EXPLORING THE IDEA OF THE CREATIVE CLASS IN AN AFRICAN CITY: A CASE STUDY OF ICT PROFESSIONALS IN NAIROBI

Lauren Rosenberg

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Supervisor: Prof. Alan Brent

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Abstract

This study is an exploration of Richard Florida's Creative Class theory within an African city context. 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, as lifestyle amenities are valued as much as employment opportunities. Nairobi is an example of an African city currently attracting both Kenyan and expatriate Creative Class workers, particularly in the information and communication technology (ICT) sector. The research aimed to understand why this group chose to live in Nairobi and to describe Nairobi's quality of place, with a particular focus on infrastructure disruption. Overall, the Western city is the reference point for 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 (Nairobi included) 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. The point of the study 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. 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 case study revealed that Nairobi's quality of place is fundamentally different to normative prescriptions given to urban planners and, in some instances, is highly frustrating and unattractive. Contrary to Florida's theory, those interviewed were not leaving Nairobi in search of cities with higher quality of place attributes or better infrastructure provision – individuals were rooted to the city because of their work and the professional networks with which they were associated.

Opsomming

Hierdie studie is ‘n verkenning van Richard Florida se teorie van Kreatiewe Klas binne die konteks van ‘n Afrika-stad. Die ekonomiese waarde van die Kreatiewe Klas is dat hul werk rondom innovasie draai, wat as noodsaaklik beskou word vir die stedelike groei van die “nuwe ekonomie”. Plekkwaliteit (dit wat ‘New York, New York’ maak) lok luidens Florida se teorie die Kreatiewe Klas na sekere stede, aangesien hulle leefstylgeriewe net so hoog soos werksgeleenthede op die prys stel.

Nairobi is ‘n voorbeeld van ‘n Afrika-stad wat tans beide Keniaanse en buitelandse werkers van die Kreatiewe Klas lok, veral na die plaaslike Informasie- en Kommunikasietegnologiesektor (IKT-sektor). Die navorsing het gepoog om te verstaan waarom hierdie groep gekies het om in Nairobi te woon asook om Nairobi se plekkwaliteit te beskryf, met ‘n spesifieke klem op die onderbreking van infrastruktuur. Oor die algemeen is die Westerse stad die vertrekpunt vir literatuur oor die Kreatiewe Klas. Daarby word plekkwaliteit gewoonlik beskou binne die raamwerk van “verstedeliking deur industrialisering”, wat bekend staan as die eerste verstedelikingsgolf. Die vinnig groeiendste stede op die Afrika-vasteland (insluitend Nairobi) is deel van ‘n tweede verstedelikingsgolf wat deur gans ander dinamika gedryf word, waarvan industrialisering ‘n feitlik weglaatbare faset is. Verstedeliking deur industrialisering het tot gelyktydige beleggings in infrastruktuur aanleiding gegee, dus maak dit sin dat literatuur oor die Kreatiewe Klas aanvaar dat stedelike infrastruktuur “altyd aan” is – dit wil sê, immerbeskikbaar as ‘n onafskeidelike kenmerk van die plek.

Die doel van die studie was nie om modernistiese vergelykings te tref nie, maar om te beklemtoon dat begrippe van plekkwaliteit onvolledig is gegewe die opkoms van tegnologiese innovasie in stedelike Afrika, waar stede dikwels ly aan onderbrekings van basiese infrastruktuur. Tot baie onlangs is Afrika-stede nie genoem in literatuur oor die Kreatiewe Klas nie; die oorwegend landelike fokus van die verspreiding van IKT dra ook by tot die gebrek aan inligting aangaande die Kreatiewe Klas in Afrika-stede.

Die gevallestudie het onthul dat Nairobi se plekkwaliteit in wese anders is as die normatiewe voorskrifte wat aan stadsbeplanners voorgehou word en dat dit selfs, in sommige gevalle, uiters frustrerend en onaantreklik is. In teenstelling met Florida se teorie was diegene met wie onderhoude gevoer is, nie van plan om Nairobi te verlaat

op soek na stede met hoër plekkwaliteitkenmerke of beter infrastruktuur nie – dié individue was gevestig in die stad weens hul werk en die professionele netwerke waarmee hul geskakel het.

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Contents

Abstract ... iii

Opsomming ... iv

Contents ... vii

List of Figures ... viii

List of Tables ... viii

Thesis Introduction ... 1

Urbanisation, Infrastructure Disruption and the Creative Class in Africa ... 4

  Introduction ... 4

  Waves of Urbanisation ... 7

  Urban Infrastructure as Quality of Place ... 10

  On the Creative Class ... 17

  On the [African] Creative Class ... 21

  Conclusion ... 26

The Creative Class explored in an African City Context ... 29

  Introduction ... 29

  Exploring Nairobi's Quality of Place ... 29

  Nairobi – 'Silicon Savannah' ... 31

  Research Design & Methodology ... 35

  Discussion of Results ... 39

  Mobility: "Chewing diesel all day" ... 40

  Water ... 46

  Quality of Place ... 48

  Here to Stay: Reflections on Nairobi's Quality of Place ... 53

  Quality of Place versus Invincible Infrastructure ... 57

  Conclusion ... 59

Thesis Conclusion ... 62

Reference List ... 65

List of Figures

Figure 1: Current and projected undersea fibre optic cables around Africa.............15

Figure 2: Spatial split of historic infrastructure investment.......................................15

Figure 3: Technology-focused incubators and hubs in Africa..................................24

Figure 4: Example of a hand-drawn map...36

Figure 5: Mapping at the iHub..37

Figure 6: Mobility frustrations as quality of place..43

Figure 7: Household’s main source of water 47

Figure 8: Nairobi quality of place map – interview and group creative mapping.......50

Figure 9: Cultural hangouts in Nairobi CBD...51

Figure 10: Planned interactions..52

Figure 11: Innovators in disrupted cities...60

Figure 12: Using social media to investigate quality of place..................................63

List of Tables

Table 1: Overview of the interview sample...38

Table 2: Hangout spots...49

List of Acronyms

BPO: Business Process Outsourcing
CBD: Central Business District
ICT: Information Communication Technologies
ICT4D: Information Communication Technologies for Development

Thesis Introduction

This study is an exploration of Richard Florida's Creative Class theory applied within an African city context. The Creative Class derives its living primarily from innovation, at various scales and in various fields, making its contribution to 'new economy' urban growth attractive and desirable to planners and governments alike. The new economy, somewhat difficult to define, is enabled by the internet and encompasses a wide range of vocations across the business and financial services sector, high technology industries and the cultural industries (Scott, 2006). The new economy is thus an economy of ideas and its growth increasingly relies on the expansion of technological innovation and the value addition of the work of the Creative Class (Florida, 2004).

Florida (2005:33) argues that knowledge workers tend to cluster in certain cities over others: "in a world where people are highly mobile, why do they choose some cities over others and for what reasons?". Florida (2000:7) posits quality of place as central to this clustering phenomenon, the "missing piece of the puzzle" of urban economic growth strategies. He argues that without it, cities are doomed to economic stagnation, as they will not attract the type of talent necessary for new economy growth. Florida (2005:83-84) lists the following as typical quality of place attributes that the Creative Class finds attractive:

- Large numbers of visibly active young people;
- Easy access to a wide range of outdoor activities;
- A vibrant music and performance scene with a wide range of live-music opportunities;
- A wide range of nightlife experiences, including many options without alcohol;
- A clean, healthy environment and commitment to preserving natural resources for enjoyment and recreation; and
- A lifestyle that is youth-friendly and supportive of diversity

Many urban planners and municipalities around the world have accepted Florida's Creative Class theory almost in its entirety, with great enthusiasm and without much critical analysis (Ballard, 2012). Research has shown however that as pervasive as the new economy is - due to the insatiable appetite of global capitalism (Scott, 2011) - place idiosyncrasies still outweigh normative prescriptions for quality of place. The aim of this study was not to prove or disprove Florida's theory but rather to explore his ideas within an African city context given that it is one vastly different from the urbanscapes imagined by both Florida and his critics.

Quality of place (that which makes ‘New York, New York’) is said to attract the Creative Class to certain cities, as lifestyle amenities are valued as much as employment opportunities. Nairobi, Kenya is an example of an African city currently attracting both Kenyan and expatriate Creative Class workers, particularly in the information and communication technology (ICT) sector. The research aimed to understand the locational choices of Creative Class workers within this sector and contribute to a better understanding of the Creative Class in African cities. The study consists of two parts:

- a literature review
- data analysis of a case study of 16 semi-structured interviews conducted in Nairobi.

Although presented in one document here, each part was written as an independent academic journal article and will be disseminated as such.

Research Strategy

The research approach, for the literature review, sketched the general terrain between the themes of urbanisation, ICT diffusion and the Creative Class theory, all within an African city context. Each theme on its own is well documented; the challenge was to find instances where these discourses appeared alongside each other. Overall, the Western city is the reference point for Creative Class literature, which assumes urban infrastructure to be ‘always on’ and so it is barely considered as a function of quality of place. The point of this paper was not to draw modernist comparisons of development - the idea that Africa is lagging behind Western cities - but rather to emphasise that notions of quality of place are incomplete given the rise of technological innovation in urban Africa. Until most recently, African cities did not feature in the Creative Class literature; the predominantly rural focus of literature looking at ICT diffusion in Africa contributes to the lack of information about this group in urban areas.

The data analysis section utilised an idiographic inductive case study approach and data was collected through 16 semi-structured interviews conducted in Nairobi. The research aimed to understand why the sample chose to live in Nairobi and to describe Nairobi’s quality of place, with a particular focus on infrastructure disruption.

Supplementary data, in the form of hand-drawn maps detailed by interviewees and a larger map populated by an additional sample (not interviewed) of about 40 people, was also collected to enable a deeper understanding of the spatial context of the Creative Class (Brennan-Horley, 2010).

This study is “an examination of everyday practices and imaginaries” (Pieterse, 2009a:6) informed by continent-specific urbanisation trends and global economic phenomenon. As a whole, the study is both timely and necessary. ICTs will continue to shape African economies for many years to come and it is worth investigating the dynamics of this growth at different scales – regional, national and city level – to contribute to increasing the current relatively small body of knowledge generated by African researchers.

Limitations of the study

> *“A single case study is still a single-shot affair – a single example of a larger phenomenon”* (Gerring, 2007:42).

The research design of this study also limits the outcomes of the study and subsequent use of the results. Firstly, it is impossible to make any general inferences about the locational choices of the Creative Class in Nairobi beyond the case sample and the reader is to bear this in mind throughout. Secondly, the research methodologies used are somewhat traditional and perhaps, given the technological focus of the study, the overall research project would have been greatly enhanced through data collection from social media websites (Twitter and Facebook in particular). Incorporating social media websites would have allowed for a greater sample to be included at virtually no additional financial cost to the researcher. Thirdly, from a theoretical point of view, the study was limited to exploring Florida’s Creative Class theory through one paradigm (quality of place) to make the study feasible and unique.

Urbanisation, Infrastructure Disruption and the Creative Class in Africa

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)[1]. 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 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[2]. 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 study 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.

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[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).

Research Approach

> *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 study 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 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).

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[2] 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.

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)[3] 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[4]. 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).

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[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).

[4] See for example Molony (2009), Hassanin (2009), Falch (2004), Yitamben & Tchinda (2009), Wyche et al. (2010) and Mwesige (2004).

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).

Waves of Urbanisation

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 'new economy'* (Scott, 2006:3).

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 inter-linked (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[5] as a battle of investment between the

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[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".

"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).

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 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[6]. 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 study 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).

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[6] See for example McKinsey Global Institute (2010) 'Lions on the Move: The Progress and Potential of African Economies' Report.

- 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 Africa[7]. Indeed, although "comprehensive work on the internal 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, 2008a) 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 1970s[8], 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.

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[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 and North America, implementing these in rural areas where they perceived poverty to be the greatest (Heeks, 2009).

[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).

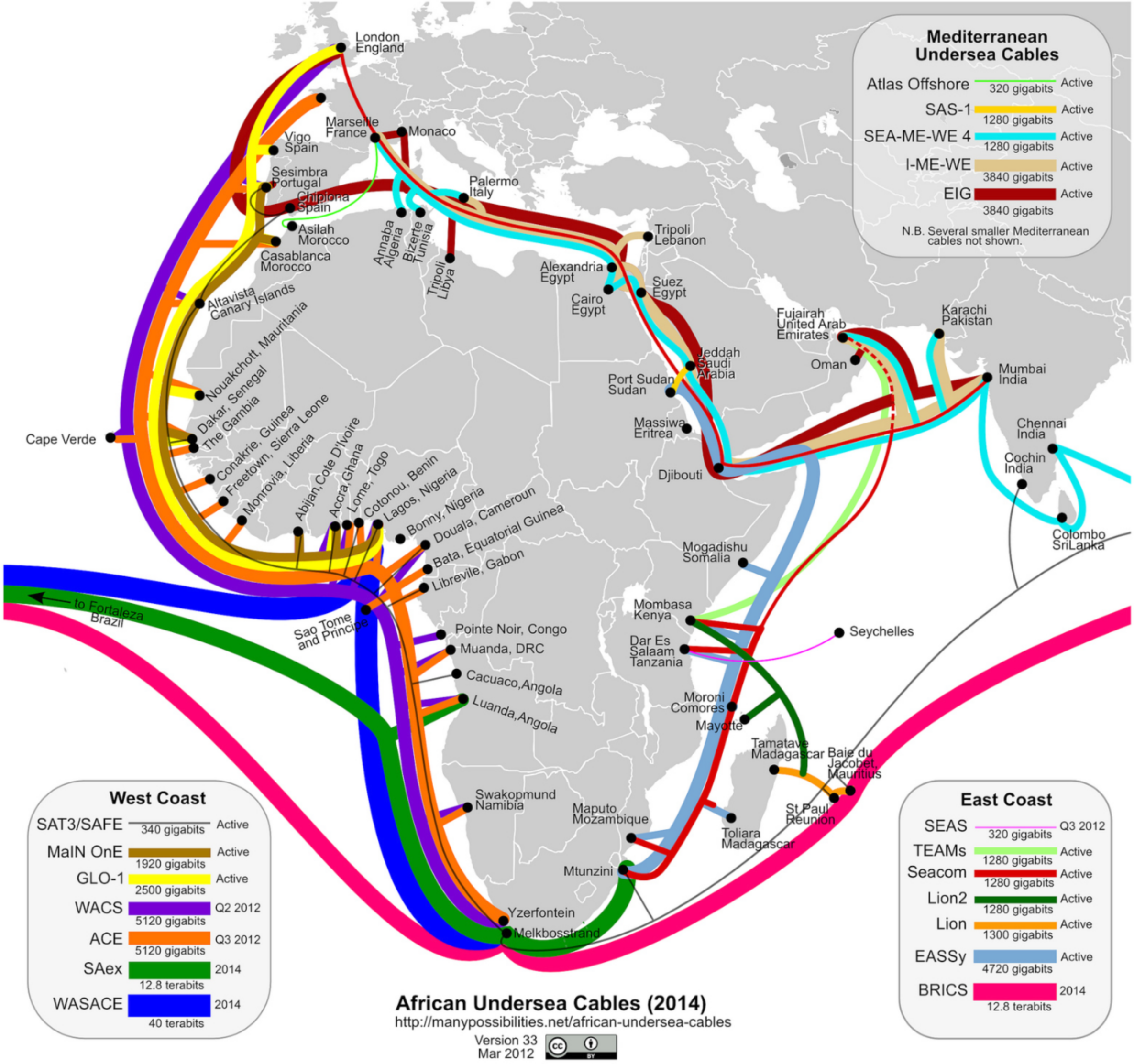
Mediterranean Undersea Cables
Atlas Offshore 320 gigabits Active
SAS-1 1280 gigabits Active
SEA-ME-WE 4 1280 gigabits Active
I-ME-WE 3840 gigabits Active
EIG 3840 gigabits Active
N.B. Several smaller Mediterranean cables not shown.
West Coast
SAT3/SAFE 340 gigabits Active
MaIN OnE 1920 gigabits Active
GLO-1 2500 gigabits Active
WACS 5120 gigabits Q2 2012
ACE 5120 gigabits Q3 2012
SAex 12.8 terabits 2014
WASACE 40 terabits 2014
East Coast
SEAS 320 gigabits Q3 2012
TEAMs 1280 gigabits Active
Seacom 1280 gigabits Active
Lion2 1280 gigabits Active
Lion 1300 gigabits Active
EASSy 4720 gigabits Active
BRICS 12.8 terabits 2014
London England
Marseille France
Monaco
Vigo Spain
Sesimbra Portugal
Chipiona Spain
Asilah Morocco
Casablanca Morocco
Palermo Italy
Annaba Algeria
Bizerte Tunisia
Tripoli Libya
Tripoli Lebanon
Alexandria Egypt
Cairo Egypt
Suez Egypt
Altavista Canary Islands
Nouakchott, Mauritania
Dakar, Senegal
The Gambia
Cape Verde
Conakrie, Guinea
Freetown, Sierra Leone
Monrovia, Liberia
Abijan Cote D'Ivoire
Accra, Ghana
Lome, Togo
Cotonou, Benin
Lagos, Nigeria
Bonny, Nigeria
Douala, Cameroun
Bata, Equatorial Guinea
Librevile, Gabon
Sao Tome and Principe
to Fortaleza Brazil
Pointe Noir, Congo
Muanda, DRC
Cacuaco,Angola
Luanda,Angola
Swakopmund Namibia
Yzerfontein
Melkbosstrand
Mtunzini
Maputo Mozambique
Toliara Madagascar
St Paul Reunion
Baie du Jacobet Mauritius
Tamatave Madagascar
Moroni Comores
Mayotte
Dar Es Salaam Tanzania
Mombasa Kenya
Seychelles
Mogadishu Somalia
Djibouti
Massiwa Eritrea
Port Sudan Sudan
Jeddah Saudi Arabia
Fujairah United Arab Emirates
Oman
Karachi Pakistan
Mumbai India
Chennai India
Cochin India
Colombo SriLanka
African Undersea Cables (2014)
http://manypossibilities.net/african-undersea-cables
Version 33 Mar 2012

Figure 1: Current and projected undersea fibre optic cables around Africa

Source: Song (2012)

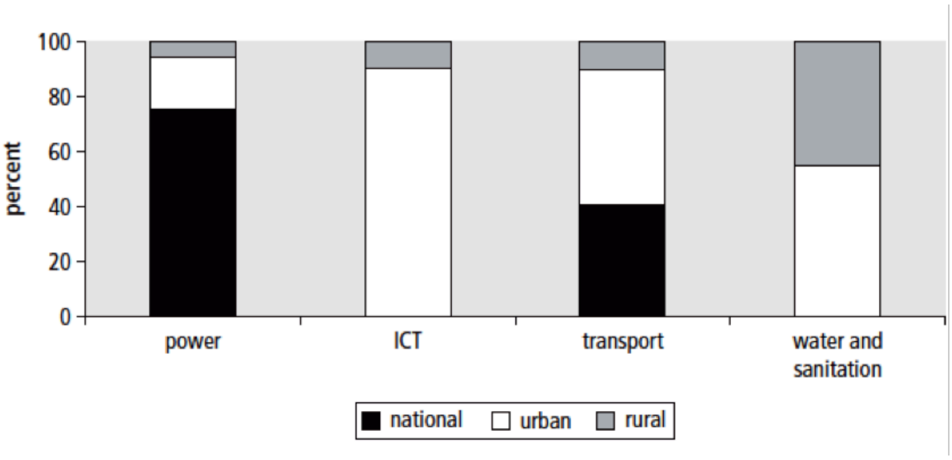

Figure 2: Spatial split of historic infrastructure investment

Source: Foster & Briceño-Garmendia (2010:133)

> *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)[9]. 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*

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[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.

> *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* (Mbembe & 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[10]. It must be stated that it is generally the urban poor who are the most inventive and creative in disrupted cities[11] and who pay the most for infrastructure solutions[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.

On the Creative Class

> *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*

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[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".

[11] See Bayat (2000) for a full exploration of this.

[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).

> *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-Brelot et 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:

1. There is a set of professions that deal with 'creative'[13] tasks;

2. Their members are sufficiently similar to be considered as a class, sharing characteristics relating to their activities and way of life[14];

3. This so-called 'creative class' is a major driver of today's economic development[15];

4. Members of the 'creative class' tend to concentrate in certain cities. Such cities therefore show a better economic performance[16];

5. Members of the 'creative class' are geographically mobile[17]; 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[18].

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:

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[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).

> *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).

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.

On the [African] Creative Class

The aim of this study 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[19]. 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[20].

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[19] In a recent article, Kalan (2012b) 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.

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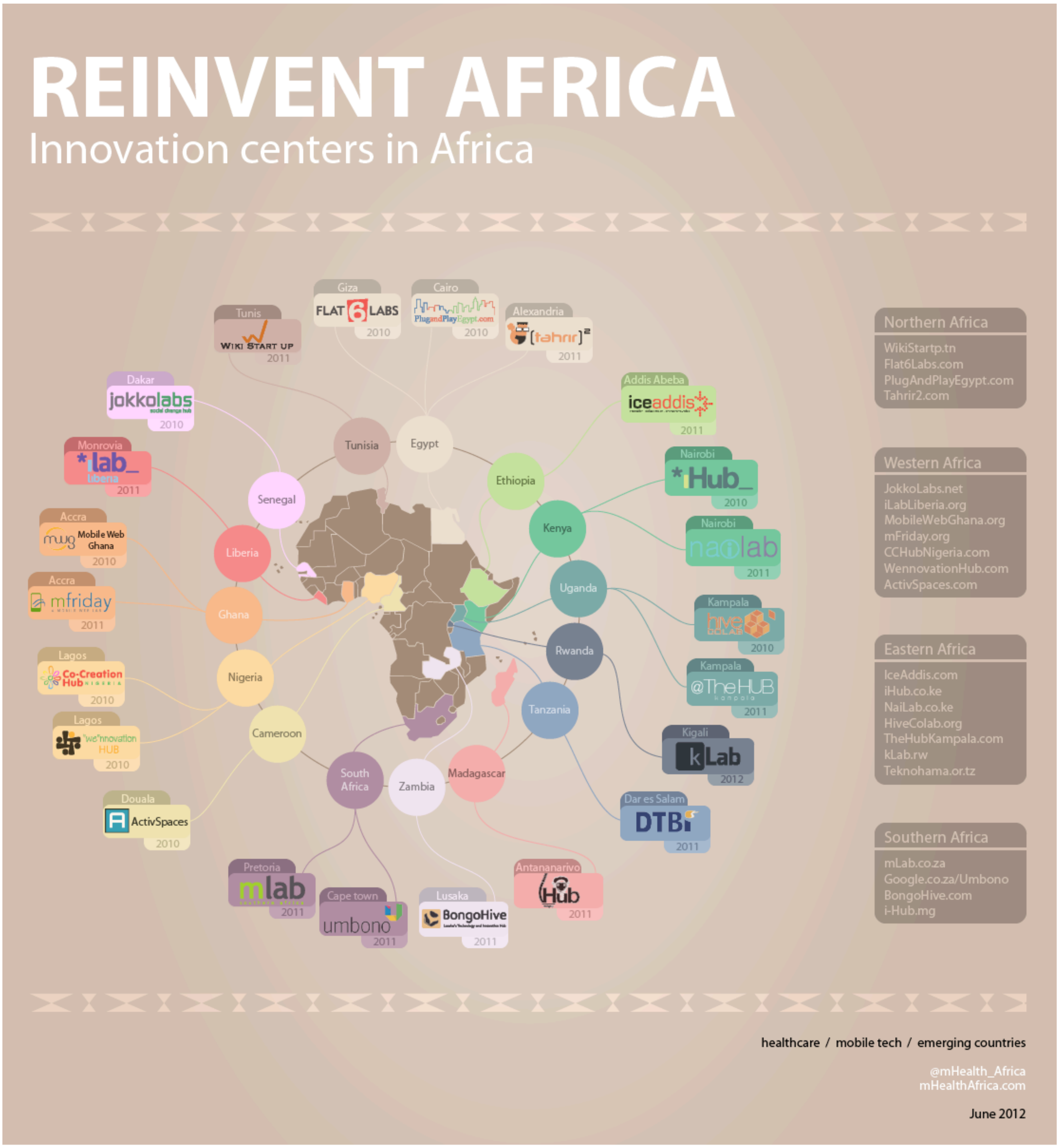
[20] For example: "'The environment is cool, it's convenient,' says student Nzota Yonazi, who works out of the hub, 'and at my place… the power is usually out'." (Kalan, 2012b)


REINVENT AFRICA
Innovation centers in Africa
Tunis
Wiki Start Up
2011
Giza
FLAT6LABS
2010
Cairo
PlugandPlayEgypt.com
2010
Alexandria
[tahrir]²
2011
Dakar
jokkolabs
2010
Monrovia
*lab_ liberia
2011
Accra
Mobile Web Ghana
2010
Accra
mfriday
2011
Lagos
Co-Creation Hub
2010
Lagos
'we'nnovation HUB
2010
Douala
ActivSpaces
2010
Pretoria
mlab
2011
Cape town
umbono
2011
Lusaka
BongoHive
2011
Antananarivo
Hub
2011
Dar es Salam
DTBi
2011
Kigali
kLab
2012
Kampala
@TheHUB
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Ghana
Uganda
Nigeria
Rwanda
Tanzania
Cameroon
South Africa
Zambia
Madagascar
Northern Africa
WikiStartp.tn
Flat6Labs.com
PlugAndPlayEgypt.com
Tahrir2.com
Western Africa
JokkoLabs.net
iLabLiberia.org
MobileWebGhana.org
mFriday.org
CCHubNigeria.com
WennovationHub.com
ActivSpaces.com
Eastern Africa
IceAddis.com
iHub.co.ke
NaiLab.co.ke
HiveColab.org
TheHubKampala.com
kLab.rw
Teknohama.or.tz
Southern Africa
mLab.co.za
Google.co.za/Umbono
BongoHive.com
i-Hub.mg
healthcare / mobile tech / emerging countries
@mHealth_Africa
mHealthAfrica.com
June 2012

Figure 3: Technology-focused incubators and hubs in Africa

Source: M-Health Africa, 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 Lagoasian 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).

Conclusion

> *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-pathogolize 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-pathogolize is to ask whether African cities are "'non-functional', or only so in northern-hemisphere terms?" (Hentschel & Press, 2009:7). De-pathogolizing 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.

The Creative Class explored in an African City Context

Introduction

This paper explores Richard Florida's Creative Class theory within an African city context. Florida (2005:33) argues that knowledge workers[21] tend to cluster in certain cities over others: "in a world where people are highly mobile, why do they choose some cities over others and for what reasons?". Florida (2000:7) posits quality of place as central to this phenomenon, the "missing piece of the puzzle" in urban economic growth strategies. Without it, Florida argues that cities are doomed to economic stagnation, as they will not attract the type of talent necessary for 'new economy' growth[22]. Nairobi, Kenya is an example of an African city currently being shaped by an aggressive 'new economy' urban growth plan[23] and it is attracting both Kenyan and expatriate Creative Class workers in the information and communication technology (ICT) sector. The research aimed to understand the locational choices of Creative Class workers in the ICT sector who live and work in Nairobi. Little work has been done on the Creative Class in African cities and thus this paper seeks to improve understanding of why this group chose to live in Nairobi and to describe Nairobi's quality of place, with a particular focus on infrastructure disruption.

Exploring Nairobi's Quality of Place

Florida's work has captivated the attention of urban planners and local governments (Ballard, 2012). Many have entirely restructured their planning according to his recommendations and because of this Florida's theory has generated considerable debate among urban researchers, many of whom successfully problematise the Creative Class theory by applying it to local contexts outside of the United States of America (USA)[24]. Further to that, from an economic viewpoint, Wilson and Keil (2008) have critiqued Florida's 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. Particularly relevant to this study is the research done by Brennan-Horley (2010) as it offers a thorough exposition of a small Australian city's quality of place. This is an example of a city that would probably not have made Florida's list as a Creative Class city. Interestingly, it further problematises the orthodox methodologies that Florida and others use to map quality of place in a city by proposing alternative methodologies that rely more on participant input. The aim of this study was not to prove or disprove Florida's theory (many authors have shown that place idiosyncrasies far outweigh Florida's blanket statements), but rather to explore his ideas within an African city context given that it is a vastly different context from the urbanscapes imagined by both Florida and his critics. In addition to this exploration, this study aims to include urban infrastructure as part of the dialogue.

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[21] Acknowledging that defining the Creative Class is not an exact science (given that occupation taxonomies change frequently), Florida (2004:8) argues "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".

[22] Scott (2006:3) notes that attempts to describe the 'new economy' never completely capture its essence. He notes however that the new economy is recognised as a "marked shift away from the massified structures of production and the rigid labor markets that typified Fordism" and that perhaps "the best way of alluding to what is at stake here is to say simply 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 'new economy'".

[23] 'Nairobi Metro 2030 - A World Class African Metropolis' (Ministry of Nairobi Metropolitan Development, 2008). This document was produced as part of an overall national development plan called 'Kenya Vision 2030' designed to transform Kenya into a middle-income country by the year 2030. See www.vision2030.co.ke for further reading.

Swilling and Annecke (2012:108) reject the view that cities are "simply spaces within which other things happen"; they rather claim that cities are the emergent outcomes of "complex interactions between overlapping socio-political, cultural, institutional and technical networks" in a constant state of flux. This is evident in global South cities where many can be described as both 'global' and 'developmental' (Robinson, 2006). The nature of the urban condition is thus a state of contest between "globally connected infrastructure enclaves" and "the informal, almost disconnected and abandoned city, where the urban poor are subjected to inhumane living conditions" (Pieterse, 2008:38). Beyond brief reference to mobility infrastructure, disruptions to infrastructure supply are barely considered in the Creative Class literature, a somewhat strange trend given that "physical networks are intimately tied to everyday life" (Guy & Marvin, 2001:27). Overall, the Creative Class literature assumes that urban infrastructure is 'always on'. The baseline reference point of this literature is the Western city where infrastructural services are "virtually ubiquitous and utterly ordinary" (Graham, 2010:6). Much of this can be attributed to the urbanisation patterns that cities in the global North have followed: an urbanism of economic growth through industrialisation with concomitant investments in infrastructure. In comparison, African cities exist today because of vastly different mechanisms of urbanisation. The continent's colonial past has resulted in city settlements where investment in infrastructure occurred only to support an imperial economy of extraction and export (Simone, 2004a). In Europe and the USA, it is possible to talk of post-industrial cities (Scott, 2011). This is not the case with sub-Saharan Africa. 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).

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[24] Krätke (2010) problematises Florida's unit of analysis (the city) in the German context contending that regions matter more economically; Martin-Brelot et al. (2010) use data from eleven different European cities to show that knowledge workers are not as mobile as Florida suggests. Research in Canada 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).

Nairobi – 'Silicon Savannah'

East Africa is the least urbanised region on the continent (UN-HABITAT, 2010) and its economic hub is undoubtedly Nairobi, Kenya. Established as a transportation centre by the British colonial rulers in 1899, Nairobi is today the regional hub for transport, commerce, tourism, trade and conferences (Owuor & Mbatia, 2012). However, Nairobi can also be considered a 'new city' in some regards given that it is one of the youngest cities in the East African region (Kelava, 2010) and it is projected to be the tenth fastest growing large city in Africa, with a projected growth of 47% between 2010 and 2020 (UN-HABITAT, 2010). Awuor-Hayangah (2008) argues that the rate of urbanisation in Nairobi is significantly higher than the national average for population growth, indicating that rural to urban migration is the leading cause of an increased city population rather than natural growth. However, the latest report on the 'State of African Cities' (UN-HABITAT, 2010) contends that natural demographic growth in cities is the leading reason for high population growth rates, as well as the accommodation of foreign nationals displaced by conflict in the region (for example, Somalian immigrants). Regardless of the exact reason, clearly it seems that Nairobi is growing quickly. Using 2007 data, the United Nations Human Settlements Programme cites Nairobi's population at 3.36 million people (UN-HABITAT, 2008a) however the more recent 2009 Kenya National Census data however found Nairobi's population to be just over 3.1 million (Kenya Open Data Initiative, 2012). Since the mid-2000s

Nairobi employs approximately 43% of all urban workers in Kenya (about 25% of the country's workforce) and generates more than 45% of the national GDP (UN-HABITAT, 2006). Current urbanisation trends place Nairobi in a very different category to cities typically considered in Creative Class literature where urbanisation is largely complete. Nairobi, like other sub-Saharan African cities, faces the challenges brought about by a lack of "capital, technology and the organisation to cope with the enormous pressures of urban population growth and the demand for basic facilities that these create" (Awuor-Hayangah, 2008:230). Nairobi is considered the fifth most unequal city in the global South with a Gini-coefficient[25] (income-based) of 0.59 (UN-HABITAT, 2008b:73)[26]. There are approximately 200 informal and densely populated settlements (slums) in the city that exhibit some of the worst urban living conditions on the continent due to a lack of shelter and sanitation infrastructure and services (UN-HABITAT, 2010). Slum Dweller's International and local Kenyan affiliate, the Pamoja Trust (2008), argue that Nairobi's slum dwellers "compete" for investment into their own communities with infrastructure projects, city beautification initiatives and private development. An in-depth exploration into inequality as it relates to infrastructure service provision in Nairobi is beyond the scope of this paper. The aim rather is to describe in broad terms the fractured nature of the city, an urban condition found in other African cities as well. Often infrastructure investment takes the form of "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).

Recently, Nairobi has been dubbed 'Silicon Savannah' – a reference to Silicon Valley - because of the boom in technology innovation occurring in the city[27]. This emergent trend is inextricably linked to a national development blueprint called Vision 2030. Part of which aims to develop the country's economy using ICTs through a dual emphasis on providing better infrastructure for ICT services as well as building a state of the art ICT park called Konza Technology City, which would provide business process outsourcing (BPO) to foreign companies (Adeya & Munywoki, 2012). Cities in the global South are usually positioned as the focal point of national economic growth strategies, most often occurring in the form of a city development strategy (Pieterse, 2008). Nairobi is thus an indispensable focal point in terms of the planning and investment being pumped into ICTs with the aim that the sector should eventually contribute 25% of Kenya's GDP (Moraa, 2012b)[28]. Currently, Kenya rates higher than the global index average (second only to Nigeria on the continent) in terms of ICT and technology entrepreneurship (Moraa, 2012b). Moraa (2012b:4) notes, "in the span of two to three years…the innovation scene in Kenya has greatly expanded… At the front line, pushing for this progress has been the Kenya ICT Board", referring to the Board's crucial role in securing the SEACOM and East African Marine Systems undersea optical-fibre internet cables in 2009 (Waema et al., 2010). The securing of the undersea cables has resulted in a much greater access quality compared to previous satellite-based access[29] in terms of speed and reliability. The exact impact in terms of changes to costs of retail internet service remains elusive (Waema et al., 2010). The biggest effect undoubtedly has been the dramatic reduction of mobile internet subscription costs in a highly competitive market (Munyi, 2011) and this is evident in latest statistics that show that mobile internet and data subscriptions count for 98.8% of the total internet subscription market in Kenya (Communications Commission of Kenya, 2012). National investments into both hard (e.g. undersea cables) and institutional infrastructure (e.g. support for businesses from the Kenya ICT Board) are inevitably most visible in Nairobi given its primacy[30] (UN-HABITAT, 2010). Academic literature has been slow in tracking ICT use as it relates to economic development in urban contexts in the global South, focusing rather on rural ICT for development (ICT4D) projects (Levy & Banerjee, 2008). The same lack of focus applies to the case of Nairobi. While online news media and blogs have eagerly documented the growth of the technology scene, academic literature seems to have barely taken notice beyond recognising the mobile money revolution started by MPESA some five years ago. Unlike the high turnover of United Nations and other aid workers that the city is known for[31], American and European venture capitalists and entrepreneurs are moving to Nairobi to start long-term businesses[32]. The net result has been a clustering of Creative Class workers in Nairobi, both Kenyans (many of whom have studied abroad for several years) and foreigners who believe they can 'make it' in the city. "Nairobi's become a bustling hub for young social innovators and social entrepreneurs from Brown, Harvard, Stanford, and MIT, who give up jobs at McKinsey, Bain, and Goldman Sachs to be here. So what is it?" (Kalan, 2012a). The 'it' is intimately linked to Nairobi's quality of place. Florida (2000; 2004; 2005) specifically uses quality of place to contrast with the notion of quality of life in order to highlight place specific amenities and intangible characteristics:

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[25] The Gini-coefficient communicates levels of inequality at different scales (city, regional, national) and is expressed as a decimal between 0 (perfect equality) and 1 (perfect inequality) (UN-HABITAT, 2008b; Moodley, 2005). Thus, an income-based Gini-coefficient of 0 reflects a society where all individuals have an equal share of total income and conversely the maximum of 1 indicates that one person has the total income (Hao & Naiman, 2010).

[26] Comparatively, eight South African cities are tied collectively at position one.

[27] See for example: Upwardly Mobile (2012) or Manson (2011).

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[28] Moraa (2012a) notes that the 2010 Kenyan Economic Report showed that Kenya's GDP grew by 5% between 2007 and 2010 and that the ICT sector alone accounted for almost a quarter (23%) of this increase.

[29] See Wyche et al. (2010) for an interesting read on end-user internet access in Nairobi before the sea cable access was available. Data collection for the study took place in 2007 and results showed that: "While ICT has rendered time more "plastic", "flexible", and "opportunistic" in the global North, there is a sense that the opposite is true in Nairobi... Another difference between our participants and those discussed in prior research is that they must visit their office or local Internet café to use the Internet" (Wyche et al., 2010:7). This scenario has markedly changed due to the declining cost of access to mobile internet subscriptions.

[30] Urban primacy refers to "the degree to which urban resources are concentrated in one or two large cities, as opposed to spread over many cities" (Davis & Henderson, 2003, cited in Beall & Fox, 2009:73).

> *Quality of place is a key factor in the joint distribution of human capital and industry. 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).

However, the ability to measure quality of place rather than proving it exists is the critical issue (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 claims 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 are felt at an individual level rendering them intangible, highly subjective and somewhat elusive. Gibson et al. (2012:300) argue that researchers interested in quality of place for the Creative Class "would do well to relax the categories used in research" given the fuzzy nature of the phenomenon being investigated. In light of this, this study sought to experiment with alternative methodologies that encouraged participants to articulate the idiosyncrasies of place that were personally experienced.

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[31] The United Nations has two of its largest departments headquartered in Nairobi, and many other foreign aid organisations choose Nairobi as their African headquarters. As a result, Nairobi is "an increasingly international city, with a large number – and high turnover – of highly skilled international migrants" (Simon, 1992:89). Some entrepreneurs have argued that the sheer density of aid workers in the city creates a false economy, as economic gains that could accrue to local workers are swallowed. See, for example, Hersman (2012).

[32] Personal field notes of the researcher.

Research Design & Methodology

The aim of this study was to describe the quality of place in Nairobi in detail, through a case study methodology approach, in order to explain why ICT Creative Class workers were clustering in Nairobi, with an explicit focus on infrastructure disruption. The study utilised an idiographic inductive case study approach with the intent to "describe, explain, interpret, and/or understand a single case as an end in itself rather than as a vehicle for developing broader theoretical generalisations" (Levy, 2008:4). Inductive case studies are typically highly descriptive and data analysis is not constrained by a theoretical framework (Levy, 2008). Given that the phenomenon under investigation is extremely nascent, this type of case study methodology is appropriately suited to the study and is both explorative and descriptive (Yin, 2009). Case studies often employ qualitative methods (Mabry, 2008) and data was collected through 16 semi-structured interviews conducted in Nairobi in July 2012 after an initial period of context observation in March 2012. Sampling was achieved through both purposive pre-selection and snowballing techniques[33]. The aim of sampling in an idiographic case study, especially where the sample involves entrepreneurs, is not to present 'success stories', nor is it to provide a representative sample of a region, but rather a size that is manageable and rich in details (Berglund, 2007). Two criteria however were non-negotiable: interviewees needed to be working in an ICT-related field and they needed to be living in Nairobi on a medium- to long-term basis (i.e. longer than a year). Interview data was transcribed fully and each interview was analysed individually to extract meaning units - discrete parts of speech that emerge as distinct not because of syntactic rules but rather the visible change in meaning they convey (Berglund, 2007). Meaning units were systematically sorted, grouped and coded until clear themes emerged from the data (Berglund, 2007; Rubin & Rubin, 2005; Gibson & Brown, 2009a). As supplementary data, interviewees were asked to draw maps during interviews to elaborate on quality of place features, as well as supply a word or phrase that they thought encapsulated Nairobi to them. These were done at the end of the interview on a blank page. Interviewees found the mapping somewhat daunting and some were slightly apprehensive before beginning to draw[34]. The aim of this was to encourage spatial thinking about place in a creative manner that broke away from the traditional interview format (Brennan-Horley, 2010).

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[33] In the case of the former, iHub Research assisted greatly.

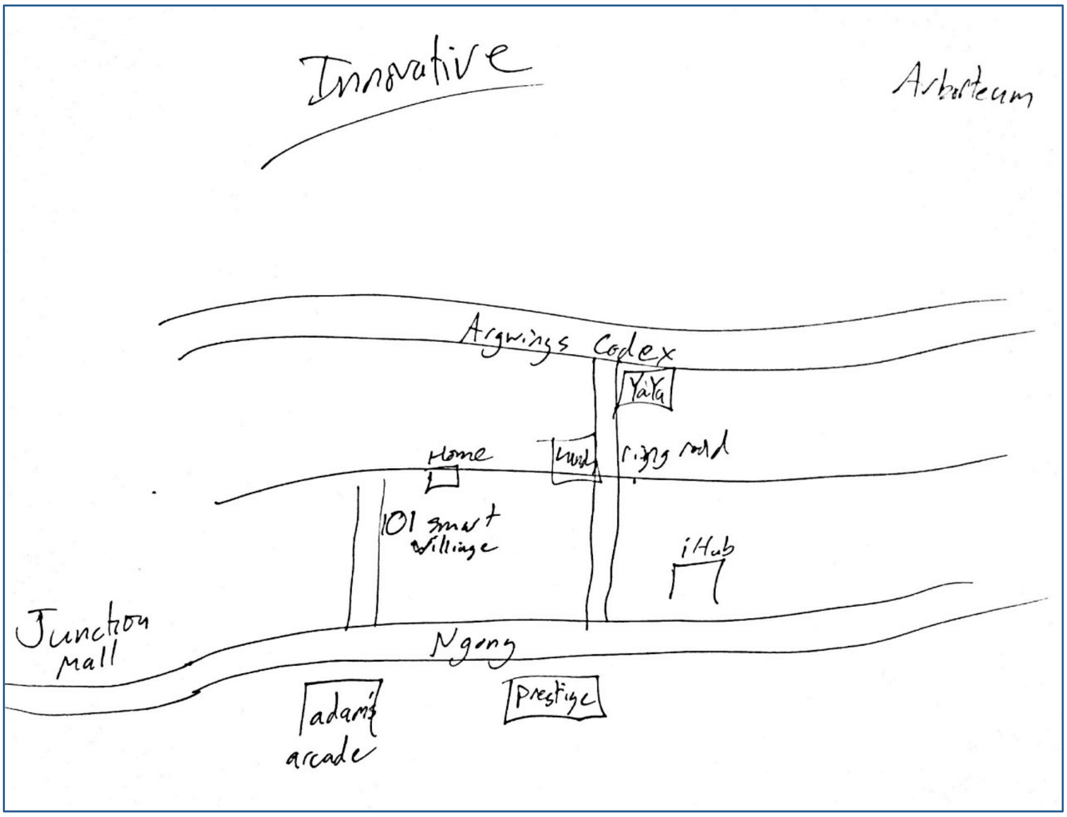

Figure 4: Example of a hand-drawn map

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[34] Gibson et al. (2012) note a similar response in their study, even though printed city maps were used instead of blank pages.

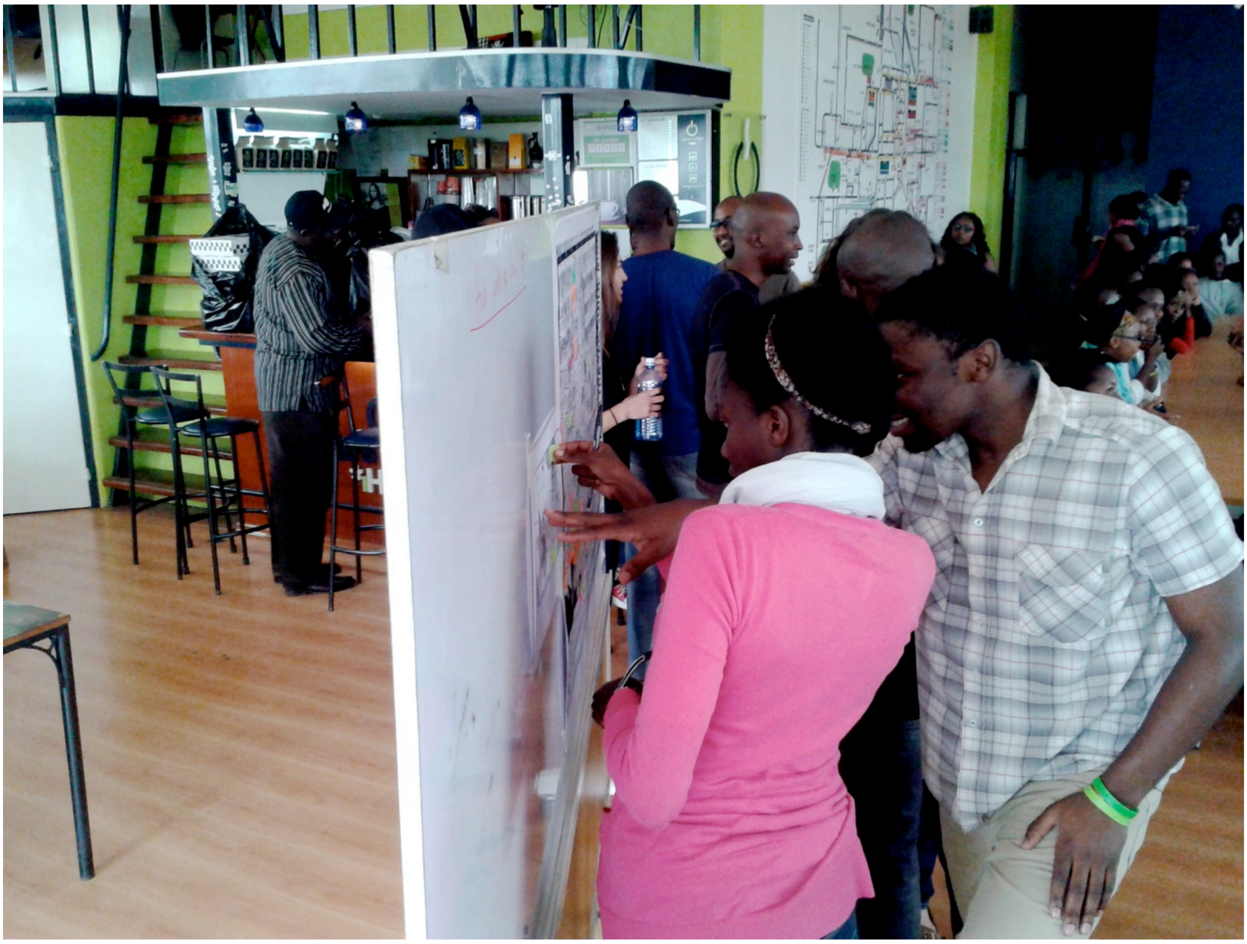

Figure 5: Mapping at the iHub

Source: Lauren Rosenberg

A much larger group was sampled using a large map of the city for similar purposes. The researcher explained the purpose of the map to a group of about 40 individuals at Nairobi's Innovation Hub (iHub) who were invited to mark on the map (using colourful tags) where in the city they lived ('home'), where they worked ('work'), and where they had fun or went to get inspired ('fun'/'inspiration'). The intent behind this mapping exercise was to experiment with non-traditional methods for understanding the spatial context of the Creative Class (Brennan-Horley, 2010) and to obtain an imperfect snapshot of quality of place[35].

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[35] Place is understood as location (a specific point on the earth's surface), as 'a sense of place' (the subjective feelings individuals have) as well locale which is the "setting and scale for people's daily actions and interactions" (Castree, 2003:167)

Table 1: Overview of interview sample

Name (Pseudonym)	Working in the ICT sector since	Current vocation	Previous vocation sector & location	Approx. distance to work in kilometres (km)	Primary mode of transport	Lived abroad?	Word/phrase to describe Nairobi	Expat/Kenyan
Hamadi	Mid-2010	eCommerce entrepreneur	Corporate finance, UK	6km	Private vehicle	Yes, more than ten years in the UK	Controlled madness	Kenyan
Mandini	August 2011	Founder, youth empowerment & technology company	Corporate ICT, Nairobi	20km	Private vehicle	Yes, less than 5 years, USA	Potholes; traffic;kindness; Nairobbery; Laughter; Green city under the sun	Kenyan
Esther	2010	Founder, online classifieds website	NGO sector, Nairobi	3km	Public	No	Bustling; home; hope	Kenyan
Mbita	Late 2009	eCommerce entrepreneur	Corporate ICT, USA	4km	Private vehicle	Yes, more than 5 years, USA	Home	Kenyan
John	Mid-2011	Co-founder,online logistics company	ICT Startup, Nairobi	1-2km	Walks	Yes, more than 5 years, USA	Upstart; under-achieving right now; funny	Kenyan
Tim	January 2012	Co-founder, community research & development website	Non-profit ICT sector, Nairobi	2-3km	Walks & public	Yes, less than 5 years, Kenya	Innovative	Expat, USA
Abasi	Early 2011	Freelance writer & project coordinator	Public sector, Nairobi	6km	Public	No	Concrete Jungle	Kenyan
Frank	2011	Creative economy consultant	Various	Unknown	Private vehicle	Yes, various	N/A	Kenyan
Gerri	2011	Founder, youth empowerment & technology company	NGO sector, Kenya	2km	Taxi cab, public & walks	Yes, various, less than 5 years in Kenya	Organised chaos at its finest; No rules	Expat, USA
Faith	Mid-2011	Graphic designer & social media manager	Advertising & NGO sector, Kenya	Direct route, 12km, route travelled 25km to avoid traffic	Public	No	Fun;adventurous; crazy	Kenyan
Dale	Mid-2011	Frelance writer & technology journalist	Freelancer, Tanzania	Varied	Walks & public	Yes, various, less than 5 years in Kenya	Sprawling construction site	Expat, USA
James	2011	ICT4D researcher	Academic	12km	Private vehicle	No	Orange for innovation	Kenyan
Steven	2011	ICT business hub manager	Entrepreneur manager	10km	Private vehicle	No	Connected	Kenyan
Atieno	February 2012	Founder, online content site	Various startups outside of ICT, Nairobi	2-3km	Walks& private vehicle	No	Frantic; Restless	Kenyan
Alfred	February 2012	Data analyst & consultant	Corporate finance, Nairobi	12km	Public& Private vehicle	No	Hectic; needs creativity	Kenyan
Okapi	2010/2011	Serial entrepreneur	Various, Nairobi and Johannesburg	4km	Public& Taxi cab	Yes, less than a year in South Africa	Jingle	Kenyan

Given the study's focus on the intrinsic worth of context, the researcher purposefully visited and experienced places that interviewees noted as important to their sense of place. This, in turn, led itself to the generation of field notes that also supported primary data collection. Overall, the research design was subjected to several iterations because of cultural and/or context specificities that emerged in the field. It must be stated at the outset that the quality of place explored here is for a very small fraction of the population all of whom are relatively affluent. Nairobi is a highly divided city with a high Gini-coefficient that is clearly visible when spending any amount of time in the city. Like other cities with high levels of income inequality, infrastructure provision and disruption are highly stratified along class lines. This aspect needs to be kept in mind throughout the discussion of the results.

Discussion of Results

It is useful here to detail what Florida (2005:83-84) lists as typical quality of place attributes that the Creative Class[36] find attractive:

- Large numbers of visibly active young people;
- Easy access to a wide range of outdoor activities;
- A vibrant music and performance scene with a wide choice of live-music opportunities;
- A wide range of night-life experiences, including many options without alcohol;
- A clean, healthy environment and a commitment to preserving natural resources for enjoyment and recreation; and
- A lifestyle that is youth-friendly and supportive of diversity.

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 type of lifestyle and as a result, the Creative Class tend to gravitate towards certain places and urban spaces that are known for their creative communities[37]. As discussed, urban infrastructure is assumed to be 'always on' and thus is absent from the quality of place criteria suggested by Florida. In Nairobi, however, infrastructure disruption must be considered, as it exists as an authentic quality of place attribute. Electricity and water supply, mobility, access to affordable housing and information communication technologies, were considered as examples of urban infrastructure susceptible to disruption. While all who were interviewed identified with disruption in the first three categories of infrastructure (electricity, water and mobility), it was not clear whether affordable housing was an issue as housing options seemed to be based on their relative proximity to place of work, level of security and quality of water supply. ICTs were occasionally disrupted, but never to the point of diminishing quality of place, as the following example illustrates:

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[36] Note that when Florida uses the phrase Creative Class he is referring exclusively to American (Florida 2000; 2004; 2005) or European (Florida & Tinagli, 2004) Creative Class workers.

> *"even when the power and water are both down usually you can get 3G internet… so internet is actually pretty good… for a long time I was just using my phone for internet everywhere because it's faster than our landlines and so I just tethered it to my computer and I'd spend less than 40 bucks on unlimited internet and text and calling a month and that is like a third to quarter of the price to the US"* (Tim).

Mobility constraints and water supply emerged as the dominant areas of disruption and will be discussed fully further on.

Mobility: "Chewing diesel all day"

> *"If you have a 9-5 job, you work for the UN, you work for somebody you know, it's easy. They have a car that comes to pick you up or you have a set schedule and you go to your office and you work through all day, it's easy. If you're a freelancer going around the city, walking on these roads…you know you can get hit by a car, there's all that kind of like safety stuff. Um you know taxis are insanely expensive so you take public transport, you know if there's a story that happens on the other side of town like I got to find my way over there without getting in a car, I got to get myself a motorcycle, which is DANGEROUS but cheap."* (Dale)

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[37] American Creative Class cities highlighted by Florida include San Francisco, Seattle, New York, Austin and Boston.

The issue of mobility in Nairobi has been a policy concern for several years (Omwenga, 2008; Salon & Aligula, 2012; Klopp, 2012) and although public transport is extensive, covering all areas of the city, often the experience of using it is somewhat unpleasant[38]. The discussion with interviewees on Nairobi's quality of place was intentionally started around mobility, as this heavily influences the individual's sense of place. The Creative Class are said to enjoy cities that offer them an 'experiential lifestyle' (Florida, 2004). Mobility is obviously key to this indicating the ability to move between different scenes, spaces and places. Overall, both Kenyans and expatriates that were interviewed faced mobility frustrations around the state of roads (potholes, drainage and lack of clean pedestrian walkways) and safety and security issues related to mobility. Pokhariyal et al. (2003) note with concern the level of crime in Nairobi and the resultant sense of insecurity that affects both businesses and residents. In the case sample, 12 out of 16 interviewees referred to crime or to feeling insecure (often as a function of mobility decisions) as being characteristic of Nairobi's quality of place. Salon and Aligula (2012:75) note that the city faces a tremendous planning challenge concerning transportation, land use and economic development: "roads are already congested with vehicle traffic, causing increasingly dangerous levels of air pollution and transport delays that hurt public health and the regional economy". Nairobi was recently deemed to have the world's fourth most painful commute (IBM, 2011)[39] with air pollution[40] at 550% over the USA's legal limit (Sclar & Touber, 2008). Unsurprisingly, all respondents commented on traffic congestion within the city. For some, this resulted in a decision to move to a different location to shorten the commute to their working space. This study was not so much concerned with describing in depth the frustration caused by Nairobi's traffic jams, rather it is interested in how disruptions in mobility infrastructure affect individuals' sense of place. For example, conducting business is testing especially when meetings take place on the other side of town, which is not geographically far (usually between seven and 15 kilometres)[41] but can seem a world away when traffic is taken into account:

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[38] See for example: Wa Mungai, M. & Samper, D. A. 2006. "No Mercy, No Remorse": Personal Experience Narratives about Public Passenger Transportation in Nairobi, Kenya. *Africa Today*, 52(3). 51-81

[39] The survey sample included the following 20 cities: Bangalore, Beijing, Buenos Aires, Chicago, Johannesburg, London, Los Angeles, Madrid, Mexico City, Milan, Montreal, Moscow, Nairobi, New Delhi, New York City, Paris, Shenzhen, Singapore, Stockholm, and Toronto. In first position with the world's most painful commute is Mexico City, followed by Shenzen and Beijing.

[40] For an in-depth analysis of air quality in Nairobi, see Kinney et al. (2011)

> *"It's a ridiculous amount of traffic. I stopped scheduling meetings outside the office between 2-4pm, unless I really, really, really, really have to. Otherwise you're going to spend 3 hours in traffic just to get back here. And it does kill your sense of excitement in this new city and it also really upsets me when visitors come in and the first thing that hits you from the airport coming in is the traffic. And you're like geez, how does this city work?"* (Hamadi)

Another interesting example of how mobility frustration is a function of quality of place was revealed in interviewee's map drawings (see Figure 6). In one interview, although the respondent noted that the neglected maintenance of roads in Nairobi was frustrating, they did not refer to traffic as being a key attribute of place. This came out strongly however when drawing the map and actually radically refigured how the map was drawn to indicate congestion as well as pedestrians complicating the route of private vehicles through the city.

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[41] In a much larger sample, Salon and Aligula (2012) show that across different modes of transport (including walking) most trips taken in Nairobi are less than five kilometres.

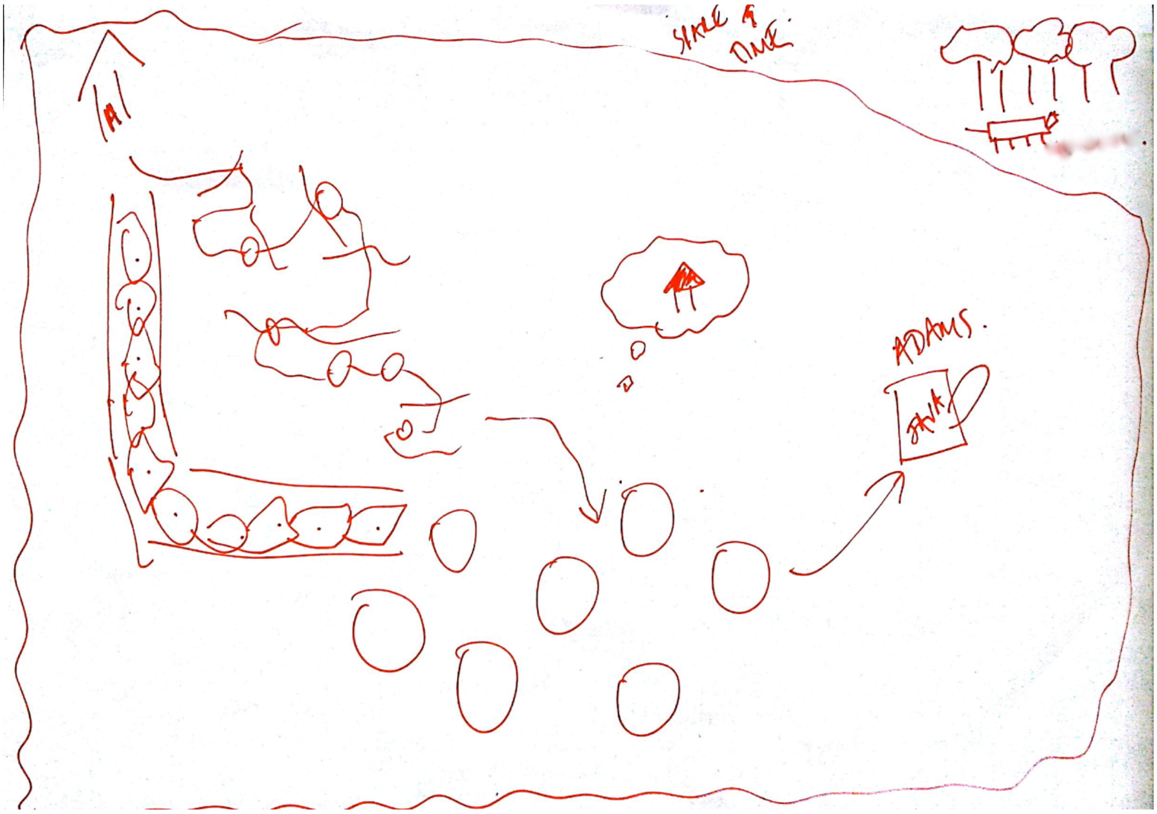

Figure 6: Mobility frustrations as quality of place

In an attempt to understand Nairobi's genius loci, as many forms of available transport as possible were tried out: 'matatus' (mini-bus taxis), private taxicabs, buses, 'boda bodas' (motorcycle taxis) and walking, especially during peak hour traffic[42]. From first-hand experience, one can relate to the sentiment that mobility is "the biggest pain on a day to day, it's not that hard to get around but it's not fun" (Tim). As a function of quality of place, mobility within the city for Creative Class workers is very important:

> *Many of the younger creative workers did not have cars and wanted to locate in regions where they did not need one… regions where amenities and activities are easy to get to and available on a just-in-time basis, with easy access on foot, bicycle, or via public transportation* (Florida, 2005:85).

The extensive research done around mobility within Nairobi (Salon & Aligula, 2012)[43] confirmed an overwhelming reluctance by individuals to consider using bicycles to commute in the city (despite the mild climate and relatively flat topography) due to safety concerns as well as the absence of dedicated cycling paths[44]. Klopp (2012:3) notes that the combination of urban dynamics and high rate of urbanisation in Nairobi makes "daily routines and movement around the city stressful, unhealthy, expensive, and sometimes precarious". For expatriates specifically, mobility frustrations were around the experience of sticking out from the crowd or being cheated on fares ('mzungu tax')[45], while Kenyans in particular complained of drivers' attitudes displaying a lack of respect for road rules and other road users:

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[42] For example, "Actually, I'd rather walk from here to town because I'd take a shorter time. And now I see many people who do that, very many people, it's not because they're poor and can't afford transport, it's just that because of the time, they would rather walk" (James).

[43] The authors themselves note the dearth of research on urban transport in African cities, and in this regard their study and relatively large sample size is a highly valuable contribution to the literature.

> *"I don't drive much but when I do, just driving in Nairobi it's, it shortens your life. Because you're really tense, you have to make sure you're not even leaving an inch between the car in front of you because you don't want a matatu coming in and cutting you off. If you spend, you know, if you look away a minute you'll find three matatus trying to squeeze in, in front of you and might scratch your bumper or whatever so it's a really um tense place"* (Atieno).
>
> *"You know not just in Jamhuri but generally everywhere else, as in if you have a road it's got potholes and then it becomes dusty. So either way, you're either dealing with DUST or mud, as in if it rains [when walking]"* (Esther).
>
> *"Um what also frustrates me is sticking out, um I think like it sucks having people look at you all the time. Where it's like you're white, you look different"* (Gerri).
>
> *"When I'm driving around with someone it's always full of frustration like, 'goddammit why is this road not fixed, this is the MAIN road', in this like crazy commercial area like Westlands and it's just a disgrace… in the West we have this thing where we talk about the weather and ask about the weather [laughs], in Nairobi we have this thing where we complain about the roads, complain about the government"* (Mandini).

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[44] However, "it is worth mentioning that some of the poorest residents would be willing to bicycle commute in spite of the risk, but many of them cannot afford bicycles. Just over a quarter of those who do not own a bicycle report that their reason is affordability, and two-thirds of these respondents would cycle-commute if they had a bicycle" (Salon & Aligula, 2012:72).

[45] Price discrimination between locals and foreigners (mzungus). The researcher witnessed this when a bus tout insisted on charging a small group of Spanish volunteers much more for the fare than the rest of the bus, in spite of other (local) passengers calling him out as wrong.

> *"I prefer to come iHub perhaps from 9am because I know I won't have to encounter traffic jams and also leave late because I know I won't have to stay long within a matatu"* (Abasi).

> *"You driving you just see your side mirror being taken and there's nothing you can do, if you alight maybe even the whole car is stolen away"* (Alfred).

Residential choices were affected by mobility constraints: "I really hated traffic and I really hated waking up early so I had to move somewhere on this side" (Esther); "I'd rather move house and immediately move jobs rather than trying and figuring out how to commute" (Atieno); and "I like this area, it's closer to work but I'd rather live in Kileleshwa" (Gerri). Similarly, it is not only the commute between home and work that is affected by mobility infrastructure but also between home and leisure and entertainment options:

> *"like you're not just like walking on the street and like dipping into a coffee shop or walking down the street and 'oh I'm going to go shopping there'. It's like you HAVE TO PLAN and I'm going to THERE, and that's where I'm going to get in my taxi and then go there"* (Dale).

This reinforces the sense that individuals do not move to an area because of quality of place ('soft factors') but rather due to mobility infrastructure challenges. Mbita noted that traffic directly impacted on his entertainment options during the week as rush hour traffic can sometimes last until 8pm: "if I wanted to watch a play on a Tuesday, getting into traffic on Tuesday night will become a nightmare…I'm looking forward to a time where by I don't have to wait for a Saturday to go out or to go to a movie or to go to a play". Omwenga (2008) estimates that Nairobi accommodates roughly 30% of total private motor vehicle ownership in Kenya, indicating the presence of significant urban sprawl in the city. Similarly, Kinney et al. (2011:370) argue that Nairobi is in a precarious position as it grows rapidly given the "lack of investment in public transport and urban road infrastructure [resulting] in increasing road deterioration, numbers of motor vehicles and congestion".

Mobility infrastructure within African cities is a highly important feature of place representing the convergence point between modernism and failed development (Pitcher & Graham, 2006). It is the point at which the private car, a quintessential signifier of modernity in developing countries, and the colonially configured road space converge (Pieterse, 2008; Graham & Thrift, 2007; Robinson, 2006). In Nairobi, this is most visibly seen in colossal traffic jams[46], potholed roads and heavy air pollution.

Water

As regards water, respondents noted the issue was not connection to the main grid so much as the problem of a disrupted supply of water. The city of Nairobi entirely constitutes Nairobi County (as a political and administrative unit) and is the only county that is 100% urbanised in Kenya (Medard, 2010). Nairobi is relatively well connected to water infrastructure (compared to other urban counties) and has the largest number of formal connections per capita (World Bank, 2007). Data analysis from the African Centre for Cities (van Rooyen, 2012) also shows that close to 80% of Nairobi households have access to piped water. The 2009 Kenyan census data supports this, showing that the majority of dwellings get most of their water from the centralised water supply (see Figure 7).

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[46] UN-HABITAT Chief of Urban Transport Christian Schlosser estimates that Nairobi's roads were designed for a city ten times smaller than its current size (IBM, 2011).

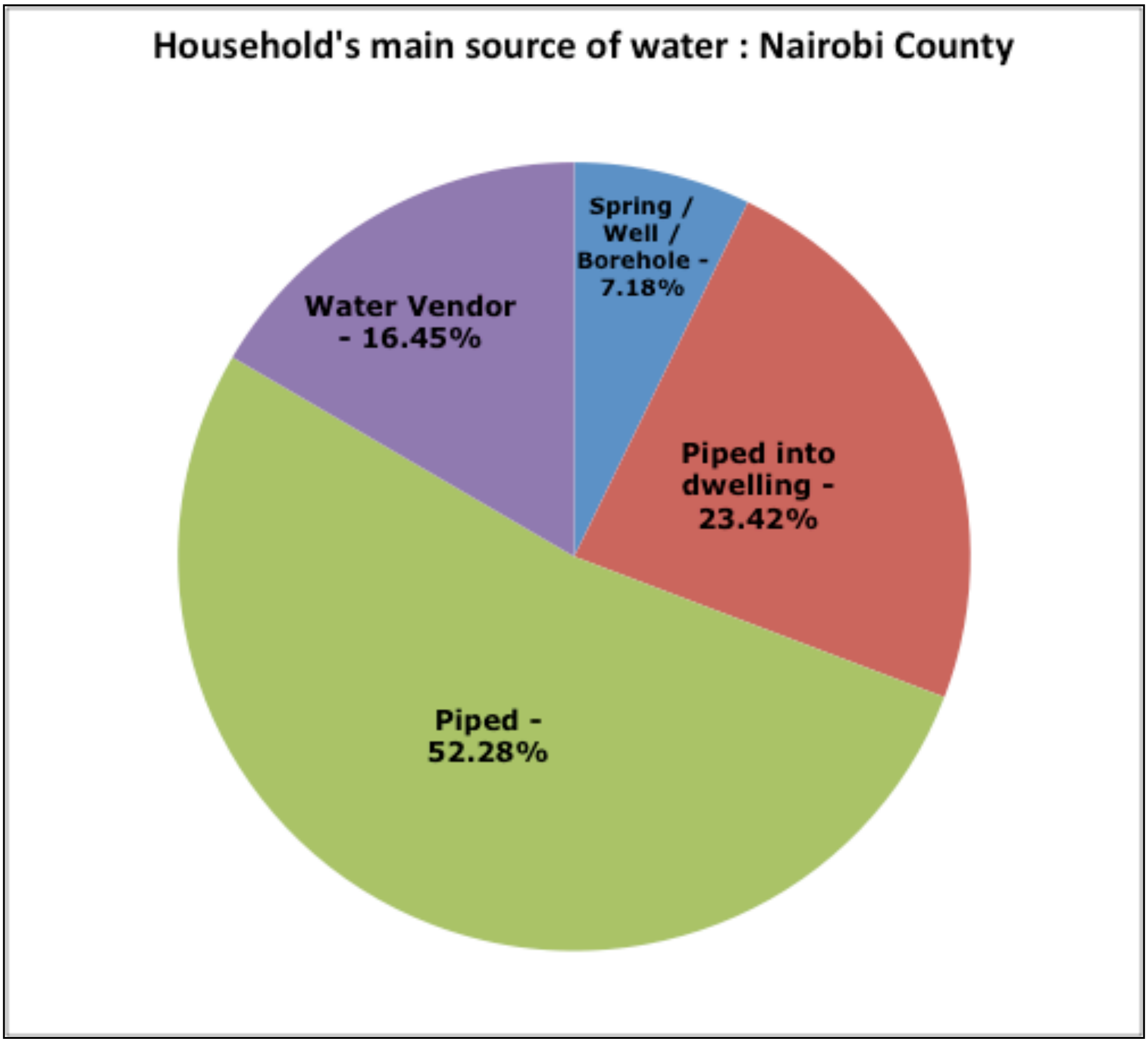

Figure 7: Household's main source of water

(Source: Kenya Open Data Initiative, 2012)[47]

As stated, the high Gini-coefficient in Nairobi means that Figure 7 probably does not reflect the means of water access of poorer households nor the vast differences in cost of access and supply between neighbourhoods[48]. Despite the relatively high level of connectivity to the centralised water supply, disruption levels were frequent and private water vendors or other solutions such as boreholes were often sought out:

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[47] The 2009 Kenya National Census data as well as other data sets are freely available at https://opendata.go.ke for online analysis or downloading. Kenya is the first sub-Saharan country and the second African country, after Morocco, to have an open government data portal.

[48] The City of Nairobi estimates that only 48% of the city is connected to the centralised sewerage system (UNEP, 2007). Indeed Bousquet (2010:146) notes that because "the public sector has never been able to reach an equitable distribution of water services in the city of Nairobi" poorer households often pay very high premiums for water to private vendors. The 'Nairobi Inventory' provides excellent details of differences in cost for a 20-litre jerry can of water between slum communities (Pamoja, 2008).

> *"We buy water um every month…because you know they supposedly supply from the Nairobi city council but it's never enough. It comes in, trickles in, fills quarter of the tank and you realise okey dokey, we need to top up"* (Atieno).
>
> *"I don't think we ever really get Nairobi water, like all of our water comes in from a truck…we have to pay for this on top of the rent"* (Gerri).
>
> *"One of the biggest problems is water…in the place where we stay we get water more or less 2 or 3 times a week and sometimes you have problems with the Nairobi Water and Sewerage Company where usually you can even go for three weeks …so you have to look for other ways of getting water"* (Abasi).

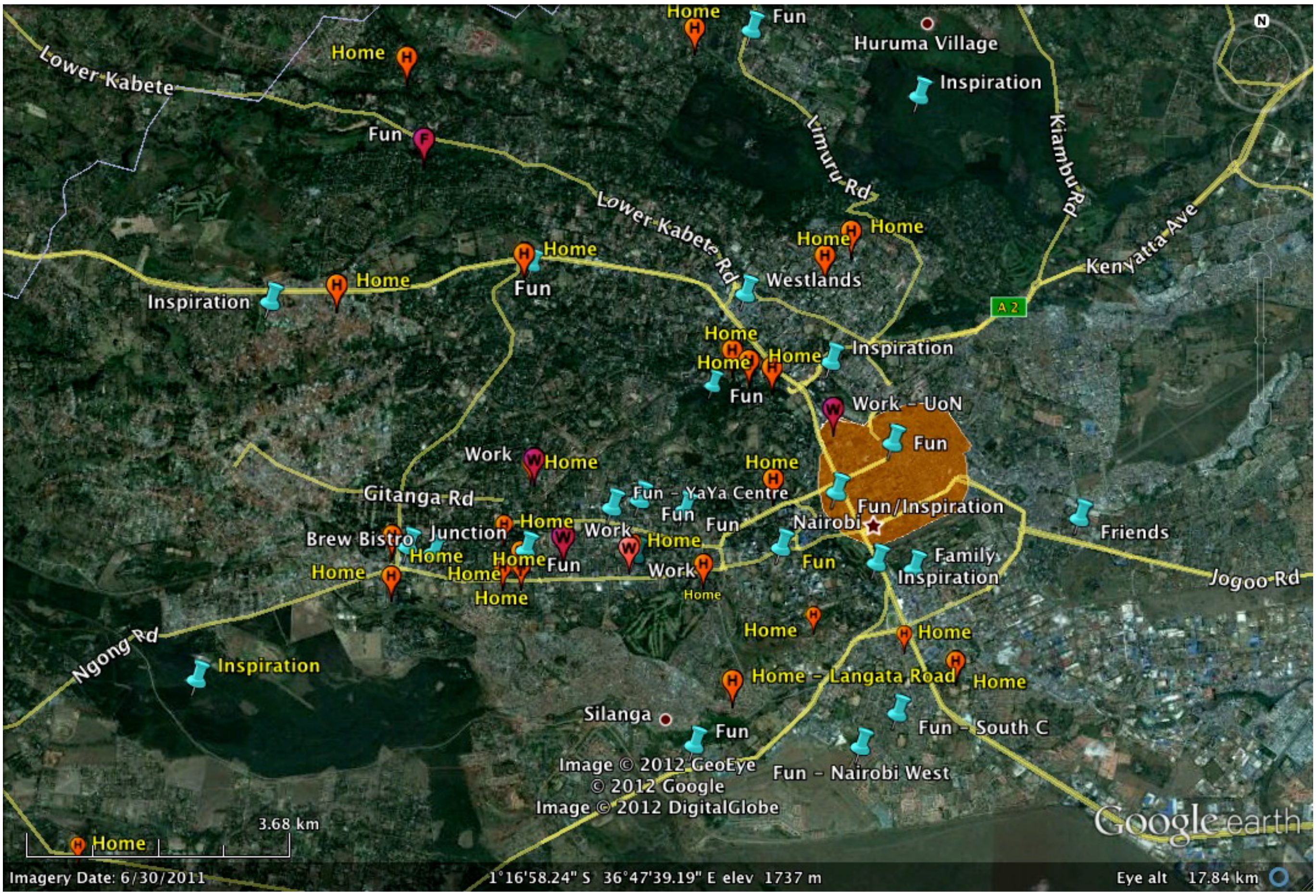
It was noted that disruptions to water supply appear to be neighbourhood specific and several respondents commented that they made housing choices based on their knowledge of the quality of water supply. Similarly, it seemed also possible to buy yourself out of the problem: "if you want to live in a place where there's like water 24/7…you have to pay quite an amount to live in a small apartment… unless you live around maybe Statehouse – near the president [laughs]" (Faith). Water quality is also not optimal in Nairobi and many households boil the water before consuming. Of those interviewed, only one person, an expatriate, noted that he does not drink the tap water but buys bottled drinking water. Over and above water supply, water pollution in Nairobi is also a major concern and highly visible given that three rivers run through the city. One respondent commented that part of his daily commute used to involve walking by the Nairobi River where you can "smell the stink of it" – indicating how the smell of pollution in the river can be used as means of orienting oneself in the city. The Nairobi River Basin Project assessed the quality of Nairobi's rivers over a nine-year period (1999-2008) and concluded that: "Nairobi City is increasingly choking with uncollected garbage and over-flowing sewers, which have polluted its river system" (UNEP, 2003:1).

Quality of Place

So what is it that Creative Class workers in Nairobi enjoy doing? Table 2 reflects the names of places in the city (with location and type of activity) that were mentioned as hangout spots or places of inspiration in the city, those that are asterisked indicate places that individuals deemed as important places that they often frequented.

Table 2: Hangout spots

*Alliance Française	CBD	Cultural/Arts
*GoDown Arts Centre	Industrial Area, adjacent to CBD	Cultural/Arts
*Arboretum	Kileleshwa	Wildlife/Nature/Park
*University of Nairobi Sports Complex	Ngong Road	Sports
Impala Club	Ngong Road	Sports
*The Junction Mall	Ngong Road	Shopping, restaurants & bars
Westlands (clubs and bars in this area)	Westlands	Night clubs & bars
*Brew Bistro	Ngong Road	Bar
"Local bars"	Various	Bar
Java House (franchise)	Various	Coffee shop
The Mug	Prestige Plaza Mall, Ngong Road	Coffee shop
NaiLab	Bishop Magua Building, Ngong Road	Business Incubator
MLab	Bishop Magua Building, Ngong Road	Business Incubator
Sierra Lounge	YaYa Shopping Centre, Kilimani	Restaurant & bar
Blanco's Lounge	Argwings Kodhek, opposite YaYa Centre	Restaurant & bar
*Blankets & Wine (outdoor music event)	Karen	Cultural/Arts
Talisman	Karen	Restaurant & bar
Que Pasa	Karen Shopping Centre	Restaurant & bar
*Artcaffé (franchise)	Junction, Westgate & Galleria shopping malls	Coffee shop
Mercury Lounge	Junction Mall	Restaurant & bar
*Habesha (Ethiopian Restaurant)	Argwings Kodhek Road	Restaurant
Smart Village (Ethiopian Restaurant)	Elgeyo Marakwet Road, off Argwings Kodhek Road	Restaurant
Village Market	Gigiri	Shopping and entertainment complex
Tamambo Tapas Bar	Village Market	Restaurant & bar
Motherland	Ngong Road	Nyama choma
*The Spot	Ngong Road	"local bar"
*iHub	Bishop Magua Building, Ngong Road	Co-working space
*Goethe-Institut	CBD	Cultural/Arts
Michael Joseph Centre	Upper Parklands	Cultural/Arts
Pawa254	Kilimani	Cultural/Arts
Ozone Lounge	Valley Arcade Mall, Thompson Estate	Restaurant & bar
*Karura Forest	Muthaiga Estate	Wildlife/Nature/Park
*Nairobi National Park	Langata	Wildlife/Nature/Park
BoBos Turkish Diner	CBD	Restaurant
Nakumatt Prestige	Ngong Road	Supermarket
*iMax Theatre	CBD	Cinema
Ngong Forest	Ngong	Wildlife/Nature/Park
"local places" / kibandas	Various, near Ngong Road	Restaurant
Toi Market	Ngong Road	Shopping


Home
Fun
Huruma Village
Lower Kabete
Home
Inspiration
Fun
Limuru Rd
Kiambu Rd
Lower Kabete Rd
Home
Home
Kenyatta Ave
Home
Westlands
Inspiration
Home
Fun
A 2
Home
Home
Home
Inspiration
Fun
Work - UoN
Fun
Work
Home
Home
Gitanga Rd
Fun - YaYa Centre
Fun
Fun/Inspiration
Brew Bistro
Junction
Home
Work
Fun
Nairobi
Friends
Home
Home
Home
Home
Fun
Fun
Family
Home
Work
Inspiration
Jogoo Rd
Home
Home
Home
Ngong Rd
Home
Inspiration
Home - Langata Road
Home
Silanga
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Fun - South C
Image © 2012 GeoEye
© 2012 Google
Image © 2012 DigitalGlobe
Fun - Nairobi West
Google earth
3.68 km
Home
Imagery Date: 6/30/2011
1°16'58.24" S 36°47'39.19" E elev 1737 m
Eye alt 17.84 km
N

Figure 8: Nairobi quality of place map – interview and group creative mapping

Table 2 reflects an average spread of amenities and activities (shopping malls, bars and some parks) typical to many cities. Unique characteristics include ‘nyama chomas’, which are restaurants where barbequed/roasted meat is served, as well as what expatriates called “local bars” that serve traditional Kenyan food and play Kenyan music. Small side-of-the-road lunch booths (‘kibandas’) near working spaces were also frequented during the lunch hour. The map (Figure 8) indicates clearly a clustering of offices, residential locations and entertainment and leisure venues away from the central business district (CBD) (shaded in orange) in westerly direction along Ngong Road. Residential locations of those interviewed also reflected a similar clustering. In general, shopping malls across the city are also popular destinations. Two individuals commented that entertainment options not involving alcohol were limited. Others expressed that they were happy to see that the cultural scene was growing and found themselves participating in those events more as opposed to the norm of getting drinks at a bar. “So there’s a lot more music and art type stuff that’s been, that’s in Nairobi” (Gerri) and “artists and musicians and poets are doing things and they’re kind of on your level…it’s becoming really compelling um culturally”

(John). One person however commented that many of the emerging new cultural and artistic activities in the city were fast becoming “mainstream”.

There was no clear consensus on perceptions of the CBD – some enjoyed its diversity and vibrancy while others felt it was too crowded and too unsafe. Two respondents noted that their favourite cultural hangout spots were to be found in the CBD. Figure 9 is an example of cultural spaces enjoyed in the CBD by a respondent, namely the University of Nairobi campus (U.O.N), the Goethe Institut (G.I), Alliance Française (A/F) and the GoDown Arts Centre.

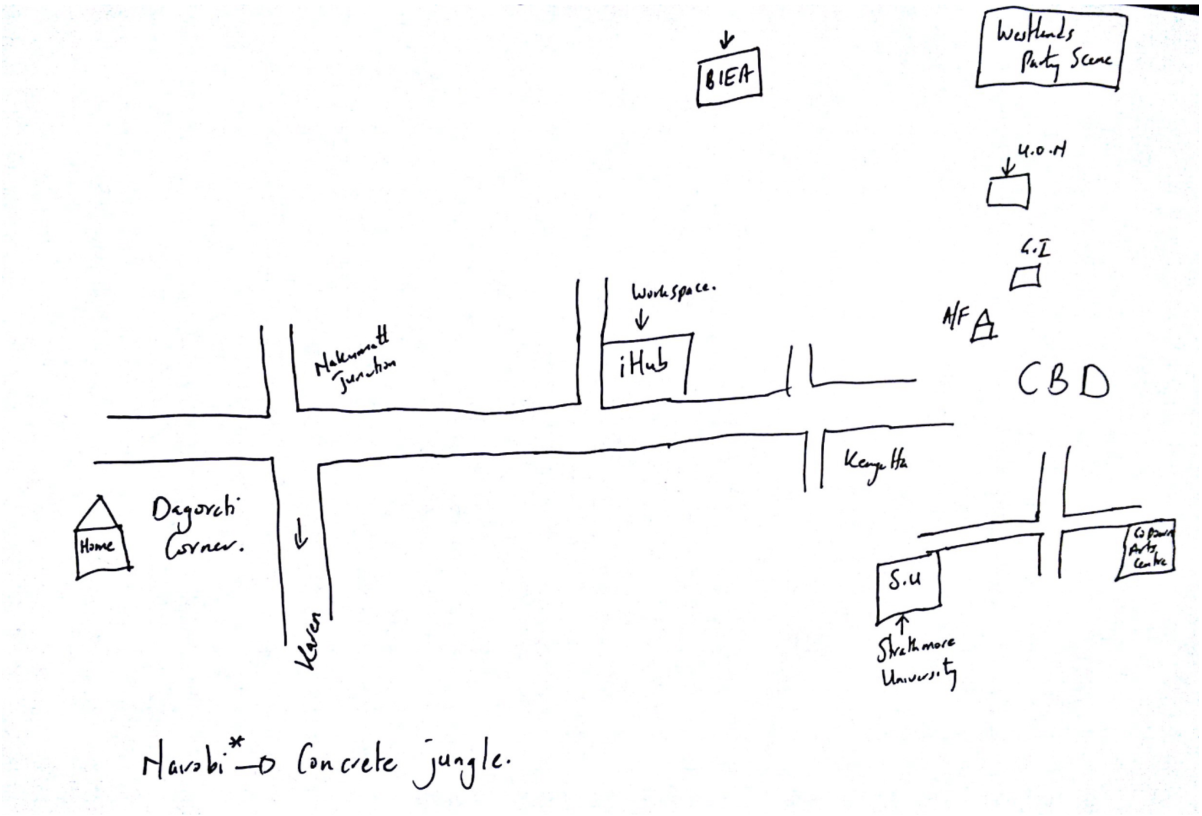
BIEA
Westlands Party Scene
U.O.N
G.I
A/F
CBD
Workspace.
iHub
Nakumatt Junction
Kenya Ha
Dagoretti Corner.
Home
Karen
S.U
Strathmore University
GoDown Arts Centre
Nairobi* → Concrete jungle.

Figure 9: Cultural hangouts in Nairobi CBD

Apart from what was observed at co-working spaces and cultural hubs, there appeared to be little in the way of an “experiential lifestyle” (Florida, 2004). As a newcomer to the city, Dale complained lifestyle options were constrained to “little gated communities and gated shopping centres” where “you walk between your house and that next mall”. This is somewhat reflected in Figure 10, an interviewee map that reflects mobility and experience of place as clear-cut destinations that are regularly and routinely visited (again, interesting to note is the distinctive clustering of entertainment destinations in a westerly direction away from the CBD). Given Nairobi's high Gini-coefficient, gated communities are unsurprising and are most pronounced in areas with high inequality and inadequate public security (Beall & Fox, 2009). Only two interviewees made direct reference to social inequality in Nairobi as a function of quality of place, noting indirectly politics of propinquity in the city[49]. One commented that "Nairobi is like filled with these pockets of like um bougey upper class areas and like right behind them is always a slum or a lower class settlement where everyone who supports that system works" (Mandini).

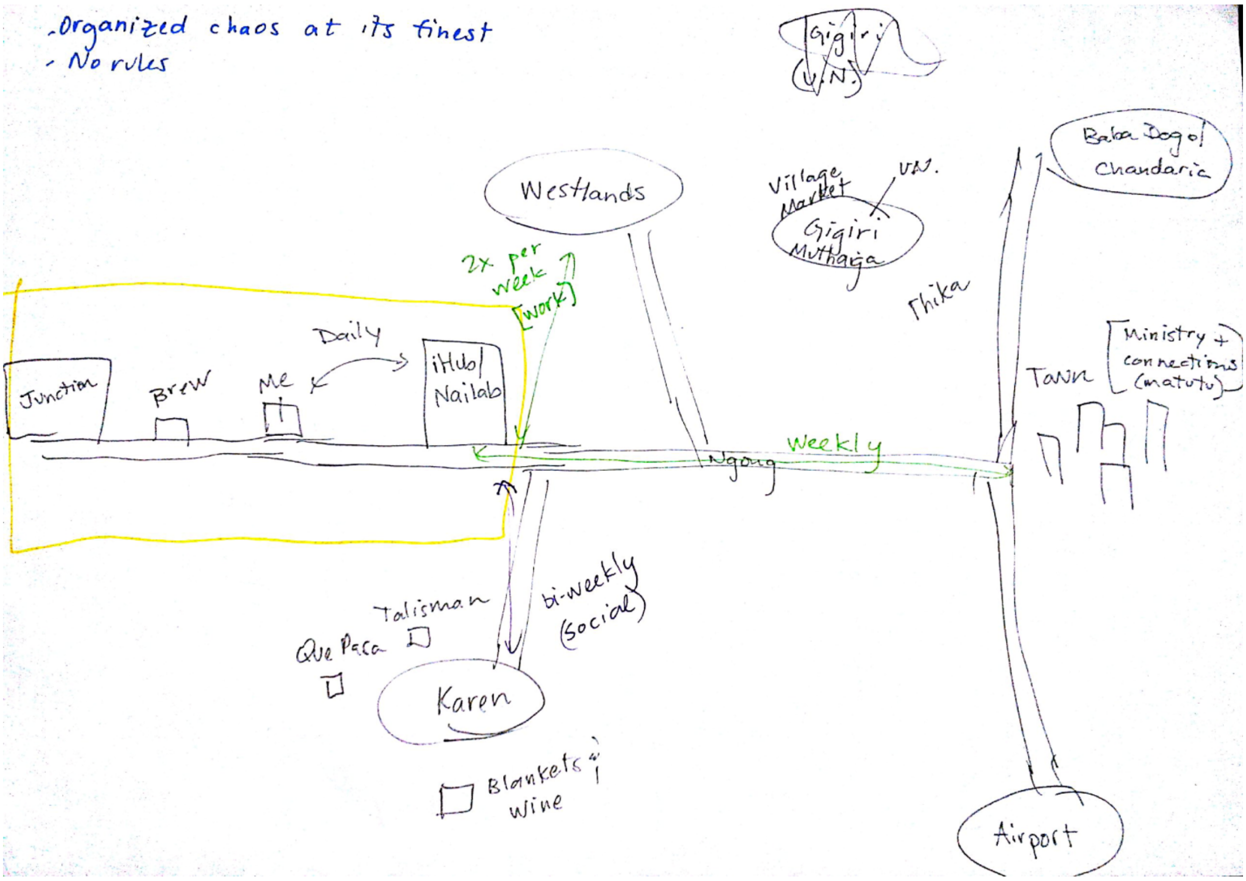
-Organized chaos at its finest
- No rules
Gigiri (U.N.)
Baba Dogo/ Chandaria
Westlands
Village Market
U.N.
Gigiri Muthaiga
2x per week [work]
Thika
Daily
Junction
Brew
Me
iHub/ Nailab
Town
Ministry + connections (matatu)
Weekly
Ngong
Talisman
Que Pasa
bi-weekly (social)
Karen
Blankets + wine
Airport

Figure 10: Planned interactions

Several individuals noted that they found it hard to relax in Nairobi – there was a sense that the city was too fast paced and stressful and that it was difficult to find calm and peace on a regular basis. In particular, some felt that this was directly linked to a lack of natural beauty and environs to enjoy within the city boundaries:

---

[49] Amin and Thrift (2004) argue that the politics of propinquity manifests in spatial juxtaposition, for example: wealthy investors who work for transnational companies who share the same city space, often in close proximity (depending on the time of day) with transnational migrants and dispossessed peoples.

> *"I hate the pollution, I really hate the pollution, that is my least favourite thing about the city and the environment here is not that great…I mean you can get out pretty easily but I'm a huge nature guy I want to be by the coast, I want to be by that stuff so for me that part of Nairobi I hate. Where it's really just like bearing down on you at all times"* (Dale).

> *"I've always wanted to live like in a place where there's GREEN grass and TREES and I will clearly not find that in the city so [laughs] I'll definitely move [in the coming years, not immediately]"* (Esther).

It seemed that in order to feel truly relaxed in Nairobi, you needed to leave it. Nairobi's quality of place is enhanced by its close proximity to many attractive tourist locations that are easily accessible for weekend trips. Individuals did express the need to leave Nairobi either on a regular basis for short holidays to take a break from the stress of city life. Respondents enjoyed being able to "go off and hang out in the Maasai Mara for a weekend" or to "take a game drive four hours that way towards Mombasa into Savo…in an environment where you don't even have mobile phone reception". Others mentioned visiting family members who lived in nearby counties to relax in a rural setting. Overall, it seemed however that those who did frequently leave the city to nearby tourist attractions were either expatriates or well-established entrepreneurs. This indicates perhaps that the ability to leave Nairobi "at a moment's notice [to] a complete change of climate and environment that really helps one relax" (Hamadi) was not an option for everyone.

Here to Stay: Reflections on Nairobi's Quality of Place

> *"Even if it looks utterly chaotic and unplanned and so on, I get that sense of we're going somewhere you know, people are not sitting some place at home defeated, it's people are scrambling to um kind of just to get ahead you know where they are"* (John)

Analysis of the interview data revealed that Nairobi's quality of place is fundamentally different to the normative prescriptions in Florida's theory. Part of this is simply because of context: African cities are profoundly different in myriad ways to Western cities. Secondly, infrastructure disruption is a common feature of quality of place in

African cities, something that is completely overlooked by Florida and even his fiercest critics. Over and above this, however, the data showed that despite Nairobi's frenzied character, the sample of Creative Class workers interviewed were not packing their bags anytime soon to leave[50]. Their work was deeply rooted in context, seemingly more captivating than the urban infrastructure disruptions around them, fears about crime or opportunities abroad:

> **Interviewer:** *You said you 'liked it here so you stayed, could you unpack that a bit more? What exactly do you like about it?*
>
> **Tim - interviewee**: *"Um yeah, to be honest not the city that much, it's very hard to get around um you get heckled a lot as a mzungu [foreigner] um you get cheated…. Um so it's a bit of a pain living here. You have to take taxis everywhere at night because it's not entirely safe ah things like that BUT um the tech scene here is just amazing… and the entrepreneurs here – both Kenyan and expats – are all really interesting, really cool people."*
>
> **Mandini - interviewee:** *"And then I applied to a better masters programme at Stanford, and again gotten in and had to turn that down which was unfortunate because it was just, I couldn't walk away from this opportunity at that time which was really tough um yeah."*

For Kenyans, choosing Nairobi was also the result of personal trajectories in their lives: "the attachment of a person to a geographical location resulting from his/her previous life course" (Martin-Brelot et al.,2010:860). Thus, individuals were drawn to networks built up over the course of high school or tertiary education and they identified Nairobi as 'home' even if they were not born there. Primary reasons to stay in Nairobi can be broadly grouped into two categories. Firstly, a very close attachment to 'the people', these are friends and professional networks. Secondly, the promise of leaving a legacy, to change the city and indeed the country for better. Below are a few examples, out of the many given, to illustrate these points:

> *"I don't know what brought me back but I can tell you I definitely didn't like a life that I couldn't leave a legacy behind…And I just wanted to create"* (Hamadi).

---

[50] Expatriates however noted the rising cost of work permits as something that could possibly force them to leave Nairobi in the future.

> *"Why Nairobi? I don't know um I don't know there's no other place I'd rather be currently. I think Nairobi more or less that's where my pals are and my friends"* (Abasi)[51].
>
> *"So there's a sense of certainly we know how much potential there is and we're here and we could be there"* (John).
>
> *"I was supposed to be at business school and I was like this is a great opportunity, I can't go pass it… things are quickly changing, I wanna be a part of it"* (Gerri).
>
> *"We don't have gold, we don't have oil, we don't have you know…it's a country that's held together by the people, the sheer um, to quote one of my favourite writers, 'bloody-mindedness' of the people, it's just people are just you know, it's, just don't give up"* (Atieno).
>
> *"there's just this sort of collective buzz that happens here. Everybody's kind of just pushing, pushing, pushing...it's becoming a real cultural, not cultural I'd say um social Mecca of people just coming here doing all sorts of things"* (Dale).

Some of those who were interviewed expressed interest in exploring business opportunities in other African cities – Juba, Kigali, and Lagos – while some expressed interest in the lifestyles that Cape Town and Johannesburg seemed to offer. One person mentioned that they would be interested in moving to New York City. Although some expressed these sentiments and had a genuine interest for living abroad, it was quite clear that this was curiosity for another context and not a desire to remove themselves from their current city in search of the lifestyle opportunities offered by another's quality of place (whether perceived or experienced). Neither expatriates nor Kenyans who had studied and lived abroad expressed any interest in leaving Nairobi for the countries they had recently relocated from even though they referenced quality of place features that they missed from previous locations (bicycle trails, outdoor cafes, cheap classical concerts, etc.).

A large feature related to Nairobi's quality of place for the case sample was co-working spaces and incubators that function as spaces where Creative Class workers can insure themselves against infrastructure disruption, often at very low prices or for free. Coffee shops in private malls are equipped with backup generators and wireless internet and like many other cities draw Creative Class workers in: “I think Nairobi has a certain edge over places like Dar es Salaam specifically because the coffee shop culture actually emerged here, you have that third space for creatives - for people to meet, and hang out” (Dale). However, co-working spaces and incubators differ significantly from coffee shops in terms of the relatively lower cost of access as well as the nature of the type of space. Individuals consistently referred to ‘the people’ as being their favourite part of Nairobi, the source of inspiration in the city and their reason for remaining in the city. Co-working spaces like Nairobi’s Innovation Hub (iHub)[52] and business incubators (for example, 88MpH Garage Nairobi, NaiLab, MLab, etc.) not only offer the infrastructure and financial support (in the case of most incubators) for start-ups but they also invite and encourage collaboration, networking:

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[51] This is a particularly interesting sentiment given that the individual has never lived outside of Kenya.

> *“I’m a technologist so that means for instance this building started with iHub, and NaiLab… and then MLab appeared downstairs and then research at iHub appeared on the first floor, and then the UX Lab appeared and then the GSMA’s moving in and FrontLine SMS and KopoKopo was in this building and the reason is when you’re in a community it’s stimulates you, you have lots of ways to solve problems, people who know things that you don’t… this building is really important to all these techies”* (John)

> *“But generally as long as I hang out in the iHub I meet people, there’s always people to be met you know… and of course there’s the issue of electricity, of course the constant it’s on it’s off it’s on it’s off, but I think that being in the iHub has really helped so I do most of my work from the iHub”* (Esther).

The high levels of infrastructure disruption in Nairobi coupled with the financial constraints typical of any start-up venture make co-working spaces very attractive. Co-working spaces also actively encourage an entrepreneurial culture in a particular context thus promoting innovation and adding to local economic development (Julien, 2007). As start-ups grow, they might leave co-working spaces for bigger premises but then they take on the cost of infrastructure disruption insurance. One entrepreneur, in a start-up of more than 15 people working out of rented premises, noted how he had to pay US$4000 for an inverter to counter power blackouts. However, internet was still powered by the centralised main electricity grid, thus “if the main grid goes off we may still have power here but we don’t have internet” (Hamadi) – a highly debilitating position for someone whose entire business depends on the internet[53].

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[52] The iHub is highly innovative in this regard and has ensured constant internet access by arranging with one service provider for their internet cables to terminate directly into the building and securing backup bandwidth supply with another provider should there be disruptions to the main undersea-cables.

Quality of Place versus Invincible Infrastructure

> *“I nearly (sic) think they should have built Konza somewhere on this road [Ngong Road] cause as in many IT firms like the small startups are all, they’re being built up around this area. It’s either this area or around Westlands”* (Esther).

A discussion around infrastructure disruption and ICT Creative Class workers in Nairobi would be incomplete if it did not mention Konza Technology City, the prestigious ICT park megaproject planned by the Kenya ICT Board. Located some 60 kilometres outside of Nairobi, Konza City is a greenfield development project offering “one of the best locations to do business in Africa” (Adeya & Munywoki, 2012:3). This is because of the investment opportunities it offers to foreign multinational companies for business process outsourcing (BPO), lifestyle amenities (commercial offices, hospitals, shops, entertainment all within walking, cycling or Konza-provided public transit access), and most notably, foolproof infrastructure supply (Adeya & Munywoki, 2012). The fact that it is far removed from Nairobi will be resolved by a rail link connecting Konza to Nairobi CBD and the airport. In the interviews for this study, only one person indicated that they would be interested in moving their business operations there but commented that the location of the target market of their operations would prevent them from doing so.

When asked whether he would move to Konza, one individual was very clear on the issue: “Hell no and I told Dr. Ndemo the same”[54]. Given the close-knitted supportive nature of the technology community in Nairobi, many felt that either moving to Konza City would remove the benefits of being spatially close to the community or that Konza would destroy the community itself:

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[53] Graham and Thrift (2007) note how disruption to electricity unveils the true fuel of the new economy: an ‘electric-electronic nexus’ that controls end-users far more than they routinely acknowledge.

[54] Dr. Bitange Ndemo is the Permanent Secretary (PS) in the Ministry of Information and Communications. Notice the close relationship between the entrepreneur and the PS implied here, a clear indication of the close working relationship and institutional support from government for those working in the ICT sector. Several other interviewees noted their good working relationship with the PS or attributed the success of innovation in ICT in Kenya to Dr. Ndemo.

> *"when I look at the Konza city website and the plans and the 3D flyovers and so on are they actually thinking in terms of community…Is someone actually thinking about the people who are moving there and the kinds of things that they need. Um and most of the talk is about you know the architecture and the infrastructure and the location"* (John).

> *"cause I think cities follow people you know or there has to be something that draws people like Konza there's nothing really drawing* *us* *there, it's just structures"* (Esther, emphasis added).

> *"They don't have (sic) who they'll put in Konza you know there was a time when you wanted to bring HP, IBM, Oracle but those days are gone. The days where we used to talk about big outsourcing those days are gone"* (Mbita).

Creative Class ICT workers outside of the case sample are also sceptical about Konza City and there is much discussion about how Konza will change, and possibly ruin, Nairobi's quality of place for entrepreneurial Creative Class ICT workers.[55]. Nairobi's quality of place resonance for technologists lies in the talent it attracts and the organic networks that have formed in the city because of, and in spite of, continual infrastructure disruption: "I do think there's something about Nairobi, about the people, about Kenyans, something that has made it take off as a tech hub as opposed to Accra or Kampala or a lot of other places that might be a little more pleasant to live*"* (Tim). Jane Jacobs[56] (1961:188) argued: "old ideas can sometimes use new buildings. New ideas must use old buildings", inferring that a less than ideal context with high quality of place factors was a more preferable setting for innovation compared to an ideal setting. It is thus interesting, and possibly unsurprising, that in trying to attract the

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[55] See, for example, Alliy (2012) and Akunga (2012).

[56] Florida acknowledges that his work is inspired by Jacobs, and indeed others have noted similarly. Darchen and Tremblay (2010:226) note that "it is important to mention that the point of view developed in the creative class thesis is not totally innovative" and that "the creative class thesis is thus confirming, in a more assertive way, the previous works of other urban theorists".

ICT Creative Class of Nairobi with optimal infrastructure configurations, Konza Technology City simultaneously repels the very same group.

Conclusion

Florida (2006:26) stresses that “to create a growth region, you need the kind of place that people want to come to and can easily get to, where they can lead the lives they want and express themselves freely”. Much of this has to do with Florida’s core assumptions about the nature of cities. A recent assessment of the social, economic, and environmental characteristics of 98 different cities across the world showed Nairobi to have below-average levels of liveability[57] along with Addis Ababa, Dar es Salaam, San Salvador and Abidjan (Liu et al., 2011). Florida’s Creative Class theory (even without the added consideration of urban infrastructure disruption) would suggest at first glance that a city like Nairobi should not attract Creative Class talent. The challenge for urban studies researchers is to push beyond the familiar formulas of development (for example, agglomeration + capital investment = innovation) because, simply put, “the real African city does not correspond to our modernist biases about the physical fabric of cities” (Pieterse, 2011:8). Swilling and Annecke (2012:108) argue similarly that the emergent nature of cities calls for viewing urban systems as “simultaneously routine, crisis-ridden, unpredictable, and transformative”. Systems produce flows (of people, money, food, traffic, water, energy, etc.) that are particular to place and place is not “reducible to a particular economic structure or spatial configuration or mode of governance” (Swilling & Annecke, 2012:110); neither is place reducible to optimal quality of place configurations.

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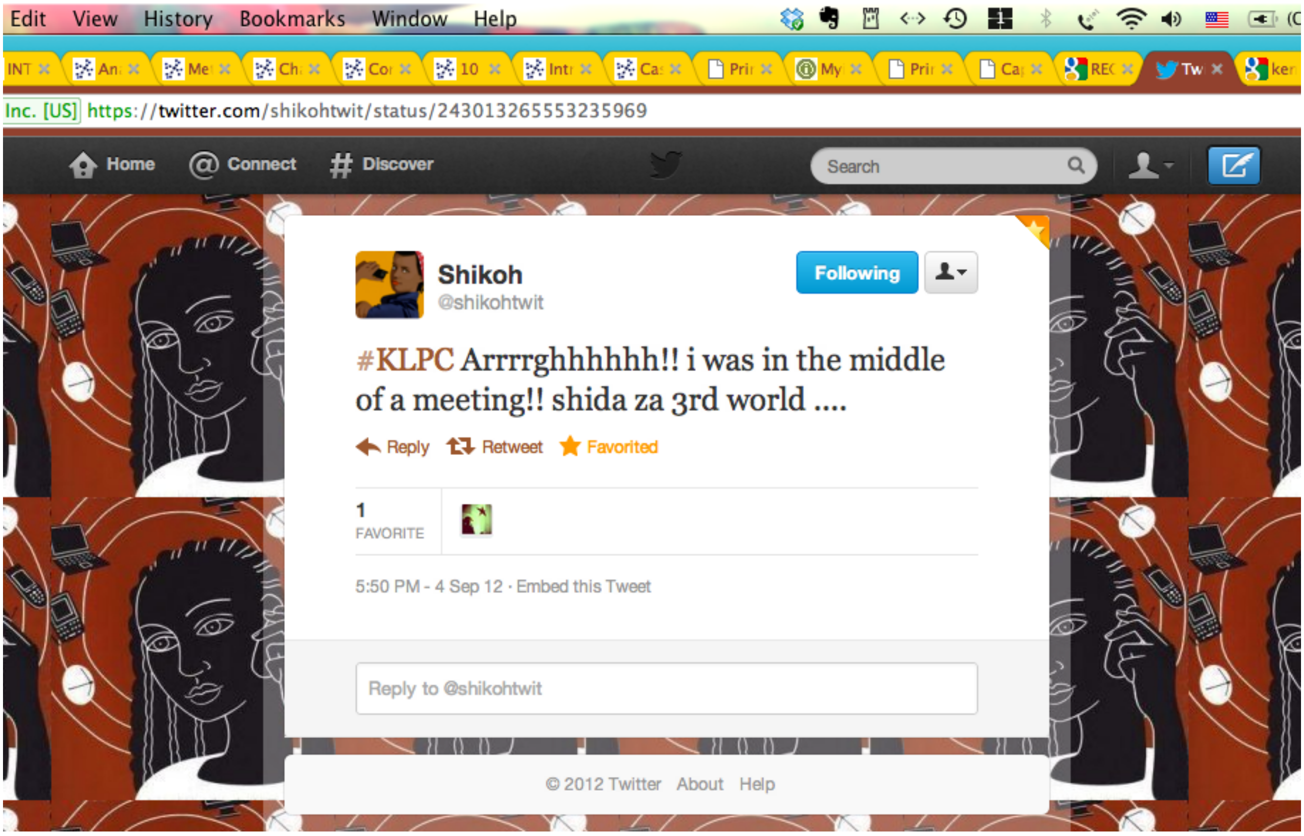
[57] Data used by researchers: Mercer's Quality of Living Survey 2007, Pricewaterhouse Coopers Global city GDP rankings 2008 - 2025, City Population website 2010, United Nations Human Development Index 2010.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© 2012 Twitter About Help

Shikoh
@shikohtwit

#KLPC Arrrghhhhhh!! i was in the middle of a meeting!! shida za 3rd world ....

1
FAVORITE

5:50 PM - 4 Sep 12 · Embed this Tweet

Reply to @shikohtwit

Figure 11: Innovators in disrupted cities[58]

Besides mobility, infrastructure disruption has not been typically considered as a quality of place attribute in the literature. The question then is whether infrastructure disruption diminishes the experience of quality of place to the point where a city becomes unattractive to live in. Only one individual interviewed, a Kenyan, had previously decided to leave Nairobi intentionally for rural Western Kenya for a period of more than a year because she needed to “get out of Nairobi and be in a serene place, just quiet and nice and away from everything and everyone I knew”. Some individuals did however anticipate moving away from Nairobi in the future when their careers were more established, citing the hectic nature of city life and traffic as their reasons for relocating. Despite this, it appears from this case study that, although Creative Class workers were repeatedly frustrated by infrastructure disruption, Nairobi remained an attractive city to live in, even if it meant taking regular breaks from it. Analyses of the interviews show that there seemed to be an accepted sense of living with infrastructure disruption: “it’s like those problems you learn to work around”

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[58] A tweet from Shikoh Gitau, a technologist based in Nairobi, complaining about an electricity blackout during a business meeting. This image was included as it captures the real time experience of infrastructure disruption as function of quality of place for the ICT Creative Class in Nairobi.

(Esther); “so we’ve learnt how to dance around all these frustrations” (Atieno). The best example of this, arguably one that affects business productivity the most, is electricity disruption. All respondents commented on electricity disruptions (blackouts that can last anywhere from a couple of hours to a couple of days) and this was evident several times over the course of the fieldwork period, where power often cut out at interview venues. In most cases, however, in less than a minute, a generator would kick in and machines, lights and water coolers would be humming again. Interestingly, although Konza Technology City promises to solve all the infrastructural woes of the ICT Creative Class in Nairobi there was barely any interest in moving there – a strong indicator of the type of quality of place undesired by this group. Some respondents noted that the reason why people move to Nairobi is to benefit from “centralised services” (Steve, James, Alfred) and clearly, people remain in the city despite severe interruption of these services. Of course, those who are able to buy themselves out of infrastructure disruption do not mind the disruption; this was evident with Mbita who was the most established and most affluent of the entrepreneurs interviewed. He seemed unbothered by the extra cost implications and considered infrastructure disruption to be “a barrier of entry to everyone” starting a business, implying that privatised supply options are always available.

Nairobi’s quality of place for the Creative Class sampled in this study is thus simultaneously attractive and frustrating. Nairobi is simultaneously a city of opportunity (supplemented by highly-supportive professional networks) and a city where infrastructure interruption restricts the very same business opportunities offered by the city’s growing new economy.

Thesis Conclusion

> *"I think currently I think that the whole thing I like will be the IT buzz that is just going around within Nairobi I think that's always something I look forward too"* (Abasi).

Infrastructure investments spur technological change in urban economies, and this is especially evident in investments made in ICTs in Africa, allowing new possibilities for production previously not available to end-users during industrialisation. Although Richard Florida does not consider African cities at all in his Creative Class theory, researchers would be limiting the range of this scholarship if they did not consider the current rise of the African Creative Class in the ICT sector. Little work has been done on the Creative Class in African cities, and this study exists as an attempt to alter this state.

The research aimed to understand the locational choices of Creative Class workers in the ICT sector in Nairobi and to describe Nairobi's quality of place, with a particular focus on infrastructure disruption: why Nairobi over other cities and what makes Nairobi, 'Nairobi'? Business opportunities in the technology sector are the primary draw card for both Kenyans and expatriates. The sense that Nairobi is *"where everything is happening, where I can make stuff over here"* (Esther), a city where individuals feel *"I don't think there's anywhere else in the world where I would have been able to do what I did but Nairobi"* (Dale). Beyond that, the ability to build highly-connected professional and social networks in a relatively short period of time is a key reason as to why individuals remain in the city. Florida (2006:25) seems to accurately predict that the clustering of the Creative Class in a city produces the effect where "they make each other more productive, they make each other more inventive, and they complement each other's skills and talents". Emerging research and the case sample showed that business incubators and hubs played a vital role in producing this, over and above the infrastructure provision these spaces provide.

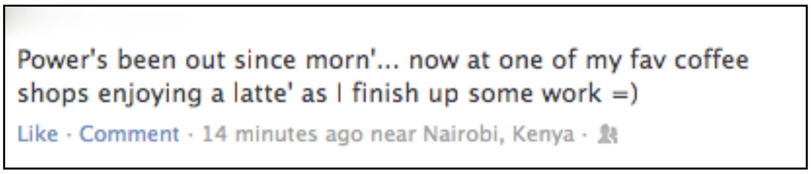
The research journey, however, revealed the need for the idea of 'quality of place' to be fundamentally delinked from the image of the Western city. Indeed, as Graham and Thrift (2007:10) write:

> *Cultures of normalised and taken-for-granted infrastructure use sustain widespread assumptions that urban 'infrastructure' is somehow a material and*

> *utterly fixed assemblage of hard technologies embedded stably in place, which is characterized by perfect order, completeness, immanence and internal homogeneity rather than leaky, partial and heterogeneous entities.*

In delinking, it is not the aim to draw modernist comparisons of development as infrastructure disruption is common to all cities but with differing levels of visibility (Graham & Thrift, 2007). Rather it is to emphasise the differences in urbanisation trajectories and how these completely reconfigure the effect that economic and technological change have on a particular place. The question then is whether infrastructure disruption diminishes the experience of quality of place to the point where a city becomes unattractive to live in. In the case study, infrastructure disruption is an inseparable attribute of place that is routinely frustrating. However, individuals valued the business opportunities and networks they had built up in Nairobi far more than the dysfunctional infrastructural systems the city offered them.

As noted, this study is subject to several limitations inherent in its design that strictly limit the findings of this study to the case sample. Further to this, the study could have been greatly enhanced by including, as primary data, social media data generated by the ICT Creative Class in Nairobi (Figures 11 and 12). Incorporating social media would have greatly increased the sample size and possibly altered the overall findings of the study. In general, this study is limited to being a snapshot of a city at a particular moment in time. Funding constraints limited the data collection period and the researcher was not able to carry the study over to a second year. Similarly, during data collection the researcher found that the nature of Creative Class work (especially for individuals involved in small start-ups) is that time spent doing other things is a sacrifice of time that could have been spent doing business. This limited some interviews and meant that a longer period of observation could have added to the study.



Power's been out since morn'... now at one of my fav coffee shops enjoying a latte' as I finish up some work =)

Figure 12: Using social media to investigate quality of place

As argued, an entirely new understanding of quality of place needs to be configured when considering urban African in light of the differences between urbanisation on the continent and in the global North. Researchers interested in investigating the rise of the Creative Class in Africa should thus seek to explore quality of place in new ways, drawing on a wide range of materials and methodologies. Those interested in the ICT sector are particularly encouraged to engage with actors in this industry. From the researcher’s observations, the emerging continental community is highly supportive of inquiry into their area of work and appear to be equally curious about research around issues of technological and urban change.

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