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Editorial

The creative destruction of cities

Most readers will not be familiar with the detailed geography of the financial district of London which is called 'The City', but I beg your indulgence in that my example of what has and is happening there provides an excellent illustration of the thesis that most change in cities is due to renewal. Just as the human body renews itself continuously through its cells, cities are continually renewing their fabric as they adjust to the wider economic context, changing preferences in location and travel, and of course, technological innovation. In the last sixty years since the end of the Second World War, the City has undergone massive waves of building at least three times, perhaps four, coinciding with the boom times and associated property speculation. Even though many buildings have been renewed through redevelopment, the overall morphology of the place has changed little, as the street pattern is much the same as that after the Great Fire in 1666, while strict planning controls during the last century have kept the skyline low. Since the last boom began in the mid-1990s, many office buildings dating from the 1960s and 1970s have been rebuilt in situ, the centre of gravity of the financial quarter has moved west from the Bank of England towards St Paul's, while the comparatively quiet area between the City and the eastern fringe of the West End—the shopping and entertainment core of London—has filled out and become commercially attractive. Within the fabric of this built environment, there has been massive change in terms of who works and lives in these areas, but little obvious change in overall physical form.

What is so interesting about this renewal is that it is not generated simply by the fact that buildings have outlived their usefulness in terms of their functional arrangement. If you currently visit Cheapside, the street linking the Bank to St Paul's, the buildings lining the street are being currently replaced one by one. Perfectly serviceable and even attractive buildings are being removed and rebuilt. A guessing game I play is to speculate on whether a building that suddenly becomes vacated and surrounded by hoardings is to be cosmetically renewed or rebuilt in situ, and it is virtually impossible to anticipate this simply from knowledge of its physical form. Of course, many buildings are no longer adapted to the functions that were originally intended and there is always a case for redevelopment in economic terms. But property speculation and the quest for newness, for style, and the lure of fashion are very significant. And then there is the single-minded force that cities, their developers, the capitalists required to finance them, and even the workers and residents that occupy them demand to make their mark: to exhibit their difference from the past.

In understanding urban development, the focus for much of the last century was largely on how cities grow in terms of their morphology and economic structure rather than the way they continually renew themselves from within: on exogenous rather than endogenous growth. This was in spite of the fact that, when quite simple migration patterns are examined, they show that in most cities the mobility of the population on a yearly cycle in terms of housing and job changes far outstrips actual net growth of population and employment. In the US some 14% of the population move house each year while the US population is growing at a rate which is more than ten times less. In a sense, this implies that our focus on an urban dynamics dominated by new growth, focusing on sprawl and on ways of controlling the physical extent of cities

through green belts and growth boundaries, is at worst wrong headed, at best a distraction from the core processes of urban dynamics. Most change in cities is based on renewal and internal movements of populations as any observation of fine-scale environments will reveal.

Seventy years or more ago, the economist Joseph Schumpeter (1938) argued quite convincingly that capitalism was an incredibly efficient system precisely because of this quest for continuous renewal. He suggested that any single component of the economy—say a firm or even industry—could not withstand the deep-seated forces of competition and innovation which would eventually destroy any firm that grew to dominate its market. New firms would be created on the basis of innovations that established firms could never emulate, and, in this way, no firm could stay ahead of the market (Foster and Kaplan, 2001). Examining the earnings of the top US firms for each year over the last fifty years, only seven from 1955 now remain in the top hundred and it would appear that none of these will be in the top rank by 2020. This seems to imply that the processes of creation and destruction that Schumpeter so effectively articulated are sufficiently core to the economy to reflect such iron laws of social dynamics (Batty, 2007; Sandberg, 2006). In terms of individual cities, the same kinds of creation and destruction seem to operate at a much more aggregate level. From Chandler's (1987) database, there are no cities from the top fifty in 450 BCE which remained in that top group in 1450 and of those at the top in 1450, only six remain today. The half-life of firms in the top hundred (from the Fortune 500 list 1955 to 1995)—which is the number of years after which the number of firms reaches one half the number in the initial list—is twenty-eight years, while for cities in the US from 1790 to 2000, the equivalent is about sixty years. For the world data from 450 BCE, it is seventy-five years, decreasing from about two-hundred years two millennia ago. As we scale up from individuals to firms to cities to world populations, the dynamics becomes smoother, notwithstanding its comparative volatility.

At the smallest scale with which we began this editorial, analysis is more subjective, although far more evocative of how these processes work themselves out. Clearly innovations in style and technology are instrumental in creating new building forms, but so are innovations in the way property is acquired and managed against a background of raw competitive impulse. Page (1999) has picked up Schumpeter's (1938) characterisation in his brilliant description of the rebuilding of Manhattan during its early period of skyscraper development from the turn of the last century until the Second World War. He argues (page 2), as we have already implied, that capitalist urbanisation and development is a process "not defined by simple expansion and growth but rather by a vibrant and often chaotic process of destruction and rebuilding", and that this process is central to a modernity that renews the city so that more and more profit can be extracted through the transformation of development. In this sense these processes are central to all city building.

This characterisation of urban dynamics is one in which development is never completed and the city is always 'provisional' in its form and function. Page (1999, page 3) summarises this rather well when he says: "The 'creative destruction' oxymoron suggests the tensions at the heart of urban life: between stability and change; between the notion of 'place' versus undifferentiated, developable 'space'; between market forces and planning controls; between economic and cultural value, and between what is considered 'natural' and 'unnatural' in the growth of the city." This perspective is quite consistent with the idea that cities evolve and coevolve to outcomes that are surprising and, in this sense, show emergence. Manhattan was rebuilt during the early 20th century through an intricate combination of decisions that extracted as much profit from land development as was possible, using new building technologies which enabled

residential uses to be rapidly converted to commercial uses as the city grew in terms of its more global function. This process of transformation involving a hierarchy of interlocking decisions reveals change on different temporal and spatial scales, ranging from more rapid conversion of uses to new functions generated through a new built form, to slower changes in zoning ordinances and planning standards.

Slow processes of physical change involve major decisions which reroute movement paths in the city and occur infrequently and with great disruption. Much faster processes associated with changing the physical character of routes occur much more frequently—for example, pedestrianisation and other segregated areas, such as bikeways while the construction of utilities under street systems occurs—as and when demand arises. In contrast, building redevelopments in situ vary from the simple rehabilitation and internal reconstruction of buildings to new building forms on existing sites. Comprehensive redevelopments take place much less frequently, although often less slowly than the introduction of new street and route systems. Onto this must be mapped the organisational processes which reflect the economic cycle that determines physical change. Often land is acquired, assembled, banked, and left vacant until economic conditions are judged appropriate for redevelopment, while planning and related control processes which involve many different interests can hold up development, often stopping entire schemes. In terms of new uses being developed in existing built environments, open spaces and park facilities are the least likely to be developed, for most of such spaces are defined when the city is growing.

We have barely begun to articulate this nexus of change which determines the way new uses and buildings are created and old ones destroyed. A theory of dynamics needs to assemble such elements into a coherent theory, which in turn needs to be linked to what we know about growth and change at larger scales and over different time horizons. The ways in which such change is fashioned into new physical forms, and the ways in which new organisational procedures, changing individual and social preferences, and new technologies combine to determine how such change takes place, would form its key elements. In a sense, past, and indeed much current, research into cities reflects the fact that most change is to the existing fabric, although, when it comes to systematic theory and simulation, the focus is mostly on aggregate physical change concerned with new growth. There is a veritable cornucopia of detail about how cities change in the literature, but much of this is unsystematic, and is not organised with theoretical explanation and simulation in mind. There needs to be an urgent effort to reorganise what we know about change in cities so that we can reflect the fact that most change is concerned with restructuring rather than new structuring. This is particularly relevant in an era when our perceptions of what the most important issues in cities are, are radically changing to reflect small-scale urban environments and more routine, somewhat faster processes which occur on hourly, daily, and weekly time scales, rather than over years or decades. Of course all scales in space and time need to form the core of a new theoretical understanding of how cities grow and change.

Proposing what we might consider in a new theory of urban dynamics is far short of how we might begin to build and develop such a theory. Like all understanding and representation which relies on the historical record, our knowledge of the past is extremely limited: past facts are filtered incessantly as much of the past is forgotten. Our perspectives tend to be rooted in the present and our reconstruction of the past is inevitably structured by what we can access from the present. But there is a wealth of written and visual literature which we can draw upon. Finding quantitative data is much harder, but there are ways of interpreting old maps, of synthesising censuses which are inconsistent with one another, and of mining the past for all kinds of idiosyncratic information that can help to piece together the story line of creative

destruction in the urban fabric. Page's (1999) account is just one perspective on this dynamics. Steven Johnson's (2006) recent account of how cholera was discovered to be a waterborne disease in a half square mile of London's Soho shows how one can piece together in remarkable detail the physical form of a city from diverse sources of information which were produced over 150 years ago. To develop an appropriate urban dynamics which grapples with this kind of detail, there is no substitute for assembling all that can be mined about small areas. But our ability to do this is sadly constrained by the way academia is currently organised, and the way academics are funded and evaluated. Nevertheless, this kind of research poses an important challenge requiring a remarkable diversity of skills and viewpoints if we are to progress beyond merely describing the way cities transform themselves in space and time and the way disruptive change affects the quality of life that they offer.

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