The impact of regional designing: New perspectives for the Maastricht/Heerlen, Hasselt/Genk, Aachen and Liège (MHAL) Region

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Abstract
Regional designing is employed to envision regional futures that aim to guide decisions on the environment in the region over a longer period of time. However, longitudinal studies on the long-term use and effect of regional designing are lacking. This paper investigates the impacts of regional designing in the complex and fragmented setting of a cross-border region. Since the late 1980s, the region was subject to four regional design episodes that each had different impacts: from a new perception of the region to initiating regional collaboration and effects on the Dutch professional debate. The study showed that regional designing is a powerful means to overcome difficulties that arise from the fragmented setting of a cross-border region. Moreover, it revealed that the context in which regional designing is embedded determines in what areas regional designing will have its impact. Both plans and people are important in the transference of regional design outcomes to other planning arenas and conditions, such as status and available funding, improve the chances of transference.

Keywords
Regional design, cross-border planning, impact analysis, plan evaluation

Introduction
Regional designing is a means to develop regional visions and spatial strategies. Such visions and strategies advise stakeholders in what to aim for in the development of their region, in the light of an uncertain future; they are a prelude for action (Hoch, 2016). Visions are drawn up in a collaborative visioning process with stakeholders (e.g. Helling, 1998; Nam, 2013), which is a process of persuasion and seduction that has a lot in common with planning as persuasive storytelling (Throgmorton, 2003; Van der Stoep, 2014).

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In this process, the world is reimagined with the aim of developing common ground for collective action (Rauws and Van Dijk, 2013), which can be useful in regions where an overarching regional authority is weak or lacking, such as a cross-border region. Regional designing is a particular approach to visioning that uses the sense-making, synthesising, visualising and creative capacities of designing to develop visions for a region (De Jonge, 2009; Rauws and Van Dijk, 2013).

Regional designing induces various effects in a regional context. It develops alternative regional conceptions that can lead to a renewed perception of the region (Rauws and Van Dijk, 2013). It can unite different groups of stakeholders (Neuman, 2012; Von Seggern et al., 2008) and foster shared understanding (Van Dijk and Ubels, 2016). These contributions of regional designing are not only of direct use in regional planning processes (Kempenaar et al., 2016), but they can also be valuable in the long-term development and transformative processes of regions.

Notwithstanding a growing number of studies on regional designing and design approaches to planning (see, for example De Jonge, 2009; Meijsmans and Beelen, 2010; Von Seggern et al., 2008), and a recent study into the immediate effects of regional designing on stakeholders and stakeholder decision-making in regional planning and development (Kempenaar et al., 2016), little empirical research has been done into the long-term effects of regional designing on regional transformation and development processes. Moreover, knowledge about the manner, in which these (potential) long-term effects of regional designing arise is lacking. The study of long-term effects or impacts – as we call them in this article – and how these impacts arise is a difficult and tricky endeavour as gathered from previous research into the evaluation of plans (e.g. Carmona and Sieh, 2008; Guyadeen and Seasons, 2016; Hopkins, 2012). How, for example, can outcomes been linked to one intervention, when developments take place in a complex web of actions? Moreover, different plans aim to work in different ways (Hopkins, 2001), and this should be taken into account when the outcome or use of plans is studied (Hopkins, 2012; Lyles et al., 2016). The study of the influence of plans and plan-making is considered important as it can inform the understanding of the drivers of success of, in our case, regional designing (Lyles et al., 2016). Moreover, it can provide valuable insights for those involved in regional planning and designing, and it can increase the legitimacy of regional designing.

This paper aims to foster the learning process about regional designing by developing insight into the spectrum of possible impacts of regional designing, and in the factors and conditions that are in play in the realisation of these impacts over time. We explored the impacts of regional designing in the context of a developing cross-border region. Our research questions were: What are the traceable impacts of regional designing for this cross-border region, and what enabled the realisation of these effects?

In the next section we elaborate on our notion of regional designing for a cross-border region. This is followed by a framework for analysing the impacts of regional designing. The ‘Methods’ section elucidates our research approach and how we selected and studied our case. Next, the cross-border region that was subject of our study is introduced, followed by an analysis of traceable regional design impacts and their realisation. The ‘Discussion’ section addresses what we can learn from our research and reflects on the method used. We complete this study with our conclusions.

Cross-border regional designing

Regions are not permanent and everlasting; they perpetually evolve under the influence of many factors (Keating, 1998; Paasi, 2009). ‘Old regions’, such as Tuscany in Italy, or Catalonia in Spain, have grown historically and were gradually established. These ‘old’
regions have significant meaning to their inhabitants and they are culturally embedded. In contrast to ‘old regions’, ‘new regions’ are more recently established regions that have little self-evident raison d’être and are generally lesser known by the general public. They are created to serve a specific purpose and need to be more actively built and constructed (Paasi, 2009). The process of developing a region has different stages, from conception to creation to consolidation (Gaberell and Debarbieux, 2014).

Paasi (1991, 2009) introduced the theory of the institutionalisation of regions to conceptualise the different dimensions of region building. The first dimension concerns the territorial shape of a region, which can be historically rooted or just decided upon. The territorial shape defines the regional boundaries and distinguishes a region from other territories. These boundaries can have critical implications, for example, on the eligibility to apply for certain funding. Second, regions are symbolically shaped. This dimension concerns the creation of regional symbols, such as the name or logo of a region. Symbolic shaping is a contested process, as it brings together cultural, historical and political interests and expresses power relations. The third dimension is the institutional shaping of a region. This dimension is much related to both the territorial and symbolic shaping of a region, since institutions are needed to produce and reproduce these shapes (e.g. Dembski and Salet, 2010). Regional institutions act both inside and outside the region and use tools and products, such as a common agenda or a regional map. The fourth and final dimension concerns the establishment of the region. Established regions have become part of a broader social consciousness and are utilised in discourses and social practices.

Cross-border regions lie in two or more nation states. Although several ‘old’ cross-border regions exist, such as the Basque Country in France and Spain, the majority of cross-border regions – particularly in Europe – are so-called new regions. European cross-border regions have a specific role and position in the process of European integration (Durand, 2014). The European Union (EU) promotes territorial cohesion and has structural funds to support collaboration across and within border regions to balance developments and to overcome national differences. This has led to the foundation of multiple cross-border regions throughout Europe over the last decades (Association of European Border Regions, n.d.) and various initiatives on the coordination and planning of spatial developments in European cross-border regions (Fricke, 2015; Luukkonen and Moilanen, 2012).

Cross-border regions act in the different societal contexts of the involved nation states (Jacobs, 2016). They lack a strong overarching authority and a synchronisation of planning philosophies, systems, tools and methods (Durand, 2014). Planning initiatives, therefore, need to build upon collaboration, soft planning initiatives and looser styles of governance and institutionalisation (Luukkonen and Moilanen, 2012). This cross-border planning situation results in a network of informal (cross-border) and multiple formal (national) planning arenas involved in the planning and coordination of spatial developments in a cross-border region. The coordination of developments in such a fragmented planning landscape depends on the capacity of regional planning ideas, concepts, visions and strategies to transfer to other planning arenas. Moreover, to have effect, these ideas, concepts, visions and strategies need to have persuasive power and hold that power over a considerable period of time (Albrechts et al., 2003; Healey, 2007).

The development of such ideas, concepts, visions and strategies takes place through regional designing. A strong vision – based on a shared perception of the region – can coordinate decisions on spatial developments, despite the fragmented planning landscape in cross-border regions. Moreover, it can direct actions towards a desired regional future. To analyse if regional designing has had such impacts in a ‘new’ cross-border region, we developed a framework that we describe in the next section.
Analysing the impact of regional designing

The interest of our study lies with understanding the spectrum of impacts that regional designing can have, and how these impacts are realised over time. Based on previous studies into regional designing we distinguish four potential areas of its impact. First, regional designing aims to affect decisions concerning the physical environment (De Jonge, 2009; Neuman, 2000), and as a consequence, influences the actual physical developments. Regional designing produces visions, perspectives and strategies, which can be used as navigation devices for regional planning and development in the uncertain and unpredictable future that lays ahead (Langner, 2014).

Second, regional designing can change the perception of a region. Regional designing enables collective conceptualisation and shared envisioning, and builds support for the envisioned ideas (Kempenaar et al., 2016; Van Dijk and Ubels, 2016). This makes regional designing a powerful means to change perceptions (Balz and Zonneveld, 2015).

Third, regional designing builds regional networks and relationships (Hajer et al., 2006; Rauws and Van Dijk, 2013). In regional designing, multiple stakeholders participate in atelier sessions, workshops and charrettes that are organised as part of the regional design process. This can bond people, build community, unite stakeholders and create situations for collaboration in which rivalries can be disregarded (Meijmsans and Beelen, 2010; Von Seggern et al., 2008).

Fourth and finally, as planning and design are evolving and developing disciplines, an innovative regional design endeavour can also impact the planning and design professions and the way that plans are made (Millard-Ball, 2013; Salewski and Paine, 2012). Therefore, ways of plan-making is a fourth area of impact that we distinguished.

These capacities of regional designing are valuable for the planning and development of regions, particularly in fragmented cross-border regions. We used the four potential areas of impact to study actual impacts of regional designing in our case region. Certain potential regional design impacts, as described above, emerge during the design process. We, therefore, considered both the design products, as well as the design process, in our analysis.

To diagnose an impact we looked for a (reported) effect of regional designing on a different planning arena than its origin, in combination with a traceable pathway of transference that links the outcome of the regional design process to the affected arena. We considered the combined study of effects and traceable pathways of transference important, since effects can be in line with a plan without a link to the plan. In addition to the effects and pathways of transference, we analysed – for as far as we were able to reconstruct pathways of transference – which elements, mechanisms and conditions attributed to the transference of the regional design outcomes to other planning arenas.

To determine the effects of regional designing, we combined a plan conformance and a plan performance perspective (see, for example Guyadeen and Seasons, 2016; Hopkins, 2012; Laurian et al., 2010; Lyles et al., 2016). Plan conformance is generally used in plan evaluation research to indicate when policies and actions proposed in a plan are carried out in conformance with the plan. Plan performance is used in two ways. One line of research uses performance to indicate if a plan affected actual changes in the environment (e.g. Berke et al., 2006) and another line uses performance to indicate if a plan is used in decision-making processes (e.g. Berke et al., 2006; Faludi, 2000; Mastop and Faludi, 1997). We follow Lyles et al. (2016), who use plan performance to indicate if a plan affected actual changes in the environment and use plan influence to indicate the influence of a plan on decision-making processes.

Considering the strategic nature of regional designing (De Jonge, 2009; Neuman, 2000), Faludi (2000) and Mastop and Faludi (1997) would argue that a plan influence perspective (although they would call it a performance perspective) would be the appropriate perspective.
for evaluation. We argue that strategic plans or design can have effects in line with all three perspectives. For example, when a perception of the region in a subregional planning arena aligns with the perception that is envisioned in the regional design, is this in line with a plan conformance perspective. The use of the regional design in making decisions on the physical environment complies with a plan influence perspective. And finally, an actual physical alteration in line with the regional design ideas coincides with a plan performance perspective. Furthermore, the complementary use of plan conformance, plan performance and plan influence holds the promise of ‘deepening our understanding of how and why plans and planning succeed or fail’ (Lyles et al., 2016: 384). Therefore, we take all three perspectives into account in our study.

Pathways of transference can be more troublesome to determine, since the outcome of planning and design processes are generally very well noted, whilst the process that led to these outcomes is often less documented and difficult to reconstruct in retrospect. Moreover, multiple factors determine what actually happens, and decisions are often built upon multiple sources, making it hard to determine to what extent a plan or design has contributed to a decision (Carmona and Sieh, 2008; Guyadeen and Seasons, 2016). However, plans and designs always have a logic or assumption on how they should or could work, when they are made (Hopkins, 2001) and are reported to have had influence and effect (e.g. Hajer et al., 2006; Neuman, 2012). This strengthened our ambition to trace pathways that indicate how effects of regional designing came about in our case region.

We considered a pathway as a reported connection between the regional design and its effect in another (subregional) planning arena, including the elements, mechanisms and conditions that enabled transference to the other arena. For example, when a regional design is used by stakeholders to develop local plans, it has transferred from the regional design arena to local arenas. The presentation and the handing over of the regional design to local authorities can then be identified as a mechanism that enabled transference. Stakeholders, the presentation and the document are all identifiable elements. Certain conditions, such as the availability of funding or a formal status of regional design outcomes, can increase the chances of transference.

**Methods**

A basic assumption in our research is that plans and plan-making processes, in our case regional designs and regional designing, have an influence on the decisions and developments that unfold in planning processes. To demonstrate such influence, a longitudinal study on the impact of regional designing would preferably be done by comparing two situations, one with regional designing, and one without. However, no two situations are alike, making such a comparison study impossible. To study the long-term effects of regional designing, we chose a case study approach (Yin, 2009), which enables the study of a phenomenon in its context. We studied the effects that are attributed to the plan or plan-making process, and explored what is considered the impact of regional designing by those involved in spatial planning processes. Our research is built on what is documented on the influence and impact of regional designing in reports, and on the experience and recollection of those involved in regional planning.

The selected case for our research concerned a cross-border region located in the Netherlands, Belgium and Germany that includes the cities of Maastricht/Heerlen, Hasselt/Genk, Aachen and Liège, hence the MHAL abbreviation for the region (see Figure 1). This region is a so-called new region, initiated in the 1980s, for which multiple
regional designs were made over the last 30 years. This enabled us to study the transference of regional design outcomes over a longer period of time. The case region and the regional designs are introduced in the next section of this paper.

We studied impacts of regional designing and their pathways of transference, by means of a document review, in-depth interviews and participant observation of the last regional design episode. To establish an impact or pathway of transference, it had to build on at least two different sources, or be complemented with another reliable source. Therefore, we carried out additional desk research, using internet websites of governmental organisations, regional policy documents and literature, to substantiate the effects and pathways that were found in just one interview or project document.

For each episode of regional designing we reviewed the final report, all available intermediate reports and evaluation reports (see online Appendix 1 for an overview of these documents). All documents were summarised and analysed using our analytical framework. The intermediate, draft and final reports turned out to be valuable sources for reconstruction of each design episode, whilst the evaluation reports were an important source for identifying effects, transference of effects, mechanisms and conditions.

The semi-structured interviews were held in July 2013 and August 2013 with German, Belgian and Dutch stakeholders who were involved in two or more regional design episodes (see online Appendix 2 for an overview). This limited our potential interviewees, but ensured that the interviewees were able to share observed effects and transference pathways of different regional design endeavours. Each interview lasted between one and two and a half hours, was transcribed and then the content analysed.
through a protocol of coding (Miles et al., 2014), starting with a code list based upon our conceptual framework. The interviews turned out to be a valuable source for identifying effects, transference of effects and the elements, mechanisms and conditions that enabled transference. Moreover, the interviews were valuable in gaining a deeper understanding of the design episodes.

The participant observation took place between February 2012 and May 2014. During this period, the first and second authors of this paper participated in the design workshops and other project meetings held as part of the regional design process for the design of a landscape perspective for the region. This participant observation enabled a good understanding of the latest episode of regional designing and current cross-border regional collaboration.

The MHAL Region

The MHAL Region is the urban core of the Euregion Meuse-Rhine, which was established in 1976 as one of the first European cross-border regions. Three languages are spoken within the region (French, German and Dutch), and it includes four different planning cultures: those of Germany, the Netherlands, Flanders and Wallonia. In the late 1980s, the MHAL Region was designated for ‘further elaboration’ in national spatial policy in the Netherlands (Ministerie van VROM, 1988). The Schengen-Treaty was to come into force from 1993 onwards, meaning free traffic of people and goods within the EU. This was expected to open up regional opportunities and lead to new spatial developments in this cross-border region, hence the attention in Dutch national spatial policy. The Dutch focus coincided with the regional aim to intensify the cross-border collaboration in the Euregion Meuse-Rhine and instigated a more intense phase of regional collaboration (Varró, 2014).

Since the late 1980s, the MHAL Region has been subject to multiple regional design efforts, which can be divided into four episodes of regional designing, separated from each other by periods without regional design efforts. This is visualised in Figure 2. Below we describe each design episode, the main characteristics of the design process, and the final designs and outcomes.

A design competition on a regional scale 1988–1989

In 1988/1989 a regional design competition was held for the MHAL Region. This competition was organised by a Dutch professional organisation that had the ambition to re-establish attention to form and design in spatial planning. The MHAL Region encompassed themes that were topical in spatial planning at that time: collaboration and coordination between cities in an urban region, disappearing borders in Europe, and form and function of urban/rural complexes. The winners of the competition envisioned a complementary polycentric regional urban structure, an ongoing ecological structure, one regional airport near Liege and new attractive living environments in the rural landscapes of the Region (EoWijers-stichting, 1989).

The MHAL Spatial Development Perspective 1990–1993

Between 1990 and 1993, regional designing was employed as part of a cross-border planning initiative that developed the MHAL Spatial Development Perspective (Internationale Coordinatiecommissie, 1993). In the early stages, the design activities mainly consisted of mapping and exploring the spatial structures and developments in the cross-border region and its position in north-western Europe. Later on, the design activities turned into
developing different models and spatial concepts for the MHAL Region. Out of the developed options, the so-called landscape park model was chosen, upon which the final spatial development perspective was based. This spatial development perspective (Figure 3) consists of a polycentric urban structure with a cultural landscape in the middle – a Three Countries Park – surrounded by both nature reserves and agricultural areas. The perspective
was elaborated into an urban, a rural and an infrastructural perspective, each accompanied by a map, a programme and strategic projects.

The Three Countries Park Development Perspective 2001–2003

About one decade later, between 2001 and 2003, a development perspective was drawn up for the Three Countries Park, the heart of the MHAL Region (Projectgroep Drielandenpark, 2003). To develop the perspective, a series of five two-day design workshops were held under the guidance of a regional designer. These workshops provided the information and ideas to draw up the development perspective for the Three Countries Park. The Three Countries Park Development Perspective centred around 26 policy guidelines and two maps, one representing the existing structure of the region and one representing the desired developments (Figure 4). This perspective reproduced the spatial concept of the MHAL Spatial Development Perspective, but added the explicit ambition to restore stream valleys, develop tourist identities and add recreation facilities.

Designing a landscape policy for the Three Countries Park 2012–2014

From 2012 to 2014, once again, around one decade later, a landscape design approach was used to develop a landscape policy for the Three Countries Park (Lohrberg et al., 2014a). The design activities in this episode aimed at developing guidelines that would enable local and regional authorities, as well as other initiators, to safeguard, preserve and enhance the landscape qualities of the Three Countries Park. Throughout the project, five one-day workshops were held with regional stakeholders. In these workshops, the stakeholders brought in their knowledge, and evaluated and discussed the intermediate design results with the project team. The proposed landscape policy for the Three Countries Park consisted of 13 guiding principles that will lead to a landscape framework for the region (Figure 5) and four implementation strategies.
Impacts of the four design episodes for the MHAL Region

The episodes of regional designing for the MHAL Region each had a specific purpose, focus and approach. We found impacts of all design episodes in other arenas, but each in their own way, and not in similar areas of impact. Below, we describe these impacts of the subsequent design episodes on the four areas of impact that we distinguished and their attributed pathways of transference. We start with the perception of the MHAL Region, followed by the networks and relationships in the region, decisions concerning the physical environment and ways of plan-making.

Perception of the MHAL Region

Until the 1980s, there was no MHAL Region. National perspectives framed the respective parts of the region as peripheral, marginalised border areas. The 1988–1989 design competition coincided with the start of thinking about the MHAL Region as one region located in North West Europe. The regional designs of this first episode illustrated that the region could be thought of as a coherent unit with complementary parts. Unfortunately, neither the winning, nor any of the other designs is reported to have had a lasting effect in the Region in the studied documents or in the interviews. The design competition was not regionally embedded or part of an ongoing regional planning process, it was organised for, and by, the Dutch professional planning and design community. Moreover, the winning competition entry caused some controversy. It proposed to merge Maastricht-Aachen airport with the Liège airport to a location near Liège. This suggestion touched a ‘sore spot’: the Dutch province of Limburg wanted to keep the airport on Dutch territory.

Although none of the design ideas seem to have transferred to other planning arenas, the information package made for the regional design competition was reported to have been used in the second episode of regional designing. This package was, at that time, one of the rare documents on the MHAL Region as one region, all other information was fragmented.
Moreover, some of the Dutch professionals who organised the competition also got involved in the creation of the MHAL Spatial Development Perspective and ‘took’ the information package to this arena. As one of the interviewees noted:

*We had made a contour map of the cross-border region for the design competition. That was quite hard, as Dutch contours didn’t match the Belgian ones… So we already had some maps from the competition that we could use for the design of the MHAL Spatial Development Perspective.*

The MHAL Spatial Development Perspective is reported to have had a major effect on the perception of the MHAL Region. It contributed to a switch in perception from multiple, peripheral and marginalised border areas into one coherent, polycentric urbanised region centred around a valuable cultural landscape in the middle. The interviewees described this transition as an emergent process that took place over the course of the project. The new conception was visualised in a simple but strong representation of the conceptual design for the MHAL Region (Figure 3), making one region visible and foreseeable. Moreover, the interviewees connected the change in perception of the region to a change in perspective on the stakeholders from the other sides of the border: they transformed from competitors into potential partners. The interviewees also attributed the coming about of these transformative effects to the carefully organised and sensitively managed cross-border planning process.

The strength and long lasting use of the spatial concept for the MHAL perspective (Figure 3) is illustrated by its reproduction in the Three Countries Park Development Perspective (Figure 4) and the landscape policy for the Three Countries Park (Figure 5). These reproductions are subsequent and more detailed elaborations of the first conceptual design. Moreover, the conceptual design and its later elaborations transferred to national, subregional and local planning arenas, in which they were reproduced and elaborated for parts of the region. The ‘Plan Regional d’Aménagement du Territoire de Wallonie’ in Belgium was amongst the first administrative plans to adopt the MHAL concept (Internationale werkgroep MHAL, 1996).

This use of the MHAL concept lasted for a long time. In 2012 the spatial concept of the MHAL Region – first published in 1993 – was reprinted in the Spatial Structural Plan for the Belgian province of Limburg (Provincie Limburg, 2012), and the MHAL concept resonates through the texts in the Provincial Environmental Plan for the Dutch province of Limburg (Provincie Limburg, 2014). This latter plan included an image of the Three Countries Park and also recites the main ideas of the Three Countries Park Development Perspective.

The stakeholders involved in the creation of the MHAL Spatial Development Perspective, the final document and some of the thematic research documents that preceded the MHAL Spatial Development Perspective were reported multiple times as critical elements in the transference mechanisms. Furthermore, the idea that collaboration across borders throughout the EU is the way forward was a strong condition for the MHAL conceptual design to transfer and affect subregional planning arenas. This also accounts for the availability of EU funds over the years for the development of cross-border regions, such as the MHAL Region.

**Networks and relations in the MHAL Region**

All regional design episodes contributed to the development of cross-border networks and relations. During the first episode of regional design – the design competition – preliminary contacts were made to share the idea of a joint spatial perspective. However, the controversy around the winning entry, which proposed to move Maastricht Aachen Airport to Liège, illustrated that cross-border collaboration needed to be developed carefully with a strong eye
for sensitivities. Leaving out strong controversies, like the airport discussion, was mentioned in the interviews as an important condition during the other design episodes to develop and establish good cross-border collaboration, just like taking sufficient time, the absence of one dominant partner and receptive management of the project.

The project leaders of both the MHAL Spatial Development Perspective and the Three Countries Park Development Perspective were praised in the interviews for their sensitivity and role in establishing and developing cross-border collaboration. Both projects were perceived as ‘unique’ and ‘out of the ordinary’ in the eyes of the interviewees, which created according to them a bonding effect amongst participants. With regard to the MHAL Spatial Development Perspective, the use of design to develop models and spatial concepts as part of an experimental cross-border spatial planning endeavour was mentioned as a unique experience.

In the third episode of regional designing, during the making of the Three Countries Park Development Perspective, stakeholder workshops were organised as an integral part of the design process. During the workshops people met, got to know each other and created relationships, whilst sharing their knowledge and discussing design ideas. This participatory design approach for the Three Countries Park Development Perspective was much appreciated and described as a unique experience by the interviewees. The networks and relationships that were created during the second and third episode of regional designing for the MHAL Region are still operational today: ‘When colleagues of mine want to deal with an issue across the border, they say: Hey, you are from the Three Countries Park, do you know who in Maastricht is responsible for this or that?’. Moreover, the networks and relationships are actively employed to develop projects and apply for funding, as is illustrated by the preliminary stages of the fourth episode of regional designing. The funding application for this project had to be done on such short notice that it could only be realised by using the existing network and good relationships between the nine collaborating partners in the Three Countries Park. The project itself, on a landscape policy for the Three Countries Park, is of such a recent date that it is hard to determine its lasting effect on regional networks and relationships.

**Decisions related to the physical environment**

The impact of the first episode of regional designing – the design competition – on decision or policy-making for the physical environment was regarded non-existent. The next design episode for the MHAL Spatial Development Perspective did contribute to decision-making about the physical environment according to the studied documents and interviews. A review of the strategic projects listed in the MHAL perspective indicates that over half of these projects have been realised or are being realised. The majority of these projects were already active at the time the MHAL Spatial Development Perspective was drawn up, and many factors have influenced the realisation of these projects. Therefore, it is almost impossible to determine to what extent the MHAL perspective has contributed to their realisation. However, the conceptual design for the MHAL Region placed these separate project ideas into an integrated, coordinated and coherent setting. The interviewees indicated that this has empowered several of these projects and that it influenced the programming of national and regional investment budgets. In addition, the MHAL Spatial Development Perspective was incorporated into the Operational Programme Interreg II of the Euregion Meuse-Rhine (Internationale werkgroep MHAL, 1996), and, as such, used in decision-making about the European funding of projects in the region.

The Three Countries Park Development Perspective was also seen to have impacted on decisions about, and the development of the physical environment, although in a more
limited way. The partners involved in the Three Countries Park initiative developed and adopted several implementation projects, which have led to new, adjusted and connected cross-border walking and cycling paths, cross-border water management and art projects that mark historic sites. Being part of an integrated coherent perspective for the Three Countries Park was a critical condition for these projects to get access to EU Interreg funds.

The regional design episodes for the MHAL Region also affected planning policies and shaped decision-making environments. These notions fit with the idea that regional design aims to guide decisions on a smaller scale (Neuman, 2000). In a cross-border setting, this can be a specific aim, as it is easier to align substantive planning ideas, than it is to align different planning systems. In the fourth regional design episode, the challenge was to develop guidelines for landscape development that would fit and could be used in all four planning cultures in the MHAL Region.

Long-term effects and impacts of the landscape policy for the Three Countries Park are still developing and unsure. However, the municipality of Aachen announced during the public presentation of the Landscape Policy for the Three Countries Park in May 2014 that it will use the 13 guiding principles on landscape development for making a new landscape plan – a statutory planning scheme in Germany. Furthermore, the landscape policy is used to develop a green infrastructure programme for the Three Countries Park. Both examples illustrate that ideas from this fourth episode of regional designing transferred to and are used in subregional planning arenas.

Ways of plan-making

The first episode of design, the regional design competition, was reported to have had effect on the way of plan-making, at least in the Dutch professional field of planning and design. At the time of the competition, design had received renewed attention in Dutch national planning as a way to envision and visualise possible and desirable futures (Salewski and Paine, 2012). Several initiatives to explore this potential of designing on a regional scale were started in the late 1980s. The design competition for the MHAL Region was one of these initiatives that influenced the professional debate. As one of the interviewees put it: ‘The true integrating capacity of designing became visible in the competition. So it was a strong confirmation of the added value of designing on a regional scale’. This impact of the design competition on Dutch planning and design practice is explained by the fact that it was well nested in the Dutch professional world. The competition was organised by Dutch planning and design professionals, and the participants were also predominantly Dutch professionals.

Several suggestions were made in the interviews that the next episode, the MHAL Spatial Development Perspective, and its conceptual design, might have had an influence on the spatial planning practice in Flanders. Careers and change of jobs of some of the participants in the making of the MHAL Spatial Development Perspective were the attributed mechanisms to this suggested effect. However, this claim could not be substantiated in this study.

Furthermore, elements of the MHAL Spatial Development Perspective were mentioned as good examples in the Europe 2000+ report (European Commission, 1995) and the project won an honourable mention at the 1994 European Urban and Regional Planning Awards (Internationale werkgroep MHAL, 1996). This suggests some influence on the discussions aligned with the European Spatial Development Perspective, a direct pathway, however, could not be identified in this study. Finally, on the third and fourth episodes of regional designing nothing was reported or suggested regarding impacts on the profession of planning and design.
Discussion

The impacts of regional designing that we found in our study arose in the highly complex context of a cross-border region that must rely on soft planning initiatives in a fragmented planning landscape. These findings improved our understanding of regional design impacts and their realisation. We have seen that regional designing plays a role in developing new conceptions, in altering the perception of stakeholders, and that it builds and reinforces networks and relationships. In addition, it can contribute to the development of the spatial planning and design disciplines. However, we could not establish pathways between regional designing and changes in the physical environment. Changes in the physical environment are subject to multiple influences, of which a regional design effort is just one of many. In fact, all impacts we have found in our study have come about in a complex web of actions, in which multiple sources contribute to actual changes, and in which it is hard to determine causality. Our findings though show that the various episodes of regional designing did influence how spatial planning unfolded in the MHAL Region. They demonstrate that regional designing can be an influential means to employ in processes of spatial change and transformation.

The various impacts of the four design episodes have taught us that an impact is not self-evident. An important factor in the realisation of effects that we found in our study is the context within which regional designing is embedded. The limited impact of the design competition – the first design episode – on the planning and development of the MHAL Region is explained by its lack of embeddedness in this regional context. Instead, it was well embedded in the Dutch professional world of regional planners and designers, in which it had effect. The other design episodes were fully embedded in the cross-border context, their outcomes transferred to and impacted subsequent design episodes, and subregional and local planning arenas. These findings show that regional designing is highly contextual and builds upon ideas and concepts of previous regional design episodes and other regional planning endeavours.

Concepts have a powerful nature, but their performance depends on their content, the ambition and power of their users, and their setting (Hagens, 2010). They can be strong symbolic markers in transformation, but they must be reaffirmed to retain their mobilising capacity (Dembski and Salet, 2010). The spatial concept developed in the second episode of regional designing was reaffirmed in the third and fourth episodes. Moreover, it transferred to subregional planning arenas in all three countries, where it affected decisions and policy documents. The spatial concept for the MHAL Region proofed to be a powerful and influential concept.

However, concepts and ideas continuously compete and grapple with other concepts (Westerink et al., 2013) in the perpetual process of regional becoming. In institutional terms the Euregion Meuse-Rhine – which indicates a slightly larger cross-border area – has been more successful than the MHAL Region (Varró, 2014). The Euregion gained, for example, a formal position in the programming of EU funding. In addition, the name to indicate the cross-border region shifted over the years from MHAL Region to Three Countries Park, as can be derived from the names used in the various regional design episodes for the region. Moreover, despite all cross-border initiatives and developments over the last decades, people living in the region refer to ‘Pays de Herve’, ‘Voerstreek’, ‘Münsterländchen’ or other names to indicate a particular area in the region (Lohrberg et al., 2014a). Despite these different ideas and conceptions, Maastricht used the idea of a cross-border urban network embedded in a valuable cultural landscape for its bid to become European Cultural Capital in 2018 (Varró, 2014). Unfortunately, Maastricht did not win,
but it shows that the spatial conception of the region developed in the second episode of regional designing is still utilised.

In a detailed study into mobilising policy attention for a civic initiative, the alignment of issue frames, relationship frames and process frames was found to enable the emergence of persuasive stories that mobilised people into action (Van der Stoep et al., 2017). Similar processes might have happened in our case. During the second, third and fourth episodes of regional designing – most notably in the second – stakeholders changed their perspective on both the region (issue frames) and other regional stakeholders (relationship frames). Moreover, they developed a positive connotation on the process itself, which was framed as unique (process frame). Reframing is a subtle process of adjusting one's perspective based on an understanding of each other’s frames and takes place when people talk and listen to each other (Van Herzele and Aarts, 2013). In regional designing this occurs during stakeholder’s workshops that are organised as part of a participatory design process. Regional design processes, therefore, must be carefully designed, organised and receptively managed (Van Dijk and Ubels, 2016). A notion that was also expressed in the interviews, and which is a reoccurring theme in communicative and deliberative planning theory (e.g. Forester, 1999; Healey, 2007; Innes and Booher, 2010). However, participatory and collaborative design processes are notably absent in the academic literature in spatial design disciplines such as landscape architecture and urban design (Kempenaar et al., 2016). We argue that these spatial design disciplines urgently need to develop a knowledge base, as well as sound methods and methodologies, on participatory and collaborative design processes, as our study shows that the actual influence and impact of regional designing depends on these processes.

In the interviews, available funding and the ‘fitness’ – or lack thereof – of the ideas with the cultural and institutional setting in a country, as well as with existing policies, developments and political ambitions, were pointed out as important factors that determine the chances of physical realisation. This is in line with Jacobs (2016: 19), who argues that ‘the existing boundaries may need to become the starting point of a cross-border spatial planning, because these are embedded in society and are capable of facilitating implementation’. We think this is a valuable point to take into account in future cross-border regional design or visioning endeavours and as a specific point of interest in future research into cross-border regional designing and spatial planning initiatives.

Notwithstanding the limited impacts found from a plan performance perspective, our study shows that a combined plan conformance, plan influence and plan performance perspective can provide valuable insights on how and why strategic planning – regional designing in our case – is successful or not. Moreover, it shows the value of including the plan-making process in the evaluation of plans and planning efforts. The importance of both plans and processes, as well as their strong interlinkages has been noted and expressed by multiple scholars (e.g. Forester, 2013; Hopkins, 2001). However, a combined evaluation of plans and processes seems to get little attention in research on plan evaluation up till now. We argue that this deserves more attention and follow up.

**Conclusion**

Regional designing contributes to new perspectives for a region: to new perceptions of what the region is or can be, and to new relationships and collaboration. We have seen that this has led to influential and lasting effects in the MHAL Region, which contributed to the perpetual and fuzzy process of regional development and transformation. Regional designing realised these impacts in the complex context of a ‘new’ cross-border region. Our study demonstrates
that designing is a powerful means in bridging difficulties that arise out of an institutionally fragmented situation. This is not only useful in cross-border planning, but in all kinds of planning endeavours that engage with complex and fragmented situations.

However, regional design effects are not self-evident. Our study showed they depend on a proper embeddedness in a regional context. Moreover, they ground in the regional design process, making the plan-making process an important aspect to take into account in the evaluations of planning efforts, and future research into regional designing. Plans, in which regional designs are visualised and documented, as well as people who have been involved in the regional design process, derived from our study as critical factors in the transference of regional design outcomes to other planning arenas. Conditions, such as status and available funding improve the chances for transference. Those setting up a regional design process should, therefore, carefully consider the kind of design to be drawn up, who to involve in the regional design process, how to organise and manage such a process and how they can optimise the conditions for regional design outcomes to have an impact.

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