2. Understanding contingencies in urban future-making

Unsettled foundations and the city of emerging possibilities

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Contingent cities

Cities are often approached as places defined by order and control. They are planned through meticulous urban design, governed by policies and institutions, regulated by laws and ordinances, shaped by infrastructural and technological frameworks, nurtured through communal and economic investments, and built to reflect specific visions of functionality, identity, and progress. Consequently, cities are frequently treated as spaces of power and discipline where each element – be it physical, social, or cultural – is assumed to contribute to a coherent and regulated whole. While this perception undeniably shapes many realities of urban governance, planning, and design, it overshadows a critical counterpoint: The city as a locus of order and control only emerges against the backdrop of a deeper, often unacknowledged, sense of disorder and uncertainty. The geographers Ash Amin and Nigel Thrift state:

> [W]e must see cities as nexuses of systems of discipline – certainly and undeniably. But we must also ensure that we keep a vision of cities with all the uncertainties and risks left in, and especially the recognition that the cities' inhabitants get the chance to redefine, though rarely on their own terms, what it is to be ordered about and interrogated by these systems. The city, in other words, always contains a necessary contingency without which it would be an impossible project. (Amin and Thrift, 2002: 130)

Cities are inherently contingent structures that are always subject to potential change and transformation. The processes that structure the city as a space of order, therefore, presuppose conditions that are inherently contingent and could have unfolded otherwise. Whenever planners, architects, and other kinds of built environment professionals work to maintain or transform the city, they either implicitly or explicitly encounter the city's contingency. Each act of decision-making concerning cities and urban processes, whether large-scale, such as the establishment of transportation networks, or small-scale, such as the placement of a park bench, arises from a complex interplay of competing visions, uncertainties, and improvisations (Zeiderman et al., 2015; Kaker et al., 2020). The constructed order of the city is thus less a fixed reality and more an ongoing negotiation with the ongoing potential for change. Seen in this light, every city could always be different. Even how we define the city is, per se, not unquestionable. Or, as Ignacio Farías (2011: 368) put it: 'The key role of cities is then a historical contingency that could have been and could also become otherwise.'

To widen the scope of what the city is and can be is a crucial aim of urban research, which becomes particularly apparent when we move beyond the familiar contexts of Western European urban conditions to explore other times, places, and conditions. As such, urban research 'allow[s] us to think about the urban as an incomplete and contingent process as well as an undecidable category' (Roy, 2016: 819). Approaching the urban as contingent and undecidable requires both critical analysis and creative speculation. It calls for imagining alternative pathways that challenge prevailing paradigms of urban change, as well as for recognizing its multiple temporalities, where histories of colonialism, migration, and ecological change continue to shape present and future urban conditions. A crucial aim of urban research is not so much to define and determine the city, but to keep it open, as a space of emerging possibilities (Sendra and Sennett, 2022).

In the following chapter, we start by providing a general overview of how contingency has been introduced in different strands of social and political theory. We highlight that contingency is often either considered as a historical or as an ontological condition of society. Based on the latter, we demonstrate how contingency can be viewed as an ongoing and recurring unsettling of once-sedimented social relationships, thereby enabling these relations to change and create space for new possibilities. In the subsequent section, we demonstrate the enmeshed dynamics of sedimentation and social change in relation to urban space and material artefacts. We highlight how the built en-

vironment can influence social processes both by promoting sedimentation, thereby masking contingency, and by fostering social change, thus opening up new pathways for the future. Stemming from this, and drawing on the findings of this volume, we emphasize how built environment professionals cope with contingency and how planning and other forms of urban future-making constantly evolve in response to unexpected occurrences that can be regarded as both threats and opportunities. We conclude by pointing out how contingency offers a new pathway to think of the possible city.

Contingency in and of society

When we try to define the term *contingency*, we should first avoid equating it with coincidence or arbitrariness: 'Contingency is not arbitrary chance. It represents a complex discourse – set of truth-telling practices – about the knowledge of uncertainty' (Dillon, 2007: 45). Contingency does not mean that something is just by chance the way it is or that there is simply no explanation for it. Rather, it denotes a structural inconsistency. In political terms, contingency often carries a dual meaning (Barry, 2016). On the one hand, it refers to the proactive measures taken to prepare for unexpected or extreme events, such as floods, violent conflicts, financial crises, or shortages of essential resources. In this context, practices such as risk assessment, insurance, conflict resolution, and environmental monitoring exemplify the necessity of preparing for contingencies. Organizations are tasked with not only planning for anticipated scenarios but also adapting and formulating new contingency strategies as emerging challenges arise.

On the other hand, contingency suggests more generally that something is not entirely predetermined. In this latter context, contingency implies that phenomena and processes could always be different. In its most radical form, contingency means that nothing is permanently 'fixed' or inherently predetermined. Even when something appears fixed – whether through construction, regulation, materialization, or other forms of stabilization – it remains open to being 'unfixed' at any moment. Contingency, therefore, underscores the inherent possibility of change. There is always potential for transformation, even if the change does not necessarily meet the intended ambitions of achieving stabilization. Being contingent upon something, hence, refers precisely to the likely scenario that this something may 'unfix' one's certainties. This logic also applies to a historical (hindsight) perspective of a former something.

In social theory, contingency has been defined in either historical or ontological terms, i.e. as a particular or universal condition. Sociologist Zygmunt Bauman (1996: 51), for instance, speaks of postmodernity as the particular 'condition of contingency', thereby denoting that contingency signifies a particular moment in social history. After postmodernism abandoned the certainties and principles of modernism, society entered into a condition of contingency in which there are no longer any incontrovertible truths. Society under postmodern conditions, therefore, rests on what philosopher Judith Butler (1992) calls 'contingent foundations', i.e. foundations that always exist in plural and can only be established (temporarily) until, at a certain point, other founding principles are (temporarily) established. Against the notion of a particular condition of contingency derived from 'the postmodern condition' (Lyotard 1984; Dear, 2000), other strands of social and political theory insist that *every* social condition rests on such contingent foundations. A crucial figure in this regard is sociologist Niklas Luhmann (1996), who acknowledges that premodern societies already encountered their own paradoxical foundations, even though contingency found its proliferation in modern (and postmodern) times, when 'all connections' became contingent (ibid.: 64).

Further theoretical contributions gathered under the banner of 'post-foundational political theory' conceptualize the very foundations of politics and society as being based on a necessary and therefore 'radical contingency' (see Marchart, 2007; Landau et al., 2021; Blakey et al., 2022). Political theorist Ernesto Laclau, one of the main contributors to post-foundational political theory, considers the concealed 'contingent nature' of all kinds of social matters and 'institutions' through the notion of *sedimentation*:

> Insofar as an act of institution has been successful, a 'forgetting of the origins' tends to occur; the system of possible alternatives tends to vanish and the traces of the original contingency to fade. In this way, the instituted tends to assume the form of a mere objective presence. This is the moment of sedimentation. […] [S]edimentation can be so complete, the influence of one of the dichotomous relationship's poles so strong, that the contingent nature of that influence, its original dimension of power, do not prove immediately visible. (Laclau, 1990: 34)

Sedimentation – here understood as the routinization, fixation, and objectification of specific constellations of physical, material, and symbolic power – allows us to treat particular social matters as 'normal', 'natural', and thus as in-

evitable, or necessary. The very fact that everything could have been otherwise, on the other hand, implies the absence of absolute necessities, the existence of alternatives, and the ability to reveal and articulate these alternatives as a prime focus of struggles over power and influence. It requires power to stabilize a particular social condition and to maintain the status quo. Conversely, to destabilize a social condition and to open up the space of contingency, power is equally essential. It is here where we find the common ground of contingency and conflict. Whenever political conflicts arise, it becomes clear that things could also be different, i.e. that they are contingent. As sociologist Oliver Marchart (2021: 107) puts it: 'It is through the collision of antagonistic forces that we become aware of the contingent nature of sedimented routines. Only then do we become conscious of the fact that things could be different (historically and in the future)'. If all social processes are inherently contingent, they are inevitably intertwined with possible conflicts over which (contingent) foundation will prevail, and which alternative will be rejected.

As soon as we take contingency in and of society for granted, it is only a small step to engage with the openness of the future. Once we can no longer assume that things will always remain as they are, contingency becomes a central pillar of future-oriented thinking and action. The future is an unpredictable domain filled with risks, riddles, and uncertainties (Amin, 2013; Urry, 2016). To navigate it, strategies are established to aim at controlling and stabilizing potential disruptions (Lentzos and Rose, 2009; Anderson, 2010). These measures are designed to regulate, and 'sediment', the course of change as well as to influence how society unfolds. However, such attempts at stabilization and sedimentation are themselves contingent, often shaped by power asymmetries, ideological assumptions, and the limits of human foresight. In this sense, contingency is just one of many names used to evoke the openness of the future (Anderson, 2010: 780). Rather than a purely destabilizing force, however, contingency offers a generative potential, opening the space for new possibilities, forms of agency, and experimental approaches to imagining and constructing futures that are not merely reactions to risk but also embrace uncertainty as a site of innovation and transformation (Scoones and Stirling, 2020; Grubbauer et al., 2024a).

While there has been a tendency in social theory in recent years to approach society as temporarily or even ontologically contingent, and, respectively, the future as open, we should not neglect that 'we are not in the domain of pure contingency' (Dikeç and Swyngedouw, 2017: 12), i.e. that things do not always change and that there are also necessities (and not only contingencies)

that predetermine the fate of the future: 'As critical scholars wholeheartedly fighting for a better world, we prefer to believe that the world is malleable, that the future is open and up to us, that we are in control' (Simandan, 2010: 388). The truth, however, is that there are various constraints that shape the course of social life, and that critical knowledge often does not change the way things are. The future is thus not always open (particularly not to everyone), but to some extent, it is more often predetermined by powerful actors and sedimented structures. And something similar is true of the city, as 'urban spaces and institutions are most of the time "settled", in sedimentation after a certain contingent, disputedly instituted "setting" has been successful and met with acceptance' (Heindl, 2023: 221). Yet, what contingency allows us to highlight is a certain 'degree of undecidability' (Landau-Donnelly and Pohl, 2023: 488) that lurks within every form of social (inter)action. Contingency, therefore, means to 'furnish an always expansive space of possibility, not in the sense that "everything goes", but by eliminating the possibility of a final suture' (Fisker, 2021: 68).

Whether we understand contingency as a particular or as an ontological condition of society, the concept can help us to insist on the perpetual possibility of change. Recognizing the contingent nature of the things around us thus leads to a kind of denaturalization and de-objectivation of our social environments. Contingency sets society in motion. Of course, this does not mean that things are actually changing. On the contrary, we are currently experiencing a contradictory political situation in which everything seems to point to necessary change, yet nothing seems to be fundamentally changing. As put by Geographer Erik Swyngedouw:

> While clouded in rhetoric of the need for radical change […], a range of technical, social, managerial, physical, and other measures have to be taken to make sure that things remain the same, that nothing really changes, that life (or at least our lives) can go on as before. (Swyngedouw 2018: 82)

Yet, even in times of stasis and supposedly 'complete' sedimentation, contingency can emerge at any time to unsettle the status quo – no matter whether it is on a micro-scale of social interaction or on a macro-scale of societal transformation. That is what this volume is about.

Contingent urban foundations

The dynamics of sedimentation versus social change become more complex when the interrelation between urban space and material artefacts is considered. The interaction of social processes with material structures has long occupied the attention of research in different disciplines concerned with cities and spatial formations in general, from the social sciences and the humanities to the built environment disciplines of architecture and planning, among others. Socio-materiality is certainly a key theme and common denominator of the interdisciplinary field of urban research (Guggenheim, 2016; Watson, 2019). The interaction and interrelation between social and material worlds is, first of all, shaped by different temporalities: On the most fundamental level, different temporalities stem from differences in the substance of human and non-human life, as the life span of material matter is in contrast to the lifetime of humans; however, societal processes and social change are themselves also structured by different temporal cycles. Beyond the life expectancy of humans, the temporal regimes of modern societies, including their political cycles, play a role, as do the temporalities and rhythms of social practices and everyday urban life (Madanipour, 2017; Wunderlich, 2023). Yet, material matter, particularly in the form of the built environment, is constantly subject to human intervention: decisions influencing the lifespan and continued existence of built objects based on economic, cultural, and political rationales (see Thiel and Grubbauer in this volume).

When socio-materiality is seen as a constitutive feature of urban life, contingency can be recognized as the result of the unpredictable ways in which built structures and urban form can influence social processes in both directions: towards sedimentation or towards change. The built environment contributes to and exacerbates processes of sedimentation. Built structures and urban form thereby function as forces of inertia by objectifying the structures of the social world, and by serving as a locus of collective memory, place identity, and symbolic meaning (Steets, 2015). At the same time, urban spaces and built objects can provide for inspiration and collective imagination that point to new pathways for the future (e.g. Dobraszczyk, 2019; Zeiderman and Dawson, 2022), they can support societal progress in very fundamental material and operational terms, and they can trigger social change by prefiguring other social worlds and allowing for social experimentation (e.g. Vasudevan, 2017; Graeber and Wengrow, 2021). A crucial task, then, for 'urbanists' of all sorts is to ask: 'how to plan the construction of the next layers in the urban palimpsest

in ways that match future wants and needs without doing too much violence to all that has gone before' (Harvey, 1996: 49–50).

Processes of *sedimentation* in terms of the fixation, normalization, and objectification of social constellations become manifested in and through urban spaces on different scales: from settlement patterns and technological infrastructures to urban typologies and individual buildings as artefacts of everyday life (Sennett, 1991; Markus, 1993). Trying to understand how these elements as products of decision-making and human action at some point in history shape societies in the long-run and across generations, researchers have proposed a variety of concepts: Historians and cultural theorists have conceptualized the city as a 'palimpsest', constituted by accumulated layers of meaning, memory, and cultural symbolism (Huyssen, 2003; Binder, 2015). Architectural and urban theorists, in particular, have drawn attention to the ways in which everyday use and appropriation of space by inhabitants are part of such processes of meaning-making over generations (Cupers, 2013). Paying attention primarily to technological, economic, and ecological factors, the concept of path dependency is used by historians and other scholars to explain why certain trajectories and spatial constellations become stabilized while other paths are not taken (e.g. Bernhardt, 2018), with recent interest particularly in the temporal dimensions (Engels, 2020). With a focus on sedimented processes of socio-spatial fragmentation, exclusion, and marginalization, urban scholars have long sought to systematize how the social stratification of society and spatial structures interact and re-enforce themselves over time, showing how patterns of socio-spatial disparity are often extremely persistent and difficult to change (Graham and Marvin, 2001).

How *exactly* the interaction between social processes and material artefacts impacts sedimentation has been up for debate for a long time: One of the key challenges for various built environment professionals is to understand and anticipate how built structures impact human societies far beyond the specific political, cultural, and economic context of their origin. Academic debates offer different ways to conceptualize this impact of built structures: Cultural concepts such as *Erinnerungsräume* (spaces of remembrance) pay attention to the accumulated memories of generations that become symbolically manifested in specific places (Assmann, 1999). Sociologist Richard Sennett (1970) highlights how the symbolic power and authority of dominant groups influences the meaning of buildings and urban spaces. Geographer David Harvey (1985), on the other hand, addresses the economic dimension of sedimenta-

tion by pointing out how capital accumulation impacts the built environment through the logics of rent-seeking and spatial fixity.

Two contributions in this volume examine the crucial role of the built environment via an historical analysis that allows us to trace processes of sedimentation as a result of the interaction between social processes, built structures, and political contexts. Both highlight the unexpected ways in which contemporary social dynamics emerge from historical contingencies. Thilo van der Haegen, in his chapter on Indigenous real estate development in Vancouver, analyses how contingency can be understood not in the sense of 'everything goes', but as a way to engage with the indeterminate and often contradictory nature of urban futures. Using the example of First Nations housing projects, he shows how their integration into the real estate market reflects both practices of 'doing otherwise' and the reproduction of settler-colonial accumulation through the expansion of private property onto Indigenous lands. He concludes that the contingent character of urban future-making in postcolonial cities like Vancouver emerges from the dynamic interplay between lingering settler-colonial structures and present-day Indigenous agency. Irina Redkina, in her account of the legacies of modernist planning in India, also makes a claim for conceiving urban future-making as contingent upon historical structures, as seen in her analysis of the steel town of Bokaro. In her argument, contingencies emerge from the interplay between historical public spaces and the changing social and economic context surrounding them. She highlights how today these spaces, also due to their remarkably robust design, serve social life in the city in unexpected ways by allowing for non-commercialized social interactions amid market-driven urban development.

Processes of *social change*, on the other hand, are equally manifested in and fuelled by urban transformations and material interventions in the built environment. Most obviously, this relates to large-scale endeavours of urban and regional planning: The (re)building of cities in the modern era has long been understood as a sign of progress and as a radical break with the past (Kaika and Swyngedouw, 2000; Gandy, 2004). Post-independence capital cities, large-scale infrastructural projects, modernist housing estates, and iconic signature buildings all stood as turning points and promises of societal changes, and all had the political function of legitimizing new political regimes and establishing new societal compromises, whether in the Global West or the Global East. The dilemma of the present situation is that many of these promises of (European) modernity have lost their ideological appeal (Reckwitz, 2021). This resulting uncertainty is felt drastically under conditions of urban crisis, where

the built environment no longer provides comfort and amenities in the ways it is expected to. Indeed, social change in the present moment is fuelled by a loss of trust in the operations of state institutions; this becomes manifested, most clearly, where infrastructures fail, housing is in short supply, and basic services are interrupted (Grubbauer et al., 2024b).

Two other contributions in this volume, which investigate urban conditions in the Global South, provide an important corrective to simplistic assumptions about ideas of progress and social change associated with modernist and top-down planning. Ana Paula Koury and Alessio Mazzaro's chapter raises the question: What happens if state institutions have never managed to build trust with large parts of society, so that a lack of trust in the state is not an unusual or new phenomenon but is, instead, a common one? In their discussion of water infrastructure development in São Paulo's peripheries, the authors show how 'contingencies are the rule and not the exception'. Along a range of emergency interventions in the face of severe flooding, they illustrate how unforeseeable events, but also established governance routines, lead to unsustainable and unsatisfying outcomes in informal settlements. Similarly, the chapter by Aboli Mangire deconstructs modernist narratives around mass housing for the poor amongst climate change uncertainties in India. She shows how government policies that provide mass-produced housing under the banner of poverty alleviation appear inadequate when viewed in the light of future climate necessities. The policies prioritize standardization in construction using reinforced concrete frames, yet, as Mangire shows in her case study, such construction techniques neglect the thermal evaluation of materials and the cooling requirements that will only increase in the future.

Another long-standing strand of the discussion about how urban spaces have the potential to trigger and amplify social change looks at the more informal ways in which urban spaces are used and appropriated on a smaller scale. Scholars of different disciplines have theorized cities as places of encounter, arguing that social interaction is fundamental for understanding cities as sites of innovation (Jacobs, 1969), but also as sites of democratic practice and political contestation (Holston, 2008; Harvey, 2012). This goes along with the argument that cities have, historically as well as in the present, served as nodes in global networks of communication (Sassen, 1991; Graeber and Wengrow, 2021). A relevant but sometimes overlooked argument is that not only spatial proximity and social heterogeneity but also spatial and atmospheric qualities contribute to social interaction and the emergence of new ideas. This is a rich thread in architectural and cultural theory, concerned with understanding how urban

spaces are used in expected but also unexpected ways, as well as with which types of urban spaces have the greatest potentials for new and diverse uses (Borden et al., 2002; McGuirk, 2014). While modernity was radical in experimenting with new building typologies, forming new urban practices, today's potentialities (not only in Western contexts) are often seen in spaces of 'in-betweenness' that escape institutionalized order: niches, informal and derelict spaces, wastelands, and even ruins (Gandy, 2016; McFarlane, 2021).

In her chapter, Clara Da Ros engages with 'interstitial' spaces as a gateway to reflect on the contingency of urban life. In her research on bunkers in Hamburg, she addresses the transformation of bunkers from their original military purposes to becoming spaces for collective cooking, urban gardening, and storage rooms for agricultural goods. Through this, Da Ros argues for an 'always-in-the-making' of urban space. The key point here is that the potential of urban spaces to either reinforce sedimentation or to support the emergence of new social practices ultimately remains unpredictable. Contingency lies not only in the fact that the 'normality' of social reality can always be questioned but also in the fact that these questionings already unfold within built structures. Built environments are *immanently* unstable, as they emerge from human actions, are subject to culturally specific forms of human appropriation, interpretation, and valuation, and are shaped by non-human activity as well as ecological processes of aging and decay.

Coping with contingencies in urban future-making

Today, we can see how buildings and infrastructures increasingly face extreme conditions for which they are not adequately designed, and we see that existing built environments have to be radically adapted to new ends and functions in order to save energy and other resources. Incorporating redundancy and resilience into cities' hardware becomes essential to navigate urban futures under unpredictable conditions. However, in the face of the longevity of built structures, decisions made today to adapt to an uncertain future will have lasting effects over generations, especially when considering large-scale infrastructural works. Coping with an indeterminate future and unforeseen extreme events thus requires rendering both the existing urban fabric and new constructions resilient and adaptable to future needs. Also, the relation between sedimentation and change requires being addressed in new ways, in particular when the maintenance and stabilization of existing structures is at stake.

Whether the practices and tools of policy and planning are equipped for such a task is discussed in this section.

In terms of how professional practice generally mobilizes the notion of contingency, we can attribute Barry's (2016: 2) first part of the 'dual meaning' of contingency mentioned above. Following that logic, contingency does not denote that everything could be different, but mostly 'refers to those things that should be done in advance in order that unexpected and (sometimes) extreme events can be managed'. The key notion in such applied understandings of contingency is 'contingency planning' (e.g. Clay, 1971). There is a long tradition of contingency planning in military services, risk-exposed government departments (e.g. administration of critical infrastructures), and corporate strategies, wherein management literature often distinguishes between 'defensive' and 'offensive contingency planning' (ibid.: 71). In this vein, and from a business perspective, unexpected occurrences can thus be regarded as both a threat (defensive) and an opportunity (offensive). Both options, though, require a sense of preparedness to be able to either seize the opportunity or to avert the threat (or, at least, mitigate its hazardous impact).

Within management research, the literature on 'high-reliability organizations' (HROs) (Weick, 1987; Weick et al., 2008) discusses the most extreme needs for, and therefore most sophisticated modes of, such preparedness, though these focus on the 'defensive' side of contingency planning. HROs include systems such as air traffic control or nuclear power plants. These systems are technically complex, hence harbouring the risk of small incidents cascading into major disasters; the impact of disruptions to these systems would in fact be so disastrous that conventional incremental modes of trial-and-error learning are not at all an option. Transferring the lessons from HRO research to mega-project planning, Gernot Grabher and Joachim Thiel (2014) conclude that systems, in order to maintain their adaptability to shocks, need to create 'redundancies' (see also Grabher, 1994), which can be structural, relational, or cognitive (Grabher and Thiel, 2014). Structural redundancies include the allocation of extra resources (time, space, money, organizational structures) to the system that are not used in normal times but can be easily mobilized when necessary. Relational redundancies comprise informal networks able to take over when formal hierarchies collapse or prove unable to make decisions quickly enough. Cognitive redundancies refer to the attitude of involved organizations, requiring a collective sense of preparedness and 'mindfulness' (Weick et al., 2008) that helps to 'uncover assumptions people take for granted, trace out new implications of old assumptions, and identify

latent organizational flaws' (ibid.: 54). The cognitive dimension of preparedness, then, supports the 'acceptance that things can go wrong' (Grabher and Thiel, 2014: 542), so that involved stakeholders need to anticipate failures even if everything is in order.

Also in urban planning research, extant literature has long focused primarily on the 'defensive' side of contingencies: Contingency plans are designed to afford preparedness for any kind of high-impact event, such as transport interruptions, flooding, drought, or earthquakes (e.g. Meyer and Belobaba, 1982; Torrieri et al., 2002). The key for those plans is to provide decision-making support for 'as if' constellations (Anderson, 2010: 787). This support basically involves two elements: simulation and scenario planning tools to anticipate possible situations that require immediate response (e.g. Chakraborty et al., 2011; Othman et al., 2023), and a protocol that assigns roles and defines responses as if the anticipated situation had occurred (Meyer and Belobaba, 1982). However, research also emphasizes the politicized but contradictory nature of contingency planning. On the one hand, the (un)effectiveness of a plan in crisis situations 'is readily associated with the city leaders who adopt it' (ibid.: 462). On the other, it is difficult to motivate political leaders to engage in contingency planning 'when there is no crisis' (ibid.: 464). Adding to that, Kerstin Eriksson and Allan McConnell (2011) argue that given the importance of 'non-contingency planning factors' for the quality of 'crisis management outcomes', the correlation between the planned and the actual outcomes is anything but straightforward.

Several contributions to this volume illustrate how such traditional approaches of contingency planning appear outdated in the present context. Alexander Stanley explores the contingencies that result from these new risks for port cities in particular and shows how traditional concepts of risk assessment in port planning are limited by their focus on material infrastructure. Drawing on the two cases of Hamburg and Cape Town, he proposes to think of law-making as a dynamic process and argues that climate adaptation planning needs to be more flexible by constantly adapting to law and governance arrangements. Similarly, the chapter by Lena Enne, with her investigation of infrastructural work in Hamburg, points to the limits of traditional contingency planning. She highlights how contingency results particularly from the interrelations between different infrastructure sectors, and from the evolving standards and procedures in maintenance, adaptation, and expansion of overlapping utility grids since the 19th century. Administrators and experts dealing with these kinds of urban networks in the current context need to take these

contingencies into account when coordinating infrastructural maintenance and repair across the different sectors, with different material needs, varying organizational and ownership structures, and dynamically shifting political priorities.

More recently, though, planning literature has begun to use the term *contingency* in a different manner, as a general attitude for coping with uncertain futures. Contingency is regarded as the opposite of control, as, for instance, the literature on 'urban living labs' (Bulkeley et al., 2019) maintains. Thus, approaches to contingency planning, in this more recent sense, in a way, imply a return to incrementalism; such approaches are 'inspired less by cohesive, long-term visions of twentieth-century urban planners and more by locally focused interventions that are transforming cities through incremental processes' (Karvonen and Bylund, 2023b: 153). This attitude both adopts the second part of Barry's (2016) dual meaning of contingency – namely, 'something that is not entirely predetermined' (ibid.: 2) – and stresses the 'offensive' side in Michael J. Clay's (1971) model of corporate contingency planning. Hence, this idea of contingency in planning is about openings and opportunities. Experimental approaches – epitomized in the proliferation of urban laboratories (Karvonen and van Heur, 2014) and other more 'acupunctural' interventions into the urban fabric (Lerner, 2014) – open up opportunities, and a strategy of incrementally 'muddling through' (Lindblom, 1959) enables planning professionals to leverage these openings.

Urban scholars today look into the increasingly piecemeal involvement in the 'blessed mess' (Karvonen and Bylund, 2023a) of urban development from different directions: Some link these approaches to 'tactical urbanism' (Vallance and Edwards, 2021), others to the idea of 'agonistic planning' (Pløger, 2023); others discover 'a city of permanent experiments' (Karvonen, 2018) as the main feature. The chapter by Kathrin Meyer in this volume reminds us that also incremental and acupunctural material interventions into the existing building stock face important contingencies. Discussing the case of rooftop extensions, which are considered a promising strategy of densification in combination with energy-efficiency measures in response to social and ecological demands, Meyer shows how uncertainty results from the lack of reliable building documentation. In this way, contingency emerges not only from future unpredictability but also from fragmented knowledge of the past and the material characteristics of existing structures.

However, the growing embrace of contingency in urban planning is not without critique. Some scholars warn that promoting a positive or 'offensive'

stance towards contingency risks abandoning the planner's role in steering urban development (Savini, 2017; Kaminer, 2024) and ultimately aligns with the logic of neoliberalism. As Tahl Kaminer (2024: 14) puts it, '[i]nevitably, "embracing contingency" […] means subjugation […] to the free market'. The advocates of such an embrace admit the risk of losing control but rather call for the right balance between 'control and contingency' (Bulkeley et al., 2019: 319) or emphasize the importance of evaluating and reflecting on the impact of small-scale interventions to enhance their transformational capacity (Karvonen and Bylund, 2023a).

The chapters in this volume show how the concept of contingency can enhance our understanding of planning processes beyond the above dualistic juxtaposition of radical openness or the loss of control. In his chapter, Oliver Ibert revisits decision-centred planning models in light of today's uncertainty. Emphasizing planners' role in shaping future expectations, he builds on Faludi's (1985) distinction between 'operational decisions' and 'decision premises' to outline two strategies: One prioritizes flexible short-term responses while maintaining long-term premises; the other focuses on achieving immediate goals while keeping long-term expectations open. Similarly, the chapter by Hendrikje Alpermann, with her proposition to think of future-making in a mode of 'standby', problematizes the schematic temporal sequence and strict connection between decision premises and operational decisions in planning. In her reading, modes of standby are characterized by 'a readiness to act when conditions are right, requiring a constant investment of energy and attention despite uncertain outcomes', a mode of operation in which the focus is switching between short-term measures and long-term goals in a constant state of indeterminacy.

Apart from the different ways in which planners address contingency as a factor that shapes the way they plan, planning theorists such as Patsy Healey (2012) and Jean Hillier (2017) argue in favour of a structural, if not ontological, role of contingency in planning. Planning, in their vision, is 'replete with the radical contingency of emergent possibilities' (Hillier, 2017: 347) and, as such, follows 'a contingently universal stream of ideas, evolving with our contingencies and innovative energies […]. Our ideas about planning and its value for the contemporary world are kept alive by continual review, reassertion and reinterpretation, as we rework them in the flow of human activity' (Healey, 2012: 201). Taking this seriously means that planners and other built environment professionals constantly cope with contingencies, whether they are aware of them or not. To quote political theorist Chantal Mouffe (2005: 18), 'every order

is the temporary and precarious articulation of contingent practices', and urban planning and other kinds of urban future-making are no exception. There are no 'master plans' that are not undermined by a certain lack of certainty, predictability, and mastery – no frameworks, rationalities, and imaginaries without an inherent openness towards uncertainties and alternatives – no planning without unplannabilities – no future cities without other possible cities.

Rethinking the possible city

Against the backdrop of the growing challenges arising from the numerous and overlapping crises of our time – ranging from the financial crisis, migration crisis, Covid-19 crisis, climate crisis, health crisis, and energy crisis to geopolitical crises, the crisis of democracy, and the planetary crisis – the futures of cities are becoming increasingly uncertain (Coaffee and Lee, 2016; Shatkin, 2019; Bovo and Galimberti, 2021). These interlocked crisis developments, also framed as 'polycrisis' (Lawrence, 2024; Hilbrandt and Ren, 2025), expose the fragility of urban systems and reveal the extent to which urban life is shaped by unpredictability. The dramatic and progressing disappearance of 'habitability' under climate change (Hentschel and Krasmann, 2024; Pohl, 2025), along with the pressure on democratic institutions and socio-economic well-being, seems to bring about an increasingly grim and uncertain future (Chakkalakal and Ren, 2022; Fligstein, 2025). In light of climate change, in particular, the assumptions around the functioning, aging, and meaning of architecture, urban spaces, and infrastructural systems are radically questioned (Dawson, 2017; Goh, 2021). With ecological interdependencies, extreme weather, and environmental catastrophes becoming part of everyday urban conditions, it has become increasingly difficult to predict the demands and needs that built structures will have to meet for future generations. Against this background, the contingency of the urban once again becomes apparent, in that what we usually consider to be 'normal' or 'natural' components of cities – such as stable infrastructures, economic prosperity, public services, or even democratic governance – can no longer be taken for granted.

Against that background, built environment professionals find themselves in a highly demanding and, as we argue, new situation: Usually, with regard to urban development, the expectation is that urgency reduces uncertainty as time pressure forces priorities to be clarified and action to be taken (Grabher and Thiel, 2015). This is not the case at present, and this double condition, of

urgency and uncertainty, poses a particular challenge for professionals in the field of the built environment. They have to make decisions and implement solutions that are expected to take immediate effect, yet at the same time, decision-making processes and implementation are increasingly complex and drawn out (Wiechmann, 2016; Raco et al., 2018), as professional expertise allows assessment of the key role the building and transport sectors play in contributing to carbon emissions, as well as an understanding of the complexities involved in architectural, engineering, and planning projects in the context of social and ecological transformation. In their roles as administrators and experts, built environment professionals find themselves at the forefront of many ecological and social challenges discussed in the chapters of this volume. Yet, at the same time, they must negotiate fundamental uncertainties, as established criteria and modes of calculating risks, costs, and benefits based on life cycles in the built environment are under revision. Gertz and Manderscheid, in their discussion of this difficulty of predicting future demands and needs, use urban air mobility as an exemplary case. Drawing on historical instances of successful and unsuccessful attempts at introducing technology-induced changes in transport systems, the authors stress the non-linear trajectories of systemic transformation. Even though current models of implementing urban air mobility are failing, this is not to say that the technology will eventually be adopted in one way or another.

The city has the inherent potential to become what political theorist Margaret Kohn calls a 'radical space' that constitutes a 'site of dislocation, rupture, contradiction and contingency' (Kohn, 2003: 22), where established spatial forms and practices are constantly being reconfigured. While a strategic disruption of regulated pathways can also be part of a certain 'sacralization' of the city – as Louis Volont's chapter demonstrates in his analysis of the International Building Exhibition (IBA) Hamburg – an emphasis on the contingent foundations of the city allows us to highlight the more subtle openings and possibilities that appear outside the control of powerful actors. This volume aims to shed light on the key role of built environment professionals and their fields of action and expertise in developing such openings and possibilities. Under urban conditions in which virtually every attempt aimed at transforming the city inevitably feeds back into the sedimentation of existing urban power relations (for example, when the conversion of a street into a bicycle lane simultaneously contributes to the gentrification of the surrounding neighbourhood), it becomes increasingly difficult to discern the possibilities

for genuine change. And yet it remains the task of the 'urbanist' to uphold the possibility of change, even when it seems impossible.

Here, the current condition of heightened uncertainty might present an opportunity: to rethink the urban in entirely new ways, to experiment with new modes of urban praxis, and to envision alternative ways of planning, designing, building, governing, and living in cities. Contingencies in urban future-making allow us to focus on 'experimental intervention in a world that exceeds human powers of attunement, explanation, prediction, mastery, or control' (Connolly, 2011: 10). In a time when reactionary political forces are gaining control and transformative change is met with ever more denial and resistance, it is probably more crucial than ever to keep the city open. In a time when urban professionals are confronted with the undermining of their efforts and work, as plans are put on hold, regulatory measures are repealed, and material interventions are dismantled, it is up to urban researchers to insist on contingency as a crucial part of urban life. In a time when '[t]he system of possible alternatives tends to vanish and the traces of the original contingency to fade' (Laclau, 1990: 34), we are encouraged to hold on to the city's contingent foundations as the space for new possibilities in the future.

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