Smarter urbanisation and capital values

In this article **Nicholas Falk AoU** connects the evolution of ideas on capital and competition, with the digital revolution that is shaping the growth of cities and suggests how we could use multiple criteria to reshape the growth of towns and cities.

Old theories

It is 150 years ago since the publication of *Das Capital: a critique of political economy*, changed the way economists think about development. Karl Marx explained growth in terms of social classes and their relationship to the means of production. Property ownership explains why some prosper while others live in poverty. Less than a decade earlier, Charles Darwin had published the equally influential *Origin of Species by Natural Selection*, which explained growth in biological terms through how a myriad of different organisms mutated and competed for survival. This image undoubtedly influenced Marx.

As the world grapples with creating environments that favour social and economic growth and wellbeing in the face of demographic surges and the loss of traditional jobs, we need a more dynamic model, which I call Smarter Urbanisation. This starts with what people need to be happier and build better neighbourhoods. Most want 'fit' or 'compact towns' not 'fat' or sprawling mega cities with tower blocks that 'cost the earth'. The model of a garden, which is as old as the Garden of Eden, could yield simple rules for better or smarter towns that will thrive and endure.

Capital and stewardship

The worst effects of industrialisation such as pollution have been controlled through Clean Air Acts, and Town and Country Planning. Cities such as Birmingham introduced 'gas and water socialism' while philanthropists provided parks that were carefully stewarded. The 'threat of communism' kept Western nations together for a while. But global trade in manufacturing has transferred capital and jobs from West to East. In a few decades the Digital Revolution transformed the supply chain and what and how we consume, which is well documented in *The New Industrial Revolution*[1]. In the UK local authorities ended up with their powers and resources stripped back. We will need a stronger vision to overcome divisions and a general lack of capacity.

The contradictions are indeed glaring. The French economist Thomas Piketty revealed in his influential book *Capital in the 21st Century* that the gains from owning capital, largely houses, far outstrip the growth in wages[2]. The gains work out about six per cent a year on average since 1870 compared to three per cent for wages, so wage earners can never catch up. Home ownership has become the predominant means of accumulating private capital, or financial wealth, rather than investing in stocks and shares. House prices have consequently become unaffordable for those not on the ladder. Land values have escalated as a result, profiting the few not the many, while the masses worry about meeting their mortgage or rental bills.

Apart from a few exceptions such as Daniel Glazier in *The Triumph of the City*, economists have been spatially blind. They overlook the factors that cause creative people to move from one place to another and start or grow a business there. While companies, even market leaders, often only last for decades, cities with their extensive infrastructure go on forever. But the location of innovation is shifting. Cities in the past had real advantages over small towns or villages. But while a city may 'take-off' by exploiting an asset such as a river, a market, or even a university, the key lies in extraordinary people. A powerful essay contrasts the lives and works of Abraham Lincoln and Charles Darwin to show '*the slow emergence from a culture of faith and fear to one of observation and argument, and from a belief in the judgements of divinity to a belief in the verdicts of history and time*[3].'

The most dynamic change makers, such as James Dyson or Steve Jobs,

are not to be found in large cities any more. Like Cadbury at Bournville, Google are building a new town for their employees near Palo Alto, many of whom currently live in San Francisco. The starting point is not simply land ownership but communications that enable other places to be reached swiftly. A town on a junction will do better than one on a branch line to nowhere, a dead end. Super-connectivity is what science cities as diverse as Cambridge, Freiburg, Grenoble, Palo Alto and Singapore have in common, despite their obvious differences[4]. Their environment not only favours innovation, but also provides better places for children to learn and develop, as well as more choices in terms of places to do research or work.

Time and care is then needed to accumulate the economic, social and environmental capital to become self-sustaining. To cultivate more change makers we should learn from the metaphor of a garden. Incubation calls for suitable environments, whether it be soil, water or light. New growth needs saving from weeds through stewardship or careful management! Deserts can be made to bloom under special circumstances, but it is much easier to plant a market garden in established soil. The prudent gardener starts seedlings off in a greenhouse, away from threats and with plenty of light. New towns on a redundant airfield may never get off the ground.

Shaping the future

The 'natural' form for smarter urbanisation may no longer be a grid, which was right when infrastructure came in metal pipes. But what shape should growth towns aspire to? In a follow-up study for the National Infrastructure Commission on the Cambridge Milton Keynes Oxford arc *Partnering for Prosperity*, Tom Holbrook of 5th Studio refers to *String Cities*, and many different patterns of urban growth. But studies of property values show that people want access to green space, but not so much as to reduce accessibility or connectivity. In turn, the economic value of proximity to transport nodes and views of the countryside generates a pattern of growth over time, which can be seen in aerial pictures of city lights by night. The problem is that when most people choose to use private cars, the roundabouts on the edge clog up, and the centres become grid-locked. Smart technologies like autonomous vehicles do not tackle the roots of congestion.

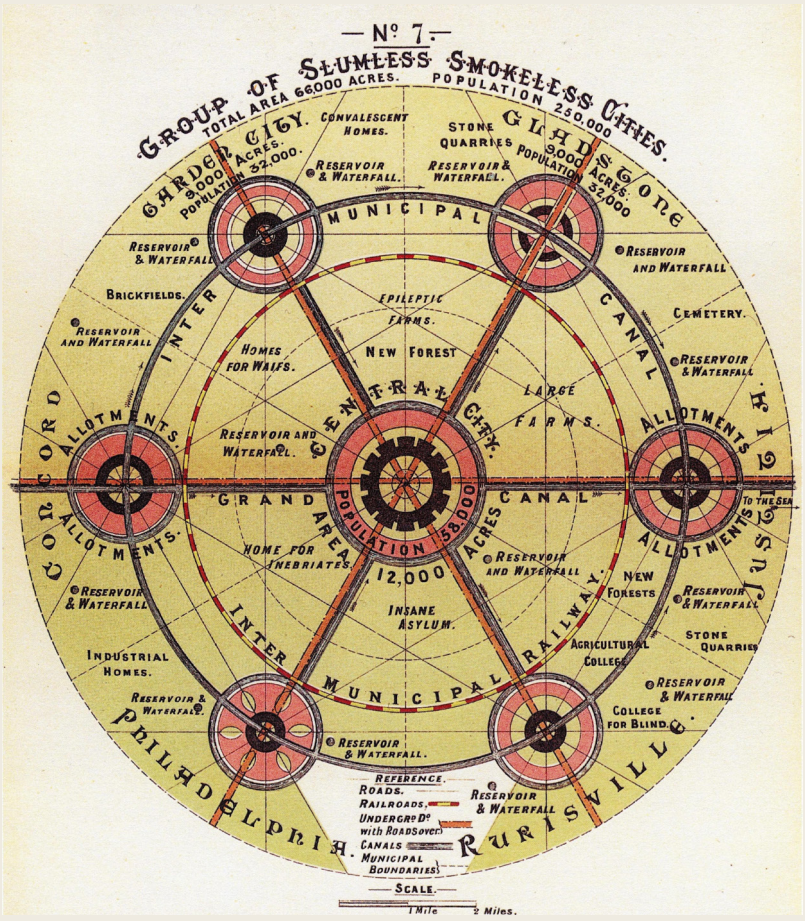
A better shape is more like a snowflake, with six points, and none of them the same. Ebenezer Howard's original drawing for the *Social City* showed a polycentric network of towns linked by high quality transit systems, and separated by actively used countryside. The submission that won the 2014 Wolfson Economics Prize applied this idea to growing cities like Oxford and York. David Rudlin's new book with Shruti Parikh, *Climax Cities*, analyses the built form in leading cities throughout the world. What architect Brian Love terms the *Connected City*[5] intensifies areas around stations or stops along a transit line connecting up several major towns to generate enough activity to make better services viable.

Smarter urbanisation

A host of cities around the world aspire to be **Smart Cities** from Eindhoven and Manchester to Shanghai and Hyderabad. Organisations selling ICT such as IBM or Google and consultants such as PWC have broadened interest in the concept. Singapore has gone furthest in its vision for '*a city in a garden*' with electronic road pricing to even out traffic flows. The Future Cities Catapult concludes that "*City authorities have at their disposal a raft of levers and enablers, which on analysis are not being fully utilised*"[6]. The term Smart Cities, like sustainability or resilience, is open to interpretation.

Thus the Indian prime minister Modi has committed the country to supporting a hundred smart cities through smarter infrastructure. China aims to build 1,000 new towns, using the latest 'smart' technologies, and is keen to learn from practice elsewhere. But what does a 'smart city' really mean? The definition needs to go beyond technologies. Terms like intelligent or wired, and the creative or learning city, could form part of a new 'sharing economy', but the cities that score best on indices may have good intentions, but are still a long way from mobilising the investment needed to tackle social exclusion[7]. Shakespeare put it best when he wrote "*What is a city but its people?*"

A true 'learning city', which both develops and applies knowledge, does not just make the most of ICT, such as smart phones of data hubs, but also human interaction, as Charles Landry has pointed out[8]. This might be called real intelligence, not artificial intelligence. This calls for technologies that allow for environmental and social impacts – collective over individual



The Garden City Concept by Ebenezer Howard

Electric Road Pricing toll collection scheme adopted in Singapore to manage traffic

transport, active over passive transport, like bikes and walking, and the 'Omnibus' over the autonomous vehicle. A useful review of the literature with 89 references distinguishes between **technology** factors that favour integration, **human** factors that favour learning, and **institutional** factors that favour good governance[9].

The term 'smart' can also be applied to many sub-systems including transportation, environment, energy education, health care and safety. What matters most is how well these are joined up, and therefore how projects are designed and financed. While the concept may have started with electrical systems, it is now time to draw on ecological as well as economic concepts such as balance or equilibrium.

Real cities that work

Economic factors are fundamental, and their impact on both the way we live (the social dimension), and on the environment (the physical dimension). But what would a better future look like? As the greatest value today is attached to brands rather than physical assets, (think of Apple) it is easy to fall for the many tempting visuals, for example libelium.com. But despite the appeals of *Capitalism without Capital and the Doughnut Economy*[10], and companies like Uber, Facebook or Trivago and the 'weightless economy', real development takes finance. Investors in turn require an assured return and the security provided by property.

So as most private wealth is stored in the value of houses, then a post-capitalist society is likely to look very different from the industrial towns that grew up around manufacturing factories or mills. In particular the relationship between town and country will be very different, as *Financial Times* writer Peter Marsh suggests. For example instead of second homes and cars, we could well see a huge growth in hiring services rather than owning products, as already happens with smart phones. ApartHotels in major cities and cohousing schemes in smaller towns are other good examples of the 'sharing economy'.

Conclusion

To achieve smarter development we need four-dimensional frameworks which relate the three fundamental measures of economic, social and environmental wellbeing or capital in a mutually beneficial way over time. This may be achieved diagrammatically through a form of triple helix or a pyramid made up of trellises

To make better decisions on where to invest, we should take more account of the natural capital that Darwin celebrated and Dieter Helm has brought up to date, the economic capital involved in property that Thomas Piketty has charted, and the social capital that we are only just starting to value. Such growth will be 'smarter' because it is more intelligent and better looking than the alternatives. It also should produce better returns on investment over the longer-term A new report for the Greater London Authority *Capital Gains* may help show the way[11].

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For more information visit smarterurbanisation.org and urbedtrust.com

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