Transboundary area: Methodological considerations

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Abstract

Against the backdrop of rich theoretisation of borders, the nodal importance of the transboundary area requires articulating its conceptual, methodological, and analytical potential. Focusing on the subject of state borders, through terminology review the article contributes to better structuring the idea of a single zone, marginal for the centers on the both sides of the divide, as well as to presenting the transboundary in its capacities of a spatial level of operation, a medium, and a tool of analysis. It then sketches the transboundary area problem pattern that can be investigated within the same framework, being a transborder problem stemming from the perceptions of limits of sovereign responsibility and manifesting itself in negative effects from processes in inner polity regions and across the border. The article also discusses possible practical usage of the framework, providing the example of its applicability in transnational environmental governance research.

Introduction

If we decide to approach the problem of transversal phenomena in adjacent state border areas, we can notice that elaborate theoretical models for cooperation formats across administrative boundaries have been put at our disposal: from stable "cross-border regions" (Perkman, 2003) to fluid "soft spaces" (Walsh et al. 2012). Yet scholarly effort has been somewhat lacking in respect of formulating a model that could capture, at a due level of abstraction, the sui generis spaces of exception spanning across polities, if the former are not articulated in terms of governance interlocks. At the same time, in the Western imaginary and popular art works border areas are often pictured as tumultuous cul-de-sacs that can take the form of a broad exclusion zone alienating the U.S. from Mexico or of a landscape sprinkled with killers, smugglers,

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and illegal migrants on the Polish south-eastern confine. The immersive fiction of artistic narratives does not but translate, in a concentrated form, persistent archetypical representations that the (state) border area has been subject to. The very possibility of such stereotypification is just another illustration of the degree to which universal and constant features permeate multifaceted manifestations of the phenomenon of the border. Besides, although all borders differ between themselves, there are to a substantial extent unified institutional practices and standards supporting their existence all over the globe. It is, moreover, not uncommon that the more borders are challenged, the more they become reinforced in their divisive function.

One would need to be able as well to handle – with an apposite approach – spatially transversal issues related to bordering. In such a patchy, "strange" land-stretch as the border area things can be scarce and abundant at once, fostering "short-term, opportunistic and more questionable 'arbitrage' activities" (Anderson, 2001, p. 9). To take a cinematic shortcut, this includes the immaterial "thing" of the rule of law: (allegedly) nobody wants to investigate crimes at borders. This seemingly common truth is voiced by a main character of The Ice Forest (Noce, 2014), a Slovenian policewoman who sees her Italian counterpart step back discouraged by the complexity of a case. May it be such kind of attitude itself that further incentivizes perpetrators? As a matter of example, crime rates can be relatively high in border regions (Ceccato, 2007, p. 152; Dijkstra, 2014, p. 79; Yashar, 2018, p. 332), whereas there is evidence that systematic law enforcement helps to counter that tendency (Orrenius & Coronado, 2005).

In order to fit up the analytical exploration of border area specificity, proceeding from the two above-mentioned concerns, the present article attempts at giving a better shape to the concept of the transboundary area. The following sections are aimed at: 1) delineating the semiotical setting for the concept; 2) finding a mode to carve out the transboundary argument within the analysis of borders; 3) sketching the problem of the transboundary; 4) summarising the methodological implications at the example of environmental governance across borders.

Method

The article builds on a multidisciplinary literature review. Authoritative theoretical and em-pirical papers pertaining to the conceptualisation of border and the space around it were analysed with the objective of discerning how they can be used for grounding the thinking about transboundary areas. The key components of the respective border representations were synthesised, allowing to set forth within the same framework characteristic features of the transboundary. Additionally, a number of case-focused publications relevant to the dis-cussion of the latter were selected for the sake of citing examples.

Theory overview: setting the coordinate system for the term

In the late 1960s material expressions of social structures and processes came into the spotlight in the frames of the Spatial Turn (Pattaroni, 2016). Given that conceptualisations of space inevitably evoke reflections on boundary as an ordering and structuring component, the 1980s saw the incipient interest in the discipline of Border Studies grow massive. The theoretical apparatus of the latter has enriched the academic metaphor trove with quite a few ways to grasp certain spatial phenomena through making sense of various aspects of boundaries (e.g., othering, crossing, exchange). In the present article the focus is narrowed to inter-state borders which alone produce a plethora of variegated effects in different spheres of human life. Numerous overviews of border-related terminology (see Rankin & Schofield, 2004 for rigorously drawn semantic watersheds in English and beyond; Brunet-Jailly, 2005; Newman, 2006; Cassarino, 2006; Green, 2012; Janparvar et al., 2021) have contributed to structuring the wealth of the discipline's knowledge. It is also the terminological realm that one has to deal with when identifying a

place for the notion of the transboundary area.

In the words of David Newman (2006, p. 150), "[t]he classic border literature distinguished between the border or boundary on the one hand, and the political frontier or the borderland on the other". This conceptual bifurcation implies two outlooks on the problem of bordering: the linear and the bi-dimensional one, respectively. The first perspective is applicable in the spheres where discrete models and representations of geospatial organization are used (e.g., legal and administrative understanding, nimble demarcation). Yet to Megoran (2012, p. 465), for instance, international boundaries appear – in a legalistic key – as "vertical planes" and are distinct from borders imagined bi-dimentionally. The latter kind of border undoubtedly "structures the modern geopolitical imagination" (Vaughan-Williams, 2016, p. 11) and thus conveys an immense symbolic meaning. It is found especially clear-cut, if one looks from the "center" of a territory: one recognizes a line on the map and thereby becomes mindful of the rules that apply in the topos circumscribed. In everyday life, most of those sharing the center-informed linear idea, crystallized and maintained over time, come at the border only as visitors. The linear understanding is additionally important in two aspects. First, it is applicable to regionalisation processes which are alternative to (and, at times, contestant of) state administrative division and also rely on virtual lines and (re-)bordering. Second, it helps in determining that removal of physical boundaries does not equal borderlessness (in the institutional sense): formalistic representations survive even in the absence of material obstacles.

The alternative perspective is more suitable for analysing dispositions on the ground. When one has an immediate experience of processes around the border, new elements add up to complement the picture, both physically and semiotically, making it evident that lines are "insufficient, in themselves, as an understanding of border" (Green, 2009, p. 10). Referring to Martinez (1994), Newman (2006, p. 150) described the frontier or borderland as "the region or area in relative close proximity to the border within which the dynamics of change and daily life practices were affected by the very presence of the border". The quote points out to the pragmatics of sociality and special conditions of daily life at the limit of a territory. It should be noted that there are several models for a bi-dimensional border area conceptualisation. First, as far as "frontier" was tied by Turner's thesis to the connotations of dynamics and unidirectionality, a wide-spread approach to representing borders indeed leans on a vectoral component. Second, following Barth's study (1969) of dynamic social action at the frontier, the latter has been imagined as a zone of contact and penetrating influence (for a borderland interpretation see Adviloniene, 2008; Bespamiatnykh, 2012). The approach of looking at the whole border area within one country only is itself transitional between center- and border-informed stances on spatial organization. A continuation of Barth's idea – accentuating life-world's extension beyond the border – propounds "a coherent transnational and cross-border frontier" (the observer's stand-point is inferrable) as a meaningful space where life flows "as if the line between countries was not there" (Donnan & Wilson, 2010, p. 9). Such view evidently opts out of any border effects, regrettably simplifying the schema. Third, there is a cross-border perspective, in which, firstly, the zone spanning both sides of an international border is taken as the unit of analysis and, secondly, the factor of the sides' mutual influence is considered: e.g. "borderland" examined in the work of Baud and van Schendel (1997, p. 216). Besides, Raczaszek (2011, p. 16) made a handy terminological distinction between "borderland regions" lying within the boundaries of one state and "transborder regions" which are single spaces extending across borders. Finally, it was noted that border areas are entitled to their own diffuse boundaries. For instance, they can be defined as a 25 km-wide strip of land extending alongside the borderline, since there the effects of the proximity of a political border are most evident and strong (Bufon & Markelj, 2010, p. 20).

Conceiving of border influence as a spatial areal object reflects the continual paradigm in spatial unit definition (problematised, for example, in Allen & Cochrane, 2007). The thesis of continuity has been

spreading through various metaphors. For example, in suggesting the vision of "Borderland Europe" Balibar (2004, p. 12) nurtured the borderworlds interference imaginary by formulating a cross-over model of borderland political space as overlapping open regions, borders being an element of that system. The images of gradual change, fretting or blurring of characteristics in the expanse surrounding the border comprise the metaphor of spillover (Van Gorp, 2009, p. 358) and hybridisation (Newman, 2003; Fourny, 2014) as well as the interpretation of border areas in terms of transition zones (Newman, 2006, p. 146; Volynchuk & Korotich, 2013), liminal spaces of multiple challenges (for the Alpine context see Fourny, 2014), and practical "zones of border integration" (Linares, 2019 about the Andean Community). The gravitational model used by economists permits to discern varying intensity of border effects (Raffestin, 1974) with regard to specific indicators.

Shall one need to add a third virtual dimension to the "line" and the "plane" in the above-sketched layout, the creative modality would consist in envisaging the border's influence in different spheres of life as separate layers (Fig. 1a). A precursor idea transpires in Carl Schmitt's placing of the boundary at the foundation of "the orders and orientations of human social life" (Schmitt, 2006, p. 42). The picturesque construct of superimposed social spaces was taken up by Lefebvre (1974, p. 86) in the figure of mille-feuille pastry. The body of research conceptualising the complexity of borders through layers offered a distinct model (e.g. Giaoutzi et al., 1993; Schack, 1999; Anderson, 2001; Zimmerbauer, 2011), discussed the composition of the ensuing "thick border" (Haselsberger, 2014) and the power of single dimension components (Janparvar et al., 2021). However, superposition of boundaries and the measure of integration of the "border stack" vary depending on particular real-life cases. The extension of layers may differ, and consequently "the border crosses the layers at different points" (Schack, 1999, p. 5). Some authors (Herzog, 1990, p. 135; Schack, 1999, p. 4) underscored the importance of social formations in border areas as objects of analysis, for they are seen to result from and develop under the influence of the overlapping of networks from all the layers involved. It is worth noting not only that layers are thought of in a systemic key as interconnected, but, with respect to the effects of border and bordering, also that at different layers the pressure of specific exogenous and endogenous (from the territorial point of view) factors is not the same (Fig. 1b).
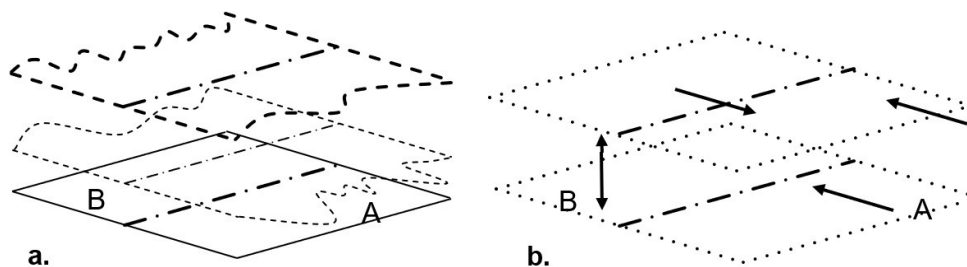

Figure 1. a. Combined border scheme; b. Forces influencing border areas

There is, importantly, a range of "integration-neutral" concepts resulting from a problem-oriented outlook on border area exploration. For instance, the pulsing machinery of "borderscape" (Perera, 2007) as the prime tool is more suitable for the study of geographically broad and unstable, rather than distinctly localised, phenomena. Less innovative frameworks reflect transitory dynamics and mutual influence in

the context of multi-layer division: such are "trans-boundary regions" (Newman, 2003), "border regions <…> where nation-state oriented subsystems of society are overlapping the state border and at the same time are related to (and produce) spatial patterns" (Schack, 1999, p. 5) or "transborder regions" (Volynchuk & Korotich, 2013). Moreover, the latter imply a topology of their own to be investigated, i.e., "core, periphery, communication network, belt of transboundarism and a contact zone" (Volynchuk & Korotich, 2013, p. 73). Not unimportantly, Parkin (2013, p. 47) found the glue for regions in the pragmatic action and discursive signification reproduction, whereas Konrad and Nicol (2008) proposed a border dynamics theory comprising a cycle of five stages (namely, identities, cross-border culture, governmental policies, markets, cross-border political clout) that was extended by Chavez (2012) with three more elements (cross-border political elite, media and communication exchanges, flows of people). While escaping the (often undesired) connotation of purposeful delineation and formal fixity of a "region", the notion of "cross-border area" helps to introduce into the analysis "a geographical system governed by political rules and divided by two or more man-made boundaries" (Guo, 2015, p. 38). Therein, "[t]he elements of each sub-area <...> are correlated with each other in sequence" (Guo, 2015, p. 38), so that, due to a comprehensive interconnectedness resounding the "spaces of dependence" (Cox, 1998), "all adjacent areas are geographically interdependent" (Guo, 2015, p. 38).

Defining the transboundary

Upon the above summarised theoretical grounding, one may lay out the composite concept of the transboundary area. First, the conventional linear "boundary" denoting a physical limit, unsurprisingly, is seen as a crucial element of the ideation, due to the ontological role it has in the definition of the systemic rules. On each side adjacent to this axis mundi, there extends such an area of the state concerned that has characteristics setting it apart from the areas lying further, closer to the territory core, but at the same time, connecting it, in one way or another, to the area across the border. Most characteristics in question are spatially manifest. Second, the prefix "trans-" is deemed well-suited, because it renders the idea of processes that can run in both directions and create a special "zone of tension". It can be argued that borders as systemic limits "are neither inside nor outside the system" (Wullweber, 2015, p. 81), which, in the continual perspective, then brings about certain exceptional space and thus helps to accommodate liminality in the semantic spectrum of the transboundary. Third, it is expected that any concrete area to which the notion is applied may have its own particular "bordering script" (Van Houtum, 2005, p. 676) conditioning its development dynamics. Every day across the world concomitant processes lead to the strengthening of the divisive function of some borders and to the loosening of regimes at other ones. Depending on the factors at play, for some actors boundary becomes vital as the line of control, others value borderlands for exchange and cooperation opportunities. So, any specific transboundary complex configuration is contingent mainly on the multilayered (and probably fragmented) regulatory space it came to be shaped in; but what is essential is that a single problem domain for the whole area still can be observed.

As a tool, the concept of the transboundary is helpful in bypassing certain contradictions and limitations, in particular: a) it serves as a homogenizing framework for spatial analysis without threatening the borderline's discursive firmness by functional unit plotting; moreover, it does not necessary correlate with any formal nor quasi regionalisation; b) it does not require all elements to be highly interconnected across the border and hence is compatible with the approach of relatively isolated layers; c) consequently, it does not steer applied research towards the cooperation bias which can be observed in studies focused, for practical reasons, on possibilities for enfranchising the contact function of borders and cross-border collaboration as a panacea (see Koff, 2013); d) it does not limit the analysis to the impact of the linear border as such nor to the factors on one side of it, but allows for incorporating

the influences of various origin (including the spatially "dispersed" institute of border) that converged to be "read in space" for a specific area; e) it permits to integrate in one picture the legal and the anthropological dimensions of border phenomena; f) it presents also the potential for setting a comparative (cross-case) frame of reference. The designation chosen for the notion implies it may be used in kinds of boundary investigation, other than in the contexts of political geographic partition.

The shaping and maintenance modality of a space segment that can be understood as a transboundary area fits with the processual concept of bordering. Firstly, there is a set of circumstances that are common for most contemporary border areas. Space production there is conditioned by the placement of boundaries which can either discourage or stimulate spatial interaction (Rietveld, 2012). Or, to quote Megoran (2012, p. 465), there are "the spaces of division and interchange created or influenced <…> by the presence of an international boundary". Furthermore, there is often a noticeable imbalance between the neighbouring sides (Sparke, 2002; Newman, 2006). A wide variety of actors from multiple spheres of activity find themselves in intertwined relationships at borders, which necessitates a spatial relation architecture model beyond the simplistic (Lefebvre, 1974, p. 34). Inside the state, there is an ambiguous perspective on border areas. On the one hand, they are seen as peripheral to the center of political power (though Schack, 1999 warned the readers against generalising), which results in the "state retreat" syndrome and low attention to the respective region's development. In addition, centrifugal processes may push all sorts of marginal phenomena (e.g. crime, deviant elements) as far away as possible, to the very borderline. And thus, on the other hand, due to internal and external threats, areas close to borders are conceived of primarily in terms of security (e.g. Peshkov, 2011; Fabian, 2013), their strategic and industrial importance being comparable to the value of a "politically central location" (Hartshorne, 1933, p. 213). To complete the picture, at the halt of national jurisdictions, these are international regimes that govern transversal processes.

Secondly, there is a mechanism underlying the process of work on a border, in the constructionist sense. It traditionally consists in a purposeful reinforcement of the division (e.g. through demarcation), consequent local adaptations (e.g. discursive, infrastructural) to the new status as well as the coming into action of a co-constitutional force. A border regime "as a materially produced form" (Shields, 1991, p. 7) is aimed at organizing flows along and across a border, including the occurrences of cross-border planning and programme implementation. Its other facet is discursive practices scaffolding the margins of states and serving to affirm the linear, clear-cut border in the symbolic and institutional dimensions. (Differing perceptions of a border can lead to maladaptations and contestant transgressions: e.g. Miles (2005) looked at a curious example of cross-border commuters that would consider the divide impermanent.) Then, regular "linking" movement across the border plays a two-fold role. It maintains a contact zone and a certain degree of interdependence between the divided sides. And, importantly, it is in that way also a reflection of the phatic function of transborder exchanges, as, unlike a border, a transboundary area is created continuously on the ground, rather than declaratively. But the movement "ensures continuity and some degree of cohesion" (Lefebvre, 1974, p. 33) for the dividing apparatus too. A broader range of customs and arrangements around the border belongs at the intersection of matter and discourse. For instance, while Megoran (2012, p. 465) specified that "institutional paraphernalia and practices <…> order space by creating difference", Swyngedouw (2004, p. 33), in a possibilist vein, underscored the significance of affordances and rituals in spatialisation contexts. Hence, looking for affordances and their structures is a good theory framework device for exploring transboundary areas.

Thirdly, one cannot disregard the temporal component of the process perpetuation. Beside the fact that a border is capable of causing socio-spatial change, the effects of bordering do not wear off easily and materialise themselves in morphologically distinct spaces. Restricted circulation of people and goods,

radio jamming, and dense fences are some of the conventions that can evolve into inequalities in the physical space. To site examples from studies, these are areas of lacking cooperation vehicles such as public awareness or infrastructure (Pîrvu, 2014) and difficulties in adapting to new geopolitical conditions (Matthiesen & Bürkner, 2001). If a border becomes less rigid, even disappears, border atavisms and discourse remnants nevertheless persist for a shorter or longer while. (For the canonical example of road network disjunctions in the unified Poland see Rey, 1991.) The question of time for a specific border and the zone around it still offers room for debate (Martinez, 1994; Baud & van Schendel, 1997; Anderson, 2001; Green, 2009; Ratti & Schuler, 2013). To grasp the phenomenon, one should look at the longevity of the outcomes of territory- and place-production projects: their infrastructural footprint along with the co-constitutive social spatialisation (Shields, 1991) and spatial socialisation (Paasi, 1998) developments. The latter keeps up a rolling lifecycle of a sea of social representations that impose inertia on social change. According to an examplification by Appadurai (1996, p. 184), places-made may provide a context for the production of local subjects that, in their turn, contribute to the context creation. In transboundary areas, therefore, one has to deal with vernacular perceptions, latent animosity, or symbolic intertwining. The problem can be approached from a stricter sociological viewpoint of (the presence or absence of) bridging and bonding capital (Putnam, 2000) and relational capital (Donati, 2011). Moreover, the relational aspect can be seen as one of the ontological cornerstones of the transboundary. The factors and measure of complexity associated with the formation of transboundary areas thus would significantly differ depending on the degree of cross-border interaction (Martinez, 1994, p. 6), begetting a range from a conflict case to "a lively hub" (the Austrian-German border in Haselsberger, 2014).

Transboundary problem

Noteworthy is the "negative" model of transboundary areas production. Where does the wide-spread habit of picturing the border area as a zone "of danger requiring special ritual maintenance" (Appadurai, 1996, p. 179), or, more practically, a spot of peaking crime rates, take root? Probably, in the image of messiness accompanying the things disposed of as "not belonging here" ("dirt as matter out of place" in Douglas, 1966, p. 36). In the linear border vision, states are allowed to whip up within their precinct "homogeneous contiguous spaces of nationness" (Appadurai, 1996, p. 189) which are conceived to differ from the adjacent entities. Therefore, the "sense of sharp dislocation and separation" (Newman, 2006, p. 148) is cultivated intensively around the border, so as not to allow for "ambiguous continuity" (Lefebvre, 1974, p. 87) fraught with spatial tissue re-bordering claims.

At the same time, with a separation in place, "the other side becomes invisible and unknown" (Newman, 2003, p. 20). What is beyond the conventional oecumene is also beyond the state's responsibility; and all what is made alien within the territory has to be marginalised – driven to the rim or straight over it. (This illustrates the primordiality of the idea of possession in the raison d'être of borders.) That can happen to waste, a polluting manufacture, or undesirable subjects. The approach can be shared on both sides of the border, inducing convergent or colliding movements of the rejected. An aggravation can result from some conditions that commonly overlay each other at the "backyards" of states: i.e., extreme natural setting (e.g., mountains, thick forest, deserted landscape), depopulation, marginalised population groups, lacking social capital, ethnic or religious feud, hostility toward the neighbouring state, complex bureaucracy and restrictions, lower coverage by transport systems etc.

The problem of transboundary area is generated by such ubiquitous set of rules which inevitably fosters "myopic" spatial arrangements, eventual antagonisms, and peculiar border arbitrages due to the

"juxtaposition of two or more systems of rules" (O'Dowd, 2001, p. 73). Part of the logic behind that circumstance stems from the "territorial trap" (Agnew, 2015) mind-frame, "containerised" spatial perceptions, and "the ideology of rigid national sovereignty" (Martinez, 1994, p. 3). There is, consequently, no prerequisite for a negative bias toward the neighbour. The mechanisms at work are the same that permit to identify transboundary areas: material infrastructure, programmatic discourse, societal reinforcement. Moreover, permeability of the border is the main determinant of the shape the crises of public authority take. Low permeability means a situation where the threshold status of the border is especially pronounced: convergent movements solidify the divide through the limitation "from two sides, the interior and the exterior" (Walther, 2014, p. 8), core-orientation, mythologisation of the border as well as conflict mongering. The maximum rigor of the state confine collides with the "monde à l'envers" (Bourdieu, 1980) of the borderland: what then extends across the line of separation is an area of shared condition. Illustrative are cases of governmental neglect and structural violence in border regions (Jusionyte, 2015) or internal instability producing transborder spaces of high political tension (Linares, 2019).

Conversely, a homogeneous space can testify of a highly permeable boundary. In such cases, the very border zone is often considered to lie almost "across the fence", to be "no-man's land", or to serve a perfect wasteland for defense purposes. A single zone grows marginal for the cores on the both sides of the border, while no "good fences" are provided for to create a "manageable situation" (Newman, 2006, p. 150). Examples of such inverted "tragedy of the commons" in dire borderlands milieux are many: from Anglo-Scottish border reivers and zones of contamination with unexploded ordnances and chemical weapons (Havlick, 2018) to spaces of illegal trafficking (Walther, 2014) and drug economies in the shared Amazon (Heredia Escobar et al., 2022). According to Leibenath (2008, p. 1) cross-border processes are always about gaps. This figure of speech is definitely applicable to flows that contribute to problems of the transboundary: e.g., criminals capitalise on the existence of borders where legislation is not harmonised and enforcement is less effective, particularly vulnerable being regions with lengthy exposed borders, a high volume of border crossings, weak central state control mechanisms or a persisting conflict (Shelley 2006).

Discussion: analytical applicability to environmental governance

It is hereby suggested that the transboundary is more than a single space of which a border is not only an absorbed, but also a formative element. It is taken as a spatial level of operation, a medium, and, most importantly, a tool for analysis. Furthermore, the concept of the transboundary can be convenient for investigating challenges in areas close to state borders, in the pursuit of what is merely "[t]he proper study of an international boundary <...>, primarily concerned with the associations <…> of different parts of the border area with each of the bordering states" (Hartshorne, 1933, p. 199).

Not so long ago, Ulrich Beck (2007, p. 10) noted that "[g]lobalisation is supposed to lead to a diminishing significance for boundaries, <…> but in spite of this, borders remain highly relevant and contested". We could yet put in question the use of the adversative conjunction in the remark: the situation described is devoid of contradiction. Under the pressure of globalisation borders have become places of increased friction and consequently have acquired a higher profile. Borders often run along important natural objects (Bespamiatnykh, 2012), ascribe parts of what is thought of as a single ecosystem to different polities, but are not apt to impede the spread of ecological catastrophes. Hence, borders can be thought of as constituent parts of environmental problem and policy complexes. To cite an example, in the Lower Mekong Basin water pollution was found to be the most serious in transnational border areas, supporting the view that the level of water pollution and distance to the border are negatively related (Guo, 2015, p. 36). At the same time, against the backdrop of both positive and negative phenomena's transborder spillover, the presently dominant environmentalist paradigm unyieldingly contributes to contesting and discursively undermining political administrative borders, while promoting shared responsibility and international governance. These developments can be listed among "the many ways in which liminal conditions have come to shape the contemporary" (Horvath et al., 2015, p. 8). Gradually, stemming from environmental research, particular space conceptualisation in terms of biogeographical areas has penetrated policy programming and management.

Governance can be understood "as a system of control, management or government of human activities" (Warner & Marsden, 2016, p. 3), characterized by a diversity of actors and the blurring of "boundaries between the public and private sectors, and the national and international levels" (Jordan et al., 2003, p. 8). While some underline the political and invasive nature of the common aims behind "the continuous political process of setting explicit goals for society and intervening into it in order to achieve these goals" (Jachtenfuchs & Kohler-Koch, 2003, p. 4), others note that such activities are justified with reference to the common good (e.g., security, environment protection, economic growth), yet, the outcome is not always unambiguous. To explore the micro- and meso-levels of environmental governance is to look at objects and instruments, stakeholders and actors, regulatory landscape, organizational ties, processes of goal setting and decision making regarding "the transboundary impacts of particular human activities on the natural environment" (Warner & Marsden, 2016, p. 3). Although international governance does not have to be necessarily concerned with transborder matters, governance covering a transboundary area is by definition trans- or international.

Both governance and the transboundary are kinds of virtual system conceptualisation (Tab. 1), epistemological tools, related through such categories as thematic layer and domain; and both denote relatively stable entities that can evolve over time. Applying the optics of the transboundary to a concrete case means studying the spatio-geographic dimension of international cooperation with a "goal-neutral" tool that adds anchor points connecting governance with a problem (or another phenomenon) on the ground. This also leads to identifying the key layer (e.g., environmental) and layers of secondary importance, all systemically interrelated. And then the mapping of main factors and actors concerned with the problem provides an insight into the interplay of levels and adequacy of governance choices.

The formation of a transboundary area itself reflects situations when local and international factors collide and rules are in conflict with complex reality, yielding a case for governance. In that context, the latter becomes a process of establishing a single understanding of the space at the border (and a shaping factor for the transboundary).

Table 1. Conceptual comparison of governance and the transboundary

Characteristics	Transboundary area	Governance
Ontological basis	conventional	conventional
Teleologic load	neutral	goals, influence vehicles
Spatial configuration and anchors	distinct area; feature salience points	approximate coverage or network; centers, problem locations
Cooperation centricity	absent	in focus
Thematic category	layer	domain
Process logic frame	transboundary complex evolution	one or a combination of governance modes
Vision of rules	collision of rule sets	aligning of rules
Actor classification basis	inclusion, proximity	involvement, level
Commonality represented	condition	concerns, plans

A transboundary framework, first of all, can be used for representing on a map a specific transnational phenomenon that is the object of governance. This includes boundary tracing for spatially amorphous governance and territorial pivoting of the phenomenon (rather than having loose spatial association with single governance organisations, stakeholders etc.). The two modalities of this correspond to the respective geographical partitioning principles, zoning and outlining:

I. Formal regionalisation offers a straightforward opportunity to analyse units, such as ecological regions shared by two or more countries, as transboundary areas in order to interpret the processes on the ground. (The transboundary here is instrumental for governance.) One then can adopt a two-fold frontier perspective. On the one hand, ecoregion, being a new frontier zone for exploration, taming, and transformation, can be a key to unlocking contemporary governance discourses; on the other hand, there is an ongoing eco-frontier deployment taking source in environmental policies and non-governmental organizations' activities.

II. Circumscribing specific problems across borders is the other approach. It is suitable not only for the mapping of natural reserves or conflicts over cross-polity resources, but also for investigating the measure in which the much criticized artificial character of borders actually hinders targeted ecological cooperation. (As far as territorial thinking is still used for organizational purposes (Agnew, 2015), the

state-centric perspective to a large extent conditions processes within a borderland.) Besides, officially delineated ecosystem regions can also be easily compared with the spatial configuration of specific environmental problems (and governance structures around them), if such can be articulated in terms of distinct transboundary areas.

Second, the instrument allows for tracing connections and networks of governance around a specific spatially compact matter. Delineating governance architecture includes reviewing: stakeholders (e.g. local inhabitants, government, business entities), actors (e.g. individuals, non-governmental organizations, authorities), their relations, resources, and instrument projections, characteristics of the border(s) concerned (e.g. open or closed, transforming or stable), other influences (e.g. institutional, administrative, economic, level of expertise, cultural, degree of propensity to cooperate), endogenous and exogenous to the transboundary complex under examination. This hence permits to integrate impactful factors projected from each side of the border, both within the area under examination and external to it (border region specifics, national ecological policies etc.), so as to look into distinctive governance pattern formation. The whole mechanism in place can be viewed as only one of the so-called international arenas of governance interlocked with other such thematic arenas. It is important to take into consideration that border work is undertaken not only by states (Rumford, 2006) and occurs beyond border areas as well. The transboundary tool moves the focus of attention to the constructed condition of cross-border spaces and to processes of marginalisation and convergent development across the border. Therein the matters of place-making and identity, in particular, are all but unimportant (an emphasis on environmentalism in identity creation is often subordinated to practical tasks (cf. Fabian, 2013)). The classifications of agents and factors as remote or included in the transboundary area is key for defining the combination of levels of governance involved and hence for making judgment on the fitness of the mechanism at work.

Third, when the interaction of environmental governance and borders brings about localizable effects and geographical patterns of change in physical space, the transboundary framework allows for capturing and contextualising such repercussions. At the same time, environmental change being among forces working toward distinguishing an area from the adjacent space, the role of the border in the transformation of landscapes is significant also from the ecological point of view (e.g., border wall impact in Cohn, 2007). Moreover, the effects concentrate in specific zones: as noted by Rumley and Minghi (2015, p. 4), "it would be a mistake to necessarily assume an unchanging effect along the full length of a political boundary". One is then inclined to look for the critical points of tying between the sides of the border, the nodal locations of cooperation activities or problem maturation. The type of the changes is inextricable from specific local factors and the action dimension of the parties involved (e.g., legal, infrastructural), enacting layers of the transboundary model.

Table 2. Environmental governance through the prism of the transboundary area

Governance Aspect	Transboundary Interpretation	Examples
Thematic focus	physical area shape, vertical combination of layers, transboundary problems	zoning of cooperation in the Alps by NUTS 2 (Fourny, 2014); outlinable border wall impact area (Cohn, 2007)
Norms and rules	side similarities, asymmetries	U.S.-Canada differences in environmental policies (Konrad & Nicol, 2008); spatial effects of a joint approach deployment (Gratton & Levine, 2019)
Actors and organisations	endogenous and exogenous forces	European and global organizations influencing the Mozambique-Tanzania border (Noe, 2010); local illegal groups (Heredia Escobar et al., 2022)
Scale and level	extent; complex composition	systemic interrelation of the Mekong management stakeholders (Guo, 2015); trans-local activity fostering (Gratton & Levine, 2019)
Goals	spatial pivots and change	fighting transboundary pollution included locating risk-bearing facilities (Warner & Marsden, 2016)
Management instruments	spatial frames	the Northern Appalachian-Acadian ecoregion as the cooperation ubication (Gratton & Levine, 2019)
Infrastructure	affordances, pivot points	the Selous-Niassa widlife corridor (Noe, 2010); surveillance technology (Heredia Escobar et al., 2022)
Activities and outcomes	spatial transformation	militarised borderlands reforged into the Green Belt of Europe (Havlick, 2018)
Gaps and limitations	higher complexity, internal and inter- layer	"fissures": transborder lifeworld vs. international regime (Noe, 2010); rules vs. capabilities (Warner & Marsden, 2016); national needs vs. on-the-ground cooperation reach (Heredia Escobar et al., 2022)

The blow that has been dealt to "[t]he terms and conditions of spatial ordering" (Amilhat-Szary & Giraut, 2015, p. 5) is interconnected with the transformation and intricacy of formats of governance which in the environmental domain relies on problem-centered or biogeographical functional regionalisation. The new patterns of boundaries and functioning of state borders have altered spatialisation premises underlying systems of societal practice (Shields, 1991, p. 46), thus adding complexity for practitioners and investigators of ecological cooperation. Therefore, in producing an overview of an instance of environmental governance it is possible to use the concept of the transboundary (Tab. 2): 1) to engage with formal regions or define problem areas; 2) to outline characteristics of the border (condition) in question; 3) to identify dimensions of bordering involved; 4) to set a focus on cooperative ties, or absence thereof, to map respective "spatialities of power" (Agnew 1994); 5) to connect changes in the spatial patterns of borderland ecosystems with the effects of bordering; 6) to grasp the overall role of the border in shaping the governance system. The transboundary area perspective offers a way of reflecting over the situations when the spatial characteristics of borders and their functions no longer coincide (Amilhat-Szary & Giraut, 2015, p. 8).

Concluding remarks

Due to the transnational dynamics of the last years the very institute of state border has come under new shocks, and respective adaptations can be seen in border areas across the world. Simultaneously, for many observers today, borders present alternative foci of socio-economic life as well as mind-frames for everyday reasoning, rather than plainly peripheral objects. Transboundary areas between neighbouring states are, in essence, a by-product of territory formation and often concentrate in themselves the impacts of specific factors.

The of concept of the transboundary can be used as an instrument to delineate, visualize, and analyse a problem with reference to such sets of factors. It is also helpful in following the construction and linking of boundaries in different spheres of life, their merging or yoking into one of the spatialities of power in non-core areas. The methodological value of the transboundary includes the possibility of applying it as an explanatory or inductive research framework for matters across wider regions, that is, to cases highlighting the pitfalls of peripherality, liminality, governability, and transition. Thus, the concept offers another gateway to exploring governance with regard to marginalised settings. In particular, it can be operationalised as an analytical category for environmental problems and ecosystemic regions. This allows one to move beyond argument compartmentalization and to consider the interrelation of the environmental and political in the creation of regulatory spaces for eco-frontiers as well as the implications for real-life borders that such innovation entails.

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