

Jessica Baier

From a materially produced to a socially constituted space: a proposal for a new research perspective on public service provision and infrastructures in rural areas based on a relational theory of space

URN: <https://nbn-resolving.org/urn:nbn:de:0156-08910630>



CC license: CC-BY-SA 4.0 International

Page 75 to 86

In: Abassiharofteh, Milad; Baier, Jessica; Göb, Angelina; Thimm, Insa; Eberth, Andreas; Knaps, Falco; Larjosto, Vilja; Zebner, Fabiana (Eds.) (2022):
Spatial transformation – processes, strategies, research designs.
Hanover. = Forschungsberichte der ARL 19.

This paper is a translated version of the following publication: Baier, Jessica: Vom materiell hergestellten zum sozial konstituierten Raum: Entwurf für eine neue Forschungsperspektive zu Daseinsvorsorge und Infrastrukturen in ländlichen Räumen mit der relationalen Raumtheorie. In: Abassiharofteh, Milad; Baier, Jessica; Göb, Angelina; Thimm, Insa; Eberth, Andreas; Knaps, Falco; Larjosto, Vilja; Zebner, Fabiana (Hrsg.) (2019): Räumliche Transformation – Prozesse, Konzepte, Forschungsdesigns. Hannover, 80-92. = Forschungsberichte der ARL 10.

The original version can be accessed here:

URN: <https://nbn-resolving.org/urn:nbn:de:0156-0891063>

Typesetting and layout: ProLinguo GmbH

Translation and proofreading: ProLinguo GmbH

Jessica Baier

FROM A MATERIALLY PRODUCED TO A SOCIALLY CONSTITUTED SPACE: A PROPOSAL FOR A NEW RESEARCH PERSPECTIVE ON PUBLIC SERVICE PROVISION AND INFRASTRUCTURES IN RURAL AREAS BASED ON A RELATIONAL THEORY OF SPACE

Contents

- 1 Introduction
 - 1.1 Public service provision and the associated understanding of infrastructure in the context of social change
 - 2 The reciprocity of spatial and social dimensions of a changing society and their challenges for functionally peripheral, rural areas
 - 3 Private colleges in rural areas
 - 3.1 Conclusion: a change of perspective from a materially produced to a socially constituted, relational space
 - 4 Conceptualising the study of the social constitution of space at private colleges in rural areas
 - 4.1 A relational conception of space according to Löw
 - 5 Insights gained through the relational perspective
 - 6 Summary
- References

Abstract

This article uses research in relation to the provision of public services and infrastructures to support the thesis that primarily one particular perspective on space – namely a material or quantifying perspective – is reflected in current empirical research. The article thus proposes the use of the concept of relational space by Martina Löw (2001) in empirical research to improve our empirical understanding of the space relevant for local people. To conclude, potential insights gained are outlined on the basis of the conceptualisation of a study of private colleges in rural areas in Germany.

Keywords

Public service provision – social infrastructure – rural areas – relational space – private colleges

1 Introduction

The traditional concept of public service provision in the sense of a comprehensive state responsibility for the provision of services for the common good which are essential for life (Einig 2008: 17; Knorr 2005: 35) is currently being turned upside

down, particularly due to changes in society and the processes associated with these. A successive reconceptualisation based on the model of the state as guarantor (Schuppert 2001: 219 et seq. and Schuppert 2005: 11 et seq. after Einig 2008: 17), which is no longer responsible for actually providing but merely for guaranteeing services (Hoffman-Riem 2001 after Einig 2008: 17), thus makes research on this subject relevant both for the spatial sciences and the social sciences.

The present paper puts forward the thesis that primarily one particular perspective on space influences current research on the provision of public services and infrastructure and/or the guaranteeing of infrastructural services. By expanding the focus of the conception of space to include a relational understanding (L6w 2001) with socio-spatial structures, people and goods can be viewed within empirical research both in their materiality and in their social relationships to each other. This spatial understanding also allows empirical research on the provision of public services and infrastructures to provide action-relevant knowledge (e.g. about people's needs or the shaping of ways of life in a given locale). This type of knowledge generation can particularly enrich research on functionally peripheral, rural areas, which, in view of the social change processes, face particular challenges with regard to the provision of public services and the guaranteeing of infrastructure (cf. e.g. ARL 2016 and Kersten/Neu/Vogel 2012).

By conceptualising a current study by the author on private colleges, this paper shows how a relational concept of space can allow the spatial structures which characterise rural areas to be empirically captured in their heterogeneity. Its intention is therefore primarily to introduce a research strategy which demonstrates a new perspective.

By way of introduction to the topic, a brief, general overview of the social change processes with regard to their significance for the provision of public services and the associated understanding of infrastructure will be provided at first. In a next step, the reciprocity of spatial and social dimensions of a changing society will be demonstrated. Particular attention will be given to the challenges which occur in the provision or guaranteeing of infrastructural services in rural areas in the context of social change.¹

After setting out the challenges to the provision of infrastructures in rural areas, the article will address the phenomenon of private colleges and the associated potential for rural locations. It will be shown that the qualitative impact in these locations, or in other words the impacts which are not quantifiable, have thus far been relatively neglected in empirical research, where a material, quantifying perspective on space and the spatial provision of infrastructure largely prevails.

The article thus derives the plausibility of an expanded perspective on the conception of space within empirical research. The relational understanding of space put forward by Martina L6w (2001) will then be introduced and explained for the conceptualisation of a study of private colleges in rural areas. This new perspective leads to an ap-

1 This article aims to address the research literature which correspondingly supports the thesis set out here. It is neither possible nor intended to reproduce the discourse on the provision of public services and infrastructure in functionally peripheral rural areas in full at this point.

plication section outlining the potential of the insights gained from this relational understanding of space, particularly for research in rural areas in the context of the current challenges of social change.

1.1 Overview: public service provision and the associated understanding of infrastructure in the context of social change

The transition from an agro-industrial society brought with it social, economic and demographic changes (Arbo/Benneworth 2007: 10 as well as van Laak 1999). The provision of public services by means of a comprehensive development of infrastructure (Forsthoff 1938) came onto the political agenda with the aim of reducing the unemployment caused by this transition, strengthening the welfare state and reforming the industrial sector in order to promote employment and prosperity. Spatial planning and development was accordingly pursued strategically in order to promote social and economic development in structurally weak areas (Barlösius 2006; Arbo/Benneworth 2007: 10 et seq.). As an instrument of development policy and ultimately for the stimulation of employment and the economy, primarily large, central infrastructural buildings were erected (van Laak 2006: 170 et seq.). The concept of infrastructures therefore developed closely with that of public service provision, which comprised administrations' legally secured participation in infrastructural and other services which were to be provided by the state (van Laak 1999, 2006: 175; Knorr 2005; Barlösius 2006).

A combination of social and spatial development therefore resulted from the intention of supporting social change through the spatial provision of local public infrastructure, as well as the development and expansion of infrastructural facilities. Thus, the creation of spatially standardised infrastructure was governed by the ideas of equal opportunities to participate in society, the complete integration of all people in society and the equivalence of living conditions, which were implemented by means of this infrastructure (Barlösius/Neu 2007 and Barlösius 2016). In addition, infrastructures constituted an effective means for using and ordering public space by shortening time and space and by functioning as mediating object-based systems between people and nature (van Laak 1999, 2006: 167 et seq.; Barlösius 2016: 207).

The discussion within the spatial sciences identifies the turning point in the development presented here as the early 1980s. This was the first time since the efforts at reform that economic stagnation and inflation set in and the underlying development strategy became inadequate. According to this view, the change from an industrial to a service and then to a knowledge society, driven by technological and economic globalisation, reduced the relevance of many industries and led to people being displaced from the labour market because their qualifications were becoming obsolete (Arbo/Benneworth 2007: 12 et seq.; Kersten/Neu/Vogel 2012: 9 et seq.). Together with demographic change, macrosocial developments effected changes, both to the demands for the provision of public services by the welfare state and with regard to their financial feasibility; these changes still affect the need for infrastruc-

tures and the associated services today.² In this context, a distinction is made between qualitative, quantitative and spatial structural change in the need for infrastructures. The first of these results from the increase in the proportion of old people in the population at the same time as a reduction in the proportion of young people, whereas the quantitative change results from the overall decline in the population, decreasing settlement densities and fewer employed people (Einig 2008: 25). Spatial change in relation to these needs, on the other hand, relates to safeguarding basic provision of public services across the board, which is increasingly difficult to implement (ibid.).

2 The reciprocity of the spatial and social dimensions of a changing society and their challenges for functionally peripheral rural areas

As shown in the overview, investment in the development and expansion of infrastructure for large-scale spatial organisation brought with it an economic and social upgrading. The underlying strategy of the provision of public services was based on the assumption of constant economic prosperity and a growing society. However, it also became clear that the development strategy was becoming less and less appropriate, since these assumptions were no longer a given, or were only so to a much lesser extent.

Currently, spatial development in Germany is characterised ‘[...] by a juxtaposition of demographically and economically growing, shrinking and stagnating spaces’ (ARL 2016: 4). Whereas infrastructures in structurally weak, sparsely populated and functionally peripheral spaces are losing their economic viability (Kersten/Neu/Vogel 2012: 10 et seq.), the utilisation rate in other areas may already be above capacity (ARL 2016: 4). The maintenance of services to be provided in the sense of public service provision by the welfare state is being renegotiated in the process. There are discussions about what constitutes an acceptable minimum quality of public services which is offered at socially acceptable prices, comprehensively and within an acceptable distance of people (ARL 2016: 2 et seq. and Einig 2008: 25 et seq.). Acceptability is derived from the central-place theory (Christaller 1933), which is intended to guarantee comprehensive basic provision and, beyond this, the provision of goods for a higher level of or more specialist needs in some places (Einig 2008: 27 et seq.).

Thus, the provision of public services, understood as the safeguarding of basic needs and creating the possibilities for a self-sufficient life (ARL 2016: 2 et seq.), changes in its conception from a state of comprehensive infrastructural provision to a task which must be fulfilled by the ‘triad of three service principles’ (ibid.: 3 et seq.) of the market, the transfer and reciprocity between state actors, the economy and civil society. Although this strategy seems suitable for meeting the challenges of social change

2 However, it should also be noted at this point that this reflects the discourse in the spatial sciences. In parallel to this, for example in the social sciences, there are interpretations which link the departure from the principles of the welfare state in the provision of public services to changes in the political agenda, which are legitimated by the transition to a knowledge society (cf. e.g. Barlösius/Neu 2007).

with regard to financial sustainability and the utilisation of infrastructural facilities at the macro level, it results in social inequalities for the actors, social groups and individuals at the micro level, which are reflected in their specific life opportunities and possibilities.

This is the case, for example, when the opportunities for participating in society which should enable all citizens access 'to desirable goods such as jobs, education and health' (Barlösius/Neu 2007: 82) are called into question in these structurally weak, sparsely populated and functionally peripheral areas (ARL 2016: 6; Barlösius 2006: 17). This subsequently results in a form of social – namely territorial – inequality for those affected, which reduces their life opportunities (Barlösius/Neu 2007: 82 et seq. and Barlösius 2006.) In spatial planning, this is referred to as vulnerability, i.e. the vulnerability of individuals and social groups in relation to specific environmental influences. Individuals are regarded as vulnerable to particular environmental influences if they are unable to sufficiently cope with the deterioration of those influences (cf. Bolte/Bunge/Hornberg et al. 2012; Köckler/Hornberg 2012). For example, if an individual's functionally peripheral, rural place of residence, which they are unable to leave (e.g. for financial or social reasons), results in systematically less favourable access opportunities to adequate education or other infrastructural services, this has a negative effect on their life opportunities and they are socio-structurally disadvantaged. Accordingly, it is precisely at the micro level of individuals that the reciprocity of the spatial and social dimensions of social change processes becomes tangible.

The fact that access to desirable goods such as education is not just central in the context of the knowledge society but also a prerequisite for many other economic and social processes – including in rural areas – is demonstrated, for example, by the increasing number of private providers in the education sector. In the following section, the article will look at the specific example of private colleges in rural areas.

3 Private colleges in rural areas

Private colleges in rural areas present an interesting empirical phenomenon. With reference to section 70 of the German Higher Education Framework Act (*Hochschulrahmengesetz, HRG*), the German Science Council (*Wissenschaftsrat, WR*) defines them as a subgroup of non-state universities. These are defined as universities which are not sponsored by a federal state (*WR* 2012: 14 et seq.). Private colleges are specifically defined here as '[...] all non-state universities which are operated privately in the narrower sense' (*ibid.*). They are characterised by a comparatively compressed offer of (predominantly) fundamental degree courses, as well as mostly dual or part-time training oriented towards the regional labour market (Frank/Hieronimus/Killius et al. 2010: 6 et seq.). The different educational tasks of colleges range from the academisation of former apprenticeship-based vocations to distance learning or online degrees for target groups with a particular need for flexibility, to the provision of practically oriented degree courses with the possibility of immediately joining a company which partners with the college (*ibid.*). The first colleges were founded in the 1990s, hence they are a comparatively new phenomenon,

but their increasing presence throughout Germany means that privately operated colleges can no longer be considered a peripheral phenomenon (Frank/Hieronimus/Killius et al. 2010: 6). In its list, which is updated daily, the German Rectors' Conference (*Hochschulrektorenkonferenz, HRK*) currently counts 116 officially recognised colleges and universities which are operated privately in Germany (*HRK 2018b*). Of these, eight private universities of applied sciences³, with a total of approximately 5,800 enrolled students, are located in Lower Saxony.⁴

In the research on the provision of public services and infrastructures, private colleges are noteworthy, particularly in view of heterogeneous socio-demographic developments in rural areas and the challenges to the provision of infrastructure outlined above. Thus, it may be precisely private institutions which can guarantee opportunities for participation in social life, communication and access to desirable goods (cf. Barlösius/Neu 2007 and Barlösius 2006), such as to education or the labour market, in structurally weak, sparsely populated and functionally peripheral areas.

Because of their financing structure, organisation and the nature of what they offer, private colleges can select their location independently of spatial planning logic such as the central-place theory (Christaller 1933). For example, in Lower Saxony it can be observed that private colleges – similarly to their state counterparts, universities of applied sciences – are increasingly choosing locations outside the large university towns and in rural areas. Thus, it is precisely these colleges which can contribute to spatial structuring and social participation in those areas in which investment in state (social) infrastructural facilities is increasingly at risk due to spatial planning logic. For example, they do this by offering training and education outside the state-funded structures and, in the process, involve regional stakeholders (e.g. companies by means of partnerships in dual work/study courses). This enables local young people to have access to an academic education, and young people come to the college location who would otherwise have chosen a different place to study.

There has thus far been very little empirical research on private colleges. Existing studies usually have an exploratory character. For this reason, the following remarks are related to colleges in Germany and to their locations and their impact on their locations. Academic discourse in this area has focused primarily on regional economic effects, e.g. knowledge and personnel transfer, start-ups and spillover effects (e.g. Thierstein/Wilhelm 2000 and Back/Fürst 2011). In addition, there are a number of research papers on the effects of private colleges on the stability of the regional economy, locations as places of residence and their image as a knowledge region (e.g. Stoetzer/Krähmer 2007; Fritsch 2009). On this basis, statements about the social effects of colleges largely refer to structural data about their location (e.g. Kriegesmann/Böttcher 2012; Fischer/Wilhelm 2001). Thus, studies look at, for example, the rejuvenating potential that students have for the population structure of their

3 Unlike universities of applied sciences or colleges, there are no private full-range universities in the federal state of Lower Saxony.

4 As of the winter semester 2015/2016, less the students of the Municipal University for Administration (*Kommunale Hochschule für Verwaltung*) (*MWK* [Ministry for Science and Culture of Lower Saxony] 2018).

location or emphasise how college graduates who stay on after their studies have a positive effect on purchasing power, the workforce, the utilisation of infrastructures and avoiding high vacancy rates (see also OECD 2007).

Empirical research on location impacts has thus far been characterised by an overwhelmingly quantifying perspective, which is usually oriented towards materiality. When such research focuses on rural areas, the plausibility of expanding this perspective becomes clear; research from this perspective tends, particularly in rural areas, to emphasise deficits and shortcomings, because it is oriented towards a schema which relies primarily on key figures and measurable quantities. Or, to put it another way: in functionally peripheral, rural areas, in the worst case this perspective brings precisely those elements into focus which are declining, deficient or no longer in existence. Consequently, it would be productive for empirical research to take up a perspective which enables rural areas to be captured in a way that steers the focus towards available resources and spatial structures, or to features which distinguish them in their heterogeneity.

3.1 Conclusion: a change of perspective from a materially produced space to a socially constituted, relational space

The relational understanding of space proposed by Martina Löw (2001) is useful here. It enables the focus to be shifted to the process of constituting space and to those people who live locally, use the space every day and (re)produce it in their activities. Thus, empirical research can be decoupled from distinctions based on schemas such as 'existing resources – non-existent resources', and goods, structures, connections and cooperation initiatives enter the picture which are available locally and which characterise the area for local people (Löw 2001: 130 et seq.).

Such an expanded research perspective is not only useful and enriching but possibly also necessary. In section 2, the present article outlined an interpretation according to which processes of social change have spatial and social dimensions which stand in a reciprocal relationship to each other. In view of this, it is conversely downright implausible to apply a theoretical concept which is unable to incorporate social structures and the perspective of local people to such empirical research.

The further process and the potential insights to be gained with the relational theory of space as a new perspective in empirical research on the provision of public services and infrastructures in rural areas will be presented in the following section, based on the conceptualisation of a current study by the author on private colleges in rural areas.

4 Conceptualising the study of the social constitution of space at private colleges in rural areas

In the qualitative research project on private colleges in rural areas of Lower Saxony, local processes in relation to the social constitution of space which are localised

around the private college as a spatial crystallisation or anchor point are captured empirically. The focus here is exclusively on those people, goods and structures which are present locally and viewed as having relevance for the constitution of space. In order to take these into consideration and embark on the research without pre-set theoretical criteria, the study draws on the relational understanding of space put forward by Martina Löw.

4.1 The relational theory of space according to Löw

In Martina Löw's *Raumsoziologie* [Spatial Sociology] (2001), space is captured empirically as an arrangement of social goods and people in the context of everyday activity (cf. Löw 2001: 158 et seq.). People are understood to be those who actively constitute space as actors. This arrangement is a social process which can be differentiated analytically into two different activities: spacing as an action and dimension of spatial constitution, and synthesis as an aspect of order or structural dimension of the constitution of space (cf. Löw 2001: 158 et seq.). Both activities are always connected in practice, so that action and structure, or spacing and synthesis, relate to each other recursively in everyday activity.

Space thus constitutes an arrangement of social goods and people which are placed or positioned within the spacing. These people and social goods can be localised primarily by their material characteristics in certain places in geographical space. Placings or positionings in the context of everyday activity are, additionally, always carried out in relation to other placings (ibid.). For example, the placing of a social good always addresses its relation to another social good. However, the arrangements which occur in this way can only be understood if the symbolic component of the arranged people and social goods (e.g. their significance or the purpose of their placement) is understood. The meaningful capturing of people and social goods in their arrangement is designated accordingly as synthesis. Within the framework of this synthesis, impressions are consolidated within the perception. Thus, people and social goods placed within the spacing are meaningfully captured in their significance together with the places in which they are placed, and within the synthesis they are connected with each other so that they are no longer just placed objects (cf. ibid.: 195 et seq.). The way in which placed social goods and people are perceived in their specific arrangements and connected to space is socially pre-structured by institutionalised processes of perception, recollection or imagination.

5 Insights gained through the relational perspective

Viewed from this relational perspective, space becomes a network of dynamic social interconnections between people, and of the places and social goods relevant for them. By capturing, in particular, those people who live locally as constitutive elements of their space, their individual relevance becomes comparatively more visible. The relational theory of space thus opens up a view of a socially constituted space which possesses specific, material points of reference and which also has socio-cultural significance. This object of research then allows us not only to generate

action-relevant knowledge about how people constitute their individual space but also to show that spatial structures manifest themselves as social structures and can be empirically depicted as such. This knowledge might provide a helpful addition to the existing stock of knowledge from the quantifying perspective and about materially produced spaces.

The conceptualisation of the study on private colleges also reveals aspects which can contribute to a relational perspective on space for the purposes of empirical research and which are also relevant beyond the specific context of this project (e.g. for research on the provision of public services and infrastructures).

For example, through a relational understanding of space, the study can focus specifically on the (college) space in which people meet each other in their everyday activities and in which they will connect with each other in future. Thus, the study decouples from the (comparatively conservative) conceptual understanding of (college) space which can or should primarily be planned, managed or changed on an overarching level, and creates possibilities for incorporating individual relevance into empirical research.

In addition, the research design enables all constitutions of space relating to the private college to be included in the study. This also includes those which, because of their inconstant nature, would be very difficult to represent in other analyses. An example might be students who do not live permanently or temporarily (e.g. in student accommodation) at the place of study and who are not considering living there after completing their studies. For them, the private college with its educational programme provides the only anchor point to the rural college location. Outside the obligatory lectures or classes, they are unlikely to be found at the location. From a quantifying or material perspective, the question is raised as to what benefit their absence has in relation to the use of housing space, the rejuvenating potential or the use of the leisure and job opportunities for the college location, and whether they can or should even be recorded at all in this context. However, from the relational perspective on space, these students also constitute a space by being active at the college location, for example by attending lectures, using the canteen, the library or public transport, or simply by representing the connecting link within the partnership between the private college and a regional company. This constitution of space presumably has no less relevant a social (location) impact than that of the students who live at the location of study and can be assessed by the material or quantifying perspective with regard to their impacts, for example on purchasing power and avoiding high rates of vacancy (see section 3 of this article).

6 Summary

Within the field of research on the provision of public services and infrastructures, this article has been working on the thesis that primarily one particular perspective in relation to space is reflected in current empirical research. It therefore proposed the relational concept of space by Martina Löw (2001) for empirical research to expand the current state of research in this area.

To this end, it first set out the challenges facing the provision or guaranteeing of infrastructural services in rural areas. In this context, private colleges in rural areas were presented as a comparatively new empirical phenomenon, and the (social) possibilities that they present for rural locations were considered. As spatially relevant empirical research has hitherto largely adopted a material and quantifying perspective, the relational concept of space (Löv 2001) was introduced to expand this.

By conceptualising a current study by the author about private colleges in rural areas, it was then illustrated how the relational understanding of space can capture rural areas with their existing resources and spatial structures and in all of their heterogeneity. This also enables the empirical depiction of a socially constituted space, which nonetheless possesses specific, material points of reference and reveals socio-structural significance. Thus, the study presented will be in a position to focus precisely on the space in which people meet each other in their everyday activities and in which they will connect with each other in future. The study thus decouples from the (comparatively conservative) conceptual understanding of a space which is primarily planned, managed or changed on an overarching level, and creates possibilities for incorporating individual relevance into empirical research.

In addition, the research design enables inconstant constitutions of space, which are very difficult to depict in other analyses, to be included in the study. From the relational perspective on space, every individual constitutes space in their everyday local activities. It is not important here whether they fulfil traditional, measurable indicators, but rather that they contribute to spatial structuring and social participation through their activities.

For reasons of practical relevance and the currency of the topic, the thesis developed in this article has been illustrated using research on the provision of public services and infrastructure but could, in principle, be applied to other fields of research which have a spatial reference. With regard to rural areas in general, however, it can be stated that the change⁵ in perspective from the materially produced or quantitatively measurable space to the relational perspective shifts the focus to the social processes by which space is constituted – i.e. people as constitutive elements. Thus, rural areas can be depicted in terms of what characterises them for the people who live there. This insight is particularly relevant for research on rural areas, regardless of the research field.

5 At this point, however, it should be emphasised that the shift towards a relational perspective promoted by the current article is intended explicitly as a change in the sense of taking up a supplementary, alternative perspective.

References

- Arbo, P.; Benneworth, P. (2007): Understanding the Regional Contribution of Higher Education Institutions: A Literature Review. [sine loco] = OECD Education Working Papers 9.
- ARL – Akademie für Raumforschung und Landesplanung / Academy for Territorial Development in the Leibniz Association (Ed.) (2016): Rethinking the provision of public services and equivalent living conditions – perspectives and fields of action Hanover. = Positionspapier aus der ARL 108.
- Back, H.J.; Fürst, D. (2011): Der Beitrag von Hochschulen zur Entwicklung einer Region als 'Wissensregion'. Hanover. = E-Paper der ARL 11.
- Barlösius, E. (2006): Gleichwertig ist nicht Gleich. In: Aus Politik und Zeitgeschichte (37) 2016, 17-23.
- Barlösius, E. (2016): Wissenschaftliche Infrastrukturen: Verschiebung der Makro-, Meso- und Mikroebene. In: Baur, N.; Besio, C.; Norkus, M.; Petschick, G. (2016): Wissenschaft als Mehrebenen-Phänomen. Weinheim, 13-46.
- Barlösius, E.; Neu, C. (2007): Gleichwertigkeit – Ade? In: PROKLA. Zeitschrift für kritische Sozialwissenschaft 37 (146), 77-92.
- Barlösius, E.; Neu, C. (2008): Territoriale Ungleichheit - Eine spezifische Ausprägung räumlicher Untergleichheit? In: Zukunftsorientierte Nutzung ländlicher Räume – LandInnovation (17) 2008, 17-24.
- Bode, A. (2007): Die digitale Universität – Anforderungen an Infrastruktur und Serviceeinrichtungen der Hochschulen. In: BIBLIOTHEK Forschung und Praxis 31 (1), 37-41.
- Bolte, G.; Bunge, C.; Hornberg, C.; Köckler, H.; Mielck, A. (Eds) (2012): Umweltgerechtigkeit. Chancengleichheit bei Umwelt und Gesundheit: Konzepte, Datenlage und Handlungsperspektiven. Bern.
- Christaller, W. (1933): Die zentralen Orte in Süddeutschland. Eine ökonomisch-geographische Untersuchung über die Gesetzmäßigkeit der Verbreitung und Entwicklung der Siedlungen mit städtischen Funktionen. Jena.
- Einig, K. (2008): Regulierung der Daseinsvorsorge als Aufgabe der Raumordnung im Gewährleistungsstaat. In: Informationen zur Raumentwicklung (1/2), 17-40.
- Fischer, G.; Wilhelm, B. (2001): Die Universität St. Gallen als Wirtschafts- und Standortfaktor: Ergebnisse einer regionalen Inzidenzanalyse. Bern.
- Forsthoff, E. (1938): Die Verwaltung als Leistungsträger. Stuttgart/Berlin.
- Frank, A.; Hieronimus, S.; Killius, N.; Meyer-Guckel, V. (2010): Rolle und Zukunft privater Hochschulen in Deutschland. Essen.
<https://www.stifterverband.org/rolle-und-zukunft-privater-hochschulen-in-deutschland> (26.03.2019).
- Fritsch, M. (2009): Was können Hochschulen zur regionalen Entwicklung beitragen? In: die hochschule 18 (1), 39-52.
- Goddard, J.; Puukka, J. (2008): The engagement of higher education institutions in regional development: An overview of the opportunities and challenges. In: Higher Education Management and Policy 20 (2), 11-41.
- HRK – German Rectors' Conference (2018a): Hochschulen in Zahlen 2018.
https://www.hrk.de/fileadmin/redaktion/hrk/02-Dokumente/02-06-Hochschulsystem/Statistik/2018-05-17_Final_fuer_Homepage_2018.pdf (15.08.2018).
- HRK – German Rectors' Conference (2018b): Tagesaktuelle Liste aller Hochschulen.
<https://www.hochschulkompass.de/hochschulen/downloads.html> (28.09.2018).
- Kersten, J.; Neu, C.; Vogel, B. (2012): Demografie und Demokratie. Zur Politisierung des Wohlfahrtsstaates. Hamburg.
- Knorr, A. (2005): Gemeinwohl und Daseinsvorsorge in der Infrastrukturpolitik. In: Hartwig, K.-H.; Knorr, A. (Eds): Neuere Entwicklungen in der Infrastrukturpolitik. Göttingen, 31-53.
- Köckler, H.; Hornberg, C. (2012): Vulnerabilität als Erklärungsmodell einer sozial differenzierten Debatte um Risiken und Chancen im Kontext von Umweltgerechtigkeit. In: Bolte, G.; Bunge, C.; Hornberg, C.; Köckler, H.; Mielck, A. (Eds): Umweltgerechtigkeit. Chancengleichheit bei Umwelt und Gesundheit: Konzepte, Datenlage und Handlungsperspektiven. Bern, 73-86.
- Kriegsmann, B.; Böttcher, M. (2012): Wissen schafft Wirtschaft in Bochum. Final Report. Bochum.
http://ihk-website-test.standpunkt-demo.de/fileadmin/_migrated/content_uploads/2012_62_Abschlussbericht_Wissen_schafft_Wirtschaft.pdf (25.11.2018).
- Löw, M. (2001): Raumsoziologie. Frankfurt am Main.

MWK – Ministry for Science and Culture of Lower Saxony (2018): Fachhochschulen in nichtstaatlicher Verantwortung.

https://www.mwk.niedersachsen.de/startseite/hochschulen/hochschullandschaft/hochschulen_und_berufsakademien/fachhochschulen_nichtstaatlicher_verantwortung/fachhochschulen-in-nichtstaatlicher-verantwortung-19122.html (28.09.2018).

OECD – Organisation for Economic Co-operation and Development (2007): Higher Education and Regions: Globally Competitive, Locally Engaged. Paris.

Pasternack, P. (Ed.) (2013): Regional gekoppelte Hochschulen. Die Potenziale von Forschung und Lehre für demografisch herausgeforderte Regionen. Halle-Wittenberg. = HoF-Handreichungen 2.

Stoetzer, M.-W.; Krähmer, Chr. (2007): Regionale Nachfrageeffekte der Hochschulen – methodische Probleme und Ergebnisse empirischer Untersuchungen für die Bundesrepublik Deutschland. Jena. = Jenaer Beiträge zur Wirtschaftsforschung 06/2007.

Thierstein, A.; Wilhelm, B. (2000): Hochschulen als Impulsgeber für die regionale Entwicklung. In: Thierstein, A.; Schedler, K.; Bieger, T. (Eds): Die lernende Region. Zurich, 9-35.

van Laak, D. (1999): Der Begriff der Infrastruktur und was er vor seiner Erfindung besagte. In: Archiv für Begriffsgeschichte Volume 41, 280-299.

van Laak, D. (2006): Garanten der Beständigkeit. Infrastrukturen als Integrationsmedien des Raumes und der Zeit. In: Doering-Manteuffel, A. (Ed.) (2006): Strukturmerkmale der deutschen Geschichte des 20. Jahrhunderts. Munich, 167-180.

Warnecke, Chr. (2016): Universitäten und Fachhochschulen im regionalen Innovationssystem. Eine deutschlandweite Betrachtung. In: Review of Regional Research 36 (2), 195-197.

WR – German Science Council (2012): Private und kirchliche Hochschulen aus Sicht der Institutionellen Akkreditierung.

<https://www.wissenschaftsrat.de/download/archiv/2264-12.pdf> (15.08.2018).

The author

Jessica Baier was a Research Assistant of the Society and Culture department at the Headquarters of the Academy for Territorial Development (Akademie für Raumforschung und Landesplanung, ARL) and a PhD student at the Institute of Sociology at Leibniz University Hannover from October 2015 to July 2019. She is writing her PhD within the TRUST/ARL Doctoral Colloquium on the social constitutions of space by students at private colleges in rural areas of Lower Saxony. Her research interests include higher education and scientific research, education and social infrastructures as well as rural areas. Before joining the ARL, she studied social sciences (B.A.) at Leibniz University Hannover from 2010 to 2013 and subsequently completed the interdisciplinary Master's course in Science and Society (M.A.) at Leibniz University Hannover (2013 to 2015).