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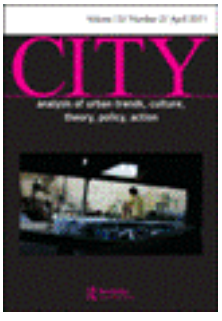

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Assemblage urbanism and the challenges of critical urban theory

Neil Brenner, David J. Madden and David Wachsmuth[1]

Against the background of contemporary worldwide transformations of urbanizing spaces, this paper evaluates recent efforts to mobilize the concept of 'assemblage' as the foundation for contemporary critical urban theory, with particular attention to a recent paper by McFarlane (2011a) in this journal. We argue that there is no single 'assemblage urbanism', and therefore no coherence to arguing for or against the concept in general. Instead, we distinguish between three articulations between urban political economy and assemblage thought. While empirical *and* methodological *applications of assemblage analysis have generated productive insights in various strands of urban studies by building on political economy, we suggest that the* ontological *application favored by McFarlane and several other assemblage urbanists contains significant drawbacks. In explicitly rejecting concepts of structure in favor of a 'naïve objectivism', it deprives itself of a key explanatory tool for understanding the sociospatial 'context of contexts' in which urban spaces and locally embedded social forces are positioned. Relatedly, such approaches do not adequately grasp the ways in which contemporary urbanization continues to be shaped and contested through the contradictory, hierarchical social relations and institutional forms of capitalism. Finally, the normative foundations of such approaches are based upon a decontextualized standpoint rather than an immanent, reflexive critique of actually existing social relations and institutional arrangements. These considerations suggest that assemblage-based approaches can most effectively contribute to critical urban theory when they are linked to theories, concepts, methods and research agendas derived from a reinvigorated geopolitical economy.*

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Key words: assemblage, actor-network theory (ANT), planetary urbanization, critical urban theory, urban political economy

Introduction

The field of urban studies is today confronted with significant theoretical, conceptual, epistemological and methodological challenges. As was arguably also the case in the late 1960s and early 1970s, when debates on the 'urban question' (e.g., Harvey, 1976; Castells, 1979 [1972]; Lefebvre, 2003 [1970]) destabilized inherited Chicago School ontologies, established paradigms of urban research now appear increasingly limited in their ability to illuminate contemporary urban changes and struggles. As in previous rounds of debate on the urban question, the source of the

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contemporary 'urban impasse' (Thrift, 1993) is the restless periodicity and extraordinary slipperiness of the urban phenomenon itself. Even more so than in the 1970s, urbanization today 'astonishes us by its scale; its complexity surpasses the tools of our understanding and the instruments of practical capacity' (Lefebvre, 2003 [1970], p. 45). A decade ago, Soja (2000, p. xii) aptly captured this state of affairs:

> 'It may indeed be both the best of times and the worst of times to be studying cities, for while there is so much that is new and challenging to respond to, there is much less agreement than ever before as to how best to make sense, practically and theoretically, of the new urban worlds being created.'

Some strands of urban studies, particularly those rooted in the professionalized routines of academic disciplines, remain mired in outdated research agendas that only partially grasp the contours and consequences of emergent urban transformations. Fortunately, however, there is elsewhere considerable intellectual adventurousness on display, as urbanists across the social sciences and humanities, as well as in the cognate fields of planning, architecture and design, grapple creatively with the tasks of deciphering the rapidly transforming worldwide landscapes of urbanization (Sassen, 2000; Soja, 2000; Taylor, 2004; Roy, 2009). Among the key agendas for such researchers is to investigate the evolving positionalities of cities—and urban landscapes more generally—within such large-scale, long-term trends as geoeconomic restructuring, market-driven regulatory change (including both privatization and liberalization), the worldwide flexibilization/informalization of labor, mass migration, environmental degradation, global warming, the creative destruction of large-scale territorial landscapes and the intensification of polarization, inequality, marginalization, dispossession and social conflict at all spatial scales.

In the face of these developmental dynamics, we believe there is an increasingly urgent need to rethink our most basic assumptions regarding the site, object and agenda of 'urban' research. The 'urban question' famously posed four decades ago by Lefebvre, Harvey and Castells remains as essential as ever, but it arguably needs to be *reposed*, in the most fundamental way, in light of early 21st-century conditions. In other words: do we *really* know, today, where the 'urban' begins and ends, or what its most essential features are, socially, spatially or otherwise? At minimum, the town/country divide that once appeared to offer a stable, even self-evident, basis for delineating the specificity of city settlements, today appears increasingly as an ideological remnant of early industrial capitalism that maps only problematically onto contemporary urban processes (Wachsmuth, 2010). More radically still, a case can be made that Lefebvre's postulate (2003 [1970]) of an incipient process of 'complete' or 'planetary' urbanization is today being actualized in practice. Despite pervasive sociospatial unevenness and persistent territorial inequality, the entire fabric of planetary settlement space is now being both extensively and intensively urbanized (Schmid, 2005; Soja and Kanai, 2005; Madden, 2011). In the face of this prospect, and especially given the unprecedented pace, scale and volatility of contemporary worldwide urbanization, it seems essential to consider whether inherited concepts and methods for understanding and transforming cities remain at all adequate to contemporary conditions. Quite simply, the oft-repeated mantra that a global 'urban transition' has recently occurred due to the apparent fact that over half of the world's population now lives within cities does not even begin to capture the intellectual, representational and political complexities associated with grasping the contemporary global urban condition.[2]

It is, we would argue, certainly not a moment for intellectual modesty or a retreat from grand metanarratives, as advocated by some poststructuralists a few decades ago. On the contrary, from our point of view, there is today a need for ambitious, wide-

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reaching engagements—theoretical, concrete *and* practical—with the planetary dimensions of contemporary urbanization across diverse places, territories and scales. Yet it would be highly problematic to suggest that any single theory, paradigm or metanarrative could, in itself, completely illuminate the processes in question.[3] Theoretical ambition need not be pursued through the construction of reductionist, simplifying frameworks; the task, rather, is to create concepts and methods that *open up* new questions and horizons—for both thought and action. Accordingly, in contrast to some of the more closed models of urbanism that prevailed during the high-points of Chicago School urban research in the 1930s through the 1960s and, in a different way, within the structuralist Marxisms of the 1970s, urban theory today must embrace and even celebrate a certain degree of eclecticism. Today more than ever, there is a need for a collaborative, open-minded spirit to prevail in urban studies, particularly among those scholars who are most committed to confronting the daunting challenges of reconceptualizing the parameters and purposes of this research field. When such scholars make divergent or opposed theoretical, conceptual and methodological choices, useful opportunities may emerge for all those involved to clarify the stakes of such choices, and their possible implications.

In that spirit, our goal here is to evaluate critically the growing literature on an assemblage-theoretical approach to urbanism, and in particular Colin McFarlane's recent arguments in *City* (2011a) and elsewhere (2011b). Given our remarks above regarding the situation of contemporary urban studies, we certainly welcome the innovative, intellectually adventurous impulse behind recent assemblage-theoretical interventions by McFarlane and others (Farías, 2010; Farías and Bender, 2010). Their work represents a serious effort to transcend certain inherited, intellectually constraining assumptions regarding the urban question, and on this basis, to open up new methodological windows into the various forms in which that question is being posed and fought out today. However, while we strongly support assemblage analysts' concern to reinvent urban theory for early 21st-century conditions, our own orientations for such a project diverge considerably from those that have to date been proposed by the major authors advancing this framework. In outlining this divergence, with particular reference to McFarlane's recent paper in *City* (2011a), our intention is not to attempt to patrol the boundaries of theoretical innovation in urban studies. Rather, by posing some critical questions regarding McFarlane's framework and the larger intellectual terrain on which it is situated, we hope to contribute to a broader dialogue, in the pages of *City* and beyond, regarding the challenges of contemporary urban theory, and the most appropriate strategies for confronting them. Because we do not believe there is any single correct 'solution' to such challenges, our questions are intentionally open-ended. The goal, we repeat, is to open up horizons for thought and action, and through collective dialogue, investigation and debate, to begin to explore these horizons.

Towards assemblage urbanism?

Prior to its elaboration within urban studies, the concept of 'assemblage' has been mobilized towards diverse ends within several traditions of contemporary social theory. Although the word is sometimes used in a descriptive sense, to describe the coming-together of heterogeneous elements within an institution, place, built structure or art form (Sassen, 2006; Madden, 2010a), its philosophical usage in English derives principally from the work of Deleuze and Guattari (1987 [1980]). Their concept of *agencement* was translated as 'assemblage' by Brian Massumi in the English version of *A Thousand Plateaus* published in the late 1980s, and this convention was generally preserved through a 'loose consensus' among subsequent translators and commentators (Phillips, 2006, p. 108). But, as

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Marcus and Saka (2006) demonstrate, the concept of assemblage has subsequently been mobilized in multifarious ways, only some of which are explicitly Deleuzoguattarian (as in, for instance, the influential work of De Landa, 2006). Significant elements of what has today come to be known as 'assemblage theory' are only partially linked to the philosophical apparatus of Deleuze and Guattari (Venn, 2006). Well-known examples of the latter include emergent approaches to global anthropology (e.g. Ong and Collier, 2004; Collier, 2006) and, perhaps most influentially, the 'actor-network theory' (ANT) developed by scholars such as Bruno Latour, Michel Callon, John Law and their followers (for an overview, see Law and Hassard, 1999; Castree, 2002; Latour, 2005). While Latour (1999, p. 19) has said that ANT is derived from an 'actant-rhizome ontology', it arguably departs significantly from the philosophical–political project of Deleuze and Guattari themselves.

Aside from the heterodox, broadly Deleuzoguattarian strand of architectural theory and criticism developed as of the late 1980s in the now-defunct journal *Assemblages*, it is only relatively recently, above all since the publication of Farías and Bender's important volume on the possible applications of ANT in urban research (2010), that the discourse of assemblage has been explicitly deployed as a major analytical tool for more-than-descriptive purposes in studies of cities and urban space. McFarlane's work (2011a, 2011b) builds upon and extends the latter line of research. Like Farías (2010) and Bender (2010), McFarlane argues that the concept of assemblage can help illuminate some neglected intricacies of urban spatiality and, more generally, urban life. Additionally, McFarlane attempts to specify some of the epistemological and methodological implications of applying this concept in specific realms of urban research—for instance, on urban inequality, particularly in the realm of housing. Perhaps most intriguingly, McFarlane situates his analysis quite explicitly in the tradition of *critical* urban theory, as presented in a recent issue of *City* by Marcuse (2009) and Brenner (2009).

As a motif within urban theory, McFarlane argues, the notion of assemblage is primarily focused upon 'sociomaterial transformation' (2011a, p. 206), 'grammars of gathering, networking and composition' (p. 207), and 'interactions between human and nonhuman components' that as 'co-functioning' can be 'stabilised' or 'destabilised' through 'mutual imbrication' (p. 208). Assemblages are processual relationships that 'cannot be reduced to individual properties alone' (p. 208). Assemblage thinking highlights processes of composition and recognizes diverse forms of human and nonhuman agencies—while striving to avoid reification, reductionism and essentialism. In this sense, McFarlane contends, assemblage thinking has an 'inherently empirical focus' (p. 209). As urban theory, assemblage thought asks how urban 'things'—including, quite appropriately, the urban itself—are assembled, and how they might be disassembled or reassembled.[4]

In the core sections of his paper, McFarlane outlines three specific contributions that he sees the assemblage approach making to critical urban theory. First, he sees assemblage thought as an empirical tool for engaging in thick description of 'urban inequalities as produced through relations of history and potential' (p. 208). He suggests that by paying detailed, ethnographic attention to processes of assemblage, urbanists may better understand how actually existing urban situations are constituted and, on this basis, may be better equipped to imagine alternatives to those situations. Second, McFarlane notes, assemblage thought can help attune researchers to the problematic of materiality—that is, to the significance and purported agency of materials themselves, 'whether [they] be glossy policy documents, housing and infrastructure materials, placards, banners and picket lines, new and old technologies, software codes, credit instruments, money, commodities, or of course the material conditions of urban poverty, dispossession and inequality' (p. 215). By 'distributing agency

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across social and material' entities, such that both human and non-human forms of agency may be considered coevally, 'assemblage thinking diversifies the range of agents and causes of urban inequality, while potentially multiplying the spaces of critical intervention' (p. 219). Third, McFarlane sees the assemblage idea as activating a more general critical 'imaginary' (p. 219) and political sensibility containing a distinctive image of the desirable city-to-come. While noting the risk of the idea's co-optation by various elitist or oppressive projects, McFarlane offers 'cosmopolitanism' as a 'normative political project of urban assemblage' (p. 219).

In sum, then, McFarlane sees the concept of assemblage as opening up a variety of new urban questions—or at least new orientations towards inherited urban questions—as well as new sites of analysis, methodological tools, targets of critique and political visions. As an illustration of the potential of this discourse, McFarlane briefly discusses his own work on urban informality in Mumbai, where he observed 'the crucial role that various materialities play in the constitution and experience of inequality, and in the possibilities of a more equal urbanism' (p. 216). Here, marginalized city dwellers 'recycle' the city by gathering 'materials … from local construction debris, riverbeds, manufacturing waste, or patches of tree cover' (p. 216). Unequal access to infrastructure and other resources is shaped by the state and various other powerful actors. For some activists, the material networks of the city can be used as objects of resistance and tools of protest, generating a subaltern form of urban cosmopolitanism or 'one-worldism' (p. 220) that militates for a new urban commons. McFarlane suggests that an assemblage-based urban imaginary can produce 'new urban knowledges, collectives and ontologies' (p. 221) that invoke and pursue new rights to the city among the most marginalized city dwellers.

Insofar as it enables urban scholars to question outdated categories and epistemologies, to demarcate new objects and terrains of urban research, and to highlight the political stakes and consequences of previously taken-for-granted dimensions of urban life, the assemblage-theoretical urbanism advanced by McFarlane and others opens up some important new prospects onto the urban question. But despite these valuable contributions, we are concerned that McFarlane's construction of an assemblage-theoretical urbanism remains too broadly framed, at times even indeterminate, to realize its proper analytical potential.

If the assemblage approach is intended simply to serve as a guiding sensibility or research orientation, such a framing might prove feasible. However, like other advocates of such an approach (e.g. Farías, 2010), McFarlane has larger ambitions for assemblage thought, proposing an extremely wide array of analytical and normative purposes to which it may be applied, and attributing to it some rather impressive explanatory capabilities, up to a point at which its definitional parameters become extremely vague. Rather than disavowing the idea's mercurial nature, McFarlane affirms it, noting that the term assemblage is 'increasingly used in social science research, generally to connote indeterminacy, emergence, becoming, processuality, turbulence, and the sociomateriality of phenomena' (2011a, p. 206). As McFarlane acknowledges, the assemblage concept is polysemic, alternately functioning 'as an idea, an analytic, a descriptive lens, or an orientation' (p. 206); elsewhere he suggests that it is simultaneously to be considered as a 'concept, process, orientation and imaginary' (p. 208). The question, however, is how much and what type(s) of intellectual and political work this term, and the mode of analysis associated with it, can plausibly be expected to accomplish.

In our view, the power of the assemblage approach may be most productively explored when its conceptual, methodological, empirical and normative parameters are circumscribed rather precisely. Against interpretations of this concept as the basis for 'transforming the very ground of urban studies' and as 'an alternative ontology for the city' (Farías, 2010, pp. 8, 13), we argue here

for a narrower, primarily methodological application. The concept is most useful, we contend, when it is mobilized in the context of a broader repertoire of theories, concepts, methods and research agendas that are not derived internally from the assemblage approach itself, whether in its ANT variant or otherwise.[5] In elaborating these concerns, we are particularly interested in addressing what we view as the highly ambiguous status of political economy, and the concept of capitalism itself, within significant strands of assemblage analysis. This issue is closely intertwined with the still larger question of whether and how assemblage analysis might contribute to the project of critical urban theory.

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The specter of political economy

At the outset, it would appear that radical urban political economy and the new theoretical idioms associated with assemblage analysis could coexist and even mutually transform each other's methodological orientations, descriptive categories and objects of analysis (Farías and Graham, 2010). In some sections of his paper, McFarlane seems to support such a procedure—for instance, through his statement that he 'do[es] not see assemblage as an outright contrast to the complex and varied history of debates on critical urbanism, including urban political economy, capital accumulation, inequality, and so on' (2011a, p. 204). However, despite his suggestion that assemblage thinking can build upon critical theory's concern with capitalism, the thrust of McFarlane's analysis actually appears to displace or even bypass such considerations.

Indeed, an unstated agenda of McFarlane's paper seems to be a redescription of urban processes, transformations and inequalities with almost no reference to the key concepts and concerns of radical urban political economy—for instance, capital accumulation, class, property relations, land rent, exploitation, commodification, state power, territorial alliances, growth coalitions, structured coherence, uneven spatial development, spatial divisions of labor and crisis formation, among others. Without articulating his grounds for doing so, McFarlane's paper simply *enacts* this displacement, offering neither an explicit critique of these concepts nor a clear sense of how the assemblage approach might better illuminate the dimensions of contemporary urbanization to which the latter have generally been applied.[6] Yet the social relations, institutions, structural constraints, spatio-temporal dynamics, conflicts, contradictions and crisis tendencies of capitalism do not vanish simply because we stop referring to them explicitly—especially under conditions in which their forms are undergoing deep metamorphoses, they arguably still require explicit theorization and analysis in any critical account of the contemporary global urban condition.

The ambiguities surrounding this issue in McFarlane's text are replicated more generally in the recent literature on assemblage urbanism. Among the major practitioners of assemblage-based approaches, there appears to be considerable confusion as to whether such categories should be mobilized to deepen, extend, transform or supersede the analysis of capitalist structurations of urbanization. Does the term assemblage describe a type of hitherto-neglected *research object* to be studied in a broadly political–economic framework—thus generating a political economy of urban assemblages? Is assemblage analysis meant to extend the *methodology* of urban political economy in new directions, thus opening up new interpretive perspectives on dimensions of capitalist urbanization that have been previously neglected or only partially grasped? Or, does the assemblage approach offer a new *ontological* starting point that displaces or supersedes the intellectual project of urban political economy?

Following from these questions, Table 1 identifies what we view as the three major articulations between assemblage thinking and political economy that have been developed in the recent urban studies literature.

Table 1 Articulations of assemblage analysis and urban political economy

	Relation to urban political economy	Exemplary research foci	Representative authors
Level 1: empirical *Political economy of urban assemblages*	Assemblage is understood as a specific type of research object that can be analyzed through a political–economic framework and/or contextualized in relation to historically and geographically specific political–economic trends.	Technological networks within and among cities (e.g. electrical grids); intercity networks; assemblages of territory, authority and rights.	Graham and Marvin (2001); Sassen (2006); Ali and Keil (2010); Graham (2010)
Level 2: methodological *Assemblage as a methodological extension of urban political economy*	Assemblage (often in conjunction with the closely related concept of 'metabolism') is presented as a methodological orientation through which to investigate previously neglected dimensions of capitalist urbanization. The core concerns of critical urban political economy remain central, but are now extended into new realms of inquiry.	The production of socionatures; infrastructural disruption or collapse; flows of energy, value, substances, microbes, people, ideas.	Kaika (2005); Heynen *et al.* (2006); Bender (2010); Graham (2010); McFarlane (2011a)
Level 3: ontological *Assemblage as an 'alternative ontology for the city' (Farías, 2010, p. 13)*	Assemblage analysis displaces the investigation of capitalist urban development and the core concerns of urban political economy (e.g. the commodification of urban space, inequality and power relations, state intervention, polarization, uneven spatial development).	Urban materialities and infrastructures, including buildings, highways, artifacts, informal settlements, communications systems, traffic flows, inter-urban networks	Latour and Hermant (2006); Farías (2010); various contributions to Farías and Bender (2010); Smith (2010); McFarlane (2011a, 2011b)

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The rows in the table represent both the core logical positions in terms of which this articulation may be understood and the major analytical strategies that have been adopted by assemblage researchers. There is, of course, considerable overlap and slippage among the positions outlined here, and the work of several authors listed in the table could be positioned in more than one row. For present purposes, our intention is at once to illustrate McFarlane's contention that there is no necessary antinomy between the two approaches while also demarcating the various ways in which researchers have explored their articulations.

The first row demarcates the use of assemblage as a distinctive type of research object within urban political economy. Sassen (2006), for example, uses assemblage to refer to a particular historical interrelation of territory, authority and rights, while Graham and Marvin's *Splintering Urbanism* conceives of infrastructure networks as 'sociotechnical *assemblies* or "machinic complexes" rather than as individual causal agents with identifiable "impacts" on cities and urban life' (2001, p. 31, original emphasis). These authors do not draw on assemblage thinking as an ontological foundation, but instead mobilize certain propositions from such approaches in order to reframe concrete urban analysis on an ad hoc basis. Consequently, authors working in this tradition tend to analyze the assemblages they have identified along more or less political–economic lines—in effect, they are engaged in a political economy of urban assemblages.

In the second row, assemblage thinking generates a predominantly methodological approach that builds upon urban political economy while extending and reformulating some of its core elements and concerns. This procedure parallels the ways in which the cognate field of urban political ecology has

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used the idea of 'metabolism' to capture the interconnected yet fluid dynamics that characterize the production of urban socionatures (Gandy, 2004; Kaika, 2005; Heynen *et al*., 2006; Swyngedouw, 2006). As these authors note, the metabolism concept has a long heritage in political economy (Foster, 2000) as well as obvious affinities with some strands of contemporary assemblage analysis. Urban political ecology explicitly connects these two positions, using the concept of metabolism and selected methodological tools from ANT to build upon and reformulate the treatment of socionatures within critical urban political economy. For these authors, the concept of metabolism serves simultaneously as a way to characterize objects of inquiry (particularly urban socionatural networks) and also as an explanatory and theoretical device. On the one hand, the metabolic circulation of matter causes it to become '"enrolled" in associational networks that produce qualitative changes and qualitatively new assemblages' (Swyngedouw, 2006, p. 26). On the other, urbanization itself is retheorized as 'a metabolic circulatory process that materializes as an implosion of socio-natural relations, a process which is organized through socially articulated networks and conduits' (Swyngedouw, 2006, p. 35). Such arguments amount to a substantial rethinking of urban theory, but it is one that retains the central concerns, concepts and analytical orientations of political economy within a methodologically expanded framework.

Finally, in the third row, assemblage thinking subsumes the entire conceptual apparatus and explanatory agenda of urban studies. Authors working in this manner look to assemblage analysis as a way to reconceptualize the fundamental character of the (urban and non-urban) social world. The urban process is now conceived as a huge collection of human and nonhuman actants within a flat ontology devoid of scalar or territorial differentiations. Ways of understanding the city based on concepts from political economy or spatial sociology are considered illegitimate or at least bracketed; categories of sociospatial structuration such as scale and territory are understood primarily as data to be interpreted rather than as theoretical, explanatory or interpretive tools (Smith, 2010). In this way, the assemblage approach comes to function as a radical ontological alternative to political economy: it is not merely a conceptual motif, an empirical tool or a methodological orientation, but an alternative mapping of the urban social universe. Representative examples of this position include Latour and Hermant's study of Paris (2006), Farías's programmatic statement on ANT and urban studies (2010), several contributions to Farías and Bender's edited volume on assemblage urbanism (2010), and significant segments of McFarlane's recent work (2011a, 2011b).

On close reading, McFarlane's position is in fact rather ambiguous; he sometimes frames his arguments in methodological terms, but he also more frequently appears to adopt a strong ontological stance. Thus, at certain points of his analysis, McFarlane (2011a) seems to embrace a position within level 2 of the table by advocating a mutually beneficial dialogue between assemblage theory and political economy in the service of a revitalized critical urban theory. Substantively, however, the thrust of his elaboration of assemblage analysis is situated on level 3. As he unfurls his argument, the concept of assemblage increasingly becomes an open-ended, all-purpose and potentially limitless set of abstractions regarding the urban question that displace rather than dialogue with the questions, concerns and orientations of urban political economy. To capture this apparent tension in his work, we have placed McFarlane's paper on both level 2 and level 3 of the table, reflecting his declared commitment to the research agendas of radical urban political economy along with his simultaneous—and in our view more forceful—displacement of these concerns in the bulk of his concrete analysis.

Distinguishing between these three broad ways of articulating assemblage thought and political economy should clarify that there is

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no single 'assemblage urbanism', and therefore no coherence to arguing for or against the concept in general. At the same time, as the preceding discussion already anticipates, we believe that some of its specific manifestations are more defensible than others. Specifically, we would argue that the merits of levels 1 and 2—the empirical and methodological levels—have already been theoretically and substantively demonstrated in the urban studies literature, and certainly warrant further elaboration in future research. These strands of assemblage thinking have productively amended and continue to transform the research focus and theoretical orientation of urban political economy. However, for reasons we now elaborate, we are much more skeptical regarding the possible contributions of analyses conducted on level 3 of the table—assemblage as an ontology—particularly with regard to their relevance to the project of *critical* urban studies.

An ontology of naive objectivism and the 'context of context'

A notable strength of much assemblage thinking is its careful attention to the multiple materialities of socionatural relations. Additionally, the approach has pioneered the analysis of how and when nonhuman actants, from buildings and building materials to infrastructural grids, forms of energy and even weather systems, may generate significant forms of 'reactive power' or agency.[7] But, without recourse to political economy or to another theoretical framework attuned to the structuration of urban processes (whether by capital, states, territorial alliances or social movements), an ontologically inflected appropriation of assemblage analysis confronts serious difficulties as a basis for illuminating the contemporary global urban condition.

In particular, the descriptive focus associated with ontological variants of assemblage urbanism leaves unaddressed important explanatory questions regarding the broader (global, national and regional) structural contexts within which actants are situated and operate—including formations of capital accumulation and investment/disinvestment; historically entrenched, large-scale configurations of uneven spatial development, territorial polarization and geopolitical hegemony; multiscalar frameworks of state power, territorial alliance formation and urban governance; and the politico-institutional legacies of sociopolitical contestation around diverse forms of dispossession, deprivation and discontent. In explicitly rejecting concepts of structure as remnants of an outdated model of social science explanation (or in simply ignoring such concepts), ontological approaches to assemblage analysis deprive themselves of a key explanatory tool for understanding the sociospatial, political–economic and institutional contexts in which urban spaces and locally embedded social forces are positioned. Within such a framework, moreover, there is no immanent principle for distinguishing relevant and irrelevant actants, whether of a human or nonhuman nature. As Bender (2010, p. 305) explains, such approaches risk engaging in an 'indiscriminate absorption of elements into the actor-network' with the 'effect of levelling the significance of all actors'. The result of this procedure is a metaphysics of association based on what Sayer (1992, p. 45) has elsewhere aptly termed a 'naïve objectivism'. This mode of analysis presupposes that the 'facts'—in this case, those of interconnection among human and nonhuman actants—speak for themselves rather than requiring mediation or at least animation through theoretical assumptions and interpretive schemata.

These issues are very much in evidence within McFarlane's brief analysis of informal housing in Mumbai (2011a), which offers a broad description of housing arrangements in a marginalized neighborhood of that city. The experience of poverty and inequality, he shows, is crucially mediated through the building materials and infrastructural elements that comprise the built environment. On this basis, McFarlane

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appropriately suggests that the materiality of informal housing in Mumbai deserves more analytical attention due to its important role in mediating the everyday experience of poverty. As he indicates, housing is 'both *made* and *edited*, in contexts of deeply unequal resources and precarious lives' (McFarlane, 2011a, p. 216, original emphasis). But does the thick description of assemblages offered in his analysis suffice to illuminate the specific forms of inequality and deprivation under investigation? To what degree does an assemblage-theoretical analysis help explain the underlying contexts and causes of urban sociospatial polarization, marginalization and deprivation, whether in Mumbai or elsewhere?

While McFarlane's rendering of assemblage may shed valuable light on the dynamics of making and editing, and on the broad spectrum of socionatural processes involved in the latter, it is precisely the 'contexts of deeply unequal resources and precarious lives' (p. 216) that are bracketed in his analysis. This bracketing is problematic insofar as it leaves underspecified the question of what historical geographies of land ownership, dispossession, deprivation and struggle generated and entrenched the unequal distribution of resources and the precarious life-conditions in the areas under discussion. After all, many of the details McFarlane gives of informal housing materiality—found construction materials, vertical modular construction, accreted rather than planned built forms, and the like—would equally well describe sociomaterial conditions within other zones of informality and marginalization in mega-cities across Latin America, the Middle East and South Asia (Roy and Alsayyad, 2004). Yet the shantytowns and squatting settlements within each of these global regions are positioned in quite different ways within any number of broader historical geographies of power—for instance, global divisions of labor and circuits of capital investment/disinvestment; legacies of colonial and postcolonial statecraft; modes of geopolitical control, subordination and intervention by imperial powers and global institutions such as the World Bank and the International Monetary Fund; differential patterns of agro-industrial transformation and associated rural–urban migration; state strategies to shape urbanization through speculative real estate development, infrastructural production, housing policy and slum clearance; and diverse forms of social movement mobilization at various spatial scales. In an analytical maneuver that is characteristic of this strand of assemblage analysis, contexts such as these are scarcely mentioned, much less theorized or systematically analyzed. However, without a sustained account of this *context of context*, the analysis remains radically incomplete.[8]

While the assemblage ontology focuses on the materials themselves, it is essential to consider the political–economic structures and institutions in which they are embedded. In fact, the building materials under discussion here are highly polysemic and promiscuous. Graffiti paint, unadorned brick, dirt in backyard gardens, corrugated metal—each can be an expression of precarious impoverishment or of dominating, aestheticized prosperity, depending upon its context. In a telling illustration of his conception of sociomaterial assemblages, McFarlane asks, 'what [is] the particular agency of Richard Florida's sleek PowerPoint presentations of the "creative city" […] when set against existing local urban plans?' (2011a, pp. 218–219). But is the real issue here the sociomateriality of PowerPoint, or the structural contexts and institutional locations in which this technique is deployed? It is quite possibly the case that policy entrepreneurs who are aligned with real estate developers will use sleek PowerPoint presentations while, say, working-class housing activists will not. But what matters about the PowerPoint presentations are the projects of ideological legitimation towards which they are mobilized; the words, phrases and narratives they contain have a non-arbitrary relationship to historically and geographically situated, differentially empowered social movements, forces, alliances and institutions.

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Substitute a PowerPoint presentation focused on the purported benefits of the creative class or a state-subsidized office tower for one focused on residential displacement, political disempowerment or labor rights, and it is an assemblage with a very different form and function, even though it may appear identical in purely material terms. An empirical focus on such assemblages could be helpful in unraveling certain aspects of such dynamics, but this would entail exploring their contested instrumentalities within the political–economic and institutional forcefields mentioned above. By contrast, an ontological conception of assemblage substitutes for such considerations a naive objectivism that is difficult to reconcile with the basic questions about power, inequality, injustice, politicization, struggle and mobilization that lie at the heart of critical urban theory (P. Marcuse, 2009; Soja, 2010).

Actuality, possibility and critique

ANT has had, at best, a lukewarm relationship with critical theory, particularly in its Marxian forms (Latour, 2004; for discussion see Madden, 2010b); this generalization applies to significant strands of assemblage analysis as well. Perhaps for this reason, those branches of critical urban studies that have incorporated assemblage thinking into their intellectual apparatus have tended to marry it to more explicitly political–economic approaches which supply a strong dose of critical energies. The authors whose work is positioned on the empirical and methodological levels of Table 1 thus rely extensively upon urban political economy to ground the critical elements of their respective analyses. By contrast, McFarlane proposes to derive a distinctively critical stance from the methods and normative orientations of assemblage analysis. McFarlane's chief argument to this end focuses on the relationship between the actual and the possible which, as he acknowledges, has also long been one of the primary concerns of critical theory, urban and otherwise (Brenner, 2009). McFarlane argues that 'assemblage [analysis] supports this line of critical thinking' due to its concern to uncover how formations of the urban might 'be assembled differently' (2011a, p. 210).

The issue, however, is not *whether* the actual and the possible are related, but *how*. Here, we believe, there is a fundamental distinction worth making between dialectical approaches to critique and those derived internally from assemblage analysis. In McFarlane's account, potentiality is exteriority: any assemblage may, in principle, be decomposed and a new one formed by incorporating new sociomaterialities; these new elements, which lie outside the extant assemblage, supply the possibility for different arrangements of human and nonhuman relations. This possibility is ontologically presupposed rather than being understood as historically specific or immanent to the sociomaterial relations under investigation. Although McFarlane introduces fruitful normative categories such as the right to the city, the commons and cosmopolitanism, the assemblage approach appears to operate primarily by describing alternatives unreflexively, as abstract possibilities that might be pursued. In our view, however, this approach offers no clear basis on which to understand how, when and why particular critical alternatives may be pursued under specific historical–geographical conditions or, more generally, why some possibilities for reassemblage are actualized over and against others that are suppressed or excluded.

A critical theory, by contrast, holds that capitalism and its associated forms contain the possible as an immanent, constitutive moment of the real—as contradiction and negation (H. Marcuse, 1990 [1960]; Ollman, 2003; Lefebvre, 2009). Specific historical structures produce determinate constraints on the possibility for social transformation, as well as determinate, if often hidden or suppressed, openings for the latter. Within such a framework, the impulse towards critique is not an external, normative orientation or a mental abstraction, but is embedded

within, and enabled by, the same structures, contradictions and conflicts that constrain the realization of what might be possible. From this point of view, a key challenge for any critical theory is to explicate reflexively its own conditions of emergence—not simply as a matter of individual opposition or normative commitment, but in substantively historical terms, as an essential moment within the same contradictory, dynamically evolving social totality it is concerned to decipher and ultimately to transcend (H. Marcuse, 1990 [1960]; Postone, 1993).

When we compare this immanent, dialectical conception of negation with the externalist normative orientation of assemblage theory, we also find a difference in political outlook. Despite its stated goal of expanding our understanding of agency into nonhuman realms (as argued forcefully by Bennett, 2010), ontological forms of assemblage thinking are not well equipped to identify the specific human agents and social forces that might engage in the process of social transformation. Instead, a passive-voice politics prevails in which assemblages are anonymously, almost mysteriously destabilized or dismantled. McFarlane argues, for example, that 'urban assemblages are structured through various forms of power relation and resource and information control' (2011a, p. 210). But if this is the case, it is essential to explore *who* (or *what*, as the case may be) is doing the structuring to whom. In a world animated by passive interactions among actants, the forcefield of struggle among diverse sociopolitical agents battling to appropriate and reappropriate urban space (P. Marcuse, 2009) is relegated to the background. While there are strands of assemblage theory that have successfully articulated powerful, even radical, visions of alternative futures (see Bennett, 2010), it seems impossible to pursue the latter without engaging with the fundamentally *political* dimensions of human agency. In short, perhaps because of the inert way that they interpret the world, ontological variants of assemblage thought do not offer much guidance for how to change it.

Reassembling assemblage urbanism?

In a recent assessment of contemporary urban theory, Roy (2009, p. 820) argues that 'it is time to blast open [the] theoretical geographies' associated with late 20th-century urban studies and thus to produce new 'geographies of theory' that can come to terms with the contemporary global urban moment in both North and South. Our goal in this paper has been to assess the degree to which various newly emergent strands of assemblage-theoretical urban studies can contribute to this wide-ranging intellectual and political task. While we are broadly sympathetic to the empirical research agendas and methodological orientations that have been opened up through such discussions, we have expressed a range of reservations regarding the more ontologically grounded applications of assemblage urbanism, which offer no more than a partial, if not misleading, basis for critical urban studies.

By way of conclusion, we want to reiterate the need for intellectual adventurousness and experimentation in this research field, and to underscore the useful ways in which, despite its blind spots, the debate on urban assemblages is productively contributing to such impulses. It is certainly not the case that critical urban theory, as it currently exists, has ready-made analytical tools for deciphering the rapidly transforming condition of worldwide urbanization. Without a doubt, the questions posed by assemblage urbanists—for instance, regarding human/nonhuman interfaces, networked interdependencies and the production of sociomaterial infrastructures—are essential ones, and they certainly deserve serious, sustained exploration in future forays into the urban question.

Today, new forms of urbanization and world-making (Lefebvre, 2009; Roy, 2009) co-constitute each other in a volatile context of geoeconomic, geopolitical and

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environmental crisis, ongoing market-driven regulatory experimentation and intense sociopolitical contestation at all spatial scales. As the urban condition becomes worldwide, it does so not through the absolute territorial expansion of an inherited urban object, but rather through the emergence of qualitatively new, genuinely planetary forms of urbanization in which a densely if unevenly urbanized fabric of sociospatial and political–economic interconnectivity is at once stretched, thickened and continually redifferentiated across places, territories and scales, throughout the space of the entire globe. This becoming-worldwide (in Lefebvre's terms [2009], *mondialisation*) of the urban is not simply a quantitative expansion of city populations or an outwards extension of inherited metropolitan jurisdictional boundaries, but has entailed a qualitative *reconstitution* of the urban itself in which a host of inherited spatial oppositions—for instance, city/suburb; urban/rural; core/periphery; North/South; society/nature—are being fundamentally rearticulated, if not superseded entirely.

In light of these unprecedented trends and transformations, a key challenge for any critical approach to urban theory is to generate a new lexicon of spatial difference through which to grasp emergent forms of uneven geographical development in ways that capture their tendential, planet-wide systematicity as well as their equally pervasive volatility, precariousness and mutability. Could it be precisely here, faced with the extraordinary challenge of mapping a worldwide yet internally hierarchized and differentiated urban ensemble (Lefebvre, 2003 [1970]), that the conceptual and methodological gesture facilitated through assemblage approaches becomes most productive? Whereas the concept of 'structured coherence' presented by Harvey (1989) confronted this problem at the scale of an individual urban region, there is today a need to decipher the variegated articulations among the disparate spatial, political–institutional and environmental elements of the emergent planetary urban configuration.[9] This task is especially urgent given the continued circulation of ideological projections of world capitalism as a heterarchical, cosmopolitan, flexible, borderless and creative 'world order' that mask an entrenched repressive agenda of (reconstituted) market fundamentalism, accumulation by dispossession and deepening environmental catastrophe. Because assemblage thinking opens up the prospect for thinking space as a relationally overdetermined plenitude (Bender, 2010; see also Massey, 2005), it may offer useful insights for exploring and mapping these emergent geographies of dispossession, catastrophe and possibility—but, as we have suggested, such an exercise will be most effective when it is linked systematically to the intellectual tools and political orientations of critical geopolitical economy.

Even though the urban process has taken on new forms in its planetary mode, we have suggested that it remains a fundamentally capitalist urban process. In our view, this dimension of urbanization—mediated, of course, through state institutions, diverse social forces and systemic crisis tendencies at all spatial scales—figures crucially in producing and reproducing contemporary geographies of deprivation, dispossession and marginalization, both within and among urban regions throughout the world. Consequently, for urban theory to remain intellectually and politically relevant, it must continue to explore the prospects for the critique of capitalism that are immanent within contemporary sociospatial relations across places, territories and scales.

The approach to critical urban theory proposed here is not grounded upon a transhistorical metaphysics of labor, a structuralist framing of the urban or a class-theoretical reductionism. Instead, through a spiral movement involving a combination of theoretical reflection, methodological experimentation and concrete research forays (Sayer, 1992), it reflexively subjects its own explanatory apparatus to continual re-evaluation and reconstitution in light of the ongoing trends, contradictions and struggles associated with

contemporary forms of sociospatial restructuring. Against this background, a key challenge is to link the analytical and methodological orientations of assemblage urbanism to the tools of geopolitical economy in ways that contribute to a genuinely critical approach to ongoing planetary urban transformations—one that is attuned not only to local specificities and contingencies, but also to broader, intercontextual dynamics, trajectories and struggles (Roy, 2009). In short, the present age demands neither the inert categories of traditional urban theory nor the conceptual quietude to which some strands of assemblage thought are unfortunately susceptible. Instead, we must continue to seek out the ingredients—intellectual *and* political—for a critical imagination that is oriented towards the possibility of a radically different type of worldwide space (Lefebvre, 2009). This in turn requires forging a critical urban theory that is capable of grasping our global urban world 'by the root' (Marx, 1963, p. 52).

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Notes

1 This paper emerged from our collaboration in the Urban Theory Lab New York City (UTL-NYC), a working group devoted to the challenges of reconceptualizing urban theory in a manner that is adequate to emergent 21st-century transformations and struggles. We describe this working group as a 'lab' to underscore the experimental, trial-and-error and open-ended character of our efforts. However, in contrast to most laboratories, our experiments are devoted most centrally to problems of theoretical conceptualization, not to data collection or analysis per se. In addition to the present authors, other current participants are Hillary Angelo (NYU) and Natan Dotan (Columbia).

2 Louis Wirth (1995 [1937], p. 58), whose work is usually associated with more traditional approaches to urban theory, offers a fascinatingly prescient critique of this assumption in his famous 1937 essay on urbanism: 'The degree to which the contemporary world may be said to be "urban" is not fully or accurately measured by the proportion of the total population living in cities. The influences which cities exert upon the social life of man [*sic*] are greater than the ratio of the urban population would indicate, for the city is not only in ever larger degrees the dwelling-place and workshop of modern man [*sic*], but it is the initiating and controlling center of economic, political, and cultural life that has drawn the most remote parts of the world into its orbit and woven diverse areas, peoples, and activities into a cosmos.'

3 This claim applies not only to the contemporary conjuncture: urbanization has always been an 'open system' insofar as its basic patterns and consequences cannot be derived from any single theoretical framework or causal mechanism (Sayer, 1992).

4 Bender's thoughtful postscript (2010) to his edited volume with Farías on the urban applications of ANT offers a strikingly cautious reflection on the same issue.

5 An interesting reference point in this context is Amin's recent paper in *City* (2007). Amin's orientation towards the urban question (also elaborated in Amin and Thrift, 2002) closely parallels the substance of McFarlane's argument, but he does not classify his analysis under the assemblage rubric or even use the latter term. While some of the concerns we raise below regarding McFarlane's text may also apply to certain aspects of Amin's framework, our focus here is specifically on the various ways in which the notion of assemblage is currently being used in the field of urban studies. However, the fact that Amin (2007) can develop an ostensibly ANT-based approach to urbanism without relying upon the term assemblage does open up the question of whether McFarlane may be overloading this concept with more analytical weight than it is properly equipped to carry.

6 Although the contributions included in his edited volume with Bender are quite heterogeneous, Farías (2010) moves in an analogous direction in his programmatic essay on 'decentring the object of urban studies'. Interestingly, Farías is careful to distinguish his proposed approach from traditional Chicago School models of urban space, but he does not discuss the post-1970s tradition of radical urban political economy associated with authors such as Lefebvre, Castells and Harvey.

7 Although she does not link it specifically to the field of urban studies, Bennett (2005, 2010) offers an impressively clear philosophical and sociological explication of this position. Latour (2005) offers the more standard reference point on these matters in the context of a rather sweeping critique of 20th-century social science.

8 For a discussion of the need for consideration of the 'context of context' in relation to neo-Foucauldian analyses of neoliberalization see Brenner *et al.* (2010). Our critique of the ontological strand of assemblage urbanism here closely parallels this argument.

9 On this problem in general, see Ong and Collier (2004); with reference to Harvey's work, see Brenner (1998); see also Sassen (2006) on the nature of the 'global'.

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