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Planning Smart Cities ... Sustainable, Healthy, Liveable, Creative Cities ... Or Just Planning Cities?

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1 ABSTRACT

The paper explores the notion of „smart city" by contrasting a narrow with a wide understanding of „smart cities" and by putting the notion of „smart city" into the context of some city typologies generated over the last few decades. It draws on debates, research, government policies and industry declarations about „smart cities", and other „adjectified" cities, to single out the specificities of „smart cities", and explore what they may contribute over and above to current urban policies and planning strategies.

2 WHAT IS A "SMART CITY"?

Is the notion of „smart city" yet another attempt to grapple with the complexity of cities by deconstructing the concept of „city" and making its component parts easier to understand and eventually to plan for? Or does it stem from yet another commercial offensive set to invent new products and services and to find outlets for them by creating new demands? Or, less likely, do „smart cities" and in particular their operational innovations represent a paradigmatic change of urban living, akin to the introduction of electricity as some claim?[1] This paper explores these questions based on selected debates, research outcomes, government policies and industry declarations.

Like so many new expressions which come on-stream in the academic world or in commerce, the idea of „smart city" appeared in different places simultaneously some two decades ago. It may be traced back to the notion of „smart communities", themselves possibly an evolution from the ecological grass-root movements in California and elsewhere. The Global Forum[2] has included „smart communities" already in 1997 in its tri-partite events bringing together industry, regulators and users in the field of telecommunications.[3]

The World Foundation for Smart Communities[4] was created in 1997 at the International Center for Communications in San Diego USA. It defined a „smart community" as:

„…a community that has made a conscious effort to use information technology to transform life and work within its region in significant and fundamental rather than incremental ways. The goal of such an effort is more than the mere deployment of technology. Rather it is about preparing one's community to meet the challenges of a global, knowledge economy..."

Before that, the concept of „smart growth" appeared in 1992 when the United Nations adopted the Agenda 21 programme at the UN Conference on Environment and Development in Rio de Janeiro, Brazil. Later, the American Planning Association put this idea into practice when it devised a regulatory framework for „smart growth" in 1997.[5]

Critical minds may object to the hijacking, reinterpreting and sometimes even patenting of ordinary words like „smart" used in everyday life. The same happened to „gay" a word that cannot be used anymore in its former sense since the homosexual community appropriated it to itself. „Smart" meant a person who is streetwise, commonsensically clever, astute, even canning. In the realm of the built environment „smart" has been reduced to ICT applications for practical urban living. In fairness, part of the academic world is attributing a broader meaning to „smart" and „smart city". The fact is though that a human being can be

[1] For example Irving Wladawsky-Berger in the Wall Street Journal 19 December 2012.

[2] See far example the early annual conferences of the Global Forum, a tripartite organisation bringing together (telecommunications) industry, regulator and user (some of them "smart communities"). http://globalforum.items-int.com/

[3] Judith Ryser. 1997. Smart Communities Forum, Nice (Sophia Antipolis) and Rome. Information and Communication Technology Applications: the contribution of "smart communities" to the Information Society. Report on the event for ITEMs International, France.

[4] http://www.smartcommunities.org/about.htm It published the "Smart Communities Implementation Guidebook" for the State of California.

[5] Growing Smart Legislative Guidebook: Model Statutes for Planning and the Management of Change, APA. 1997. https://www.planning.org/growingsmart/guidebook/print/

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smart, but not a material object like a city, a utility, a technology, whatever. This remark applies also to other „adjectified“ city types, such as „creative city“, „intelligent city“, „digital city“, „healthy city“, „resilient city, and many more which have emerged over the last few decades. Like for them, the definition and use of „smart city“ remains fuzzy, albeit a possible advantage in disguise.

3 “SMART CITY” TYPES

There exists a proliferation of „smart city“ definitions. The German „National Academy of Technology and Engineering“ defines „smart city“ as „intelligent, integrated and networked”.

The definition advocated by the UK Department for Business, Innovation and Skills (significantly changed from Department for Trade and Industry) includes references to technology and data capture as well as sustainability:

„…”smart city“ brings together hard infrastructure, social capital including local skills and community institutions, and digital technologies to fuel sustainable economic development and provide an attractive environment for all… “smart city“ harnesses data capture and communication management technologies… „smart „approaches“ to services, transport, utilities, waste management transform efficiency and sustainability of urban communities … potential cost and CO2 emission reduction… improvement of quality of life…”

Among the many definitions, two main strands of „smart cities“ seem to have established themselves: a narrow understanding promoted by the ICT industry and a wider notion supported by academics and the urban planning and policy community.

3.1 “Smart city“ confined to ICT support systems

Is „smart city“ just confounded with high-tech? Such a narrow definition is often used by the ICT industry which is developing remote control and monitoring devices related to energy or other resource consuming urban activities, with the apparent aim to reduce consumption. This narrow and technological definition of „smart city“ has close connections with the „sustainable city“, the „resilient city“, the „liveable“, „playable“, „healthy“, „senseable”, „green city“, and more directly the „eco-city“. In this sense, a „smart city“ is a „platform for innovation, where converging technologies transform government”[6] (or governance). Sectorally this translates into „smart water“, „smart energy“, „smart transportation“, the key fields in which ICT is being put to use, most frequently at the level of buildings, to control their utilisation and more specifically that of their appliances, as well as to measure their technical performance. Cisco postulates that the Internet has become the fourth „essential utility“.[7]

3.1.1 Smart City Expo World Congresses

The „Smart City Expo World Congresses”, founded and held in Barcelona, are a concrete global manifestation of the commercial approach to „smart cities“.[8] The style of the „reports“, more photo opportunity than explanatory words,[9] shows the commercial fair approach of the protagonists, mainly ICT companies with a lot at stake.[10]

[6] http://eu-smartcities.eu/content/presenting-european-innovation-partnership-smart-cities-and-communities
[7] http://www.cisco.com/web/strategy/smart_connected_communities.html
[8] http://www.smartcityexpo.com/en/home The next event is in Kyoto, Japan in March 2014 which promotes the exchange of knowledge, practices and businesses on Smart Cities while creating a network between Asia, Europe and South America.
[9] http://media.firabcn.es/content/S078012/SmartCity2012Memoria.pdf Only headlines of the conference themes are quoted without details or cross references. See 2012 report themed „smart strategies for transforming cities“ under urban planning and building.
[10] Global partners of the Smart City Expo World Congresses are multinational and global firms like Cisco, IBM, FCC, Schneider Electric, Indra, Aqualogy, Urbanser, Abertis telecom, Atos, Microsoft, Thales, red,es and ThyssenKrupp. Event partners participate as well, including Nissan, Philips, Siemens, Telefonica, T System, SilverSpring, Oracle, Ericsson and many others. The EU, UN Habitat and the The World Bank was among the supporting institutions, besides the Barcelona administration.

In fairness, the „Smart City Expo World Congress“ sessions in 2012, under the umbrella of „Smart Thinking Solutions”, included „urban planning and building“,[11] as well as „smart society and collaborative city“,[12] besides the technological subjects considered to be core to „smart cities“, dealing with energy, technology and innovation, environment, mobility, emergencies and security, governance and economy.[13] Interestingly, while „smart society and collaborative city”[14] was maintained in 2013, planning was substituted by „sustainable built environment”[15] - closer to the application of ICT to building technology; „emergencies and security“ were transformed into „city resilience and security“,[16] while the „smart city“ techno subjects were maintained under the general title „Smart Cities Change the World”.

The first congress in Barcelona in 2011 had focused on „Smart Society for Innovative and Sustainable Cities”. All the key topics related to „smart cities“ were covered: energy and environment, urban planning, governance and funding, living and people, mobility and technology, with topics structured around three major themes: liveable cities for people, integrated vision, and sustainable cities. The debates raised four key issues: the need for new models, new industrial and ecological revolutions, and self-sufficient neighbourhoods, the latter taken up by the „new urbanism“ movement. In 2014, the congress branches out to Kyoto under the theme: „Next Generation Cities and New Industries through Green Innovation”.[17]

This quick overview of arguably the most global organisation dedicated to „smart cities“ shows the wide overlaps between the notion of „smart city“ and other „adjectified“ cities, such as „sustainable city“, „green city“, „resilient city“, „intelligent city“, ‚innovative city“, competitive city“, notions which are used almost interchangeably. Moreover, the narrow technological preoccupations of „smart cities“ overlap with what eco-cities stand for,[18] but most importantly with their pursuit of global recognition for their standards and levels of excellence which are promoted by the Barcelona „Smart Cities Expo World Congresses“ with awards.

Fairs like the „Smart City Expo World Congresses“ are lucrative and other international fairs are emulating their successful formula. Examples in the field of the built environment which also invoke „smart cities“ and „smart buildings“ are MIPIM,[19] „the world’s property market and leading international real estate event” which celebrates its 25th anniversary this year, and „Ecobuild“, a relative newcomer which claims to be „the world’s biggest event for sustainable design, construction and the built environment”.

3.1.2 European Union „smart city“ initiatives

The EU as well took on board the narrow notion of „smart cities“ in the interest of globally competing European „smart“ technology companies.[20] An EU initative carried out by a consortium between the Vienna University of Technology, the University of Ljubljana, the Delft University of Technology and AssetOne encourages cities to name themselves „smart city“ and to join the project which aims to establish a (unique?) „smart cities“ model, provide a system of rank ordering the cities as „smart“, and benchmarking their compliance with „smartness“.

[11] introduced by: „Urban planning deals with the design and management of the space where we live and work. After half a century of car-centred planning, city planning is refocusing on the human scale”.
[12] introduced by: „ICTs are setting a new landscape to empower citizens to develop their initiatives, fostering creativity and innovation, in both more developed and developing countries”.
[13] http://media.firabcn.es/content/S078012/SmartCity2012Memoria.pdf
[14] introduced by: „ICTs are setting a new landscape for analysing society, to enable interaction and collaboration, to empower citizens to develop their initiatives, and to foster creativity”
[15] introduced by: „The world is facing major environmental challenges caused by the production of energy and the consumption of natural resources needed by our cities. A sustainable built environment tackles these challenges by rethinking how we live and work in them. „
[16] introduced by: „City resilience refers to the city’s capacity to react to unexpected situations such as natural disasters or accidents that could cause disruption in urban services or transportation networks. ICTs are becoming a key partner to help manage, monitor and detect critical situations once they occur. „
[17] Two strands are available: „smart cities for urban and social development“ (smart society/urban transformation); and technological research and industry for smart cities (sustainable mobility/ green economic development).
[18] See, for example, the comprehensive review: Simon Joss, Daniel Tomozeiu, Robert Cowley. 2011. Eco-Cities – Global Survey 2011. Eco-City Profiles. University of Westminster http://www.westminster.ac.uk/?a=119909
[19] MIPIM, Marche International des Professionnels de l’Immobilier, was created in Cannes in 1989. https://www.mipim.com/
[20] http://www.smart-cities.eu/ http://www.epic-cities.eu/content/smart-cities

The EU broadened its approach by adding „smart communities“ to „smart cities“. It focuses on technological innovation and invites cities to share their „smart city“ solutions and best practices.[21] They encompass applied innovation, planning, participatory approach, energy efficiency, transport and „intelligent“ use of ICT. These innovative solutions are linked to the EU 20/20 climate action goals and overlap with those sought by „eco-cities“. This EU programme with a €365m budget allocated in 2012 looks to:

„establish strategic partnerships between industry and European cities to develop the urban systems and infrastructures of tomorrow.”

The members are a combination of industry, city administrations and universities which are working to a 10 year rolling agenda.[22] The stated priority areas are to create, enlarge and „green“ markets (for smart city technology) and to foster „enablers“ (i.e. enabling capacity“ for smart integrated city planning and innovative governance; finance; open data, standards and interoperability; training and engaging stakeholders).

3.1.3 “Smart city” industry

At the Smart Cities Forum Volker Buscher, director of Arup[23] estimated the global „smart cities“ industry value at $400billion by 2020.[24] The UK government forecasts that the UK will capture 10% market share of $40billion assisted by its „smart cities programme.[25] UK government support is apparent, for example, in a paper on „Smart Cities Market Opportunities for the UK”, focusing on a more efficient way to consume resources (water, waste, energy transport, and for assisted living).[26]

Many of the international industries penetrating the „smart city“ market are creating credentials for themselves in this field, besides being members of many „smart city“ networks. One of many examples is the Crystal, built by Siemens in London’s Docklands, „one of the most sustainable buildings in the world” where Siemens has established „the world’s largest public exhibition on the future of cities”.[27] Although Siemens adopts the concept of „sustainable city“, what it promotes is „smart city“ technologies.

„…Technologies are major levers and base for further sustainable city development…efficient buildings, a reliable power grid and capable mobility solutions….The complexity involved requires a holistic view and sustainable solutions for cities. Siemens has the portfolio, know-how and consulting expertise to make cities more liveable, competitive and sustainable.”

A similar optimistic technology fix was advocated at the European Urban Summer School 2013 in Madrid[28] by Jorge Manuel Martin Garcia of Telefonica, who postulated a future of everyday urban life based on cloud communication. Smart digital communication is supposed to offer individuals timed and remote controls over their living spaces. It could be argued though, that by abdicating their control over communications to cloud computing, they create a total dependence on a privately run centralised system which mines data for commercial use and trading from individual users without their knowledge or consent.

3.2 “Smart city” understood in a wider sense

The wider understanding of the „smart city“ includes „the social“ with people in mind as an active part of the planning process. For urban policy makers urban communities learn to learn, adapt and innovate. In rarer cases this extends to the issue of social inclusion in a wider sense, public participation and co-design for practical implementation of physical „smart city“ strategies. The latter makes sense as those who advocate the wider notion of „smart city“ incorporate behaviour change and adaptation as a condition to make all the ICT solutions for „smart cities“ viable in practice.

[21] http://eu-smartcities.eu/content/presenting-european-innovation-partnership-smart-cities-and-communities
[22] http://eu-smartcities.eu/sites/all/files/10YRA%20final_january.pdf
[23] http://www.arup.com/ ARUP has grown from an engineering company into a global independent firm of designers, planners, engineers, consultants and technical specialists with 90 offices in 30 countries, and 11,000 professional staff.
[24] https://www.gov.uk/government/publications/smart-city-market-uk-opportunities
[25] https://www.gov.uk/government/news/new-initiative-to-support-40-billion-smart-cities-in-the-uk
[26] https://www.gov.uk/government/news/new-initiative-to-support-40-billion-smart-cities-in-the-uk
[27] http://www.thecrystal.org/
[28] EUSS13 proceedings to be published by AESOP. Teresa Franchini, Juan Arana Giralt, Judith Ryser (eds), 2014.

3.2.1 Cities

Certain cities use a wider definition of „smart city", especially large conurbations as well as new settlements in the developing world. Early examples of cities which have put these principles into practice are Issy-les-Moulineaux in the outskirts of Paris where the mayor has pioneered real time digital interactive citizen participation, and is expanding it continuously, possibly to e-voting and far more direct decision-making on urban policies and their implementation.[29]

The authors of „Smart Cities in Europe" give a wider definition of „smart city", with emphasis on the quality of knowledge communication and social infrastructure.

„We believe a city to be smart when investments in human and social capital and traditional (transport) and modern (ICT) communication infrastructure fuel sustainable economic growth and a high quality of life, with a wise management of natural resources through participatory governance…"[30]

3.2.2 Academe

The academic world has also adopted a range of wide understandings of „smart cities". For Richard Florida „smart cities" encompass explicitly soft infrastructure, such as knowledge networks and voluntary organisations. Only thus can the creativity of „smart city" inhabitants be put to innovative use. For many other academics „smart cities" encompass human capital, education, social and relational capital, environmental interests, besides ICT infrastructure. This is also the position of many urban policy makers and their „theoretical" advisers who aim to apply ICT to increase competitiveness and local prosperity, business-led urban development, local intelligence capacity and collective community intelligence. Some universities aim to appropriate the notion of, and control over „smart city" themselves, akin to MIT which appropriated the term CityLab and turned it into a trademark and tradable asset.

3.2.3 Industry

Industry is also active in shaping „smart cities". At a larger city scale, industry advocates „smart grids". They are defined as various functional and technological (most likely business driven) additions of a digital layer to a grid during improvements and modernisation. This can apply to power lines as well as broadband infrastructure. „Smart grids" are said to provide reliability, flexibility in network topology, efficiency, sustainability, market-enabling demand response support, which means a platform for advanced services to cover latent demand.

Another concept which is linked to smart grids are „smart meters". They are deemed to boost energy company profits, peak demand management through remote control and kill switches – all that outside the control of the user, and arguably an intrusion into users" privacy. Critics consider them as un-transparent and over-complex rating systems. They also query their legitimacy of capturing, transmitting and organising massive amount of data collected from smart meters, as well as from other intruding „smart technologies" applied in buildings as well as in cities at a large scale.

3.2.4 Commerce and international agencies

It cannot be an accident that the global institutions which dominate the neo-liberal economic system, such as the World Bank,[31] the Asian Development Bank,[32] the OECD[33], and to some extent the UNEP[34] and the EU have taken up „smart cities" in their portfolios.

[29] http://www.issy.com/numerique. See the city's website: Smart City+, la plateforme de services d'hyperproximite. Citizens can test the platform of new digital local services and provide feedback.

[30] Caragliu, A., Del Bo, C., Nijkamp, P.: Smart cities in Europe. Series Research Memoranda 0048. VU University Amsterdam, Faculty of Economics, Business Administration and Econometrics (2009) http://ideas.repec.org/p/dgr/vuarem/2009-48.html

[31] World Bank: „smartness is about doing more with less". Also: „support of the role of the private sector in partnering with („smart) cities" http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSDNET/0,,contentMDK:23146568~menuPK:64885113~pagePK:7278667~piPK:64911824~theSitePK:5929282,00.html

[32] http://www.japantimes.co.jp/text/nb20121101a8.html

[33] OECD: „…"smart cities" plan for future infrastructure needs and avoid replicating haphazard past practices."

[34] UNEP was supporting „climate - smart cities day" at the 2013 UN Climate Change conference, Warsaw

3.3 Putting „smart city“ into context of other city typologies

It is worth remembering that all these reflections and policy options apply also, for example, to the „sustainable city“, thus blurring the boundaries between „smart cities“ and other „adjectified“ cities, at least in the wider sense.

The question remains whether there is a dichotomy or contradiction between the narrow and the wide understanding of „smart city“, or whether these two interpretations can relate to a common denominator, namely their common claim that they intend to improve „quality of life“. If so, this claim is shared with many other „adjectified“ cities”: sustainable, resilient, healthy, liveable, creative cities for example. The question is whether they share the same understanding of „quality of life“, whose quality of life, provided by whom?

It could be argued that for the narrow interpretation of „smart cities“ „quality of life“ is confined to comfort in the home, (or at the workplace, and to a lesser extent for leisure activities), provided by ICT controls and monitoring of household appliances and building services. However, these objectives are shared by other „adjectified“ cities. For example, Siemens refers to „sustainable cities”[35] or „green cities”[36] when it relates its technological expertise to „quality of life“:

„…use intelligent networking capabilities to bring together people, services, community assets, and information to help community leaders address these world challenges…”[37]

Taking the example of „eco-cities“, they promote „quality of life“ driven by more ecologically responsible lifestyles assisted by technological solutions. They claim to provide:

„…opportunities for ecological, technological innovation, application of information and communication technologies..”[38]

„Eco-cities“, „sustainable cities“, „intelligent cities“ „connected cities“ have other communalities with „smart cities“ at city scale when they consider themselves as hubs for knowledge intense, competitive economic activities, or nodes in interconnectedness of urban systems in need for integrated networked solutions. There may be many more ICT driven attributes which these various city types are sharing, thus it may be difficult to establish what distinguishes them.

The question remains: if the aim of „smart cities“ is to achieve a higher „quality of life“ and better management of scarce resources, how does that distinguish them from just „cities“ which surely share these aims?

4 IMPLICATIONS OF “SMART CITY” APPROACHES FOR PLANNING

Planning contains a normative dimension. For that reason, „smart city“ protagonists are lobbying for the inclusion of „smart city“ standards in planning, alongside „smart city“ policies. To that end they need to establish accepted measures, in this case related to the improvement of „quality of life“ and „efficient use of finite resources“. These objectives are not confined to „smart cities“ though, which have resorted to „eco-cities“ for their aspiration to deliver measurable improvements. Simon Joss leading the „International Eco-Cities Initiative“ (IEI) hosted at the University of Westminster,[39] has participated in the initiative to standardise „smart cities“ akin to „eco-cities“ for which IEI has elaborated indicators, standards and benchmarks to make these concepts operational for city planners and managers.

Other countries (Germany, the UK, China, Korea among them) are working towards national „smart city“ policies and the inclusion of Public Available Specifications (PAS). PAS 181 proposes a Smart Cities Framework which postulates the inclusion of „smart technology“ into planning. Such proposals for

http://www.unep.org/climatechange/ClimateChangeConferences/COP19-new/Events/tabid/131172/ModuleID/189510/ItemID/132/mctl/EventDetails/language/en-US/Default.aspx

[35] http://www.thecrystal.org/

[36] The Green City Index, Economist Intelligence Unit, sponsored by Siemens, 2012 http://www.thecrystal.org/assets/download/120724_GCI_SummaryReport_final2.pdf

[37] http://www.cisco.com/web/strategy/smart_connected_communities.html

[38] Simon Joss. Smart-cities-Blog-Dec-2013.pdf

[39] Joss, S., Cowley, R., and Tomozeiu, D. 2013. „Towards the „ubiquitous eco-city”: an analysis of the internationalisation of eco-city policy and practice.“ Journal of Urban Research & Practice, 6:1, 54-74. University of Westminster.

„blueprint“ „smart city“ design can be perceived as a recycling of blueprints previously put forward under the heading of „sustainable city“ or „future city“.[40] Some countries go even further and seek to devise „model smart cities“, inspired by Masdar in the UAE and Songdo in South Korea. However, critics consider these examples „sterile enclaves“,[41] arguably not ecological, nor even equivalent to „garden cities of tomorrow“ which themselves have dubious ecological credentials.

A trend regarding controls of existing cities, urban management, growth and development has become detectable. Many cities, and especially the self-designated „smart cities“ in the narrow sense are adopting targets, indicators and/or standards for building technologies and are incorporating „smart grids“ into the city. Citywide „smartness“ occurs more likely in new towns designed on greenfield sites, many in the emerging economies of Asia. In existing cities, „eco-city“ (or „smart city”) indicators and certification are incorporated into planning policies to make cities „smarter“.[42] The examples of Songdo and London are used to illustrate these approaches briefly.

4.1 Songdo, a greenfield „smart city”

Songdo being built on the outskirts of Seoul in South Korea lends itself well to illustrate the (con)-fusion between „smart city“, „eco-city“, „green city“, „digital city“ and much more. Not surprisingly, it has been included in a discussion about Asian „eco-cities.[43] This project designed by Foster and partners with Arup and developed by American „Gale International“ has all the techno-gadgets to run utilities and appliances.[44] Yet, such a „smart city“ may well be utopic in its ambition to reproduce „the diversity and vitality that organic development creates in and of itself”[45] in less than two generations. Meanwhile, Songdo is the most hyped of the Asian „smart cities“. However, Yokohama in Japan was the true precursor in establishing a comprehensive, integrated masterplan to retrofit the city with every possible ICT input, elevating it initially to a „digital city“, later to an „eco-city“, and now to a „smart city“.

4.2 London, a retrofitting „smart city“

London has adopted the „smart city“ brand with gusto. It has produced a „Smart London Vision“;[46] a „Smart London Board“ in 2013 led by Ricky Burdett[47] and a „Smart London Plan”[48] targeting businesses, investors, researchers, etc. with the aim to integrate opportunities from new digital technologies into the fabric of London, incorporated in a „Smart London Export Programme“. It is worth noting that the pioneering interactive London Datastore[49] predates these initiatives and has arisen from one of the most advanced municipal Intelligence and Research services which had generated open data at the Greater London Council, abolished in 1986. London is a typical example of how „smart city“ has been added to previous „adjectified city“ tags, such as „world class city“, „creative city“. „zero-carbon city“.

Nevertheless, London has a very long way to go in retrofitting its ancient housing stock into „smart“ uses, upgrading its Victorian infrastructure - sewage, water mains, public transport, waste disposal, and to reuse waste heat, increase efficiency in energy use, and supply digital broadband and wifi facilities which are much more advanced with wider coverage in many other cities. The „smart London milestones“ are spelt out in the „Smart London Plan“. They include the delivery of a pan-London digital inclusion strategy by the end of 2014, as well as networking with „Future Cities Catapult“, „Connected Digital Economy Catapult“ and

[40] http://theurbantechnologist.com/2013/06/17/how-to-build-a-smarter-city-23-design-principles-for-digital-urbanism/ How to build a smarter city, 23 design principles for digital urbanism, 17 June 2013.
[41] Anthony Townsend, at Economist debate about „smart cities“ 13 February 2014. http://www.smartcitiesbook.com/
[42] These two approaches are discussed in: Judith Ryser, 2013, Eco-cities in Action, sustainable development in Europe: lessons for and from China? To be published by the „EU-Asia Dialogue, shaping a common future for Europe and Asia, at the East Asia Institute National University of Singapore.
[43] Judith Ryser. 2013. Asian Eco-Cities, a critique. In: FuturArc, the voice of green architecture in Asia, march-April 2013, I Volume 29.
[44] http://inhabitat.com/songdo-ibd-south-koreas-new-eco-city/
[45] Jonathan Thorpe, CIO for Gale International. Quoted on BBC News, Technology, Lucy Williamson, 020913.
[46] http://www.london.gov.uk/priorities/business-economy/vision-and-strategy/smart-london/smart-london-vision
[47] Ricky Burdett, director of LSE Cities, professor of urban studies and co-editor of The Endless City, the urban age project by the London School of Economics and Deutsche Bank’s Alfred Herrhausen Society. Phaedon 2007
[48] https://www.london.gov.uk/sites/default/files/smart_london_plan.pdf, chaired by David Gann, Imperial College London
[49] http://data.london.gov.uk/. It also includes maps which shows the spatial distribution of London characteristics.

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„iCity Programme“ and setting up a „Smart London Innovation Network“. Various programmes aim to support SMEs and a „Smart London Platform“ should enable Londoners to provide feedback on their „smart city“ experience. Much is made of the 2012 Olympic legacy, but the Wellcome Trust, a pioneer in „smart“ health research was turned down for relocation on the Olympic site.

While Songdo can factor in infrastructure needs for its longer term future at the outset, something the Victorians did for London, retrofitting a city which has lived of the foresight of its forefathers for a long time is a much greater challenge, especially as it is expected to be financed by the private sector.

5 CRITIQUE OF “SMART CITY”

It is not surprising that the „smart city“ notion has its critics.

„The whole smart city concept… well, it is marketing, you know. There is the actual worry that cities are becoming unsustainable in all sense, so academics are worried about it; then politicians add that worry to their discourse, in order to get votes, and then companies go after them trying to sell them new solutions for cities to become „smarter”…”[50]

The divisive issue is an economic-technological approach as opposed to fostering social, cultural and political plurality and diversity of cities and city life. Traditionally, information was used in the city for the purpose of city living characterised by production, concentration and exchange of information. This amounts to top down centrally controlled information aiming at „city efficiency“, as opposed to bottom up diversity and fuzziness as fertile ground for creative activities, including low-tech „smart“ solutions. Top-down techno-interventions are a far cry from Patrick Geddes“ conservatory surgery to heal cities. In today’s circumstances the decentralised autonomous initiatives are also taking advantage of ICT, albeit in terms of crowd sourcing and social networks.

5.1 Greenfield site requirements and central controls

A specific worry is that the „ideal type“ of „smart city“ models requires building on greenfield sites. This in itself can be seen as an unsustainable direction of urban development with drastic implications for future spatial policies and land use. This is particularly critical as the „smart city“ industry is less sanguine about much more costly retrofitting of existing cities where the majority of people live at present.

Another preoccupation is that owing to their „digital city“ innovations „smart cities“ lend themselves to centralised remote controls from where various urban systems could be digitally lined-up and coordinated into an overarching information system which may eventually fall into a handful of global ICT corporations. Such loss of control over urban management may not be welcome by all planning authorities. Naturally, the alternative bottom-up ecological movements contest this „big brother“ prospect and object even to new centrally controlled public safety networks proposed for existing cities like New York. For them, the ubiquitous approach to urban design and planning which aims to turn cities into „smart cities“ or to create „smart cities“ on greenfields, contrasts with the organic evolution of cities, their local specificity and dynamic diversification often manifesting themselves despite top down planning, but which in their view makes them fit for ever changing purposes driven by human activities. They reckon that just to call cities „smart“ does not make them „smart“.

5.2 The Economist debate

The recent debate organised by the Economist[51] asking „Are Smart Cities an Empty Hype?” reflects some of these controversies. Although its tenor was mainstream techno-neo-liberal, expressed by Ludwig Siegele, the moderator in his remarks that while cities generate the world’s wealth, novelty and human interaction, they also produce a vast amount of data which needs to be put to use. Integrated systems of collecting, processing and acting on this data are seen to equate with a „second electrification“.

Supporting the motion, Anthony Townsend, director of the Institute for the Future states that

„…the quest to centralise the distributed and messy yet highly resilient intelligence of existing cities within a single network or piece of software appears quixotic at best…”

[50] Peter Madden, Chief Executive, Future Cities Catapult, https://futurecities.catapult.org.uk/. Open Data Synchronisation for the City of Manchester, etc.
[51] http://economist.com/debate/days/view/1044

He sees a role though in the new utopia of „smart cities“ for bottom-up start-ups, NGOs, civic hackers, etc. who come up with innovative „smart city“ services.

Irving Wladawsky-Berger, VP Emeritus and IBM strategic adviser of Citygroup at the Harvard Business School counters that with the view that:

„…platforms are software frameworks designed to make it easier to develop, run and integrate applications of all kinds and will play a major role in the evolution of smart cities. „

His view about bottom-up protagonists is to balance their contribution with top-down actions, something the web, the internet and Linux have succeeded in doing. Not surprisingly, the debate remained inconclusive, but offered an opportunity for views to be aired from all walks of life.

Negative effects of „smart cities“ which were addressed in the response to the economist debate and elsewhere[52] focus on the intrusion into personal privacy, excessive surveillance, no personal control over personal information, as well as the threat of hacking into „smart“ systems which control appliances in the home and on-line public urban services. For Adam Greenfield,[53] a city's logic is based on chaos and diversity. Thus, subjecting „smart“ citizens to the logic of algorithm could amount to authoritarianism rather than freedom. More generally, ICT controlled dependency makes for self-absorbed, self centred people trapped in epistemic bubbles, unable to communicate meaningfully with others, or acknowledge other's ideas. He also criticises quantification of „smart cities“ which cannot be neutral and opposes the „smart city“ model to the „open city“, which uses information gathering and sharing to empower citizens and inform political debate to improve the city by resorting to a decentralised structure of autonomous local collectives.

6 “SMART CITY” OR JUST “CITY”?

How many smart cities are there compared with (self-appointed) sustainable, liveable, resilient or other „adjectified“ cities? How many overlaps do exist between „adjectified“ cities which use several of them together?

Must crucially, what distinguishes „smart cities“ from „ordinary“ cities? It is hard to imagine a city and its protagonists who would want to be „unsmart“ in their ambitions for their city, its management and its future. Does the notion of „smart city“ vary with geography, culture, stage of development? Not much information exists on the emergence of „smartness“ from this broad perspective.

Most of the technological innovations and measures which „make“ „smart cities“ are adopted by many cities. An operational question is whether „smart cities“ generate greater „quality of life“ than incorporating technological innovation in different shapes and forms into ordinary planning measures.[54] Where „smart cities may differ from just „cities“ is in how these digital controls are operated: where, by whom, at what cost and to whom? Some cities may wish to offer greater transparency, accountability and decentralisation of such powers than what seems to be on offer by „smart cities“ currently.

What may be symptomatic, and not universally welcome about the notion of „smart cities“ - and other „adjectified“ cities before them - is the relentless generation of alternative „adjectified city“ models aiming to impose frameworks for „quality of life“, together with the inordinate efforts of industry to appropriate these „ideal type models“ for its own aims. This tension between the „adjectified cities“ and the „refuseniks“ may well point to a profound (if not paradigmatic) change, expressed in the refusal, at least by a part of society, to have their „quality of life“ slotted into a binary existential contradiction, a choice between backward poverty and material wealth. The cities are the place where these contradictions are being played out. No longer either-or, the solutions point to and-and, and-or, or-or and something else altogether.

This refusal of being compressed into a binary model emerges all over the globe. The uprisings are no longer between two opposing parties, two ideologies, probably since the end of the cold war. Today they are driven by a wide range of aspirations which need to be accommodated in what can only be a new model of

[52] http://io9.com/the-dark-side-of-the-smart-city-1512608758

[53] Adam Greenfield, 2013, Against the Smart City (the city is here for you to use, e-book, Amazon, Do projects, New York City

[54] see IMPP, International Manual of Planning Practice, 2008, Judith Ryser and Teresa Franchini (eds) Isocarp, to be updated in 2015.

governance and by extension in a different urban environment enabling a wide range of urban living and „quality of life".

One manifestation of this are the „slow cities"[55] whose inhabitants are in favour of an alternative mode of living. They aim to reduce the ecological footprint of cities to contribute to sustainable planetary living. For such alternative movements the only hope for „cracks"[56] in the trend towards monopolistic domination of urban everyday life by the global corporate ICT industries and their investors is for them to fail in their effort to create a unique system with unique standards which would enable them to dominate the global „smart city" market.

Finally, are „smart cities" improving the quality of life of city users, smart of not, inclusively and equitably? From the above discussion it is clear that the jury is still out on this.

[55] Cittaslow, started this movement in Italy in 1999 inspired by the slow food organisation. Interestingly, Cittaslow which accepts only cities with less than 50,000 inhabitants is also asserting accreditation.

[56] See, for example, John Holloway, 2010, Crack Capitalism, Pluto, and John Holloway, (2002), 2005, Change the World Without Taking Power, Pluto.

Note: all the cited websites have been accessed January/February 2014.