

# Introduction

This book originated at a small conference and workshop held at the “Federico II” University in Naples (Italy) in the summer of 2013. Jointly sponsored by the Department of Architecture there and the Graduate School of Architecture, Planning, and Preservation at Columbia University (New York), its intent was to bring together scholars to reflect on the materiality of the city and the importance of assemblage thinking to planning. The conference was titled “Planning in a Heterogeneous World: Re-Assembling Informality” and six of the presentations have been revised and appear here. In addition, we solicited chapters from Linus Vanhellemont and Serena Vicari Haddock and from Raine Mäntysalo, Ilona Akkila, and Alessandro Balducci. The first two chapters were written specifically for this volume.

All of the authors draw on actor-network theory (ANT) as promoted by such social theorists as Bruno Latour, John Law, Jane Bennett, Michel Callon, and Annemarie Mol and as derived, in part, from the philosophical work of Gilles Deleuze on assemblages. Actor-network theory is at the center of a paradigm shift in science studies and a philosophical resurgence of realist thinking as captured in such phrases as the new materialism, object-centered ontology, and speculative realism. Not just historians of science but geographers, sociologists, and practitioners of urban studies have turned to it for insights (Fariás and Bender, 2010). In the last few years, as well, ANT has been gaining currency among planning scholars (Harrison, 2014; Rydin, 2012, 2014). To date, however, this intellectual work has been confined to liminal discursive space between innovation and normalization where scholarship is compelled to explore new lines of inquiry.

Actor-network theory has much to offer planning thought. Thinking of the social as a matter of associations and not as an entity pre-existing the process of assembling is a path-breaking ontological position that questions enduring social theories deeply embedded in planning theory and practice. With similar subversive force, the idea of extending agency to entities other than humans – objects, material things, technologies, natural elements – poses new questions to all scholars and practitioners engaged with urban issues, not just to social scientists. For planners in particular much is to be

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gained by bringing the built and natural environments (and technologies) into their conceptual frames.

Planning is a matter of assemblages and planners must think of the city in a similar light. ANT and assemblage thinking are powerful levers to provide new descriptions of the city that to go deeply into the imbricated relations between nature and culture, formal institutions and informal practices, actors and technologies, and change and stability. By doing so, planners will confront the imbalance between describing a problem and figuring out what can be done to alleviate it. One of the qualities of ANT is that it functions as a means of practical inquiry that provides planners with a perspective tightly connected to the material world that they hope to change. So armed, planners can better handle the double-edged problem of meshing new descriptions of the city, territory, and landscape with their practical endeavors as politically engaged actors. ANT and the assemblage thinking that flows from it thus establish a new epistemological and moral position. To further this end, the theoretical work in this book is grounded in practical findings and observations.

### Rediscovering the materiality of urban life

The last two decades have witnessed critical thinking about space and place triggered by the diffusion of new political principles such as sustainability, cohesion, and, most recently, resilience (Davoudi and Strange, 2009). Within this *spatial turn* is a growing attention to the materiality of urban life. The rediscovery of space and place is firmly tied to major changes in political economy and society, but mainly addressed by structural, a priori explanations (the passage from Fordism to post-Fordism, the decline of the welfare state, globalization) and not by a reflection on the material world itself. Assemblage thinking and ANT strike a profound, open-ended interrogation about spatial forms and processes based on a specific notion of materiality that treats the world relationally while extending agency to non-human things.

The conceptual shift from materiality as the main attribute of physical space, regarded as the passive background of urban life, to materiality as a relational concept opens up a new line of inquiry. The material world is conceived as “a motley array of entities with differing properties and capacities: infrastructures, buildings, unicorns, ideas, circuit boards, tears, air, hang gliders, hatred – all capable of acting and making a difference” (Anderson *et al.*, 2012, p. 180). Extending agency to the non-human world makes us look closer at the materiality of urban processes and the generative capabilities of things: if the main requirement for being an actor is “the ability to make a difference, to produce effects, or even to initiate action distributed across an ontologically diverse range of actors” (Bennett, 2005, p. 445), the consequence is acknowledging the material city as an open-ended whole where assemblages of different natures intersect and mutually change.

Such a material world is characterized by relations of exteriority (McFarlane, 2011; Anderson *et al.*, 2012) in the sense that each entity, each component, keeps its own ontological status while associating with others. This means that “component parts may be detached and plugged into a different assemblage in which its interactions are different” (McFarlane, 2011, p. 208). From this standpoint, infrastructure, buildings, landfills, telephones, sidewalks, power cables, birds and stray dogs do not belong to a single realm or taxonomy: they can play different roles on multiple planes, staying the same in their constitutive nature but acting differently within associations. The indeterminacy, becoming, fluidity, and heterogeneity of urban processes have much to do with such an assumption: things can do unexpected things, not just because of casual encounters but mostly for their potential unfolding, their agentic nature (Bennett, 2005). Things might also settle into assemblages and resist change. But this does not mean that they belong to one realm and cannot go somewhere else: it just means that the obduracy of the assemblage is maintained by the strength and quality of associations.

The neo-materialist perspective also highlights a new spatial imaginary. This is a reflection of the methodological symmetry that ANT poses among its fundamental claims (Latour, 2005) and of the empirical stance of assemblage thinking (Farías, 2011; Wachsmuth *et al.*, 2011). The belonging of things to multiple assemblages is paralleled – when it comes to urban form – by a focus on how provisional spatial orderings persevere in the midst of heterogeneity and fluidity. We thus pay attention to how spatial form is assembled, held in place, and opens up or closes down possibilities. We attend to how actors, things, objects, technologies come to be through assembling, rather than being predefined by that form, and then investigate how entities associate and interact. An assemblage is a process; it is an open-ended, relational configuration. Actor-network theory thereby avoids the naturalization of socio-spatial configurations. Categories – the ghetto, the neighborhood, the region – are neither fixed nor granted but rather introduced in experimental investigations of urban materiality where time is a crucial dimension of the “expressive powers of entities” (Anderson *et al.*, 2012, p. 172) as they deploy their effects in urban assemblages.

### On divides

Acknowledging the materiality of actions, ANT challenges a number of traditional incommensurabilities: between the human and non-human world, between formality and informality, and between change and stability. It does so not to conflate them (this is not a reductionist theory) but rather to acknowledge their inseparability. In this book we are particularly interested in three of these assumptions: that (a) the world of humans is ontologically incommensurate with the natural world (the culture/nature divide) and, consequently, (b) formal institutions and practices are essential for the

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development of cities whereas informal practices are considered residual if not harmful (the formal/informal divide) (Lieto and Beauregard, 2013), and (c) change is to be celebrated while stability is conservative and stifles innovation.

At its core, ANT rejects the long-term superiority of human actors as decision-makers. Rather, it embraces heterogeneity: humans act in concert with animals, water, electrons, metal cables, aquifers, bridges, and digital technologies and give rise to hybrids, metabolic chains, and transnational routes where cyborg entities (Gandy, 2005) travel and exchange knowledge and power. When things have equal weight in determining actions and change within assemblages, when the constitutive form of reality is not the individual but the actor-network, some persistent, long-term assumptions on which planning has been operating throughout modernity start to sway.

In *We Have Never Been Modern*, Bruno Latour (2009) speaks of a modern constitution – an ethos that is capable of making hybrid assemblages “invisible, unthinkable, unrepresentable” (2009, p. 54), while allowing for their proliferation. The modern organization of knowledge into three separate repertoires – naturalization, socialization, and deconstruction – provides a powerful representation of the world that sanctions the nature/culture divide. As a result, science and politics live on two different sides with facts and natural forces reduced to brutal, mute mechanisms whereas humans talk, decide, represent, and govern. The laboratory is divorced from society. Through translation and mediation, the realms of nature (science), culture (society), and deconstruction (critics) are constitutively separated and all the entities – most of the real world, according to Latour – that bridge such divides are considered monsters, anomalies, or exceptions. Actor-network theory challenges such an ethos and acknowledges only nature–cultures, and networks, as constitutive forms of the real, the “only possible base for confrontation” (Latour, 2009, p. 136 – author’s translation).

Reconciling nature and culture opens up new perspectives on the post-human city. Material interfaces between the body and the city, strikingly represented by the metaphor of the cyborg (Gandy, 2005), become the main figures of the contemporary metropolis. That metropolis is regarded as a body–machine hybrid, where infrastructures linking humans to vast technological networks play a prominent role in how political subjectivities are achieved and performed (Haraway, 1991). The deep imbrication of bodies with architectural structures also becomes one of the planes where memory and imagination are kept and developed (Shaw, 2013). The role that urban materialities play in the reproduction of poverty and inequality (McFarlane, 2011) is another relevant outcome of such a nature–culture reconciliation: different assemblages of scrap materials (for example those used to fabricate shelters and temporary homes) can be conducive to hardship as well as provide solutions to everyday life in the slums of the Global South. These few examples reference a larger debate on the neo-materialist or post-human city. Overcoming the nature/culture divide and finding new

ways of describing and explaining how the social and the natural mutually reproduce each other is the common denominator of such endeavors.

On the same wavelength are the formal/informal divide and a deeply embedded assumption that planning is action solely in a public domain infused with political and juridical legitimacy. The relation between formality and informality is typically based on formality's exclusive priority: as a powerful meta-language, formality incorporates structures of power and domination and provides a prescriptive representation of the world mediated by norms, reference standards, and cultural codes. Informality is what falls outside these boundaries: residual, anomalous, irregular, harmful. ANT rejects such a divide; it acknowledges co-functioning mechanisms involving different actants in the material world (Latour, 2005) while blurring the boundaries between the formal as the language of order, control, and stability and the informal as the creole of disorder, heterogeneity, and anomaly. Formality corresponds to an abstraction aimed at generalization. It is achieved through a complex process which strips reality of its constitutive features – decay, dynamism, instability, contingency – to isolate only those that match its a priori form (Lezaun, 2012).

Although assemblages incorporate order and organization into their constituency, they do not separate the formal from the informal. What they offer is “a sustained account of the different ways in which orders *endure across differences and amid transformations*, in addition to a sensitivity to how orders change and are reworked” (Anderson *et al.*, 2012, p. 173 – emphasis added). Such a position provides a vast frame to rework the relation between urban formality and informality beyond the popularity that informality has gained in the post-colonial studies engaged with inequalities and conflicts in big cities of the Global South (Roy and Al-Sayyad, 2004; Watson, 2014; Yftachel, 2006). The idea of a co-functioning of formal mechanisms and informal practices fosters a rich line of inquiry throughout the messiness of global urbanization processes, but also at the level of urban micro-politics. What matters is subsuming both categories under the same theoretical lens provided by assemblages and thus discarding oppositions in favor of a flatter, more symmetrical approach. Until now, urban informality has been investigated more than formality and mainly as a previously neglected issue of urban life. In this book we also look at the offset term, formality, to understand how its constituency comes to terms with the material world and is constantly influenced and reworked by informality in a quite circular mode of inquiry.

ANT also tells us something important about stability and change – they are not opposites. Rather, stability is what defines change, while change continually haunts stability. To make time pass, to allow development (or degradation) to be perceived and to recognize when a city is different, we need things to be fixed (Latour, 1988, pp. 49–52). Once ideas, practices, conditions, and relationships are stabilized, we know that change has occurred, a difference has happened. Without stabilizations, there is

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no sense of movement. Stabilizations, though, are always unstable and need constant attention to be maintained as assemblages. Assemblages – a regional plan, informal waste picking, a blight removal initiative – are always being challenged by what actor-network theorists call “tests of strength.” Incessant, these tests emerge from the constant churning of actors as they enroll and are enrolled in assemblages, lose interest, or are lured away by networks that better serve their purposes or are more compelling. Change and stability are not mutually exclusive states of being but necessarily intertwined.

The simultaneity of change and stability rests on the constituent form of reality – assemblages of assemblages of heterogeneous actors in both their formal and informal guise. As humans engage with the material things of the world, often delegating responsibility and actions to them, they create assemblages. These assemblages, however, have to be maintained or they fall apart. Humans are inventive, restless, and competitive and constantly looking to improve existing, create new, and undermine outmoded or undesirable arrangements. Moreover, they do so through formal and informal means, sometimes employing the law to bind people and things together (as in a police force) and other times acting outside formal mechanisms as with off-the-books bartering to provide for one’s family. Through these processes, change and stability are constructed and deconstructed. Together, they produce the world envisioned by ANT.

More generally, the relationship between stability and change is blurred in its ontological premises when it comes to the material world. Assemblage thinking emphasizes the force of things, their “intangible and imponderable recalcitrance” (Bennett, 2010, p. 28). In this way, it acknowledges a resistance to change that is partially independent of human will. Within relations, in a topological frame of mutual positions of different actants, change becomes possible: “entities acquire their form, efficacy and meaning by virtue of their position within some form of relational configuration” (Anderson *et al.*, 2012, p. 172). This assumption makes the argument of dynamism, contingency, fluidity of urban life more than a rhetorical or allusive reference to the messiness of the world. It allows us to understand the polyhedral, multifaceted nature of urban materials and, at the same time, their irreducible differences. From this perspective, urban plans and projects need to be revised in their conceptual and technical constituency and their aspirations transformed or questioned. The focus should be on connections and how to enable their endurance or dissolution in space and time.

### Overview of chapters

The two chapters that open this edited collection utilize the insights of ANT to explore the politics of planning. In his “Planning and the politics of resistance,” Robert Beauregard suggests that planning politics is too often viewed as a politics that solely involves human actors, their interests,

and their various associations. Drawing on two, extended examples – one a development project in downtown Aalborg (Denmark) and the other blight initiatives in the United States – he argues that planners can be more effective if they deploy a politics of things in which humans and non-humans both matter. Laura Lieto’s “Things, rules, and politics” continues the discussion by reflecting on the relationship between the rules of planning and the things that those rules represent. Using a variety of examples, she points to the presence of the material world in the very bureaucratic procedures that are meant to distance planners from the particularities of realities.

These two, relatively theoretical chapters are followed by six case studies in which the authors apply ANT to interpreting the importance of the material world to planning and public policy. In their differences, the cases all deal with a double-edged problem; that is, addressing new descriptions of the city, the territory, and the landscape while, in parallel, respecting the practical endeavors of planners as politically engaged actors who might adopt ANT and assemblages as their epistemological and moral positions. Gilda Berruti’s “The pedestrianization of the Naples seafront” is a study of the closure of a segment of the city’s waterfront to vehicular traffic and the way in which material things (e.g. automobiles, street vendors, a collapsed building) influenced the fate of the project and caused the local government to rethink its goals. Also concerned with roadways, John West tells the story of congestion pricing in the United States. His “Translation: William Vickrey and the remaking of transportation knowledge infrastructure” looks at the economic theory behind roadway financing and the contribution that one economist, William Vickrey, made to shifting the paradigm from universal access to user-payment. In doing so, West points to the calculative technologies, scanning devices, and high-speed computers that made congestion pricing possible.

The chapters by Laura Basco and Enrico Formato, the first on informal waste markets and the second on planning for the Piana Campana region in southern Italy, offer examples of the material hybridity of human practices. In “Re-assembling world and waste: Informal practices of waste picking in Naples” Basco investigates the relationships between formal and informal waste management in Naples. There, informal picking and recycling of waste not only relieves the City government of much of the burden of waste removal but also serves as a source of income for many low-income people. That income depends greatly on the commodities that are discarded as well as their re-sale and reuse value. In “‘Recombinant’ hybrid ecologies and landscapes” Formato documents both the environmental destruction of the Piana Campana region through illegal practices and the initiatives underway to remediate the damage through technologies that acknowledge the ecological importance of soils, water, and air as major components of a culture–nature hybrid machine for social and environmental regeneration.

The last two case studies deal, respectively, with the material documentation of public meetings and policy mobility. The first, “Minutiae” by Linus

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Vanhellemont and Serena Vicari Haddock, is an investigation of the consequences of recorded “minutes” for participatory processes in three communities. The authors note how these material things come to play a role in the valuing of participation and the realization of democracy. The second, “Mobilizing policy: Microfinance’s journey from Bangladesh to Washington DC” by Linying He, is concerned with how ideas materialized in one place are transformed in order to be extended to other places. She focuses specifically on the World Bank’s efforts to turn microfinance (with its informal qualities and anti-poverty goals) into a formalized program linked to the banking sector and focused on investment and risk technologies, a transformation that undermines its original intent and practices.

The last two chapters return to a more theoretical plane. In their “Normative planning research in a material world?,” Raine Mäntysalo, Ilona Akkila, and Alessandro Balducci acknowledge the potential of ANT to contribute to planning thought but then ask to what extent it can incorporate the normative aspects of planning. To enrich their argument, they include trading zone theory as a contrast and ask whether it is compatible with normativity as well. Attilio Belli also explores the normative implications of ANT in his “Assemblage, assembly, and difference.” His concern is with whether assemblage thinking can be applied to a more compassionate policy towards the influx into Europe of refugees from Africa and the Middle East. For him, assemblages are inherently tolerant and thus contain the normativity that Mäntysalo, Akkila, and Balducci question.

One of our objectives has been to enlarge the field of inquiry and test the applicability of ANT and assemblage thinking on a broad array of planning problems. In this way, we are reflecting the Latourian claim that ANT is more a methodology than a theory. This thematic indifference, stretching the planning field in many directions, echoes the words of critics who accuse assemblage thinking of being an intellectual vogue drifting towards template urbanism (Tonkiss, 2011), a new form of agnosticism that, paradoxically, allows the same planning scholar to deal with migration policies and land consumption issues and to do so indifferently.

Be that as it may, we are not chasing a decontextualized form of scholarship (Brenner *et al.*, 2011). Rather, this book is an attempt to find common ground in a complex and turbulent urban world, no matter how difficult and challenging this search might be. Grand narratives or impersonal, global forces of change are insufficient for explaining things, understanding how power and domination are exerted on people and places, and rethinking the role of planners as agents of change in public life. By following a neo-materialistic approach, being attentive to what happens on the ground, and taking a symmetrical stance to humans and non-human things, we hope to meet the challenge implicit in ANT and assemblage thinking: “it is because we wish to *explain* those asymmetries that we don’t want to simply *repeat* them – and even less to *transport* them further unmodified” (Latour, 2005, p. 63).



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