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NAVIGATING SPATIAL TRANSFORMATIONS THROUGH THE REFIGURATION OF SPACES

*Angela Million, Christian Haid,
Ignacio Castillo Ulloa, and Nina Baur*

From “turning to space” to thinking spatially

Over the course of the past three decades, space and spatial research furthering spatial thinking have become increasingly popular both within and—though in a more nuanced manner—beyond academic circles. By and large, it has been a gradual process of recognition that, “as many people have been saying, ‘Space is hot’” (Bertsch and Sterne 1994; cited in Crang and Thrift 2000a, xi). Such weasel words eventually led to what came to be known as the “spatial turn,” which, rather than emerging in the shape and form of “intellectual magnificence,” put space at the core of critical analysis to shed light on economic, social, political, and cultural transformations to which the world is continuously subjected. Prior to the spatial turn, academic discourse typically affirmed space as an a priori external to human thinking and conceptualized space as a Kantian-absolute analytical category. As a result, jigsaw-like Euclidean conceptions of space emerged, underpinned by an understanding of space as a form of “outer sense,” whereby objects are represented as existing outside of us—that is to say, “in space.” Such static understandings of space were eventually rendered insufficient by the accelerating dynamics of spatial transformations such as globalization, progressively giving way to alternative approaches asserting that spatiality cannot be comprehended separately from its production. Moreover, humans do not just perceive and act within space as an immutable frame of reference; rather, by inhabiting, living, and all the while changing space, they render it relational (Lefebvre 1991; Massey 2005). In other words, far-reaching takes on contemporary phenomena must appeal to both social and spatial circumstances in order to move beyond the truism that “everything happens somewhere,” for it is, in effect, the *where* what allows the *how* to be fathomed—the inextricable fusion of context and causality (Warf and Arias 2009; Baur 2018, 329–356).

Furthermore, several disciplines—above all, geography—were stripped of their epiphenomenal status. Concurrently, initiated by the pioneering works of Anthony Giddens (1979, 1981) and Michel Foucault (1980), efforts to interlace, for instance, a (concrete and descriptive) “geographical” with an (abstract and explanatory) “sociological” imagination started to flourish (Agnew and Duncan 1989, 1). Accordingly, a shift from “a sense of space as a practico-inert container of action towards space as a socially produced set of manifolds” took place, indicating not only that space cannot be envisaged “outside the realm of social practice” but also that “the ecology of thought is no longer seen as somehow standing outside of the spatial” (Crang and Thrift 2000b, 2).

From the mid-1980s onwards, space has been reasserted and emplaced within a multifarious, inter-, and transdisciplinary purview covering (and thereby making relevant) aspects such as everyday life, identity, and human subjectivity, which are integral to a coherent analysis of social life and lived experience. There have been insightful attempts to integrate the diverse strands of existing academic work. Diverse disciplines—such as geography, architecture, urban planning, philosophy, sociology, political sciences, anthropology, historical sciences, communication sciences, and many more—have either constantly been or are increasingly dealing with issues of spatiality and, in this context, have discussed space in their own particular manner—whether metonymically (“spaces of language”), introspectively (“spaces of the self”), socio-politically (“spaces of agitation”), culturally (“spaces of modernity”), or aesthetically (“artistic and architectural spaces”).

Nevertheless, these preceding efforts to systematize spatial concepts have ended up indexing and, in consequence, replicating disciplinary boundaries. Furthermore, while the interest in space, spatiality, and spatial research has been steadily growing and spawning across fields of thought, there have rarely been any attempts either to identify convergences and intersections amid the variety of spatial conceptualizations or to synthesize modes of spatial thinking. Showing how fruitful intersecting and synthesizing would be is precisely the purpose of this book. More specifically, Martina Löw’s (2016) conceptualization of relational space offers a conducive approach that illustrates how assorted understandings of space and/or forms of spatial inquiry could be astutely brought together. According to Löw (2016), space may be envisaged as relational arrangements in which actors, objects, and technologies are both placing and being placed. These arrangements, moreover, are based on two analytically distinct social processes: spacing—in other words, specific practices of placing—and synthesizing.

Building on similar theoretical considerations as well as empirical outcomes stemming from a variety of disciplines engaged with spatial research and thinking, the aim of this book is twofold: *opening spatial analysis and broadening the understanding of ongoing social processes as a whole*. In addition, a long-term goal, whereof this book serves as an initial stepping stone, is to develop an *empirically grounded theory of society that can best be defined as a “spatio-communicative figuration.”* In this regard, moving from “turning to space” to “thinking spatially” plays a fundamental role in theory production, “not only in the ways that theory might apply to a spatially distributed world, but in the spatialities that allow thought to develop particular effectivities and intensities” (Crang and Thrift 2000b, 3). By concentrating on space as both the object and means of analysis

and discussion, the book focuses on a key principle of the social order: exploring, first, various *social* transformations regarding their *spatial* dimensions and links; and, subsequently, restructured subjective actions, spatial knowledge, and spatial experience. On that account, spatial transformations are conceived not as abstract, unfathomable processes, but rather as processes of communicative actions and social practices embedded in people's everyday lives. What people experience, want, believe, know, do, and how they interact in turn engenders new institutions and novel forms of localization, interconnectedness, and spatially shaped (self-)experience.

In order to clearly present how the refiguration of spaces operates as an analytical angle, the structure of this book systematically follows a set of subthemes and questions. The assemblage of chapters in this book reveals, by and large, not only that space does not constitute a neutral entity existing *a priori* as regards its conception, but also how it is possible to delve into spatial transformations pointedly and discern or even contend their inherent intricacies.

Spatiality and temporality

It has long been known that space and time are intrinsically intertwined and neither concept can be thought of and written about without reflecting on the other. For example, spatial constructions change over time; humans interact in space and in certain times; it also takes time to move in and through space; and so on. Therefore, the assorted contributions in this book purposefully focus on both “the spatial” in general and *spatial transformations* specifically.

In order to discuss the specific entanglement of spatiality and temporality, it is necessary to reflect upon temporality first. As process theory has shown, two key concepts—duration and temporal pattern—are central when thinking about time (Baur 2005; Norkus and Baur 2020). “Duration” (*durée*; Braudel 1958) or “time layer” (*Zeitschicht*; Koselleck 2018) indicates that social processes differ in the amount of time they need to unfold: Whereas some phenomena must be examined over a long period, others need a more precisely delineated length of time. Heuristically, three types of duration can be distinguished (Baur 2005; Norkus and Baur 2020):

- 1 *Short-term social processes* unfold in moments, hours, or days
- 2 *Medium-term processes* (“*time of generations*”) cover the memory of the living and usually cover years or decades
- 3 *Long-term processes* (*longue durée*) go beyond the memory of the living and cover centuries or millennia

In addition to a process's duration, its pattern over time is also important. To this effect, three basic *temporal patterns* of social change can be identified from a heuristic standpoint (Baur 2005; Norkus and Baur 2020):

- 1 *Trajectories* are social processes that are patterned in a systematic way or develop path-dependently

- 2 *Turning points* occur between different phases of a process or after abrupt changes such as innovations or crises
- 3 *Cycles* describe social processes that are characterized by repetition

Against this backdrop, authors in the first section discuss *how spatiality and temporality are entwined as well as what spatial transformations arise therefrom*.

Besides the abovementioned, more abstract considerations about space and time, a more specific question is what type of spatial transformations can be empirically observed over the course of history. Empirical evidence suggests that social change and spatial transformations are interlinked. For example, Norbert Elias ([1939] 1997) has shown that in Europe, ever since the middle ages, civilizing and nation-building processes have been mutually stabilizing, driving each other along established trajectories with typical trends and countertrends. Accordingly, Elias (1986) coined the concept of “figuration” to express that different scales—namely the micro level (Elias [1969] 2002) and the macro level (Elias [1939] 1997)—are intertwined, co-develop, and, within this process, (re-)produce social inequality by including (“insiders”) and excluding (“outsiders”) people (Elias and Scotson [1965] 2002). Following this line of thought, in this book, *Martina Löw* and *Hubert Knoblauch* kick off the debate on spatiality and temporality by arguing that the second half of the twentieth century marked a turning point, contending that the specific pattern whereby social and spatial transformations are interwoven has fundamentally changed. Within this “*refiguration of spaces*” (Knoblauch and Löw 2017; 2020; in this volume), three processes unfold in parallel:

- 1 The relations of spaces as social contexts of different activities, forms of communication, and societal functions are turning into a *polycontexturalization* of space. This means that, at both a particular and structural level, different arrangements of space are simultaneously put into effect. Individual and collective actors are thus faced with the challenge of having to cope with different spatial logics at the same time; a condition that adds to, as Fredric Jameson (1991, 44) sharply asserts, “the incapacity of our minds . . . to map the great global multinational and decentered communicational network in which we find ourselves caught as individual subjects.”
- 2 Space is increasingly constituted in mediated forms spurred by hastily deepening advances in digital technologies of communication. Consequently, a *mediatization*—in the form of proactive and reflexive communicative acts unfolding on different scales and at different levels—arises and results in a simultaneity of digital and face-to-face interactions.
- 3 Humans, objects, and technologies are circulating more frequently, resulting in a *translocalization* and globalization of the economy, politics, culture, and everyday as well as urban planning/design practices. Hence, individual and collective actors and spaces, at variegated (geographically distant) locations, become progressively interconnected, coupled, and more interdependent alongside a prominent gain in the relevance of individual locations.

These processes in turn alter societies—and thereby typical patterns of social interactions—and, given that social and spatial changes are consubstantial, prompt spatial modifications (i.e. refigurations of spaces).

Therefore, Knoblauch and Löw's (2017; 2020; in this volume) concept of "the refiguration of spaces" emphasizes the overarching theoretical assumption of this book, namely that social transformations become particularly clear by looking at the restructuring of spaces and combining the knowledge, purviews, and research outcomes of diverse spatial disciplines. By concentrating on the effects of mediation, mobility, and social dislocation in spatial transformations, contributions by other authors also aim at deconstructing the notion of refiguration of spaces—as a specific interpretative vehicle to explore spatial transformations—from different theoretical and empirical angles.

A first general criticism concerning spatiality and temporality, expressed in several chapters of this section, is that, conceptually, Knoblauch and Löw (2017; 2020; in this volume) restrict themselves to mid-term or even (in actual empirical research) short-term processes. However, when it comes to spatial transformations, many of the most important and conspicuous changes only unfold over extended periods, that is, in the *longue durée*. Likewise, all chapters in this section demonstrate, on the one hand, that the past lingers on well into the present and thereby impacts current communicative action (Knoblauch 2020) and, on the other hand, how to conceptually grasp, from different angles, the entanglements of spatial transformations occurring in and throughout diverse time layers.

Karl-Siegbert Rehberg illustrates not only that humans construct space but also that that space itself affects humans. To elucidate how physical space is shaping society and how this relates to social and power structures, he scrutinizes spatial transformations that have taken place since 70,000 BC. Rehberg's analysis reveals that the extent to which humans can construct and change space is much more limited than current social-science, spatial-planning, and spatial-design discourses suggest. By solely focusing on shorter-term processes, these discourses systematically underestimate the impact of physical space on social life.

Looking into the manners in which current communicative action (short-term processes) is influenced by historicity (long-term processes), *Fraya Frehse* introduces a four-step methodology inspired by Henri Lefebvre's (2001, 73–74) regressive–progressive method. Using homelessness as an empirical example, she demonstrates that the way homeless people in São Paulo (Brazil) produce space as part of their everyday life is influenced by both past communicative action and urban structure and topology. Against this empirical backdrop, Frehse criticizes Knoblauch and Löw's assumption of a transformative conversion from a somewhat dawdling past to a remarkably hastened present. In contrast, the refiguration of spaces seems to be less linear and much more complex: The production of space by homeless people indicates that new patterns of increasing mobility ("circulation") coexist alongside long-established patterns of (im)mobility.

Similarly, *Susanne Rau* departs from examples of people's experiences of space and time in everyday life and builds thereupon a theory of spatio-temporality, which

allows scholars—in her particular case, historians—to comprehend the space–time connection. She argues that (modern) theories of space have to be integrated into the historical sciences, inasmuch as spatial studies also need to incorporate the perspective of the *longue durée*.

Finally, drawing on the work of the Architecture Principe group—namely Claude Parent and Paul Virilio—from the 1960s, *Christian Sander* gives an example of how a deeply spatial discipline (architecture) is shaped by temporality. According to the theory of the *oblique function*, the city is exclusively built with horizontal and inclined surfaces for pedestrians to circulate in order to drastically reduce the speed of movement. Circulation, Sander suggests, thereby becomes a principal organizational category in the transformation of space through time.

Spatiality, social inequality, and the economy

It is a well-known fact, especially in the social and political sciences, that the economy is a key factor in (re-)producing social inequality, inequity, discrimination, and exclusion. These interconnected phenomena obviously have a spatial dimension and manifest themselves on multiple scales. At a global level, the world-system is characterized by a global division of labor that reinforces (post)colonial divisions between the Global North and South. At a supranational and national level, regional disparities can be observed. At a community level, urban geographies of production as well as gentrification are discernible citywide.

There is strong empirical evidence to suggest that the relationship between spatiality, social inequality, and the economy is surprisingly stable in the long *durée*—powerful actors and locations consistently have managed to reproduce their advantageous position in the world-system over centuries. Hardly any war-related, economic, or political crisis manages to disturb this cycle of reproduction, and only rarely does a disadvantaged locality manage to upgrade its position (Heidenreich 2003). The chapters contained within this section explore possible reasons for this stability in order to identify ways of breaking the cycles of reproduction of social inequality and correspondingly bringing about social and spatial transformations. In doing so, the first chapters bridge the thematic gulf between the temporality and spatiality of social inequality and the economy. All chapters, moreover, find common ground by claiming that key actors reaffirming global inequality include states, other political players, and companies owned by transnational elites.

Gurminder K. Bhambra shows that current global inequalities were created during colonialism between the fifteenth and nineteenth centuries and, at the same time, criticizes the fact that economic analyses of long-term social change—such as the modeling of incomes over time—typically apply categories that implicitly reaffirm the logic of territorial thinking used by former colonial powers. Her historical sociological analysis reveals challenges for today, such as the need for concepts of differentiated citizenship and an ongoing acknowledgement of history “through forms of global distributive justice.”

Also adopting a historical-sociological perspective, *Manuela Boatcă* argues that citizenship awarded by nation states is a category of social inequality in and of itself, dividing the world-system into cores, semi-peripheries, and peripheries. Consequently, Boatcă contends, citizens of peripheral countries not only suffer from economic deprivation but also, as a result, are racially stereotyped. The seemingly neutral capitalist economy is thus based on racism and global inequality and overlaid with populist, nationalist, fascist, and racist ideologies. Accordingly, increasing global inequality both within countries—represented by social class—and across countries—represented by citizenship—are driving spatial transformations, because the fastest way of improving living standards is to move from a *peripheral* to a *core* country. However, nation states privilege the very rich of any country by allowing them to move freely and keep the very poor from immigrating—thereby reproducing the structure of the world-system.

Roberto Patricio Korzeniewicz and *Corey R. Payne*, along with *Elke Beyer*, *Lucas-Andrés Elsner*, and *Anke Hagemann*, go beyond the analytical boundaries and apparent ubiquity of the nation-state by taking a closer look at how transnational economic elites manage to stabilize—or even increase—their wealth and thus contribute to either sustaining the world-system or triggering spatial transformations, depending on which strategy better serves their needs.

Roberto Patricio Korzeniewicz and *Corey R. Payne* show that, in the *longue durée*, political spaces and territorial boundaries have continuously changed. For rich families, these spatial transformations have brought about the issue of how to best preserve their assets. As the authors demonstrate, rich families met this challenge by engaging translocally as a key economic investment practice. The refiguration of spaces is therefore characterized by “interacting, *longue durée* geographies of social and political contestation, cooperation, and identity-formation that, precisely as a consequence of their very interactions, have constantly undergone change.”

Investigating current economic actors’ fluctuating roles and engagement in the process of establishing industries and logistics for global commodity production, *Elke Beyer*, *Lucas-Andrés Elsner*, and *Anke Hagemann* come to similar conclusions. Using the example of infrastructure and industrial development projects in Ethiopia and Argentina, which are implemented in cooperation with Chinese companies and financial institutions, the authors contend that novel transnational actor constellations are fostered. A commodity chain analysis reveals how different spaces of production and distribution are interlinked and how they generate uneven spatialities. Moreover, the authors indicate the intensive involvement in the financing, ownership, operation, or construction of the infrastructures based on global flows of commodities and argue that spatial transformation in certain territories can only be fully understood if examined from a transnational and relational perspective.

Up to this point, analyses have focused on the relationship of the nation state and transnational circulation on a global scale. In contrast, *Michael Storper* illustrates that social and economic inequalities are also apparent at a supranational level and take the form of increasing regional disparities, for example, at the very core of the world-system—the USA. Spatial economic polarization is, among other things,

characterized by diverging qualifications, educational outcomes, labor force participation, and incomes. In addition, polarization of both political preferences and electoral choices is also perceptible in nationalist–populist and social liberalist–multiculturalist attitudes throughout various regions. Explaining these developments in their key mechanisms poses challenges for research on economic geography and regional and urban economy, which can only be solved through a multi-disciplinary approach that combines “micro-economic analyses of employment location, wages, the role of housing and amenities, skills and migration and place[s] them within a broad structural and developmental framework.” This is ultimately a multi- and interdisciplinary effort. The stakes are high, because geographical polarization is a threat to social and economic stability and justice in the contemporary world.

Elmar Kulke and *Nina Baur* scale down the analytical scope by focusing on the urban economy and providing an additional explanation for the sluggishness of spatial transformations in the economy: the spatial and temporal coupling of institutions. Using the example of consumer–retailer interactions in West German cities, they show how consumers (demand side) combine shopping with other everyday activities and how retailers (supply side) couple their outlets with other retailers and social institutions. Further, the authors demonstrate not only how demand and supply are coupled together but also how such combination becomes embedded in the material urban structure, in turn slowing down spatial transformations.

Digitization and visualization of space

The next section turns to another key hypothesis of Knoblauch and Löw’s (2017; 2020; in this volume) concept of the refiguration of spaces, namely that digitization drives spatial transformations. Hence, this section focuses on the function space performs in the formation of public spheres and their interaction with the digital and physical world. Additionally, several central questions are addressed: To what degree are actors and topics locally bounded or rather translocally influenced and connected? Does online communication influence the constitution of spaces offline? In what ways do actors push certain perceptions of spaces to advance their strategic goals?

In line with *Marco Bastos’* contribution, there is growing evidence that social media depend on physical spaces. The COVID-19 pandemic has even increased the interdependencies between online and offline social networks. Although they might seem unrelated at first glance, online and offline social activities reinforce each other. Furthermore, while social media interaction can develop without physical ties, interactions developed online can affect our perception of what is “real” offline and online. Bastos illustrates this by revealing that homophily is influenced by both online and offline social networks as well as the spatial dimensions of social media, which results from a tendency to associate oneself with other similar people.

Likewise, *Daniel Maier*, *Daniela Stoltenberg*, *Barbara Pfetsch*, and *Annie Waldherr* point out that digitization enables larger communities with shared imagination, interests, or experiences to become more translocal. In other words, although

people move around the world much more than ever before, they can still relate to their groups at home via digital communication. Therefore, communities not only continue to be spatially rooted but also form translocally distributed social pillars for public spheres to enhance their strength through communication in social media. Moreover, digital communication regularly breaks up national territories and, at the meso level, reorganizes translocal communities and the relationship between the public sphere and space. The authors urge for research to incorporate the translocal as a key category to delve into social media communication. Their call resonates with planning, design, and policymaking circles, in which, though the power of Internet-based communication is widely acknowledged, the translocal potential and influence of communities has not been considered in the least.

Eric Lettkemann and *Ingo Schulz-Schaeffer* take a different stance at investigating how the digital and physical world are entangled by investigating whether the increasing use of locative media—such as Foursquare City Guide or Swarm—creates new inclusive public meeting places or reinforces urban segregation by creating exclusive places. Their study reveals that locative media encourage the exploration of unknown places and could therefore lead to a decentralization of social milieus in the public urban fabric. Urban data circulations thus result in a constant modification and recombination of communicative action in public space and, at least currently, practices of inclusion and exclusion seem to balance each other out.

Now, not only digital communication and data flows but also visual representations of space portray powerful spatial transformations and thereby modify and suggest distinctive spatial images and experiences, which may in fact alter the physicality of cities. *Gillian Rose* investigates how, in digitally mediated cities, people change their way of “looking at images of other people, on digital screens large and small, pictured in that city or another.” She identifies a form of co-production of embodiments at the interface between different technologies that oscillates between representational and animated forms—best described as “animated embodiment.” Whereas representational bodies denote existing social categories, animatic bodies are emergent, mobile, fluid, and mutating. Both constitute different organizations of urban space—in order to understand mediated cities, entanglements, transformations, and mixtures of urban circulations must be part of the equation.

Spatial transformations become visible in the photo essay by artist and researcher *Stefanie Bürkle*, who weaves together images of various places within different cultural settings to display the influence of migration and tourism on both space and individual spatial perception. The continued flow of images shows not only surprising links but also new compositional and content-related connections and transitions, which go well beyond the images themselves and between the depicted spaces. The photo essay comprises, altogether, a mode of spatial representation, which, far from solely artistic, is meant also as an animatic experience for the book’s readers.

Imagining, producing, and negotiating space

The chapters in this book's last section explore how medium- and long-term spatial transformations have modified the relationship between humans and the production of space in contemporary society. To that end, a series of interlaced concepts—such as globalization, materiality, appropriation, affordance—are scrutinized, alongside the dynamics and logics of the production of physical space unfolding amid local–global tensions. Against this backdrop, the contributions grapple with questions such as: how the linking and coupling of spaces impact planning, construction, and appropriation processes; which alternative options for action and conflicts arise; the ways in which individuals cope with the notion of (in)security; and how multi-directionality forges new spatial knowledge and urban practices in addition to building new translocal alliances.

Since the 1970s, mounting economic exchange, migration fluxes, and communication technologies have not only amplified subjective uncertainty and insecurity but also paved the way for them to permeate identity politics. Consequently, political actors more often than not instrumentalize uncertainty and insecurity to legitimize their agendas and exert economic, political, and technical control over certain space—for instance, when designated “dangerous zones” in cities are put under surveillance to allegedly improve “security.” Using Ronald D. Laing (1960) and Anthony Giddens’ (1991) concept of “ontological security,” *Ilse Helbrecht*, *Janina Dobrusskin*, *Carolin Genz*, and *Lucas Pohl* identify social practices that counteract the lack of ontological security, such as geopolitically positioning yourself (i.e. developing an understanding of the world by subjectively evaluating events happening all over the world), homemaking, and nature-related routines.

In line with such spatial strategies, *Talja Blokland*, *Daniela Krüger*, *Robert Vief*, and *Henrik Schultze* stress the importance of the neighborhood in mastering everyday life. The authors propose a research approach that takes into account not only subjective definitions of support needs but also from where and in what form support actually comes. This would eventually result in geographies of support that, sure enough, are also susceptible to the effects of mobility and digitization. Hence, in order to fully grasp spatial transformations at the neighborhood level, both local and translocal networks have to be analyzed, and spatiality, as pointed out by the authors, needs to be considered within network data studies, while factors other than proximity have to come into play.

Similarly, *Jennifer Robinson* argues that new territories of urban politics—including city–regions, operational landscapes, and large-scale development projects—cannot be fully understood without contemplating transnational actors and practices, circulating policies, and material and financial flows as key drivers of urban development. Robinson looks for the spatiality in urban policy action by making territories and territorializations of the politics an access key for analyses and theorization.

Ayham Dalal, *Aline Fraikin*, and *Antonia Noll* explore the tensions between urban inhabitants and policymakers as well as between long-term local residents and new

migrants. The authors explore refugees' ability to adapt temporary homes gradually and thereby imbue them with "meaning beyond the [officially] envisioned planning." Refugees, the authors sustain, appropriate and reassign through subtle practices of forming soft and temporary spaces such as "hanging curtains, placing carpets, dismantling beds, assembling fridges, storing luggage, and relocating mattresses, chairs and tables." Refugees' material modifications constitute as much a political act as a spatial practice aimed at, somewhat stealthily, overcoming and undermining the arbitrariness of spatial regulations—which may even result in the erosion of disciplinary powers exerted through space.

In the last chapter of this section, *Ignacio Castillo, Angela Million, and Jona Schwerer* inquire into the discrepancy between experts' abstract conceptions and people's everyday uses of space in their study of children's "deviant" use of public space. Drawing on the concepts of affordance, relational space, spatial knowledge, and spatial pedagogization, public space is seen as an arrangement of multiple material objects and actors with varying degrees of spatial knowledge and physical qualities. The authors sustain that, whereas design and planning experts seek to assert a specific and ultimate purpose of public space's constitutive material elements (i.e. a spatial pedagogization), children subvert such efforts by "uncovering," through their intuitive actions, dormant affordances (i.e. a performative articulation of their spatial knowledge). In view of such a conundrum, the authors pose the question of how children's spatial knowledge, objectified in their uses of spatial arrangements, could be substantively integrated into the design process. Accordingly, the chapter deconstructs, as an empirical case study, the intervention of a public space on the outskirts of the city of Lima, which has followed a fairly unorthodox approach towards child participation and seems to have moved from a "prescriptive" to a "responsive" posture regarding the uses with which public space is to be instilled.

Towards an interdisciplinary scholarship of spatial research

The previously discussed overview of the sundry chapters comprising this volume illustrates the potential of multi- and interdisciplinary spatial research and spatial thinking—for both theory and practice. Overall, the contributions of this volume indicate that spatial transformations are characterized by three key aspects:

- 1 *Space-time entanglements*, which, though they are already comprehensible in the notions of "spatial transformations" and "refiguration of spaces," in order to fully understand them, it is important to keep in mind that spaces are refigured on different spatial scales—from specific localities and neighborhoods to cities, regions, and nation states, throughout the entire world-system—and that processes of refiguration unfold within different time layers. It is therefore especially important not only to carefully consider spatial transformations in the *longue durée*, but also to pay closer attention to the interactions of spatial transformations across different scales and time layers, as the patterns of refiguration become more specific and distinguishable.

- 2 *The processes of refiguration of spaces are characterized by power struggles, and existing power relations contained therein are often reproduced and reinforced—perhaps the most conspicuous example being the postcolonial structures of inequality within the world-system. Several chapters direct a critical perspective towards the effects of spatial refigurations by concentrating either on the impacts of the economy of the spatial division of labor and social inequality or on spatial aspects of social inequality, inclusion, and exclusion. In doing so, they bring to the fore the upshots of the refiguration of spaces along the lines of class, gender, and ethnic relations and ask who is included or excluded, where, when, why, how, and to what effect. However, as powerless and disenfranchised as some actors—such as refugees and children—may seem, they are far from passive. They are fully capable of developing counterstrategies to undermine the very attempts at controlling them. The power (im)balances and ensuing spatial practices among the different social groups in turn drive the process of refiguration of spaces.*
- 3 When looking into the manifold ways in which *offline and online public spaces are designed*, it needs to be taken into account that spaces are systematically related to and become entangled with one another. In this context, the entanglement of three fields needs to be taken into account more effectively in future planning and design processes:
 - a Planning and appropriation of urban space
 - b Translocal planning processes and procedures
 - c The role of spatiality in online and offline public spheres

Examinations of spatial production consider the relationships and tensions between *planned space* and *appropriated space*, and thereby, implicitly, the interactions between (urban) planning, architecture, and people's interactions in everyday lives. In this context, the question as to how materiality, affordance, and refiguration of spaces are interrelated remains open. The contributions in this book reveal that planning processes and procedures can be tackled as a *translocally circulating planning practice* with similar expectations of spatial constitution and furnished with challenges on spatial production. Also, the ways and extent to which planning, in and of itself, contributes instrumentally to triggering the refiguration of spaces are explored, inasmuch as spaces in and beyond (the practice of) planning are conspicuously mediated through *visualizations*. Shedding light on the production of (new kinds of) imagery arguably reveals how spaces are refigured. Last but not least, the relationship between *spatial constitution* and *the public sphere* is examined. Based on the differentiation between diverse types of publicity in the literature, their spatial concepts are juxtaposed and compared to each other in terms of leading questions and empirical characteristics. The analytical gist, moreover, is the influence that processes of spatial constitution exert on the emergence and dynamics of distinctive sorts and forms of publics.

The inherent complexity of investigating these convoluted refigurations of spaces can be seen on the subjective plane, at the level of communicative actions and social

practices and within institutional frameworks. To conduct, substantively, socio-scientific spatial research, in its broad sense, interdisciplinary cooperation is essential. This volume as a whole, along with each of the contributions, makes manifest that space, across the different disciplines covered, does not simply enable a relatively uncritical passive reflection on social phenomena, but rather constitutes both a *representational* and *constitutive* analytical strategy that allows bridges to be built across disciplines.

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