Innovators in disrupted cities: An exploration of the Creative Class theory in urban(ising) Africa

Rosenberg L; Brent AC
Stellenbosch University; laurenrosen@gmail.com

Abstract
This paper explores Richard Florida’s Creative Class theory in the context of second wave urbanisation in Africa. The economic value of the Creative Class is that their work revolves around innovation, a quality seen as essential to ‘new economy’ urban growth. Quality of place (that which makes ‘New York, New York’) is said to attract the Creative Class to certain cities. Overall, the Western city is the reference point for the Creative Class literature and quality of place is embedded within a framework of urbanisation through industrialisation - a period known as the first urbanisation wave. The fastest growing cities on the African continent are part of the second urbanisation wave, an urbanisation process spurred by a set of vastly different dynamics in which industrialisation is virtually inconsequential. Urbanisation through industrialisation induced concomitant investments into infrastructure and thus it is unsurprising that the Creative Class literature assumes that urban infrastructure is ‘always on’ – available at all times as an inherent attribute of place. Until more recently, African cities did not feature in the Creative Class literature; the predominantly rural focus of ICT diffusion in the literature is a contributing factor to the lack of information on the Creative Class in African cities. The point of the paper was not to draw modernist comparisons, but rather to emphasise that notions of quality of place are incomplete given the rise of technological innovation in urban Africa, where cities often suffer from disruption of basic infrastructure.

Keywords: Urbanisation; Creative Class; Infrastructure; Quality of place

1. Introduction
Dialogues around urbanisation, infrastructure disruption and the Creative Class rarely appear alongside each other in research on African cities; this paper attempts to connect abridged excerpts of the different narratives currently exerting influence on the future direction of African cities. As Africa urbanises, its economic growth will continue to be shaped by global capitalism and it is important and timely to investigate the dynamics of this growth in a manner that disregards normative prescriptions of economic and technological change in favour of an ‘ordinary city’ perspective that explores distinctness without modernist comparison (Robinson, 2006).

Africa is rapidly urbanising in what has been described as the second urbanisation wave (Swilling & Annecke, 2012). Historically, a positive correlation is observed between increasing levels of urbanisation and economic development, generally driven by technological innovation in cities (Beall & Fox, 2009). What remains unique about urbanisation in Africa is that “in no other region of the world today is urbanisation more sustained, but urban economic growth more sluggish” (UN-HABITAT, 2010:41). The second urbanisation wave occurs at a time when the world is fundamentally being shaped by a polycrisis constituted by “a highly unequal urbanised world, dependent on rapidly degrading eco-system services, with looming threats triggered by climate change, high oil prices and food insecurities” (Swilling & Annecke, 2012:28). The traditional relationship

---

1 Although the positive correlation between urbanisation and GDP per capita growth has traditionally been seen as an indicator of development, it is also an indicator of “a process that has created the billion or so urban-based over-consumers who drive global ecological destruction” (Swilling & Annecke, 2012:111).
between urbanisation and socio-economic development will most likely undergo fundamental changes given the vastly different global circumstances compared to those at the time of the first urbanisation wave. Despite these differences, the capitalist economy will continue to be transformed by successive technological revolutions (Perez, 2010). We currently find ourselves in the ‘Age of Information and Telecommunications’, the previous four revolutionary ‘Ages’ form the coordinates of modernity: ‘The Industrial Revolution’, the ‘Age of Steam and Railways’, followed by the ‘Age of Steel, Electricity and Heavy Engineering’, and carried forward by the ‘Age of Oil, the Automobile and Mass Production’. The latest technological revolution - the Age of Information and Technology - brings with it what has been described as the ‘new economy’, an increasingly urban global economy that is very different from the “massified structures of production and the rigid labor markets that typified Fordism” (Scott, 2006:3). The new economy challenges conventional urban economic growth patterns because it seems as if development now depends “less on access to physical resources and more and more on the ability to create economically useful new ideas” (Yigitcanlar et al., 2007:6). Florida (2004; 2005) argues that there is a particular class of people that are increasingly important to the new economy. He calls this group the Creative Class and its members engage in work, the core function of which is to “create meaningful new forms” (Florida, 2004:68). The Creative Class thus derives its living primarily from innovation, at various scales and in various fields. Growth in the new economy therefore results from the expansion of technological innovation and the value addition of the work of the Creative Class (Florida, 2004). Florida (2005) contends that cities, as dependent outcomes of capitalism as well as being sites of the socially reproductive aspects of capitalism (Scott, 2011), need to work hard to attract members of the Creative Class in order to prosper.

As Africa urbanises, strong indicators of Creative Class clustering are appearing in various cities across the continent and this paper attempts to discuss some of these dynamics. They are viewed through a multifocal lens that plays particular attention to urbanisation, technological change and urban infrastructure.

2. Research methodology

Yet, what remains in abeyance is a broader social theory of the city that works through and out of the everyday dynamics of the suburban and informal, makeshift, emergent city. The culturally attuned theoretical matrix termed ‘everyday urbanism’ (Pieterse, 2006:405).

Approaching a study on the Creative Class in any context automatically means engaging with the notion of ‘everyday urbanism’. Concepts such as ‘quality of place’ and an ‘experiential lifestyle’ (Florida, 2005) are explorable when the focus is on “the micro-spaces of everyday engagement and negotiation to make places and trajectories in the city” (Pieterse, 2006:406). The aim of the literature review in this paper was to attempt a response to the ‘everyday’ dynamics observed online on social media websites (predominantly Twitter) and information found on websites focusing on the ICT sector African Creative Class. While these ‘grey’ sources contained vast amounts of documentation about the activities of these groups in various cities across the African continent, it was very difficult to locate this type of information in academic literature. Odendaal (2010:41) notes that “work on ICT and African cities is limited, largely concerned with developmental objectives and technology diffusion” and this was immediately apparent in the literature search, revealing a knowledge gap concerning urban ICT diffusion in Africa (Mertens & McLaughlin, 1995). Literature on ICT diffusion in Africa tends to be firmly located in ‘ICT4D’ (ICT for development) discourse, with a large focus on rural

---

Florida (2005) defends criticisms against this claim by arguing that while all individuals are creative and have capacity to innovate, only some (roughly a third of the American working force by his calculations) are paid to be creative.
development projects (Heeks, 2009). Further, within this discourse, international scholars dominate the research agenda with African scholars only contributing between 1% and 9% to the literature (Gitau, Plantinga & Diga, 2010).

The research strategy was exploratory-oriented (Gibson & Brown, 2009b), aiming to sketch out the general terrain between the themes of urbanisation, ICT diffusion and the Creative Class theory within an African city context. Thematic literature reviews are well suited to exploratory studies (Mouton, 2001) and both Boolean and wildcard keyword searches (Ridley, 2008) were used to find literature in which one or more theme was addressed. Each theme on its own is well documented; the challenge was to find instances where these discourses appeared alongside each other. Literature from the “policy fix genre” (Pieterse, 2009a) also formed an integral part of the search results, even though these documents were not directly sought out. Although ICT infrastructure investment patterns in Africa have a distinct urban bias and reflect unequal access opportunities for rural areas (Odendaal, 2010), much of the research on ICT diffusion in urban areas is focused on applications of ICT to small- and medium-sized enterprises or on cyber/internet cafe users. To supplement the dearth of academic literature, grey literature was widely consulted with the intent of finding new keywords that could be included into the literature search. Although grey literature can be highly subjective, it is far more effective in keeping pace with current developments, which was highly advantageous given the subject of the study (Oliver, 2012).

As far as possible, the synthesis offered in the literature review attempted to be creative and evolutionary (Bloomberg & Volpe, 2008). This synthesis was produced by not allowing observations of real-time emergence (often best captured in grey literature) to be bounded by theoretical models and conceptual frameworks (Bygrave, 2007).

3. Literature Analysis
3.1 Urbanisation in waves
The first urbanisation wave (coinciding with the Industrial Revolution) “took 200 years - 1750 to 1950 – and resulted in an increase in the number of urban dwellers in Europe and North America from 15 million to 423 million people” (Swilling & Annecke, 2012:110). This showed that cities are indeed cynosures of economic and technological change (Scott, 2011). These changes are characterised by an ideal or stereotypical urban settlement form that represents the “notional condensation of the dominant functional systems that constitute intra-urban space as structured by prevailing capitalist social and property relations” (Scott, 2011:291). In fact Scott (2011) distinguishes three waves of urbanisation: the first is associated with 19th century British manufacturing towns, the second with large metropolitan areas produced by the Fordist mass production system and the third incumbent wave is the ‘new economy’. Somewhat difficult to define exactly, the new economy is said to be post-industrial, post-Fordist and highly embedded in ICT infrastructure and services:

Perhaps the most simple way to explain is to say that the leading edges of growth and innovation in the contemporary economy are made up of sectors such as high-technology industry, neoartisanal manufacturing, business and financial services, cultural-products industries (including the media), and so on and that these sectors in aggregate constitute a ‘neweconomy’ (Scott, 2006:3).

Themes that arise from such work focus on the role of enabling functional land markets in conjunction with ‘connectivity’ infrastructures to facilitate and catalyse increased investment, productivity and access to various distant markets. The idea is that national industrial strategies require city-level expressions and management to work in practice” (Pieterse, 2009a:2).

The new economy can be identified by three distinguishing characteristics: “it is global, it favors intangible things (ideas, information, and relationships) and, it is intensely interlinked (rooted in networks)” (Gillen & Lall, 2002:49). The idea of the new economy is often identified by other reference terms such as the ‘knowledge economy’, the ‘creative economy’, ‘cognitive capitalism’ and ‘cognitive-cultural capitalism’ (Scott, 2011). Nomenclature aside, the point in distinguishing different waves of urbanism is to highlight the notions of ‘cityness’ that are produced (Pieterse, 2010). The first urbanisation wave (or the first two waves as identified by Scott) produced clusterings of people, information and goods that generated economic activity, which, in turn, gave rise to further flows of information and goods and generated external economies of scale that stimulated innovation and enhanced efficiency (Beall & Fox, 2009). This period concluded with urbanisation resulting from industrialisation and various mechanisms of the ‘old economy’. Significantly, this process also rendered concomitant investments in networked urban infrastructure to support industrialisation and human settlements (Simon, 1992). Our understanding of how cities should look and function are tied to these waves of urbanisation and are “largely equated with complex social, natural and material interactions that unfold in Western cities, whereas non-Western cities are only good for describing absences and wanting” (Pieterse, 2010:207). This is salient when considering notions of quality of place in contexts outside of Western cities.

The second urbanisation wave results from the declining capacity of rural areas to support naturally expanding populations, natural growth in urban areas and primacy of economic and socio-political institutions in key cities in the global South, occurring at the same time as the emergence of neoliberal globalisation (Swilling, 2011). It is forecast to “take less than 100 years – 1950 to 2030 – and is taking place in developing countries where the urban population is projected to grow from 309 million to a staggering 3.9 billion people” (Swilling & Annecke, 2012:11). The jury is still out as to what the stereotypical image of second wave cities will look like, but over the 2006/2007 period second wave urbanisation in sub-Saharan Africa was “virtually synonymous with slum growth” with urban growth rates (4.58%) almost exactly correlating to slum growth rates (4.53%) (Isunju et al., 2011:369). This raises concerns about the availability of land for housing, the provision and maintenance of infrastructure such as water and power, and the capacity of governance structures at local levels among others in the region. For example, it is generally accepted that urbanites in this region without access to water account for somewhere between 35-50% and those without (conventional) sanitation infrastructure amount to 50-60% of the urban population (Pieterse, 2009b). In African cities, the relationship between urbanisation and networked infrastructure provision is often highly unequal and inadequate, the latter experienced as frequent power blackouts, the need to purchase additional water from private vendors, housing shortages and frustrating traffic jams. Most significantly, the urbanisation of poverty is also a defining characteristic of urban space in sub-Saharan Africa, meaning that a move away from rural areas to cities no longer holds out the promise of better economic opportunities (Awuor-Hayangah, 2008; Pieterse, 2008; UN-HABITAT, 2010; Watson, 2009). Another reason why urbanisation has not yielded the traditional positive correlation with economic growth and development in sub-Saharan Africa is that many countries are still largely exporters of primary resources, thus relinquishing the gains of value adding through secondary processing (Simon, 1992).

To stimulate growth in African cities, the mainstream response has been to position cities, being the focal point of national economic growth strategies, as representatives of highly competitive regions locked into a global economy (Pieterse, 2008). Much of this thinking, however, is based on first wave urbanisation logic, especially the idea of agglomeration:

*Economic advance has depended on more people living in cities (to expand the supply of labour and entrepreneurs, and to stimulate mutual learning and creativity) and has generated the resources to support urbanization (through essential infrastructure and services). The outcome of this virtuous circle has been rising*
national productivity, higher average incomes and greater all-round prosperity (Turok, 2010:13).

It is unclear whether the logic of agglomeration will produce as it previously has. What is clear, however, is that urban infrastructure (as a function of technological change) will continue to be a key area of investment (Swilling, 2010a). This is particularly evident as attempts to encourage and maintain urban economic growth occur in a context where “constrained resources and climate change meet infrastructural systems and legacies that were frequently developed a century and more ago in many Western contexts” (Hodson & Marvin, 2010:478). It is possible to describe the urban condition of many cities in the global South as a battle of investment between the “globally connected infrastructure enclaves in the city versus the informal, almost disconnected and abandoned city, where the urban poor are subjected to inhumane living conditions” (Pieterse, 2008:38). This bipolarity challenges notions of how cities should function. It challenges the epistemological link between urban development and urban modernity best characterised by the image of the Western city (Pieterse, 2010; Robinson, 2006; Simon, 1992). Images of cities are important because they signify and link to discourses of place branding – marketing strategies to attract investors and stimulate growth that are de facto selective in nature. Taken to the extreme, place branding can heavily influence urban development decisions favouring those that best suit selective growth:

CBDs, enterprise zones, shopping malls, entertainment districts, transport and communications hubs, universities and other centres of creativity, gated communities, and the suburbs and high-rise blocks supplying the employees and consumers of creative/entertainment city. The protagonists are well dressed, hard working, qualified, on the move, building a life, having fun. The rest of the contemporary city… hybrid spaces occupied by the majority population - blurs out of focus, barely acknowledged as of the urban growth machine, out of place (Amin, forthcoming).

In recognising that “industrialisation, modernisation, and… high-tech informationalism – the traditional drivers of urbanisation – have not been primary driving forces of African urbanisation” (Swilling, 2010b:11) what remains, despite the best efforts of place branding campaigns, is the fact that the nature of place of African cities is fundamentally different to Western cities. As passé as this appears, it is important to remember in the light of urban infrastructure trends that hope to jolt cities into prosperity through selective infrastructure investment. That it is: “expressways, ports, airports, telecommunications networks, and the like, squeezing out investment in more mundane infrastructure that could dramatically improve the quality of life of the urban poor disconnected from basic services or underinvested health and education systems” (Pieterse, 2008:79).

### 3.2 Urban Infrastructure as Quality of Place

Networked urban infrastructures are understood to be “the physical and technical systems that are fixed in space (such as roads, cables, satellites, pipes and rail) and managed by specific sets of actors embedded within public and/or private institutions which, in turn, must operate within specific regulatory environments” (Swilling & Annecke, 2012:121). It is important to note different types and scales of infrastructure (Pieterse, 2008). Economic infrastructure refers to connectivity infrastructures (conventional transportation as well as information and communication network systems). These are similar to but often differ significantly from public infrastructure (public resources and spaces such as pavements, parks, libraries, markets, etc.). Household infrastructures typically connect to the physical

---

5 Pieterse (2008:177) notes that the term ‘global South’ refers to “countries that do not have fully industrialised economies, largely non-OECD countries with the exception potentially of Mexico, Korea and Turkey. In postcolonial theoretical terms it denotes countries that have experienced some form of colonial domination (directly or indirectly) in their modern history, which has left indelible scars on their economic, cultural and political landscapes”.

structure (water supply, sanitation and energy) but also include services like waste removal. Although seldom considered as a function of quality of place, networked urban infrastructure in any city is crucial and particularly so in African cities where systems are largely neglected, outdated and insufficient for current demand (Myers & Murray, 2006). Odendaal (2010:50) argues that standard definitions of networked infrastructure design “simply never applied to many cities in the South” – a provocative stirring of the stereotype of what the city is and how it should function. The notion of disrupted cities is particularly useful in this regard, to consider cities in a continual state of infrastructure disruption (Graham, 2010). To be sure, improvements in infrastructure are one of the main reasons why Africa has experienced significant growth over the past decade (Foster & Briceño-Garmendia, 2010) and these improvements are one of the reasons why there has been much excitement about Africa’s current growth potential. Be this as it may, the continent’s growth prospects are still firmly dependent on how it manages resource exploitation and investments into education, human capital and infrastructure, especially urban infrastructure (Swilling, 2010a). It is the last category of investments that is relevant to this discussion and, using broad strokes, infrastructure on the African continent can be pictured as follows:

- Between the 1980s to the early 2000s, investment in urban infrastructure actually declined to less than 2% of GDP (Estache, 2005).
- Access to networked infrastructure is highly unequal with new connections to the grid largely allocated to the relatively affluent: “around 80 percent of those currently connected to modern infrastructure services are in the top 40 percent of the distribution of wealth” (Banerjee et al., 2008:6).
- Compared to other developing regions, Africa’s infrastructure backlog is the greatest (Foster & Briceño-Garmendia, 2010).
- US$93 billion a year is required to address Africa’s infrastructure investment and maintenance needs, 40% of which is to address deficits in power supply. (Foster & Briceño-Garmendia, 2010).
- Projected infrastructure maintenance cost is more than double than the Commission for Africa’s estimates (Foster & Briceño-Garmendia, 2010).
- Due to relatively low densities in cities, infrastructure projects do not benefit from large scales of economies that would increase the rate of return on investment (Foster & Briceño-Garmendia, 2010).

If infrastructural systems – pipes, ducts, servers, wires, conduits, electronic transmissions and tunnels - are intrinsic to contemporary cities (Graham, 2010) and if modern society represents “the sum total of urban innovations and exchanges across the millennia” (Beall & Fox, 2009:63), it is then important to bear in mind transition theory at this point. Perez (2010) writes that the current ICT revolution is somewhat different from the preceding four transformations because of the new value placed on intangibles and on human capital. Whereas in the previous four surges technology was embedded in tangible goods, currently the “area of intangible products, from services to information itself is now an increasing part of value added, of investment and naturally of innovation” (Perez, 2010:12). Moreover, in the fourth revolution (‘oil, the automobile and mass production’), new or redefined technologies took the form of “networks of roads, highways, ports and airports, networks of oil ducts, universal electricity (industry and homes), worldwide analogue telecommunications (telephone, telex and cablegram), wire and wireless” (Perez, 2010:5). For the global North, the transition to this era occurred between 1929 and 1943 (Perez, 2010); for African cities the transition to and deployment period of this turning point were never fully realised due to myriad reasons including colonisation and structural

---

adjustment programmes (Odendaal, 2010; Pieterse, 2008; Myers & Murray, 2006; Robinson, 2006). In oversimplified terms, urban Africa could be described as “half-built environments: underdeveloped, overused, fragmented, and often makeshift urban infrastructures where essential services are erratic or costly and whose inefficiencies spread and urbanize disease” (Simone, 2004b:425). However, Africa is currently experiencing the installation period of the fifth revolution (ICTs) - “a time of Schumpeterian creative destruction, of intense free market experimentation and exploration of all the possibilities of the new technologies” (Perez, 2010:6). In some countries, this has already progressed to deployment, best characterised as follows:

*In sum, there is a changing of the innovation guard with the Turning Point. During Installation, the innovation drivers are the new technological entrepreneurs and the financiers while the State has a service and facilitating role with a laissez faire attitude. During Deployment, the State comes back actively and serves as innovation driver together with production capital, which takes the helm of investment while financial capital serves as support* (Perez, 2010:9).

Bearing in mind the rough sketch of African infrastructure provided earlier, examining ICT infrastructure installation and deployment looks distinctly different – despite the fact that it piggybacks on most of the infrastructure of the fourth revolution. Africa is clearly undergoing an ICT revolution “based on wireless technologies, which are bypassing the fixed-line networks on which the telecom markets of developed countries were built” (Ampah et al. 2009:iv). The biggest transformation in this sector is undoubtedly the cost reduction in access as a result of undersea fibre optic cables replacing satellite access (Mapulanga, 2012; Mutua, 2012; Mutula, 2008). For example, Mutula (2008:475) notes the cost of international data transfer via satellite in the Eastern and Southern Africa regions “was about US$5,000 per megabit in September 2004, compared with US$500 per megabit with a maritime link (undersea fiber cable)”. Figure 1 illustrates the growing submarine internet cable infrastructure around the continent, highlighting the regional focus of investment and deployment. Over and above cost savings, undersea fibre optic cables also transfer data at a much quicker rate and with greater reliability (Mapulanga, 2012; Mutula, 2008). Foster and Briceño-Garmendia (2010) contend that the greatest progress in infrastructure investment in Africa has been made in the telecommunications and transportation sectors, and in both there seems to be no significant funding gap for further investment. From 1998 to 2007, fixed-line telephone subscriptions on the continent increased by 11 million (to a total of 30.6 million), however this pales in significance compared to the growth of mobile phone networks that collectively added 252 million more subscribers in the same time period to total 267 million (Ampah et al., 2009). The mobile phone is unique amongst other ICTs because of its accessibility, mobility and ability to be personalised (Odendaal, 2010; Essegbey & Frempong, 2011), which greatly expands its potential as a technology as second wave urbanisation continues (Levy & Banerjee, 2008) especially given that 91% of African urbanites live within the range of mobile network footprints (Ampah et al., 2009). What is particularly interesting in this regard is the urban bias of ICT investment in Africa (see Figure 2) in contrast to the predominantly rural focus of ICT literature focused on Africa7. Indeed, although “comprehensive work on the internal

---

7 The dominant discourse in this regard is Information Communication Technology for Development (ICT4D). ICT4D refers to research and practice where communication technologies are used instrumentally for socio-economic development (Moodley, 2005). ICT4D was born in the 1990s as the result of the general availability of the internet and the introduction of the Millennium Development Goals (Heeks, 2009). The archetypal manifestation of ICT4D is the rural telecentre (Heeks, 2009; Toyama, 2010); however, this has changed greatly since the near ubiquity of the mobile phone and innovation caused by its diffusion. Odendaal (2010:30) argues that ICT4D is the “translation of technologies into the African context...imbued with Western-centric assumptions” and this is particularly true of rural applications of ICT in Africa. The origin of ICT4D practice stems from NGOs and international development agencies who copied development interventions from Europe
dynamics between cities and ICT exists... few attempts have been made to engage with the African ‘digital’ city” (Odendaal, 2010:9) despite the fact that “ICT and cities are connected and mutually supportive of one another” (Graham, 2002 in Odendaal, 2010:9). It begs the question, where is urban Africa in the move towards the new economy? It is estimated that African cities generate 55% of the continent’s GDP (UN-HABITAT, 2008) providing support for a focus on urban ICT diffusion rather than rural development interventions. However, analysis of a list of 75 cities that typify the new economy shows that “with the exception of Cairo and Johannesburg, cities in Africa are notably absent” (Scott, 2011:94). Urban manifestations of the new economy in Western cities began to appear somewhere during the late 1960s and early 1970s8, just a little after the majority of African nation states gained their independence from colonial rule. Perhaps it is the very nature of the second urbanisation wave combined with the continent’s history that make it difficult to locate urban African ICT diffusion in academic literature.

8 This period marks the ‘crisis of Fordism’ (Scott, 2011) characterised by the ‘post-Oil Crisis recession’ (Swilling, 2011) and is the beginning of the ‘ICT Revolution’ (Perez, 2010).
Figure 1: Current and projected undersea fibre optic cables around Africa

Source: Song (2012)

Figure 2: Spatial split of historic infrastructure investment
The urban environment is a meshwork of steel, concrete, natural life, wires, wheels, digital codes, and humans placed in close proximity and it is the rhythms of the juxtapositions and associations – coming together in symbolic projections, cultural routines, institutional practices, regulatory norms, physical flows, technological regimes, experience of the landscape, software systems – that surge through the human experience (Amin, 2011:634).

All forms of networked urban infrastructure are typically designed to be ‘invisible’ – embedded out of sight in pipes, ducts, wires and tunnels (Graham, 2010). This design principle is especially evident in cities of the first urbanisation wave where infrastructural circuits have (over time) been rendered “curiously invisible and mundane – even boring” (Graham, 2010:6). Paradoxically, the ubiquitous ‘always on’ nature of urban infrastructure in these cities means that end-users typically only notice infrastructure around them when it is disrupted (Graham, 2010). Thus, as a function of quality of place, networked infrastructure in Western cities is rarely considered worth remarking on. This contrasts greatly with cities resulting from the second wave of urbanisation where infrastructure is a constant concern, in terms of both capital investment and maintenance (Foster & Briceño-Garmendia, 2010). The traditional virtuous circle of urban economic growth through agglomeration also comes with costs (negative externalities) that are often most visible in terms of the impacts they have on networked infrastructure. The cost of congestion is a good example of a negative externality, as it has not only financial implications but also environmental implications due to the pollution caused (Beall & Fox, 2009). Residents of African capital cities often experience the most negative externalities, as efforts to spur economic development are concentrated around them. Consider for example the description below of driving in downtown Yaoundé:

*The road is a disputed space, where private cars, taxis, public transportation, truck drivers, military jeeps, police cars, mopeds, bicycles, rickshaws, pedestrians, cattle, sheep, goats, and fowl intermingle and confront one another. Sudden stops and random parking, collisions that block traffic and cause congestion, the exchange of insults and physical abuse are par for the course* (Mbambo & Roitman, 2002:104).

For inhabitants of disrupted cities, both time and space are rendered highly tangible becoming a distinct characteristic of place (Malaquais, 2006). As dysfunctional as urban infrastructure can be in African cities, it would be a mistake to think that this constrains urban actors to the state of their infrastructure. Urban actors remain “incessantly flexible, mobile” (Simone, 2004b:407), motivated by what is possible to the point where cities are places of the imaginaire spanning “both the act of imagining and that which is imagined, the sum total of what can, or might, be imagined of a given place, person, or idea” (Malaquais, 2006:34). If Richard Florida is right about innovation being the essence of the work of the Creative Class, then this condition should be particularly true of the African Creative Class living in disrupted cities. If it must be stated that it is generally the urban poor who are the

---

9 Graham and Thrift (2007:10) further note that maintenance and repair services of urban infrastructure are by and large ignored in Western cities despite the “inherent and continuous unreliabilities within all infrastructure systems”. Exceptions to this consciousness only really occur when there is a dramatic interruption to infrastructure, such as a metropolitan wide power outage.

10 This sentiment should not be read naively. The vision of the Creative Class explored here is conservative, to say the least, and does not critique the privileged middle class status of the Creative Class. Ballard (2012:566) argues that “along with the normalisation of the poor, the working class, unemployed surplus, informal worker and other subjectivities, more privileged groups in society also have roles in the narratives of development. Elites, the bourgeoisie, the new rich, the creative class and the middle class are in various ways presented as model subjects of progressive society”.

---
most inventive and creative in disrupted cities\textsuperscript{11} and who pay the most for infrastructure solutions\textsuperscript{12}. What is also important to note is the fact that the rich are able to buy themselves out of disrupted cities with “globally connected infrastructure enclaves” while the poor usually remain in the “informal, almost disconnected and abandoned city… subjected to inhumane living conditions” (Pieterse, 2008:38). It should thus be clear, as a function of quality of place, that infrastructure cannot be ignored when considering African cities.

\textbf{3.3 On the Creative Class}

\textit{Many say we live in an 'information' economy or a 'knowledge' economy. What is more fundamentally true is that we now have an economy powered by human creativity... the winners in the long run are those who can create and keep creating} (Florida, 2004:5).

For the last decade, and especially since the 2008 financial crisis, Richard Florida has argued that talent (individuals with university degrees) is the most salient and vital factor to production in the new economy. Over and above natural resources and labour efficiency, Florida argues that cities need to work actively to attract individuals who form part of the ‘Creative Class’ in order to develop economically. Florida (2004:328) acknowledges that defining the creative class is not always an exact science (given that occupation taxonomies change frequently) but proposes that the Creative Class can be understood as individuals who fit the following taxonomy:

Super Creative Core:
- Computer and mathematical occupations
- Architecture and engineering occupations
- Life, physical and social science occupations
- Education, training and library occupations
- Art, design, entertainment, sports and media occupations.

Creative Professionals
- Management occupations
- Business and financial operations occupations
- Legal occupations
- Healthcare practitioners and technical occupations
- High-end sales and sales management.

Florida has written several research reports and books and consulted widely on urban policy issues always reiterating his Creative Class theory as one crucial for cities, wanting to secure growth and development, to use. Typically the Creative Class work in a ‘no-collar’ workplace, enjoy an “experiential lifestyle” characterised by a “time warp” where time spent on work and play are blurred into one as creativity and the generation of new ideas cannot be bounded (Florida, 2004). All this is made possible by cities that can offer amenities and services to support this group’s lifestyle and as a result, according to Florida, the Creative Class tends to gravitate towards certain places, urban spaces that are known for their creative communities. American Creative Class cities include San Francisco, Seattle, New York, Austin and Boston. Martin-Brelotet al. (2010:855) provide a good summary of Florida’s Creative Class theory, as argued across his writings (2000-2005), summarising it in six basic statements and hypotheses as follows:

\textsuperscript{11} See Bayat (2000) for a full exploration of this.

\textsuperscript{12} For example: the cost of 100 litres of water for slum dwellers in Accra (when consumed in purchases of 500 millilitre sachets in the absence of networked infrastructure) is US\$8 compared to households with reticulated water infrastructure who pay 5 US cents (Pieterse, 2009b).
1. There is a set of professions that deal with ‘creative’ tasks;
2. Their members are sufficiently similar to be considered as a class, sharing characteristics relating to their activities and way of life;
3. This so-called ‘creative class’ is a major driver of today’s economic development;
4. Members of the ‘creative class’ tend to concentrate in certain cities. Such cities therefore show a better economic performance;
5. Members of the ‘creative class’ are geographically mobile; and
6. Members of the ‘creative class’ are mainly attracted by ‘soft’ factors, thus cities should rather focus on these if they want to attract creative people.

Florida has captivated the attention of urban planners and local governments (Ballard, 2012). Many have entirely restructured their planning according to his recommendations. In particular, Florida’s work contends “a clear association between places with higher endowments of human capital and higher than average quality of place” (Arora et al. 2000:3). For example, environmental quality indexes (measuring air quality, water quality and levels of urban sprawl) rate higher than housing costs, cost of living, commuting patterns, availability of good schools, favourable climate, public safety and access to government services as a determining factor for location decisions of high-technology businesses (Florida, 2000). Florida (2005:33) argues that the Creative Class are not “slavishly following jobs to places. Instead it appeared that highly educated individuals were drawn to places that were inclusive and diverse”. What draws the Creative Class to particular cities over others is quality of place:

Quality of place here refers to the bundle of goods and services that come under the broad rubric of amenities. It is important to note that these amenities are not mere fleeting phenomenon but can be more appropriately thought of as the inherited, acquired, and built up characteristics of places - for example, as embodied in its parks, neighborhoods, cultural and educational institutions, and broad social milieu. In plainer language, it is what makes Paris - Paris, London - London, and New York - New York (Arora et al. 2000:2).

13 “The key difference between the Creative Class and the other classes lies in what they are primarily paid to do. Those in the Working Class and the Service Class are primarily paid to execute according to plan, while those in the Creative Class are primarily paid to create and have considerably more autonomy and flexibility than the other two classes to do so” (Florida, 2004:8).

14 “As with other classes, the defining basis of this new class is economic. Just as the feudal aristocracy derives its power and identity from its hereditary control of land and people, and the bourgeoisie from its members’ roles as merchants and factory owners, the Creative Class derives its identity from its members’ roles as purveyors of creativity. Because creativity is the driving force of economic growth, in terms of influence the Creative Class has become the dominant class in society” (Florida, 2004:xxvii).

15 “Knowledge and creativity have replaced natural resources and the efficiency of physical labour as the sources of wealth creation and economic growth. In this new era, human capital or talent has become the key factor of production” (Florida, 2005:49).

16 “The nexus of competitive advantage shifts to those regions that can generate, retain, and attract the best talent. This is particularly true because creative workers are extremely mobile and the distribution of talent is highly skewed” (Florida, 2005:50).

17 “Knowledge workers are both highly mobile and eagerly sought after by technology employers, and thus have the option of locating virtually anywhere they desire” (Florida, 2000:24).

18 “Knowledge workers essentially balance economic opportunity and lifestyle in selecting a place to live and work. Thus, quality of place factors are as important as traditional economic factors such as jobs and career opportunity in attracting knowledge workers in high technology fields” (Florida, 2000:5).
The implication of Florida’s research is that cities need to “invest heavily in creating a high-quality urban environment rich in cultural amenities and conducive to diversity in local social life” (Scott, 2006:11). However, measuring quality of place is the critical issue rather than proving it exists (Trip, 2007). Florida (2005) himself notes how his quantitative data analysis failed to prove conclusively that quality of place mattered for the Creative Class, while his qualitative data showed almost conclusively that it did factor strongly in the locational decisions of the Creative Class. Florida (2005:101) attributes this in part to the “weaknesses of existing measures of amenities” and that it in no way discredits the importance of quality of place for attracting and retaining knowledge workers. The issue remains that often the most attractive qualities of cities exist at an individual level rendering them intangible, highly subjective and somewhat elusive. Evidence of this firm belief in the economic significance of quality can be seen in the advice offered to urban planners and managers for their cities:

*Members of the Creative Class prefer active, participatory forms of recreation and have come to expect them in urban centres. Along with street-level culture – the teeming blend of cafes, galleries, small music venues, and the like - where one can be a participant-observer - these workers enjoy active outdoor sports. This includes just-in-time outdoor exercise blended into a busy schedule: running at lunch hour, getting outdoors during a couple of spare hours on a Saturday or Sunday, biking to work, or taking the bus and then roller-blading home (Florida, 2005:167).*

One criticism of new economy urbanism is that it purports to be value free (McNeil & While, 2001) and to this end, Florida’s thesis has generated considerable debate amongst urban researchers, many of whom successfully problematise the Creative Class theory by applying it to local contexts outside of the theory’s American context genesis. In the European context, Krätke (2010) problematises Florida’s unit of analysis (the city) contending that regions matter more economically and Martin-Brelot et al. (2010) use data from 11 different European cities to show that knowledge workers are not as mobile as Florida suggests. In the Canadian context, research has shown that traditional factors such as the availability of work opportunities matter more than the lifestyle choices that a city offers (Darchen & Tremblay, 2010). Brennan-Horley (2010) offers a thorough exposition of a small Australian city’s quality of place as an example of a city that would not have made Florida’s list as a Creative Class city and further problematises the methodologies that Florida uses. Milligan (2003) argues that urban sociology and psychology should form more of a key focus in Florida’s work in exploring why the Creative Class clusters in certain cities, suggesting that Florida’s theory suffers the critique of being far more interdisciplinary in nature than he himself acknowledges. As an economic theory, Wilson and Keil (2008) have critiqued the Creative Class theory for promoting a neoliberal urban elitist imaginary, as has Peck (2005) who further argues that Florida provides weak and superficial data to show causality between investment in ‘soft factors’ (quality of place amenities) and economic growth.

4. Results: On the [African] Creative Class

The aim of this paper was not to prove or disprove Florida’s theory (many authors have shown that place idiosyncrasies outweigh Florida’s blanket claims), but rather to explore his ideas within an African city context given that it is a context vastly different from the urbanscapes imagined by both Florida and his critics. The value of this study lies in its inclusion of urban infrastructure in the debate around Creative Class theories. Indeed economists and social scientists have failed to probe the reasons why the type of talent that drives economic growth in the new economy tends to cluster in certain cities over others (Florida, 2005) and even more so in the context of second wave urbanisation in sub-Saharan Africa.

‘Tech in Africa’ has come a long way in a very short time. It took less than five years for a small and fragmented group of pioneers to evolve into a sizeable pan-African community. It includes IT start-up centres, experienced computer literates,
profitable start-ups, established businesses serving African and global clients and, most recently, a handful of African hardware companies. (Grosskurth, 2012: V).

Until most recently, African cities have not featured in the Creative Class literature, yet it is possible to suggest inclusion of cities such as Cape Town, Kigali, Nairobi, Johannesburg, Cairo, Accra and Lagos that show promising signs of economic development through Creative Class entrepreneurship, in the technology sector in particular. Evidence of this cannot easily be found in academic literature but can be located in abundance in grey literature (websites, social media websites and blogs). As a proxy for the dearth of academic literature on the urban African Creative Class in the technology sector, it is possible to look at the many business incubators and co-working spaces (often referred to as hubs) that have sprung up across the continent in different cities:

*The numerous innovation hubs that have sprung up across the continent are the nerve centers of innovation… There are at least 35 tech hubs in 13 countries across Africa. Innovation hubs have created amazing momentum in their areas of operation as far as creating centers that draw in talent, and nurture skills. Young people now have the opportunity to start and grow tech companies from the right environment. It is primarily in tech hubs that the startup culture is being ‘incubated’.* (Mutua, 2012: 15 -16).

Figure 3 illustrates this trend and highlights the majority of technology-focused incubators and hubs on the continent. Although these hubs are playing a critical role in the development of African technology entrepreneurs, there is scant academic inquiry into the dynamics of this phenomena (Moraa, 2012c). Business incubators typically provide the support and infrastructure to nurture small and medium-sized enterprises (SMEs); they can be understood as an “umbrella term for any organization that provides access to affordable office space and shared administrative services” (Bøllingtoft & Ulhøi, 2005:268). Hubs and incubators offer attractive office space for freelancers and start-up companies as well as continuous networking and collaboration opportunities (Rao, 2012). This is because shared co-working spaces offer individuals the opportunity to access internal as well as external professional networks (Bøllingtoft & Ulhøi, 2005). Significantly, such spaces also offer an antidote to infrastructure disruption, for example, many would have back-up generators that allow business to continue through power blackouts.

---

19 In a recent article, Kalan (2012) writes, “there are now more than 50 tech hubs, labs, incubators and accelerators across Africa, with a new one springing up nearly every two weeks”. For the most recent additions to this list, see https://africahubs.crowdmap.com/, which is a website that allows users to populate an online map with the location of their incubator or hub.

20 For example: “The environment is cool, it’s convenient,” says student Nzota Yonazi, who works out of the hub, ‘and at my place… the power is usually out’. (Kalan, 2012)
Incubators and hubs form part of the ‘middleground’ for the Creative Class in cities - the level of communities and collectives (Cohendet, Grandadam & Simon, 2011). This is distinct from the ‘underground’ comprised of creative individuals not directly linked to the commercial and industrial world and similarly separate to the ‘upperground’, comprising typically formalised institutions and organisations that work specifically to take creative ideas through to commercial application. Middleground places are not exclusively ‘economic’ but often do enable transactions and networking that produce economic gain for individuals. Although the internet definitely allows for online and virtual collaboration, “within the middleground, agents are expected to voluntarily cooperate with one another in closely-knitted clusters” as this particular type of open innovation requires face-to-face interaction in a place-based local milieu (Cohendet et al., 2011:152). As to what a well-functioning middleground looks like, the aesthetics appear to be highly influenced by the post-industrial Western city:
A rich middleground requires places (such as cafés, restaurants, performance halls, art galleries, squares, public areas, old warehouses, etc.) where creative agents and industry professionals can eventually meet, wander, confront ideas, build daring assumptions, and validate new creative forms. These places, which are often open to the public and not purely market-driven sites, are recipients, combiners and transmitters of traveling or circulating knowledge (Cohendet et al., 2011:153).

Robinson (2006:13) argues that there is an urgent need to “dislocate accounts of urban modernity from the West and... encourage understanding of all cities as potential sites of creativity and innovation”. This raises the question that if African cities are attracting members of the Creative Class, especially the ‘super creative core’, in the ICT sector, what do we make of Florida’s quality of place proposition in light of the fact that these cities do not look and feel as Florida prescribes they should? Specifically, in Florida’s assessment criteria of quality of place, urban infrastructure is assumed to be ‘always on’ and not disrupted. How does this sit alongside research that shows that less than 5% of Lagosian households in Nigeria have access to formalised electricity connections (McFarlane, 2010) or that Nairobi, Kenya – the economic hub of East Africa with the continent’s most famous ICT hub (iHub) - has the world’s fourth most painful traffic commute (IBM, 2011). Florida’s theory thus rests on a certain set of assumptions about urban infrastructure that is not wholly appropriate when applied to African cities. This is significant as cities around the world look to the gains offered by the creative economy, especially due to effects of the post-financial crisis. Many major metropolitan areas are becoming “more and more drawn to a developmental formula that combines a focus on the new economy, investments in cultural resources, and an attempt to create a vibrant sense of place” (Scott, 2006:10-11). The difference however is that African cities have come about through vastly different mechanisms of urbanisation than Western cities. In Europe and America, it is possible to talk of post-industrial cities, not so with sub-Saharan Africa (Simon, 1992). The point here is not to draw a modernist comparison, but rather to emphasise that urbanisation through industrialisation also meant concomitant investments in urban infrastructure and a fundamentally different baseline for quality of place assessment. Notions of quality of place for the Creative Class are thus incomplete given the incredible rise of technological innovation in African cities. Perhaps then, instead of prescriptive standards for assessing quality of place, we should consider all cities as ‘ordinary’ (Robinson, 2006). An ordinary city perspective starts with the assumption that “all cities can be thought of as diverse and distinctive with the possibility to imagine (within the constraints of contestations and uneven power relations) their own futures and their own distinctive forms of cityness” (Robinson, 2006:113). This allows for a re-focusing on locational specificities and moves away from the economic reductionism rhetoric and discourses that urge cities to become ‘world-class’, ‘global’ or even ‘creative’ by implying a highly idealised form of urbanism with particular assumptions about infrastructure (Pieterse, 2008; Graham, 2010).

5. Conclusions and recommendations
Looking at each stage of urban economic development, starting with the foundations, there are clear deficiencies in the basic infrastructure and services of many African cities, including a reliable electricity supply, water supply, telephone service and efficient transport systems... these factors are usually taken for granted in business locations elsewhere (Turok, 2010:19).

This paper has tried to tie together several strands of thought: second wave urbanisation dynamics in Africa, infrastructure disruption and investment, the Creative Class theory and the notion of quality of place that supports it. It has also highlighted the need for greater focus on ICT diffusion and Creative Class clustering in African cities, currently sidelined by academic literature. The challenging and uncertain nature of the second urbanisation wave affirms again that cities, all cities, remain as sources of productivity (in the broadest sense) and not simply as sinkholes of over-consumption:
There is the potential for cities to be different because, after all, the concentrations of the intellectual resources for innovation created by an urban-centred science and education system, should provide the ideational, cultural and institutional context to foster imaginaries about more sustainable futures (Swilling & Annecke, 2012:111).

Infrastructure investments spur technological change in urban economies, and this is especially evident in investments made in ICTs that allow new possibilities for production previously not available to end-users during industrialisation. However, it is not simply enough to agree that African cities have the generative capacity to imagine workable solutions to their own development (Pieterse, 2009b). More is needed given that conceptualisations of modernity and urban development “continue to ascribe innovation and dynamism... to cities in rich countries, while imposing a regulating catch-up fiction of modernisation on the poorest” (Robinson, 2006:2). Although Richard Florida does not consider African cities at all in his theory, his quality of place proposition has the similar effect. In light of urban infrastructure disruption as a common quality of place feature of African cities, how does one proceed to explain the location choices of the Creative Class in urban Africa? What is perhaps necessary is, what some have called, the ‘de-pathologization of African cities’ (Hentschel & Press, 2009); a process of reconceptualising African urban spaces in a multiplicity of ways. The process would first need to acknowledge that a city space is an emergent space, greater than the sum of its physical elements and indeed “a layered representation of the aspirations, interventions and negotiations of individuals and groups” (Odendaal, 2010:10). The second step is to insist on nuanced and complex narratives of urbanisation in Africa that provide snapshots of life rather than overly determining macro-perspectives:

Limiting the study of urbanisation in Africa to such bleak themes as sprawling slums, inadequate social service provision, neglected infrastructure, predatory crime and random violence... not only leaves a great deal of room for misunderstandings, misconceptions, and even inadvertent stereotypes about African cities and their residents, but also tends to ignore the resourcefulness, inventiveness, and determination of the countless millions of ordinary people who somehow manage to successfully negotiate the perils of everyday life (Myers & Murray, 2006:3).

Thirdly, as I understand it, to de-pathologize is to strike back not just with anti-thesis but instead with new synthesis. This is necessary as nearly all the scholarship that ascribes generative capacity to cities is written with cities of the global North in mind (Pieterse, 2009b). To de-pathologize is to ask whether African cities are “‘non-functional’, or only so in northern-hemisphere terms?” (Hentschel & Press, 2009:7). De-pathologizing in this way creates room to explore what quality of place means in an African city context, a context overlooked by even the fiercest critics of Richard Florida.

References

Amin, A. Forthcoming. Telescopic Urbanism and the Poor. City


Brennan-Horley, C. 2010. Creative city mapping: experimental applications of GIS for cultural planning and auditing. A thesis submitted to the School of Earth and Environmental Sciences, University of Wollongong, in fulfilment of the requirements for the degree of Doctor of Philosophy


Falch, M. 2004. Tele-Centres in Ghana, Telematics and Informatics, 21,103-114


Pieterse, E. 2009b. African cities: Grasping the unknowable. Inaugural lecture delivered at the University of Cape Town. 26 August, Cape Town, South Africa


