

– WHY CITIES? A RESPONSE

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Abstract

Why do cities exist? Geographers Allen Scott and Michael Storper recently put the question before the field of urban studies and provided a clear and concise answer in terms of economies of agglomeration and the urban land nexus. I argue that two other basic elements must be added to this duo: the spatial concentration of economic surplus by ruling classes and states and the creation of a built environment or urban landscape. In addition, I take issue with Scott and Storper's neglect of the problem of scale in urban theory and their overly tidy sense of what constitutes a scientific approach to complex phenomena like cities.

For all social scientists, there are moments when it is necessary to reflect on the most basic questions about the objects of our interest. For urbanists, those would be: what are cities and why do they exist? We all have working theories in our heads, whether we enunciate them or not, and if we are honest we have to admit that what passes for a theory of cities in our subconscious can be pretty fuzzy. It is rare to be forced into a serious discussion about the fundamental character of the urban. Therefore, Allen Scott and Michael Storper have done us all a service with their recent IJURR contribution, 'The Nature of Cities: The Scope and Limits of Urban Theory' (Scott and Storper, 2014). It makes a strong case for what is essential to the urban and what is not, and the authors are unapologetic in their criticism of inadequate and shallow theorizing about cities.

I agree with Scott and Storper's core position that some foundational theory of the urban is possible because cities have shared features and processes across time and space, despite their infinite variety. I also am in accord with the idea that urbanization *per se* requires its own theory, because cities have been a clearly defined element of the human landscape since the Agrarian Revolution at the end of the last Ice Age. They have a stab at proposing such a theory in a way that is bold, honest and clear-headed, and they stick their necks out to say, quite rightly, that we know enough about the urbanization process to propose abstract conceptualizations that cut deep into the subject. We cannot accept the sort of non-theory stating that every city is so different that no common insights are possible. Nor should we fall prey to exaggerated claims that cities beyond the Euro-American pale necessarily demand wholly new theories of urbanization. At the same time, Scott and Storper are quite fair in saying that studying a variety of cities around the world and making comparisons between global North and South can always teach urbanists new things and might even alter our most basic conceptions of the urban. Yet any such claim must be demonstrated, not just declared *prima facie* true.

Nevertheless, I have some significant differences to air with Scott and Storper. First, I make the case for additional causal forces underlying urbanization beyond the two identified by Scott and Storper, namely agglomeration and the urban land nexus. My principal objection to their approach is its failure to recognize the role of economic surplus in creating cities. The existence of a surplus implies, furthermore, social inequality and exploitation, and inevitably leads me to a discussion of the role of states in city making. I then argue for the built environment as the physical foundation of cities and a key force in the making of cities.

I do not, however, simply wish to counter one parsimonious universal theory of the nature of cities with another. I think the problem of social science (social theory, as people call it today) is more difficult to parse than that. In the second half of this essay, I

Thanks to Erica Schoenberger, Andrew Sayer and two anonymous IJURR reviewers for their input. Thanks also to Allen Scott and Michael Storper for their willingness to engage in extended debate without taking offense (despite our marked differences) and for allowing me to quote from their emails.

shift to a broader discussion of how to think about the geography of cities and building urban theory. This begins with the case for a more sophisticated approach to the problem of scale in urban theory. Following that, I engage with the views put forward in Scott and Storper's penultimate section, 'On generality and difference in urban analysis', because they bear on the question of what constitutes an adequate theory of the urban.

My criticisms may at times seem unfair; after all, one can only do so much in a single article and the authors are well aware of some of the issues I raise. Still, key ideas are either absent or merely mentioned in passing that should, in my view, be prominent, despite time and space limitations. I have profited from a lengthy email exchange with Scott and Storper, which clarified but did not resolve our differences. Now it is time that I put my own neck on the line to see if further progress can be made in this important debate about the nature of cities.

Agglomeration and cities

Scott and Storper's fundamental argument is that cities are the result of agglomeration economies: that is, the key advantage of urban concentration is the propinquity that allows easy interaction between actors—firms, individuals, institutions and so on. That interaction, in turn, allows for external economies and a total output greater than the sum of the parts, for reasons that include specialization (an expanded division of labor), shared values and practices (untraded interdependencies) and face-to-face contact (trust and communication). Moreover, urban interaction stimulates the dynamic forces of problem solving, cooperation, learning, competition and technical innovation. In short, spatial concentration in cities is more efficient than dispersal across rural landscapes, and the authors often use the term 'efficiency' in speaking of cities. There is much more to be said about agglomeration, to be sure, and the two authors have done so in many books and articles over the last 30 years; in the process, they have made an indelible mark on urban theory, for which we should all be grateful (Scott, 1988; 1998; 2008; Storper, 1997; 2013).¹

While Scott and Storper argue that their theory of city formation is transhistorical, it is focused on modern industry. Theirs is chiefly a case for the productive role of cities: 'we can say that the most basic *raison d'être* for cities, certainly in the modern era, resides in their role as centers of economic production and exchange within wider systems of regional, national and international trade' (Scott and Storper, 2014: 6). This is made clear by the section on the Industrial Revolution and the stimulus it gave to the explosive growth of cities, initially in Britain, Western Europe and North America. As they say: 'The Industrial Revolution ushers in the modern era when urbanization begins in earnest. This is an era when the fundamental relationship between economic development and urbanization becomes especially clear' (*ibid.*: 5). This process continues around the world today: 'The intensification of globalization and the emergence of a new international division of labor since the late 1970s have also promoted a major wave of urbanization in the developing countries, where many cities now function as significant producers of manufactured exports' (*ibid.*).

Now this is certainly true: machinery, automation and a growing division of labor have unquestionably raised the level of economic productivity and, conversely, given urban concentration a powerful leg-up as the leading form of space-economy. I have no problem with an article explaining modern cities, though Scott and Storper are making a much wider claim: agglomeration has always been the foundation for urbanization. In contrast, I want to say that agglomeration economies cannot stand alone as the prime mover of city making, either in the past or the present. To make my case, I begin with what may seem like a historical quibble, but is most certainly more than that.

1 Oddly, the authors do not include some key early proponents of agglomeration theory in their brief review of urban theory (particularly the New York School, from Lewis Mumford in the 1920s to Edgar Hoover, Raymond Vernon and Jane Jacobs in the 1950s).

Scott and Storper, as just quoted, make the typical ‘modernization theory’ argument for the Industrial Revolution as the key breakpoint in urban history. Yet the increasing pace of urbanization in Europe well precedes the year 1800 when industry took hold and must be ascribed to three other phenomena already underway for two or three centuries: the Commercial Revolution, the Agrarian Revolution and the Age of Conquest. Scott and Storper nod towards the Commercial Revolution: ‘[by the seventeenth century] Long-distance trade costs began to decline sharply, and this allowed for tighter interconnections between far-flung and often highly specialized urban centers’ (*ibid.*). But this won’t do, because far more than declining long-distance trade costs were involved; a whole new world of commerce, merchants, credit, transportation (canals) and commodities was on the rise, centered on Venice, Genoa, Florence, Lisbon, Lyon and Antwerp (Braudel, 1979; DeVries, 1984; Arrighi, 1994). Meanwhile, in Britain and Holland an Agrarian Revolution began at least a century before the Industrial Revolution, lowering food prices, stimulating population growth and adding to the weight of commerce (Overton, 1996; DeVries and van der Woude, 1997; Brenner, 2001).

Along with all this came a definite growth in what Adam Smith called ‘manufactures’, from barrels to ships, lumber to violins, which Marx, von Tunzelmann, Kriedte and others have considered a necessary precursor to the mechanization of power and the labor process during the Industrial Revolution (Marx, 1967 [1863]; von Tunzelmann, 1978; Kriedte *et al.*, 1981). Just as important, as Jason Moore (2003; 2010) has emphasized, is the input side of things, which required a vast exploitation of resource hinterlands, bringing wood, iron, gold, grain and more into the commercial vortex of Europe’s urban centers. Any mention of resources, from silver to sugar, of course, brings us back to the European conquests and exploitation of the Americas (and beyond), which Scott and Storper (2015: 5) rather disingenuously refer to as ‘the European Age of Exploration’.

Behind these three precursors to the Industrial Revolution lies the rise of capitalism. For me, this is a key contribution of Marx’s work because he provides an explanation for the surge in commerce, production and throughput in terms of capitalist profit, competition and accumulation (*cf.* Walker, 2013). Scott and Storper mention capitalism in passing, but it doesn’t figure centrally in their argument for cities. I agree with their position that capitalism as a socio-economic system cannot, in itself, explain the existence of cities (which long predate it), but it is still fundamental to understanding modern cities, including those in the global South.²

So my ‘quibble’ about history is more than that; it reveals a chink in the armor of Scott and Storper’s agglomeration theory. Their emphasis on industrialization over capitalism reveals a bias in their approach towards the city as a purely productive entity. While they say that theirs is a political economic approach, it is more conventionally economic without serious attention to the social order behind the economy and (especially) without regard to inequality and exploitation. To speak of capitalism is to recognize that political economy is not just about production and exchange but includes the extraction of surplus (value). This point leads me to the fundamental role of surpluses in city making.

Surplus and cities

Because Scott and Storper’s theory of cities is so focused on the productive efficiency of cities (even in the widest sense of producing ideas and services), they have little to say about the role of surplus and exploitation in the making of urban centers. While they do note (in reference to ancient cities) that urbanization demands a surplus extracted from the countryside, that argument is never developed and the discussion

2 I have, for example, taken to task those China scholars who treat contemporary Chinese cities as post-socialist or distinctively Chinese, but not in key respects capitalist (Walker and Buck, 2007).

quickly shifts back to ‘efficiency’—a concept that is hard to square with what we know about Babylon, Cuzco or Rome. Even today, when the productive power of urban centers is so much greater, one of the keys to understanding cities is to see that they are places where the economic surplus is concentrated. Although Scott and Storper insist that they deal adequately with the question of surplus,³ it drops out as the argument comes up to the present, leaving industry and trade as the primary—if not the only—sources of urbanization. This is not a sufficient theory of the formation of cities, in my view.⁴

The building, peopling and supplying of cities always requires a surplus above social reproduction. Surplus is a necessary condition for the existence of cities and remains so to this day, even though the extraction and concentration of surplus are more complicated than in early civilizations. In the ancient world, when the economic base was overwhelmingly agrarian, the surplus was extracted by such means as royal taxes on farmers, imperial payments by client states and the booty of conquest. In early modern Europe, surplus came from more than trading profits. The mines of Bohemia helped build Nuremberg and those of Potosi, Seville; the forests of Norway went into the wealth of Amsterdam and those of Brazil into Lisbon; and the slave-grown sugar of Bermuda financed Bristol and Liverpool (Blackburn, 1997; Graulau, 2008; Moore, 2010). In the nineteenth century United States, gold and silver were the foundation for San Francisco’s meteoric rise, while the natural abundance of the Midwest made Chicago into a mighty city even before it became an industrial powerhouse (Brechin, 1999; Cronon, 1991). Today, the financial takings of Wall Street help fund the ever-rising skyline of New York, the licensing and sales profits of Microsoft and Amazon pay for the prosperity of Seattle, and so forth.

In contrast to theorists who emphasize urban exploitation of the hinterland above all else (like William Cronon and Gray Brechin), I want to be very clear that cities can—and almost always do—produce a surplus of their own, and in the modern world this is usually greater than the surplus extracted from the countryside (*cf.* Page and Walker, 1991; Walker, 2001). So I emphatically do not oppose a theory of surplus to one of urban economies as productive; I see them as complementary. But I do think that the disposition of an economic surplus in cities historically precedes the kind of economic dynamics of urbanization that Scott and Storper highlight.

Of course, an economic surplus does not necessarily lead to the formation of cities. Indeed, under many pre-modern modes of production, a surplus was extracted and enjoyed by feudal lords, peripatetic mandarins, and traveling kings and their courts, without generating much in the way of cities. The landscape of European high feudalism, for example, was peppered with the castles of locally prominent aristocrats surrounded by villages (Boone and Howell, 2013), while Indian rajahs under the Moghuls basked among the pleasures of rural palaces (Metcalf and Metcalf, 2002). Even today, economic surplus does not necessarily flow to the cities. There are many rural sites of surplus accumulation and consumption, such as the estates of the wealthy scattered widely across the countryside, from Surrey to the Hamptons to the Western Cape; a fair proportion of the contemporary surplus either leaves cities or never enters them in the first place.

Extraction of a surplus is, therefore, not enough; it must be concentrated in space and used to build a lasting settlement and urban environment. Hence, Scott and Storper have challenged me to show how extraction of the surplus/exploitation ‘in and of itself leads to urbanization’.⁵ Fair enough. But that’s easy enough to do. Spatial concentration

3 Personal communication, Allen Scott and Michael Storper, emails of 10–12 May 2014.

4 Contrary to one anonymous reviewer, who thinks that I am saying that ‘the agglomeration of people in cities was not primarily the result of an economic logic’, let me be clear: the generation and extraction of a surplus is definitely an economic process.

5 Personal communication, Michael Storper, email of 12 May 2014.

almost always follows from the existence of an economic surplus, whether as a result of Neolithic agricultural revolutions, the rise of tributary empires, the wheels of world commerce or capitalist industrialization. This works in at least three ways.

First, anyone in possession of a surplus and disposing it for consumption, investment or warfare will necessarily attract other people who want to partake of these riches. This is not a process of agglomeration in the sense of Scott and Storper; it has nothing to do with creative or productive interaction in the first instance. It operates in the same way as a flock of birds drawn to ripe fruit on a tree: the more heavily laden the tree, the greater the crowd. Rome was, for centuries, home to at least 250,000 people living on dole distributed from the state's coffers, not to mention the thousands of retainers and hangers-on of the idle rich in their urban palaces (Boak and Sinnigen, 1965). Similarly, most feudal towns were not, first of all, gathering places of artisans and merchants, but of wealthy families, retainers, soldiers, servants and the like (Howe and Wolf, 2002; Boone and Howell, 2013).

Second, those in control of the social surplus are rarely anonymous. Whether they are aristocratic planters, imperial mandarins or bourgeois *rentiers*, they are likely to fall prey to the desire to show off their wealth and status in one way or another: sumptuous homes, great monuments, vast parks and so forth (Veblen, 1899; Brechin, 1999; Scobey, 2002). Who do they show off to? To both fellow members of their elite class and the populace below. These can be rural showplaces, but the urge to reveal one's success will draw many together to compete with their fellow rich or dazzle the masses with their *hotels particulières* as in seventeenth-century Paris (Hazan, 2010), *palazzi* in medieval Venice (Appuhn, 2002) or condo towers in today's Dubai (Davis, 2006). Of course, many wealthy people prefer to tuck their wealth away discretely in art collections, walled compounds or anonymous penthouses (Sayer, 2014), and displays of wealth will also manifest themselves in rural surroundings, such as castles on mountain tops, Golden Hordes riding across the steppes or great pyramids as royal burial sites. But the greater the surplus being extracted, the more likely it will end up being showcased in cities. Cities are, in my view, fundamentally about the display of wealth and power. Cities are a primary way to make the surpluses and the power behind them visible to the world, enjoy them to the utmost and express superiority over other people.⁶

Third, wealthy classes derive their surpluses through the exploitation of others, whether as land rents, corporate profits, financial assets or state revenues, which require the exercise of power—whether the power of landed property to demand rent from tenants, the power of corporations to profit from factory labor or the power of the state to demand taxes. Moreover, social relations of power must be repeatedly enacted, as social theorists from Antonio Gramsci (1971) to Judith Butler (1990) have argued, and power of the social order has to be embedded in the lives, consciousness and being of the subaltern, even if it is contested (Foucault, 1979; Butler, 1997). The spatial dimensions of this process should not be overlooked, and they implicate cities and urban life in the reproduction of inequalities of power and wealth (Martines, 1988; Zukin, 1991; Pred, 1995).

The rise of capitalism and the revolutionary advances in trade and production that ushered in modern Europe from the sixteenth century onwards certainly increased the relative role of production—and especially urban productivity—in economic life. That implies a relative shift in the priority of surplus transfers and agglomeration economies in the making of cities, and an indisputable increase in the number and size of cities. Hence, Scott and Storper's theory works better for modern times than for

6 I therefore refute Scott's contention that this process is selective rather than general: 'some cities involve displays of wealth and power; not all cities involve displays of wealth and power. Even those cities that are clearly projecting images of this kind only become cities in the context of an adjunct population providing goods, services, ceremonial routines, military backup etc etc' (personal communication, Allen Scott, email of 11 May 2014).

ancient history.⁷ Nonetheless, the matter of surplus and cities did not disappear. The industrial and commercial revolutions not only meant greater economic output and productivity; they brought a vastly increased economic surplus—complemented by greater extractions from more far-flung conquests and colonies, in the case of the European powers.

Modern cities, therefore, have flourished on the basis of more available surplus and more exploitation, as well as a greater functional role in the progress of commerce and industry. Cities today are full of people living off the surplus: the rich and their showplace homes; the corporations and banks with their showplace offices; the showpiece museums and universities; government buildings and monuments to great victories; and all the rest. There are still masses of people drawn to cities by wealthy patrons, universities or banks—even though they may also be working as students, artists or brokers and able to generate productive interactions and new innovations. But the productive side of their activity is insufficient to explain their presence in the city and, in many cases, is not the primary reason for their urban location.

Scott and Storper's cities, by contrast, are not about the extraction and concentration of wealth. They sidestep entirely the issue of power and exploitation, which to me has to be at the heart of any social analysis, urban or otherwise. To put it another way, their theory of cities is almost entirely 'horizontal', concerning interactions among generic people and institutions, and not at all 'vertical', or about the operation of social hierarchy, corporate profit-making or imperial conquest—all things that are implicated in the making of cities. At one point in our debate over their article, Allen Scott says: 'In any case, you surely don't mean that displays of wealth and power are "fundamentally constitutive" of capitalist cities?'.⁸ Yes, I surely do, because capitalism is not just about efficiency and profits; it is a class system based just as much on power and exploitation as productivity and growth. To think otherwise is to fall prey to the blandishments of mainstream economics and its silence on all matters that might discomfit the capitalist establishment.

States, surplus and cities

In speaking of surplus and power, one cannot avoid the role of the state, on which Scott and Storper remain largely silent. States have repeatedly created cities by funneling surplus to certain places and using them as centers of administration, military power, royalist display, nationalist aspiration and more. This is not a necessary relation; many pre-modern states featured mobile multi-locational sites of royal residence and military encampment, as in the case of the Carolingian Franks (Wickham, 2009). Some of the greatest empires on record, such as those of Genghis Khan and Alexander the Great, created, at best, huge temporary camps (Briant, 2010). But most stable states, whether ancient empires or modern nation-states, have generated cities through the spatial transfer and concentration of surpluses.

There are abundant cases of pre-modern states establishing urban centers for reasons of defense, administration, religious celebration and so forth: Thebes and Memphis among others for the Egyptian pharaohs (Wilkinson, 2010); Rome, Constantinople and a host of second-order cities for the Roman empire (Boak and Sinnigen, 1965); Chichén Itzá, Monte Alban, Cuzco and a multitude of cities for lesser Mayan and Mesoamerican states (Mann, 2005); Peking, Xi'an and other capitals of early Chinese states (Cotterell, 2008). In such instances, the gathering of surpluses by a sovereign ruler from peasants, trade, mines, tributary states and plunder was the principal basis of those cities (Childe, 1950). Proof of this relation lies in its counter-examples: wherever

7 Note that I am not asserting that concentration of a surplus is always more important or fundamental to urbanization than agglomeration effects, only that it is significant historically and continues to be so today.

8 Personal communication, Allen Scott, email of 11 May 2014.

empires fell or the seat of power relocated, former imperial cities fell on hard times—agglomeration economies notwithstanding! In the Hellenistic era, Alexandria replaced Thebes as the primary city of Egypt, waxing fat on the surpluses flowing in from the Nile Valley and Mediterranean trade (Wilkinson, 2010). When the Abbasid dynasty replaced the Umayyad, the former Islamic capital, Damascus, shrank while Baghdad flourished (Wickham, 2009). When Cortes defeated Montezuma, Tenochtitlan (renamed Mexico City) shrank dramatically (Mann, 2005).

Modern states, too, have invariably created centers of state power and surplus concentration, such as Berlin, Buenos Aires and Jakarta. Modern states have at least three defining geographical dimensions: an outwardly bounded territory, a strong degree of spatial unification and a national capital. No modern state is without a capital city that serves as a center of administration, tax collection and military control. Some of these functions may be dispersed around their respective countries, but never is a capital city absent. The process by which a state has the power to channel economic surplus to certain cities is clearest, of course, in isolated national capitals like Canberra, Brasilia, Abuja and Washington, DC. Such showplaces are never about interaction, in the first instance, but its opposite: withdrawal from other cities to isolate and showcase the national government. Indeed, observers of such new capital cities (e.g. Holston, 1989; Melder, 1997) have always remarked on the sterility of their life and landscape.

Scott and Storper dispute this idea, saying: ‘Washington and Brasilia contain governmental facilities. These facilities may even be the main direct and indirect sources of local income. But the essentials of what is urban in Washington and Brasilia cannot be reduced to governmental facilities.’⁹ But my point, exactly, is that these cities are nothing more at the outset than spatial concentrations of government facilities that rest on tax revenues—before they come to acquire other dimensions of urban interaction and agglomeration. Agglomeration follows the surplus in such cases, not the other way round.

This is a fundamental point, which Erica Schoenberger (2008; 2010; 2015) has repeatedly emphasized. Agglomeration and the workings of modern market economies are not always self-generating. They are frequently primed by pumping surplus from one place to another in sufficient quantities so as to attract many people and firms, who then begin to interact in productive ways. Conventional economics has a hard time getting to grips with this process, because exchange so dominates the models and government ‘transfers’ are a sideline. And because cities invariably generate at least some agglomeration effects, even the sterile capital cities come to have more complex economies, and then the ongoing play of surplus transfers and external economies becomes hard to untangle. Nevertheless, even an old capital like Washington, DC had almost no private economy until the ‘Beltway’ world of lobbyists, consultants and subcontractors blossomed in the postwar era (Knox, 1991).

Distribution of state surplus does not just show up in capital cities, of course. A good example is Silicon Valley (the southern San Francisco Bay Area), where Scott, Storper and I have all done research. Silicon Valley did have pioneering electronics (ship-to-shore radio, tubes, etc.) that attracted federal spending as early as the first world war (Sturgeon, 2000), but it did not grow substantially until the second world war brought massive military contracts for radar and sonar tubes, then aircraft and missile guidance systems. True, vigorous interaction was taking place among firms from the days of Lee DeForest, but postwar companies in the Valley, like Philco-Ford, Lockheed, IBM and the ‘Fairchildren’ working with early solid state circuits and mainframe computers, had no markets beyond the military and could not have flourished without massive federal spending. Only in the 1970s did the Valley start to sell commercially and become the

9 Personal communication, Allen Scott, email of 11 May 2014.

model of market-based agglomeration that Scott and Storper envision (Saxenian, 1985; Leslie, 2000).

To sum up the argument about cities and economic surplus made thus far, I have said that the extraction and accumulation of surpluses in the hands of kings, ruling classes and states will always have a spatial dimension and that is very likely to take the form of concentration in cities. Conversely, it is hard to imagine any cities in history that have existed strictly on their self-generative economic powers without a large dose of surplus extracted from the countryside, imperial tributes or conquests, displayed prominently in the city through channels of employment, patronage, consumption and so on. I should also add here that even where intra-urban economic dynamics are strongest, they generate surpluses as profits, rents, interest and tax revenues, and the city will still rely on reinvestment of the surplus, as well as manifesting certain kinds of non-productive use of the surplus in temples, coliseums, parks, skyscrapers, mansions and monuments.

In a personal communication, Storper exhorts me to ‘remember the crucial distinction that we make: i.e., not everything that is found in the city is necessarily urban ... Our argument is that things like “political power” and “social stratification” are not intrinsically urban (i.e., they can exist in principle in perfectly non-urban situations and neither in and of itself can lead to urban genesis, as such), though they have immense effects in shaping urban outcomes. Similarly, “piling up surplus” is not in the first instance urban, though it is intertwined with urbanization via the agglomeration effects of urbanization’.¹⁰

Does this negate the argument I’ve just made? Nowhere have I claimed that surplus class and power are ‘intrinsically urban’, nor need I have done so. The causal force of the spatial concentration of surplus is not diminished by merely being a strong relation (not a necessary one). In fact, the same can be said of Scott and Storper’s agglomeration theory, which they seem to think is intrinsically urban but is not. If we take a step back theoretically, they make an unspoken leap of taking a general condition of human existence, the process of social interaction in space, and making it necessarily urban. In fact, sociality, social networks and social interaction occur in all places and at all scales, and they only lead to cities when they become spatially agglomerated and start multiplying because of the additional force of external economies of propinquity. Rural societies also have dense networks of social interaction, many of which are highly localized but don’t produce cities, just as many expressions of surplus extraction and class power take place in rural areas. Social interaction and surplus extraction are always spatialized processes, whether in what we call ‘rural’ spaces or in ‘urban’ ones, and the shift towards cities needs further explanation.¹¹

The built environment and the city symbolic

A necessary dimension of what everyone means by the urban is ‘the built environment’: an intense emplacement of buildings, monuments, streets, water and sewer lines and so forth. This has three abstract spatial dimensions. The first is absolute space, a definite place occupied by the built environment that is (relatively) immobile. The second is relative space, or the consolidation of buildings and infrastructure in close proximity, which shortens the time and reduces the cost of movement. And the third is relational, or the multiplicity of interactions unleashed by the relative propinquity of people and activities that are housed, supplied and supported by the built environment. To this I would add a fourth—verticality—which is the result of a degree of density of occupation that necessarily gives rise to an upwards impulse to building. A ‘skyline’,

10 Personal communication, Michael Storper, email of 12 May 2014.

11 Thanks to Andrew Sayer for insisting that I clarify this point.

whether dominated by pyramids in Tikal, Hagia Sophia in Constantinople or the Eiffel Tower in Paris, is something universally associated with urbanism.¹²

Scott and Storper have a second element of their theory of the urban, beyond agglomeration, which they call ‘the urban land nexus’, but it does not appear to include the absolute physicality of the built environment, as I have defined it. As they put the matter, ‘[we] identify a related feature that is equally critical to any account of the nature of the city. We refer to this feature as the urban land nexus, meaning an interacting set of land uses expressing the ways in which the social and economic activities of the city condense out into a differentiated, polarized, locational mosaic’ (Scott and Storper, 2014: 8). They go on to add: ‘The essential nature of urban land is that it is simultaneously private and public, individual and collective, and that its shape and form express the intertwined dynamics of the individual actions of firms and households and collective action on the part of diverse institutions of control and governance’ (*ibid.*).

Although the concept of the urban land nexus might encompass the built environment of the city, the latter is not made explicit; therein lies a serious analytic shortcoming of the Scott and Storper approach. While they insist that they understand perfectly well what is meant by the built environment and other points I am about to make, and protest that they cannot do everything in one article,¹³ their silence on key points speaks to a larger problem of a theoretical approach to cities and their built environments. Indeed, without clarity on the relation of physical building to urbanism, we end up with the strange sort of denial made by Storper, above, that a massive array of government buildings and monuments in a capital such as Brasilia does not make it a city!

In discussing the urban land nexus, Scott and Storper (*ibid.*) declare that there are three (functional) kinds of space in the city: production space, social space and circulation space. These speak to important economic and social qualities of cities, no doubt; but they leave out others. They capture only the relative and relational dimensions of the built environment of the city. In this, they are quite consistent with Scott and Storper’s first principle of urbanization, agglomeration, and represent what I have previously called a ‘horizontal’ theory of the city. That theory concerns spatial interaction and differentiation, but not spatial embeddedness in place and the physical fabric of the urban.

Therefore, to Scott and Storper’s spatial triad I wish to add three further functional dimensions that derive from the absolute, tangible character of the urban landscape, complemented by the relative, relational and vertical dimensions. The three are investment space, rent space and symbolic space. Furthermore, these characteristics of the urban landscape confirm the importance of the surplus and who controls it in the making of cities.

First, the built environment of cities is an investment space. That is, it requires the expenditure of surplus for its construction, whether the source of the funds is private or public, royal or theological. This is a principle I learned from David Harvey (1973; 1985; 2003). But it is not a process confined only to capitalist cities, and it speaks directly to my previous principle that cities are necessarily based on the collection and disposition of an economic surplus. The built environment is, in fact, a primary source of evidence for the workings of my primary principle, because it is the physical manifestation of the availability, transfer and disposition of a surplus. Interaction may

12 One may question whether verticality is a necessary dimension of urbanism, but I believe it is. Not that cities have to shoot skywards, but that they are literally ‘built up’ because of density, which is itself a principal condition of urbanism compared to rurality. Yes, there are tall castles and stately homes scattered across the countryside, but in cities the upwards impulse follows directly from density and space packing.

13 Personal communication, Michael Storper, email of 12 May 2014.

create new ideas and goods, but it does not build the city without the investment of an economic surplus in the urban fabric.¹⁴

Second, the built environment and urban land are themselves a source of surplus, extracted in the form of land and building rents. Scott and Storper understand land rents very well, but the chief function of land prices/rents in their view is allocative, not extractive. One might well object that the extraction of rents is not properly to be considered as a cause of urbanization, but rather as a consequence of urban concentration. It is derivative, of course, in the sense that the demand for propinquity/access generates a willingness to pay for urban property (land and buildings). Nonetheless, the reverse is also true, those with surplus invest in urban property to extract rents from others. This sort of rent harvesting was happening in Rome and other ancient cities (Boak and Sinnigen, 1965), and it remains prominent in capitalist cities. Indeed, it drives buildings ever higher as cities grow in order to reap as much in rents as possible (given laws and prevailing practices). Rent extraction is a basic motor for the build-up of cities, according to Louis Mumford (1961) and his followers (e.g. Brechin, 1999). It also features prominently in Marxist-influenced studies of city development (e.g. Smith, 1996; Scobey, 2002; Harvey, 2003; 2012).

The third characteristic of the built environment is that it is necessarily laden with symbolic or representational content, as Henri Lefebvre (1995 [1974]; 2003 [1970]) famously argued and landscape geographers have been saying all along (Wilson and Groth, 2003). All buildings and other human creations have this dimension, but when it comes to the kinds of monumental structures so often found in cities, it becomes a primary element—they are made to be read. In short, the city is never a mute artifact of economic activity (see also Soja, 1989; 2000).

The purposes for which buildings, streets, parks and the rest are erected are manifold, and so are their symbolic overtones. Some are principally utilitarian expressions of the need to (re)produce, circulate and house things and people in urban space, but even those almost always serve as celebrations of industry, trade and social capabilities, as well, whether Roman aqueducts, Chicago's L transit system or Parisian sewers. Some buildings and monuments celebrate positive achievements of society, such as democracy, popular sacrifice or historic origins, as in the case of New York's Statue of Liberty, Mexico City's Zocalo or Athens' Syntagma Square. But many, if not most, demonstrate the power and wealth and importance of the builder—and thereby awe rivals and ordinary folk. Government palaces, victory arches, cathedrals and radial parkways are all ways of expressing individual, corporate, institutional or state power and plenitude (Green, 1990; Brechin, 1999; Driver and Gilbert, 1999; Harvey, 2003).

This is, of course, an extension of my previous argument about the strong relationship between surplus and show in cities. The city is never a mute artifact of wealth and difference; it is always an active expression of prevailing social hierarchy, class control and state power. The wealthy and powerful (people, institutions, states), who are the bearers of surplus, love to congregate in cities to build monumental environments bearing witness to who they are, displaying their wealth and power, and validating the social orders over which they preside. Even today's efficient capitalist cities are always about displays of wealth and power, from corporate skyscrapers to beautiful opera houses to wide boulevards. Taking the argument further, certain cities are regularly seen as the leading representations of entire epochs of human historical geography, whether Machu Picchu for pre-Columbian Peru (Mann, 2005), nineteenth century Chicago for American expansion (Cronon, 1991; Miller, 1996), *fin-de-siècle* Vienna for Central Europe's Modernist awakening (Schorske, 1979) or Shanghai's high-rises for China's

14 Even if that surplus derives from the productive power of the city as agglomeration and its own economy. Yet, as I have already argued, that kind of surplus regularly mingles with other kinds of external extractions not based on the city's own productive power.

emergence as twenty-first century workshop of the world (Xue, 2006). The representational space of the city is not a secondary by-product of urban agglomeration but a necessary characteristic of the urban built environment.

To grasp this point, we need to go beyond a purely economic theory of cities and realize that ‘the social’ contains an irreducible element of meaning and the legibility of the products of the human hand.¹⁵ This is not a secondary or incidental effect of urbanism but part of its very substance; one of the primary reasons cities exist is as a display of wealth, power and the prevailing social order (and its ideology). Cities and their component parts are not just built to enhance production, ease circulation, govern the state or house the people; nor are they built simply to invest the surplus and garner rents. The built environment is always a statement of intent, desire, exaltation, defiance, celebration, dominance and more, and such statements are embedded in social relations of class, conquest, race and other forms of power. Yes, there are more and less utilitarian and purely economic constructs, but none are void of significance.

Without question, Scott and Storper (2014: 11) are aware of these phenomena and say something similar later on in their article: ‘the wider conditions of political authority and power are often revealed in mediated form in the skyline of individual cities, as in the case of the remnants of imperial monumentality that can be observed in London and Paris, the Soviet gigantism that continues to loom over Moscow, the feudal relics that abound in Asian cities from Bangkok to Beijing, and the colonial vestiges that characterize cities in many parts of Latin America’. But this statement relates to a discussion of generality and particularity in thinking about cities; it is not incorporated in the key section about the urban land nexus. I take from this that the symbolic side of cities is important but not essential to their theory. I am arguing something stronger: that the representational power of the city is an inevitable accompaniment to urbanization. Once again, Scott and Storper have a flat spatial concept of the city as a place of interaction and interdependence, while I am insisting on a theory that includes a built-up landscape in absolute space. Against Scott and Storper’s theory of efficient conditions for agglomeration and interaction, I insist on a theory of cities that includes the roles of wealth and power, extraction of surplus and monumental display.

The problem of urban scale

Scale is crucial to any discussion of cities and urbanization, as Scott and Storper clearly realize. They begin their polemic by insisting that the urban scale matters, opposing globalization theorists run amok who believe that specific places and cities no longer matter—only the global scale counts. Indeed, I am puzzled that someone like Neil Brenner (2013), who has spent so much time theorizing scale, can turn around and write off the urban level in a multi-scalar globalized world (Walker, 2015). Furthermore, I agree with Scott and Storper that many things in cities have their roots at other scales, and for those the city is chiefly a container or secondary source.

On the other hand, Scott and Storper do not address the problem of scale head-on. They tend to back off into vague statements about social context, society, the larger arena and so forth. They fail to say explicitly that urbanism is a multi-scalar process, from intra-urban neighborhoods to global city systems, and it involves absolute, relative and relational space (or what others have called territory, space and place—Jessop *et al.*, 2008; Herod, 2010).

Where we clearly agree is that the absolute space/place of the city matters. The city is a distinct thing, however fuzzy it might be at the edges (my forehead is a real thing, too, but where does it begin and end, exactly?). But because cities have grown

15 Symbolic life, or consciousness, is always in dialectic relation to material life and objects, as Marx insisted (see also Miller, 2010).

so huge in recent times, there is a lot of justifiable confusion about what constitutes a city. Is it an urban core, a set of suburbs, a metropolis or an even-larger urban region? The US Census has a horrible time trying to get to grips with all these levels, and often muddles things badly. The San Francisco Bay Area is one of the worst examples, having three main centers, five or seven or nine or a dozen counties, depending on how you carve it up—some even argue for a 15-county megaregion reaching far into the interior of California (Walker and Lodha, 2013).

This is not just a definitional dispute, however: the point is that even at the level of ‘the city’ or ‘the metropolis’ we are dealing with a multi-scalar phenomenon. Urban areas need to be repeatedly taken apart and put back together again in order to see how they work, even in terms of how intra-urban networks, creative encounters and agglomeration economies operate. This is more than a matter of differentiated social space by class and race, as Scott and Storper note; it includes multiple employment centers, specialization of intra-urban districts, historic satellites ingested by urban expansion and repeated processes of suburbanization/reurbanization (Walker and Schafran, 2014). I was surprised that Scott and Storper gave the intra-urban scale such short shrift.

Another scalar level is that of ‘city systems’. Such city systems are of long historical standing: the Roman empire had a network of administrative and commercial cities, early modern Europe spawned systems of cities from Italy to Iberia and around the Baltic, North America had a system of cities from Canada to the Caribbean dating back to the late seventeenth century, New World colonial cities were plugged back into those of Europe, London had an international financial chain of cities in the nineteenth century and so forth (Pred, 1973; 1977; Reed, 1981; DeVries, 1984; Blackburn, 1997; Meyer, 2003).¹⁶ Scott and Storper note such linkages among cities, past and present, and point to the specialization of cities within larger systems. To me, however, the most important thing to emphasize is not specialization, but how interfirm/interpersonal networks and agglomeration economies occur not only within individual cities but across whole systems of cities. And, of course, I would add other crucial sources of multi-city relations, such as imperial/colonial ties, corporate administrative systems and financial networks resting not only on the advantages of interaction but on flows of surplus (taxes, profits, interest, etc.).

A further scale of modern urbanization is often called ‘global’, and Scott and Storper propose that their theory applies across the wide differences between cities around the world. In particular, they engage scholars who emphasize the distinction between cities of the global North and global South, and return some of the conceptual grenades tossed their way by urban theorists from the global South such as Ananya Roy (2009; Roy and Ong, 2012) and Jenny Robinson (2006; 2011). I am not interested in taking sides in this debate here, but I do wish to draw attention to differences of scale even at such expansive dimensions of urban systems. Not only should we be aware of North/South distinctions, but European and North American city systems have had a long and distinct history on each side of the Atlantic. Chinese and East Asian cities have deep relations that arose quite separately from European contact. Former Soviet cities have linkages that have not been dissolved by the breakup of the USSR or the incursions of the European Union or China’s inroads into Central Asia and so forth. These large-scale processes of relation, interaction and difference stand in the way of unified or even dualist theories of what makes cities tick.

This problem of multiple scales and a multitude of differentiation leads me, finally, to the need to address the problem of method in urban studies.

16 In my view, the ‘discovery’ of global cities over the last generation demonstrates a troubling lack of historical perspective (e.g. Castells, 1989; Sassen, 2001 [1991]).

Cities and the science of complex phenomena

Arguments over the nature of cities, or why cities exist, necessarily raise questions about scientific method and the philosophy of social science. Such disputes are not just a matter of opposing theories of the urban but of differing outlooks on how to think about cities or other worldly phenomena. Scott and Storper are well aware of this, as shown by the section of their article entitled ‘Generality and difference in urban analysis’. They are, once again, correct on certain key issues. One error they point out is the claim that urbanism is too complex to grasp using any simple theory. All phenomena are complex, and the purpose of science is to cut through complexity to reveal underlying patterns (i.e. simplification) and to separate causality from chance. As they put the matter: ‘do the admittedly enormous variations in the empirical makeup of cities that result from ... differing contextual circumstances warrant a plurality of different concepts of the urban? Or can we cut through this Gordian knot to reveal a coherent concept of the city as an object of theoretical inquiry?’ (Scott and Storper, 2014: 10). Another common error they identify is the hope that adding more and more case studies of cities will reveal patterns in the data; this is naive empiricism unless cases are posed against definite theories of how cities work.¹⁷

I have been engaging Scott and Storper on their own terms, in a sense, by arguing for expanding the number of key forces in urbanization. I have argued that economic surplus and social power are widespread foundations for the making of cities, and that cities are unimaginable without a built environment and symbolic life. Nevertheless, I think there are real limits to what can be achieved by this sort of minimalist thinking in getting to grips with such complex things as cities, especially over enormous spans of history and geography. I’m not trying to throw out the baby with the bathwater and go back to a view that anything and everything goes in ‘the urban’ just because it goes on in cities. As Scott and Storper (*ibid.*: 13, original emphasis) put it: ‘Even in the twenty-first century, when, for the first time in human history, most of human existence is geographically contained in cities, not all or even the greater part of this existence—*pace* Lefebvre—can be described as being *intrinsically* urban’. But I do think we need a more open-ended and layered approach to urban theory than that of our authors and their two universal pillars of cities.

In short, the methodological approach taken by Scott and Storper is too black-and-white in its distinctions between essential and accidental, intrinsic and contextual. As they declare, ‘[we] insist on the distinction between issues that are to be found *in* cities but that are not intrinsically urban in character and issues *of* cities in the strict sense’ (*ibid.*: 9, original emphasis). So they offer a stepwise process of isolating the ‘strictly urban’ and then adding categories of cities in terms of other social forces. They aver that important elements of the societies in which cities are embedded will make for a variety of urban outcomes and list five such ‘contextual variables’ (levels of economic development, market/non-market systems, forms of social stratification, cultural norms and conditions of political authority)—all vital elements of social orders, to be sure. Such an approach will lead to a set of nested categories or sub-theories of cities. But it is too tidy, too certain. For how can we be sure what constitutes the essentially urban, and how meaningful is such a concept?

There are a number of problems with Scott and Storper’s approach to dealing with complex, messy, dynamic entities like cities. I want to highlight three such quandaries: reciprocal causality (dialectics), fuzzy objects (assemblages) and evolutionary processes.

17 Deep investigation of complex cases, sorting out the wheat from the chaff, is a perfectly valid scientific approach, no less powerful than broad comparisons across wide fields of data. Both are subject to the same demand for theory-guidance in making sense of evidence. The best guide to method in the social sciences is still Sayer (1992).

Let's start with reciprocal or non-linear causality. If cities are spatial concentrations of social activity, then what is or is not intrinsically urban? The dividing line is unclear. The difficulty is that societies are embedded in cities, as well as the other way around, so how can we be sure what is 'contextual' rather than 'fundamental' as this categorical boundary is crossed? Once a social activity becomes urban it may well change its character and in the process change the nature of the urban. Take sport, for example: in the move from the Greek Olympics to the Roman games, sport moved from the pastoral Peloponnese to large urban coliseums built to accommodate huge crowds. Is, then, this new version of a social activity not inherently urban to a degree? And, moreover, doesn't the change in the spectacle of sport affect the landscape and types of interaction in the city? Here's another example: building things is a general social activity, but when it becomes the construction of cities, does it not become, to a degree, intrinsically urban? After all, the concepts and technologies involved in civic plazas, water supplies and sewerage are inherently different from any rural construction.¹⁸

A second problem pertains to the unity and coherence of the object under study. Cities are notoriously fuzzy at the edges, variegated within and differentiated from place to place. This is one good reason why coming up with a 'theory of the urban' has never been an easy matter. It does not mean we can't reasonably distinguish cities from their 'other', the countryside, or find deep commonalities across cities in time and space. Rather, the problem lies in imagining 'the city' as a more integrated organized thing than it is. As Andrew Sayer puts it: 'Categorization of messy things like cities—in the Cartesian sense of creating clear cut distinctions that isolate homogenous objects or a class of objects with something in common that makes them one kind of thing rather than another—is a risky business'. Conversely, we need to acknowledge 'the gestalt character of our recognition of many objects ... [and our tendency] to work in categories and break everything down into parts [instead of using] a more holistic, non-analytical, and open way of comprehending the world'.¹⁹

Complex objects of study are often combinations with looser internal ties and stronger external adherences than we would like, in terms of isolating prime movers, emergent powers and so on. Cities as a class of objects have also been cobbled together over time and space, and this is what assemblage theory and actor-network theory, at their best, are trying to capture. Cities are, to some degree, 'assemblages'. The same problem arises in physical sciences. For example, the theory of molecular chemistry works very well over a broad set of compounds, but requires flexibility in dealing with substances like water (which cannot be understood apart from its strange weak external bonds) or DNA (which is nothing if not an assemblage with many non-functioning left-overs). The usefulness of the idea of assemblage in urban theory is clear in the way scholars repeatedly come up with looser terms for what they are trying to capture: structures of accumulation (Harvey, 1989), political regimes (Stone, 1989), social lash-ups (Molotch, 2003), regions as a nexus of untraded interdependencies (Storper, 1997) and so forth.²⁰ So we can't dismiss urban assemblage theory out of hand, because it reflects certain ways that things come together in cities and stick. Where we have to draw the philosophical line in the sand is when assemblage theorists reject any notion of relative durable structures, internal relations or necessary conditions.

The plot thickens even further when we introduce a third consideration: the problem of time and process, which implies 'the formation, modification and dissolution of what we call structures'.²¹ In distinguishing capitalist cities from feudal cities or ancient imperial cities from early modern colonial cities, it may be that the differences

18 Thanks to Erica Schoenberger for pointing this out to me.

19 Personal communication, Andrew Sayer, email of 25 June 2015. Thanks to Andrew for sorting me out on the question of assemblages.

20 Which is not to say we can go so far as to state that 'it all comes together in LA' or anywhere else (cf. Soja, 2000).

21 Personal communication, Andrew Sayer, email of 25 June 2015.

are so profound that a major theoretical shift is required to unlock the keys to each kind of city. This is what theorists from David Harvey to Arjun Appadurai have been arguing for years, and it elides any simple set of nested theories of the urban. It is the same problem posed by Marx when he said that categories such as money, capital, labor and morality had to be rethought in terms of stages of history, or modes of production. When I was a graduate student, Harvey (1973) had a go at a generic theory of the city, but he soon abandoned it for a life's work studying the capitalist city, because that was, in his view, the essence of the modern urban condition. Indeed, there's a strong sense in which Scott and Storper's market-industrial theory of urbanism is really a theory of the modern capitalist city read back into history, which is why it falls short as a universal theory of the urban.

The problem is even greater if we look at complex systems in an evolutionary or historical way. Can we actually capture the essence of what it is to be 'human beings'? We are, first of all, animals, then mammals, then simians, apes and finally species of 'homo'. All those are in us, and necessary to what we are as a functioning species today, and the differences are far fewer than people used to imagine. Nevertheless, we are ultimately different because of some less obvious characteristics, the origins of which are still not entirely clear. Many candidates have been proposed, such as upright stance, ocularity, opposable thumbs, use of tools and spoken language. Do we have a unitary essence, as 'the tool-making animal', or are we better understood as an assemblage of features? Evolution works by addition and modification of parts, as argued by Stephen Jay Gould (1980). *Homo sapiens sapiens* is something cobbled together over time. Even our DNA, which is a kind of blueprint of the species, is about 98% unused leftovers from the *bricolage* of evolution that made us.²²

In this spirit, the arrival of the capitalist/industrial/modern city on the historical stage means not only that the extent of urbanization has vastly increased, but that trying to establish a historically universal theory of the city is an exercise that can hide as much as it reveals. Similarly, thinking geographically, the European city has evolved as a remarkably different animal from, say, the Latin American city, and it is quite possible that cities in the global North and South differ so profoundly that a single theory of 'the nature of the city' can take us only so far in comprehending them.

So, in the end, while I share Scott and Storper's impatience with faulty reasoning about cities in the urban literature, and I enjoy the exercise of thinking seriously about why cities as a transhistorical-geographical phenomenon exist, I also see the limits to that project. In the end, we still require not just a solid foundation of parsimonious principles of urbanization, in the manner of Scott and Storper, but a complementary (and not simply subordinate) set of supple and open-ended urban theories to get at the immense problems presented by the growth and multiplication of cities around the world.

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22 See https://en.wikipedia.org/wiki/Noncoding_DNA (accessed 26 June 2015).

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