimit a border area for policy implementation. This is particularly relevant in territories with a clear mismatch between the delineation of administrative units adjacent to a borderline (which vary significantly in size from country to country) and the areas associated with current cross-border spatial/functional relations.

It goes without saying that the decision to instil further academic debate on the need to better delimit CBAPI resulted from past experiences in evaluating INTERREG-A programmes. Indeed, while initially associated with the EU border NUTS III, the areas covered by these programmes were gradually expanded over their five programming phases. This was a result of local/regional political interests and an increasing bureaucratization of administrative procedures, which benefited partners with strong administrative capacity, located in regional capitals outside border NUTS III. To add to this complex picture, European cross-border entities (Euroregions, EGTCs, Eurocities, cross-border committees, etc.) have been growing in number and in territorial coverage since the mid-1950s, and now cover more than 80% of the European territory.

In this context, and being aware of the EC concerns on the need to concentrate EU CBC funding in genuine cross-border areas, this article advances a multi-factor methodological proposal to identify these areas. One needs, though, to be quite aware of the challenges associated with this endeavour, since border regions differ significantly worldwide. At the same time, their territorial idiosyncrasies should be considered in this territorial delimitation process. Even so, this article sustains that a proper delimitation of CBAPI will fuel increased CBC policy efficiency with a view to directly and indirectly benefit the lives of border dwellers and cross-border commuters.

In brief, the presented methodological proposal to delimit CBAPI is based on the use of a multi-factor analytic framework. The main reason for this is the fact that there is clearly more than one single important factor which can, by itself, be used for this purpose, as the INTERREG-A experience has shown. As such, we suggest the use of a combination of available data on a number of crucial factors, which contribute to forging a cross-border catchment area for policy implementation. These include: (i) Historical factors: which affect the intensity and expansion of CB interactions; (ii) Spatial factors: like the presence of large cross-border functional areas and the influence of regional capitals far away from the borderline; (iii) Demographic factors: like the potential presence of vast high density populated areas on both sides of the borderline, and also patterns of cross-border commuting; (iv) Cultural factors: this could include cross-border regions with intense cultural similarities, and ethnic language minorities on the other side of the borderline;

(v) Data factors: these are particularly important to provide sound policy evaluations; (vi) Institutional factors: which include the presence of cross-border programmes and entities; (vii) Economic factors: these include data related to cross-border trade and projects; (viii) Infrastructural factors: which include cross-border roads and railways, and also the potential presence and influence of cross-border public transport; (xi) Environmental factors: which take into account the potential presence of cross-border protected natural areas and cross-border shared river basins, and (x) Social factors: which relate mainly to the presence of cross-border social services.

In order to facilitate the use of these factors, the area covered by established cross-border project flows between border localities should be prioritised. Secondly, comes the catchment area of potential cross-border functional areas and relatively high flows of cross-border commuting which, on most occasions, tend to overlap. Thirdly, the factor of cross-border natural protected areas is added to the equation. The remaining factors can serve to refine the cross-border area delimitation process, depending on the characteristics of each border area.

In conclusion, the proposed methodology to delimit CBAPI, not only revealed the importance of collecting updated and detailed data on border regions, as so many factors are involved, but also the degree of subjectivity necessarily involved in these types of analysis. In view of the above, we suggest that these types of exercises should involve a group of experts and stakeholders, in order to obtain as precise as possible a territorial delimitation. Indeed, with this article, we also want to open the door to additional perspectives and to provide opportunity for further research on the process of limiting CBAPI all across the world.

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References:

- Anderson, J.; O'Dowd, J.; Wilson, T. M. (2003) *New Borders for a Changing Europe. Cross-border Cooperation and Governance*, Frank Cass, London.
- Blatter, J. (2004). From 'spaces of place' to 'spaces of flows'? Territorial and functional governance in cross-border regions in Europe and North America. *International Journal of Urban and Regional Research*, 28(3): 530–548.
- Brambilla, C. (2015) Exploring the Critical Potential of the Borderscapes Concept, *Geopolitics*, 20(1): 14-34.

- Braunerhielm, L.; Alfredsson-Olsson, E.; Medeiros, E. (2019) The importance of the Swedish–Norwegian border citizens’ perspectives for bottom-up cross-border planning strategies. *Norsk Geografisk Tidsskrift*, 73(2), 96-109.
- Bryant, R. C. (1992) *Turbulent Waters, Cross-Border Finance and International Governance*, Brookings institution press, Washington, D.C.
- Bürkner, Hans-Joachim (2019) Scaling and Bordering: An Elusive Relationship?, *Journal of Borderlands Studies*, 34(1): 71-87.
- Capello, R.; Fratesi, U.; Resmini, L. (2011) *Globalization and Regional Growth in Europe Past Trends and Future Scenarios*, Springer, Cham.
- Castanho, R.; Vulevic, A.; Fernández, J.; Fernández-Pozo, L.; Gómez, J.; Loures, L. (2017) Accessibility and connectivity – Movement between cities, as a critical factor to achieve success on cross-border cooperation (CBC) projects. *A European analysis, Sustainable Cities and Society* 32 (2017): 181–190.
- CoR (2018) *EGTC monitoring report 2017*, Committee of the Regions, Brussels.
- Danson, M.; De Souza, P. (2012) *Regional Development in Northern Europe. Peripherality, marginality and Border Issues. Regions and Cities*, Regional Studies Association, Routledge, London.
- De Sousa, L. (2013) Understanding European Cross-border Cooperation: A Framework for Analysis, *Journal of European Integration*, 35(6): 669-687
- Decoville, A., Durand, F., Sohn, C. & Walther, O. (2013) Comparing cross-border metropolitan integration in Europe: Towards a functional typology. *Journal of Borderlands Studies* 28(2): 221-237.
- dell’Agnese, E. & Szary, Anne-Laure Amilhat (2015) Borderscapes: From Border Landscapes to Border Aesthetics, *Geopolitics*, 20(1): 4-13.
- Dicken, P. (2011) *Global Shift. Mapping the changing contours of the world economy*, 6th Edition, Sage, London.
- Durand F., Decoville A. (2018) *Establishing Cross-Border Spatial Planning*. In: Medeiros E. (eds) *European Territorial Cooperation. The Urban Book Series*. Springer, Cham.
- Durand, F. & Lamour, C. (2014) Cross-border metropolitan governance: the multi-faceted state power, *Space and Polity*, 18(3): 197-214,
- Durand, F. (2015) Theoretical framework of the cross-border space production – The case of the Eurometropolis Lille– Kortrijk–Tournai. *Journal of Borderlands Studies*, 30(3):1-19.
- EC (1990) *Interreg*, InfoTechnique B-501-90, European Commisiion Luxemburg.
- EC (2017) *Boosting growth and cohesion in EU border regions*, Communication from the Commission to the Council and the European parliament, European Commission, Brussels.
- EC (2018) *Comprehensive analysis of the existing cross-border rail transport connections and missing links on the internal EU borders*. Final Report, European Commission, Brussels
- ESPON (2019a) *Cross-border public services in Europe*, Final Report, ESPON, Luxembourg.
- ESPON (2019b) *Cross-border Public Services (CPS) Targeted Analysis Final Report Scientific Report – Annex V Case study report - Galicia – Norte de Portugal*, ESPON, Luxembourg.
- ESPON (2019c) *Cross-border Public Services (CPS) Targeted Analysis Final Report Scientific Report – Annex XI Case study report – Alentejo-Extremadura-Andaluzia*, ESPON, Luxembourg.
- Evrard E., Engl A. (2018) Taking Stock of the European Grouping of Territorial Cooperation (EGTC): From Policy Formulation to Policy Implementation. In: Medeiros E. (eds) *European Territorial Cooperation. The Urban Book Series*. Springer, Cham
- Ferreira, R. (2016) Iberian major Regions Interregional Trade across the Border, *Journal of Economics and Business Research*, 22(2): 19-44.
- Gerber, P. (2012) Advancement in Conceptualizing Cross-Border Daily Mobility: the Benelux Context in the European Union, *EJTIR*, 12(2): 178-192.

- González-Gómez, T.; Gualda, E. (2014) Reporting a bottom-up political process: Local perceptions of cross-border cooperation in the southern Portugal–Spain region. *European Urban and Regional Studies*, 23(3): 468–480.
- Gramillano, A., et al. (2016) *Collecting Solid Evidence to Assess the Needs to be Addressed by Interreg Cross-Border Cooperation Programmes* (2015CE160AT044), European Commission, Brussels.
- Haggett, P. (2001) *Geography. A global synthesis*, Prentice Hall, London.
- Hansen, C. L. (2000) Economic, political, and cultural integration in an inner European Union border region: The Danish German border region, *Journal of Borderlands Studies*, 15(2): 91-118
- Heddebaut, O. (2004) *The EUROREGION from 1991 to 2020. An ephemeral stamp?*, in Hooper, B.; Kramsch, O. (eds.) *Cross-Border Governance in the European Union*, Routledge, London, pp. 71-87.
- Knippschild, R. (2011) Cross-Border Spatial Planning: Understanding, Designing and Managing Cooperation Processes in the German–Polish–Czech Borderland, *European Planning Studies*, 19(4): 629-645.
- Krätke, S. (1999) Regional Integration or Fragmentation? The German-Polish Border Region in a New Europe, *Regional Studies*, 33(7): 631-641.
- Krätke, S. (2002) *Cross-Border Cooperation and Regional Development in the German-Polish Border Area*, in Perkmann, M. Sum, N, (eds) *Globalization, Regionalization and Cross-Border Region*, pp. 125-150.
- Lafourcade, M., & Paluzie, E. (2011). European integration, foreign direct investment (FDI), and the geography of French trade. *Regional Studies*, 45(4): 419-439.
- Laine, J. (2016) The Multiscalar Production of Borders, *Geopolitics*, 21(3): 465-482.
- Lange E., Pires I. (2018) *The Role and Rise of European Cross-Border Entities*. In: Medeiros E. (eds) *European Territorial Cooperation. The Urban Book Series*. Springer, Cham
- Lundén T. (2018) *Border Regions and Cross-Border Cooperation in Europe. A Theoretical and Historical Approach*. In: Medeiros E. (eds) *European Territorial Cooperation. The Urban Book Series*. Springer, Cham, pp. 97-114.
- Lundén T. (ed.) (2004) *On the Boundary. About humans at the end of territory*. Södertörns Högskola, Huddinge.
- Makkonen, T.; Williams, A.; Mitze, T.; Weidenfeld, A. (2018) Science and technology cooperation in cross-border regions: a proximity approach with evidence for Northern Europe, *European Planning Studies*, DOI: 10.1080/09654313.2018.1500528
- Malloy, T. (2010) Creating New Spaces for Politics? The Role of National Minorities in Building Capacity of Cross-border Regions, *Regional & Federal Studies*, 20(3): 335-351.
- Medeiros, E. (2010) Old vs Recent Cross-Border Cooperation: Portugal-Spain and Sweden-Norway, *AREA*, 42 (4): 434-443
- Medeiros, E. (2011) (Re)defining the concept of Euroregion, *European Planning Studies*, 19 (1): 141-158.
- Medeiros, E. (2014a) Barrier Effect and Cross-Border Cooperation: Sweden-Norway INTERREG.A Territorial Effects, *Finisterra*, XLIX (98): 87-100
- Medeiros, E. (2014b) Is there a new TRUST in Inner Scandinavia, Evidence from Cross-Border Planning and Governance. *Geografiska Annaler: Series B, Human Geography*, 96 (4): 363–386
- Medeiros, E. (2014c) *Cross-border cooperation in Raia Ibérica: the role of the INTERREG in building territorial networks.*, in: *Cross Border Cooperation Structures in Europe, learning from the Past to the Future*, Iva Pires e Luis Dominguez Castro (eds.), Euroclio, Studies and Documents, P.I.E. Peter Lang, pp. 135-154.
- Medeiros, E. (2017) Cross-border cooperation in Inner Scandinavia: A Territorial Impact Assessment, *Environmental Impact Assessment Review*, 62(2017):147–157

- Medeiros E. (2018a) *The Role of European Territorial Cooperation (ETC) in EU Cohesion Policy*. In: Medeiros E. (eds) *European Territorial Cooperation. The Urban Book Series*. Springer, Cham
- Medeiros E. (2018b) Should EU cross-border cooperation programmes focus mainly on reducing border obstacles, *Documents d'Anàlisi Geogràfica*, 64(3): 467-491.
- Medeiros, E. (2018c) Cross-Border Transports and Cross-Border Mobility in EU Border Regions, *Case Studies on Transport Policy*, 7(1): 1-12.
- Mehlbye, P.; Böhme, K. (2018) *More Territorial Cooperation Post 2020? A contribution to the debate of future EU Cohesion Policy*, Spatial Foresight Brief 2017:8, Spatial Foresight GmbH, Luxembourg.
- Microsoft Encarta (2009). *Microsoft Corporation*. All rights reserved.
- Möller, C.; Alfredsson-Olsson, E.; Ericsson, B.; Overvåg, K. (2018) The border as an engine for mobility and spatial integration: A study of commuting in a Swedish–Norwegian context, *Norsk Geografisk Tidsskrift*, 72(4): 217-233.
- Paasi, A. (2009) *Political Boundaries*, International Encyclopedia of Human Geography, Elsevier, Conventry, Volume 8: 217-227.
- Paasi, A. (2011) A “Border theory”: an unattainable dream or a realistic aim for border scholars? In Wastl-Walter, D. (ed.) *A Research Companion to Border Studies*. Aldershot: Ashgate. pp. 11-31.
- Paasi, A.; & Zimmerbauer, K. (2016) Penumbra borders and planning paradoxes: Relational thinking and the question of borders in spatial planning, *Environment and Planning A*, Vol. 48(1): 75–93.
- Perkmann, M. (2002) *The rise of the Euroregion. A bird's eye perspective on European cross-border co-operation*. Department of Sociology, Lancaster University, Lancaster, 2002. [Online]. Available: <http://www.lancaster.ac.uk/sociology/research/publications/papers/perkmann-rise-of-euroregion.pdf> [Accessed Nov. 29, 2014].
- Pires, I; Nunes, F. (2018) Labour mobility in the Euroregion Galicia–Norte de Portugal: constraints faced by cross-border commuters, *European Planning Studies*, 26(2): 376-395.
- Rietveld, P. (2012) Barrier Effects of Borders: Implications for Border-Crossing Infrastructures, *EJTIR*, 12(2): 150-166.
- Rumley, D. (2010) A Review of “Borderscapes: Hidden Geographies and Politics at Territory's Edge”, *Annals of the Association of American geographers*, 100(1): 236-237.
- Scott, J. W. (2009) *Europe of Regions*, International Encyclopedia of Human Geography, Elsevier, Conventry, Volume 3: 649-657.
- Svensson S., Balogh P. (2018) *Limits to Integration: Persisting Border Obstacles in the EU*. In: Medeiros E. (eds) *European Territorial Cooperation. The Urban Book Series*. Springer, Cham
- Szytniewski, B.; Spierings, B. & van der Velde, M. (2017) Sociocultural proximity, daily life and shopping tourism in the Dutch–German border region, *Tourism Geographies*, 19(1): 63-77.
- Terlouw, K. (2012) Border Surfers and Euroregions: Unplanned Cross-Border Behaviour and Planned Territorial Structures of Cross-Border Governance, *Planning Practice & Research*, 27(3): 351-366
- Wastl-Walter, D. (2009) *Europe of Regions*, International Encyclopedia of Human Geography, Elsevier, Conventry, Volume 3: 332-339.
- Wilder, G. M. et al. (2013) *Climate Change and U.S.-Mexico Border Communities. Chapter 16 in Assessment of Climate Change in the Southwest United States*: https://www.researchgate.net/publication/278658778_Climate_Change_and_US-Mexico_Border_Communities (accessed in 05-09-2018).
- Winder G. M. (2009) *Europe of Regions*, International Encyclopedia of Human Geography, Elsevier, Conventry, Volume 5: 330-343.

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