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The Role of Landscape Architecture in Sub-Saharan Africa

A thesis submitted in partial fulfillment of the requirements of the Honors Program of the Department of Landscape Architecture in the Fay Jones School of Architecture, University of Arkansas.

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Spring 2015

ABSTRACT

Landscape architecture is an emerging practice in the developing world. It is not, however, an established and well known profession. Developing countries, such as those in Sub-Saharan Africa, could benefit from the services that landscape architects provide for society and the built environment. This research addresses where the profession of landscape architecture currently is in Sub-Saharan Africa and speculates where it could go in the future.

The International Federation of Landscape Architects held the 2008 Africa Forum in Dubai in order to record the observations of several prominent landscape architecture professionals and students. This research expands on those observations and further obtains the opinions of landscape architects, architects, engineers, planners, academics, and students on the current and future role(s) of landscape architecture in Sub-Saharan Africa.

Through explanatory data analysis techniques, this study inquires information from students and professionals in the design field on the current and future role(s) of landscape architecture in Sub-Saharan Africa through their participation in an online survey. The results from this survey are used to develop modes and operations for the practice of landscape architecture that are appropriate for the African context. The results formulated from the survey are a viable contribution to the future of landscape architects in Sub-Saharan Africa.

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“Landscape designers don’t have to act the role of helpers, but they definitely can provide helpful design work for improvement of neglected public space, change of basic conditions of the built and non-built environment, origination of green infrastructure et cetera. Landscape architecture might also be the most appropriate design discipline to emphasize some vital beauty of even the worst place, in order to generate initial momenta for transformation processes from slums to worth living neighborhoods.”

- J. Rekitke, “Grassroots Landscape Architecture for the Informal Asian City”

CHAPTER 1 - INTRODUCTION

By the year 2030, there will be seven billion people in the developing world (UNFPA 2011). The developing world’s population, “is both a challenge and an opportunity with implications on sustainability, urbanization, access to health services and youth empowerment” (Ibid.). Landscape architects can contribute to solving challenges and expanding on opportunities by encouraging stewardship, increasing community involvement, implementing beautification practices, and facilitating sustainable design methods. Planning, eco-tourism, smart water practices, deforestation, and overall aesthetic qualities are some specific operations in which landscape architects can bring a new perspective to the design of developing countries. However, there seems to be a lack of education and knowledge in regard to the profession of landscape architecture. James Taylor, a Professor Emeritus in Landscape Architecture at the University of Guelph, states that landscape architects are taking a role in traditional formal settlements in China, but landscape architecture is essentially nonexistent in India, Venezuela, and Africa (Taylor 2011, 8).

The International Federation of Landscape Architects (IFLA) has held several symposiums and consulted with professionals and students in order to discuss the current role of landscape architecture. It is speculated that landscape architects in Sub-

Saharan Africa are underrepresented due to a number of key issues, such as limited understanding about what landscape architecture is and advocacy for the profession. Eunice Nyawira Chege, an environmental design graduate student at Michigan State University, claims that, "...there is still a serious shortage of trained individuals with expertise in [landscape architecture] and many projects that include professionally designed landscapes are limited to rich corporate and real estate development" (Chege 2008). African countries, particularly those in Sub-Saharan Africa, are taking steps to incorporate landscape architecture into the design of public infrastructure; however, landscape architecture may be viewed as a, "rich man's profession" by many individuals in the public realm (Humanity n.d.). This idea, along with several others, may have caused many communities and cities to misunderstand the services of a landscape architect and thus disregard landscape architecture as a valuable profession.

The profession of landscape architecture could bring a multitude of opportunities and improvements to developing countries, including countries in Sub-Saharan Africa. However, the current role of landscape architecture in Sub-Saharan Africa is difficult to interpret and define. This thesis analyzes and discusses the current and potential role(s) of landscape architecture in Sub-Saharan Africa. Through explanatory data analysis techniques, this study includes the participation of landscape architects, architects, engineers, planners, academics, and students in an online survey. The results from this survey are used to expand upon the understanding of the current and potential role(s) of landscape architecture in Sub-Saharan Africa.

1.1 - Research Questions

This research outlines the present and future role(s) of landscape architecture in Sub-Saharan Africa by examining the following questions:

- 1) What is the current role of landscape architecture in Africa, both regionally and from the perspective of external landscape architecture firms, universities, and non-governmental organizations?
- 2) What are the key issues behind the underdevelopment of the profession of landscape architecture in Sub-Saharan Africa?
- 3) What projects are being done in Sub-Saharan Africa that do not include, but directly affect, the work that landscape architects may do or assist with?
- 4) What are the benefits of developing landscape architecture in Africa?
- 5) What could be the modes and operations of landscape architects and how could they be applied?

This thesis discusses these questions through the literature review process. There is not a large body of literature concerning landscape architecture in the developing world. However, there are some articles concerning how landscape architecture is a needed profession in Africa. Some important references in regard to this topic include: the IFLA 2008 Africa Forum Summary Report, "Landscape Architecture Rising in Africa" by the American Society of Landscape Architects, "Landscape Architecture in the Developing World: The Growth of Informal Settlements" by James Taylor, and the work of Kounkuey Design Initiative. These references are

used to speculate on the current and potential role(s) of landscape architecture in Sub-Saharan Africa.

CHAPTER 2 - LITERATURE REVIEW

Landscape architecture is an emerging practice in Sub-Saharan Africa, and, “there are rising opportunities for landscape architects to influence built and natural environments...in Africa” (A. S. Landscape Architects 2011, 2). Thus, there is the potential for further research in this field of work, not only in African countries but in other low income developing countries. In order to adequately understand the current role of landscape architecture and design in Sub-Saharan Africa, the literature review has been divided into four subtopics: the role of regionally practicing landscape architects in Sub-Saharan Africa; the role of external firms, studios, and non-governmental organizations in Sub-Saharan Africa; the role of other design professions in Sub-Saharan Africa; and the benefits of developing landscape architecture in Africa.

2.1 – The Role of Regionally Practicing Landscape Architects in Sub-Saharan Africa

On January 22, 2008 the IFLA 2008 Africa Forum was held in Dubai in order to, “bring together leaders within the profession from Africa and other parts of the world to examine key issues, opportunities and needs for the region and to develop an action plan” (I. F. Landscape Architects 2008, 4). The IFLA Africa Forum’s main objective was to bring landscape architecture professionals from prominent countries in Africa and record the current role of landscape architecture in order to form a more stable foundation for the profession. Students, practicing landscape architects, and IFLA board members gave their opinions on the state of landscape architecture in Africa.

Benard O. Ojwang, a landscape architecture student at Jomo Kenyatta University of Agriculture and Technology in Kenya, believes that landscape architects, “are the angels sent by god to come and save Kenyan and African landscapes from the devastating impact of man and forces of nature” (I. F. Landscape Architects 2008, 29). The landscapes of Kenya, as well as the landscapes of other African countries, have experienced a variety of pressures, such as deforestation, erosion, lack of biodiversity, and informal squatter settlements. From a student’s perspective, Ojwang claims that African landscapes could improve if the practice of landscape architecture receives more support from African governments and if landscape architects that currently practice in Sub-Saharan Africa advocate for the development of their profession (ibid., 29-30).

David Gibbs, a leading landscape architect in South Africa and part of the IFLA Africa Network, notes that there are currently 130 registered professionals practicing in South Africa (I. F. Landscape Architects 2008, 12). Gibbs claims that there is an inherent need in South Africa for landscape architects to create invigorating social spaces and help reduce the carbon footprint. As evidenced by the findings in the IFLA Africa Forum, there are very few practicing landscape architects in other Sub-Saharan African countries as well. One problem is that landscape architecture students are leaving Africa in order to obtain their degree and not returning. For example, Abigail Khonje, the chief landscape architect in the Ministry of Works in Malawi, states that six Malawian citizens from the private sector and from the Civil Service were sent to Britain and America to study landscape architecture, but they have not returned to work in their

home country (Ibid., 18). This particular issue likely contributes to the underdevelopment of landscape architecture in countries in Sub-Saharan Africa.

There are a number of other factors and influences that have led to a lack of practicing professionals. Robert Kariuki, IFLA Chair, notes, "...as the profession is not well understood, there is a need to build a case for the value-added that landscape architects can bring to the built environment" (I. F. Landscape Architects 2008, 6). There seems to be a lack of understanding as to what landscape architects actually do, as well as a lack of understanding about the importance of the environment and open space. One of the main contributing influences, however, is a lack of support from government officials and thus, the policies that they enact. According to Abigail Khonje, "sustainability needs to be addressed on a global scale; reforms need to concentrate on an interaction of urban environment with the global economy" and furthermore, "a chaotic urban development as seen in many of the third world countries is difficult to be perceived by the user and can be alienating" (Ibid., 20). Education about the profession of landscape architecture and support from the government could lead to an increase in practicing landscape architects in African countries.

2.2 – The Role of External Firms, Studios, and Non-Governmental Organizations in Sub-Saharan Africa

The editor of Landscape Architecture Magazine, Bradford McKee, states, "several faculty members at different schools recently have told me, unbidden, that remarkable numbers of their landscape architecture students want to find work that has a social impact, such as with a nonprofit or non-governmental organization (NGO), after

they graduate” (McKee 2014, 22). The work of universities, firms, and non-government organizations is increasing in the developing world. There are several examples of projects in developing countries designed by landscape architecture students and professionals. For example, landscape architecture students from the National University of Singapore created speculative 3D models of Khulna, Bangladesh in order to assess the quality and potential of inner city ponds (Figures 2.1 and 2.2) (Rekittke 2009, 671). This type of analysis and design may be considered for the improvement of cities and communities across the globe.



Figures 2.1 and 2.2: Speculative 3D models of Khulna, Bangladesh. This work was completed by landscape architecture students from the National University of Singapore in order to assess the quality and potential of inner city ponds (Rekittke 2009, 671).

Several landscape architecture academic studios and students in the United States and Europe are developing projects that have a social and environmental impact on the infrastructure of countries in Sub-Saharan Africa. For example, Emily Lowery, a former MLA student at the University of Minnesota, created an approach for cultural, social, and environmental reclamation of Mfangano Island, Kenya for her capstone research (Figure 2.3) (Lowery, Fish, Forests and Futures; A Ecosystemic Approach for Cultural Reclamation on Mfangano Island, Kenya 2012). Another example includes the

work of Eunice Nyawira Chege in Nairobi, Kenya. She found that homeowners in Kenya were unaware of landscape architecture which led to a separation between her designs and the built products. Chege claims that landscape architecture in Nairobi, “can help alleviate problems related to dust, soil erosion, drainage, and air pollution in addition to changing the aesthetic outlook” (Chege 2008).



Figures 2.3: A graphic from Emily Lowery’s capstone research which displays strategies for developing post-harvest technologies on Mfangano Island, Kenya (Lowery, Fish, Forests and Futures; A Ecosystemic Approach for Cultural Reclamation on Mfangano Island, Kenya 2012).

Non – government organizations (NGOs) are also taking part in the development of landscape architecture in Africa. Kounkuey Design Initiative (KDI), for example, is an NGO that consists of landscape architects, engineers, and urban designers. KDI, “helps to transform impoverished communities by collaborating with residents to create low-cost, high-impact built environments that improve their daily lives” (Lowery, A Role

Model for Landscape Architecture-Kounkuey Design Initiative (KDI) 2011). Their main objective is to provide opportunities for open space, playgrounds, soccer fields, public gardens, and reclaimed floodplain in order to increase community involvement (Figures 2.4 and 2.5). KDI has worked on four public space projects in Kibera, Kenya, the largest informal settlement in Sub-Saharan Africa. The KDI team has used Kibera as a main case study, “to advocate best development practices in the context of available construction technologies and virtually depleted local natural resources” (Curran and Schneider 2006).



Figures 2.4 and 2.5: One project completed by the KDI team was the design and implementation of a public sanitation center, a set of kiosks, and a playground in Kibera, Kenya. The team relied heavily on community participation (Initiative 2011).

Academic studios, firms, and non-government organizations are aiding in the development of landscape architecture in Sub-Saharan Africa. This work is not purely service based. It is work that is creating more sufficient systems for the world’s population. J. Rettike, in his article “Grassroots Landscape Architecture for the Informal Asian City”, inquires as to whether landscape architects will work, “in the gilded cage of luxury design or will they turn out to be able to transform landscape architecture into a helpful and necessary mega-urban tool?” (Rekittke 2009, 667). Landscape architects

from across the globe have the ability to aid in the development of Africa's public spaces, urban planning efforts, and landscape systems.

2.3 – The Role of Other Design Disciplines in Sub-Saharan Africa

There is a presence of multiple design professions taking root in developing countries. Architects, engineers, and planners are designing and planning places and spaces that increase community involvement and that correspond to the context, experience, culture, and materials of varying communities. These professions have created a model that landscape architects can learn from. As a profession, "...landscape architects have traditionally been less unified..." as opposed to architects, engineers, and planners (Lowery, A Role Model for Landscape Architecture-Kounkuey Design Initiative (KDI) 2011). This lack in unification is mostly because it is often difficult to define what services a landscape architect actually provides. Landscape architects have the skill to contribute to the work of other design professions in order to develop the built environment of developing countries. The work of BASEhabitat, Engineers without Borders South Africa, and the Map Kibera team are prime examples of this type of design in Sub-Saharan Africa.



Figure 2.6: Image of the construction of BAYA, a nursery school building in Orangefarm, South Africa designed by BASEhabitat (*BASEhabitat n.d.*).

Architecture firms and studios have left their mark on the built infrastructure of Sub-Saharan Africa. BASEhabitat, for example, is a studio within the Department of Architecture at the University

of Art and Design in Linz, Austria. BASEhabitat works in conjunction with the UNESCO Chair of Earthen Architecture to, “erect buildings in which no outside energy is needed to provide a pleasant internal climate, buildings that use the resources of their location rather than destroying them, that enrich the environment and offer people new challenges and new work” (BASEhabitat n.d.). BASEhabitat emphasizes that beauty can be found in poverty and that the use of local materials is one of the most important facets of their work. “Using building materials from the immediate surroundings allows the people involved greater independence while also strengthening the local economy” (Ibid.). Two architecture design students from the BASEhabitat studio, Ursula Nikodem-Edlinger and Danijela Tolano, designed and constructed a nursery school building that contributes to the social and environmental health of the students and the adjacent community (Figure 2.6). The building is constructed from earth, which provides comfortable internal temperatures and “solid, stable walls” (Ibid.). The students, their parents, and the surrounding community were involved in creating and implementing the design of this building. In summation, BASEhabitat is an example of an architecture studio that attempts to bring beauty to places that are substantially overlooked and to use local materials to increase economic development and community involvement.

Engineers are also working in impoverished communities to improve the infrastructure of developing countries. The most notable of these is Engineers without Borders International. Engineers without Borders, “partner with disadvantaged communities to improve their quality of life through education and implementation of sustainable engineering projects, while promoting global experience for engineers...” (Borders n.d.). Engineers without Borders South Africa empowers communities by

working on projects that deal with education, energy, health and hygiene, infrastructure, water, and environment. One primary example is a green roof infrastructure project in the Monboneng district in Johannesburg, South Africa. Engineers without Borders South Africa, in collaboration with Global Regeneration Initiative for Neighborhood Development, has begun to install a green roof on a building in the Maboneng district in order to, “present exciting opportunities to explore urban greening, temperature reductions, energy savings, biodiversity impacts, reduced stormwater runoff and

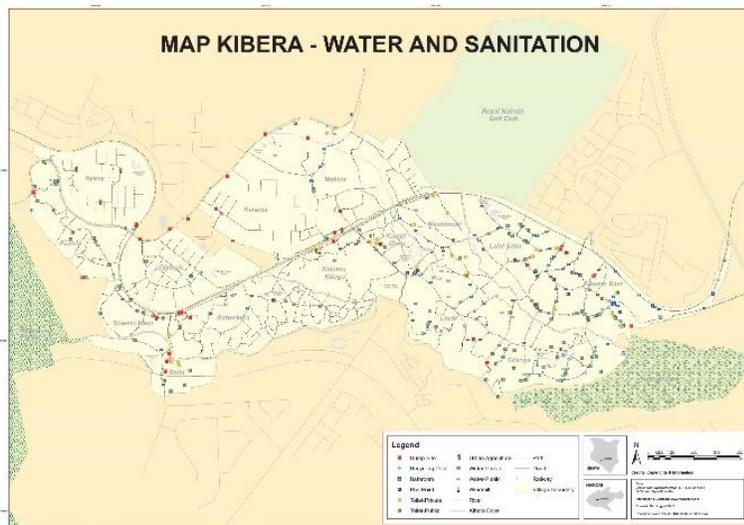


Figure 2.7: Map created by the Map Kibera team that shows the location of the water and sanitation facilities in Kibera (Kibera 2014).

agriculture” (South Africa 2014).

Planners and cartographers/geographers have also been involved in improving the health, safety, and welfare of populations across the

developing world. For example, in 2009 the Map Kibera Project

was responsible for mapping 13 villages of Kibera, the largest informal settlement in Sub-Saharan Africa. This team, which was comprised of a number of videographers, cartographers and the community members of Kibera, used Global Positioning Systems (GPS) and surveillance technology to, “become one of the few remarkable examples of how technology and new media has been successfully harnessed to foster visibility of marginalized communities and promote citizen journalism platforms to residents to share their own stories with the world” (Kibera 2014). They charted the location of

markets, schools, health facilities, water points, education facilities, and security zones so that the residents of Kibera could gain an understanding of what is currently there in order to move forward (Figures 2.7 and 2.8).

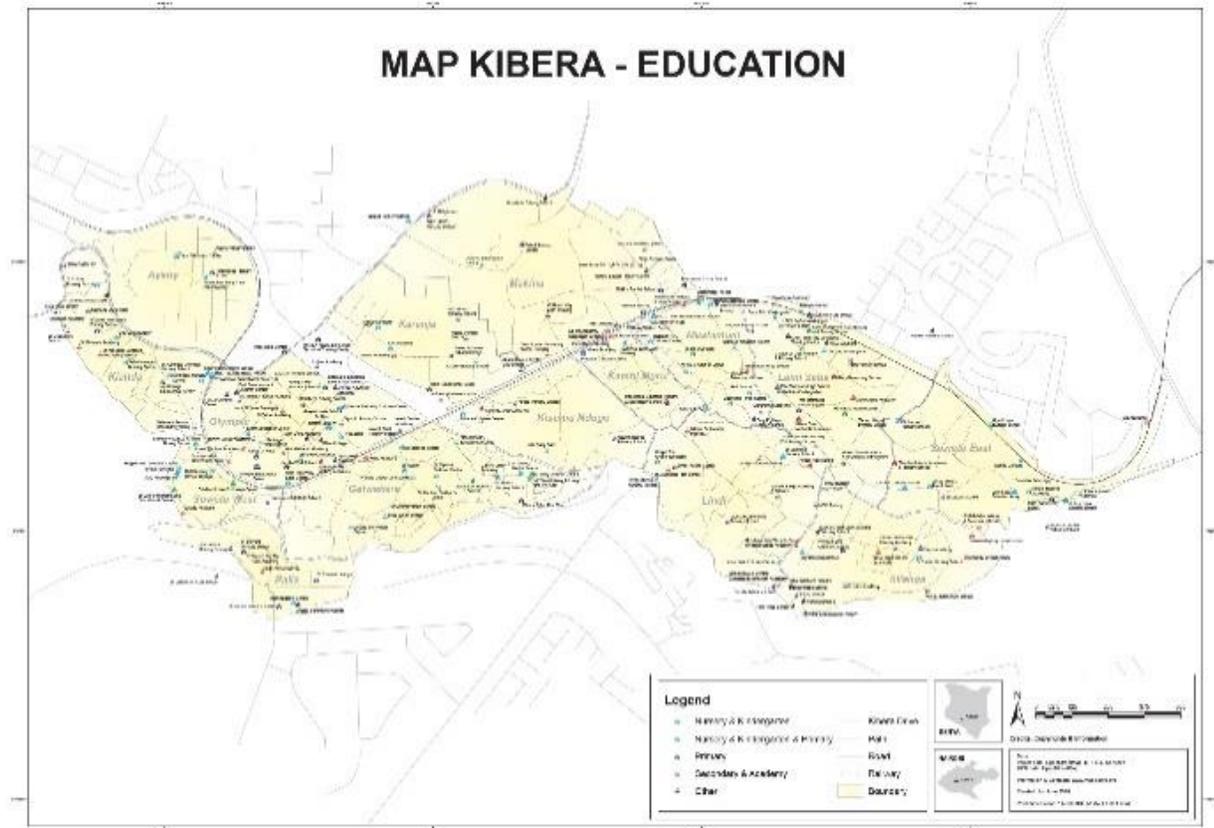


Figure 2.8: Map created by the Map Kibera team that depicts the location of every education facility in Kibera (Kibera 2014).

These three examples are instances where different design, planning and allied professions participate in projects that did not involve a landscape architect. Landscape architects, architects, engineers, and planners have the ability to work together in developing countries, such as those in Sub-Saharan Africa, to design places that improve the economy, health, and aesthetics of these particular environments.

2.4 - The Benefits of Developing Landscape Architecture in Africa

The profession of landscape architecture involves the design of places that range from small scale design, such as private residences, to large scale design, such as city master plans. According to the American Society of Landscape Architects, landscape architects design and plan for such things as: school and college campuses, commercial grounds, public gardens, golf courses, land planning, parks, residential sites, therapeutic gardens, streetscapes, and water resources (Landscape Architecture 2014). Landscape architects are involved in creating places that contribute to the health, safety, and welfare of the public realm. This includes designing, planning, and managing small and large infrastructure projects as well as creating places that are beautiful and enjoyable.

Landscape architects have the ability to create spaces that illustrate an environmental and social impact in Sub-Saharan Africa. In 2010, five countries in Africa were among the top ten fastest-growing economies (A. S. Landscape Architects 2011, 1). Based on the growth of the population and economy in countries across Africa, there are a myriad of opportunities for infrastructure development as well as for regional planning. Landscape architects can provide these services in a variety of scales by developing and enhancing existing systems, whether in small villages or large megacities.

Landscape architects working in Sub-Saharan Africa can design places and spaces through community design, the use of local materials, and aesthetic appeal. Designing with community members encourages efficient environmental practices and

inspires people to appreciate their gathering spaces. Landscape architects have the ability to work with African communities through “the instruments of control, management and detailing...” (Rekittke 2009, 672). Professionals and students have the skill set to design with local citizens and materials in order to strengthen community involvement and the economy. If there is a better understanding of the profession and more support from local governments, then the public realm will be open to the services that landscape architects can provide to their cities, open spaces, residences, and rural communities.

2.5 – Conclusion

There are a number of landscape architecture projects in Africa, but the profession is generally underdeveloped. There are projects designed and implemented by architects, engineers, and planners that do not, but could and should include landscape architects. It is evident that landscape architects in Sub-Saharan Africa are underrepresented due to some key issues, such as limited support from local governments and an overall lack of public understanding. Several landscape architects that currently practice in Sub-Saharan Africa outline some of these key issues in the IFLA 2008 Africa Forum. This research expands on those key issues and obtains the opinions of landscape architects, architects, engineers, planners, academics, and students on the current and future role(s) of landscape architecture in Sub-Saharan Africa.

CHAPTER 3 - METHODOLOGY

The primary research method for this study involves the creation and implementation of a survey. Singleton and Straits identify three features of survey research: “a large number of respondents are chosen through...sampling procedures to represent the population of interest, systematic questionnaire or interview procedures are used to ask prescribed questions of respondents and record their answers, and answers are numerically coded and analyzed” (2005, 219). In this instance, this survey involves the compilation of a nonprobability sample of design professionals, the formulation of questions about the current and future role(s) of landscape architects, and an analysis and synthesis of the responses.

Singleton and Straits describe two types of data analysis techniques: descriptive and explanatory (2005, 223). Descriptive surveys, “seek to describe the distribution within a population of certain characteristics, attitudes, or experiences and make use of simpler forms of analysis” (Ibid., 223). An explanatory survey involves, “studies that investigate relationships between two or more variables, attempting to explain them in cause-and-effect terms” (Ibid., 562). Singleton and Straits claim that descriptive research, as opposed to explanatory studies, “operates at a lower level of description by merely seeking information about isolated variables, whereas explanatory research goes beyond this step to a description of relationships among variables” (Ibid., 69). For the purpose of this study, an explanatory research method is used in order to gather information from a population of design professionals who have been involved in work in Sub-Saharan Africa or in other developing countries.

The intent of this survey is to help answer the following research questions:

- 1) What is the current role of landscape architecture in Africa, both regionally and from the perspective of external landscape architecture firms, universities, and non-governmental organizations?
- 2) What are the key issues behind the underdevelopment of the profession of landscape architecture in Sub-Saharan Africa?
- 3) What projects are being done in Sub-Saharan Africa that do not include, but directly affect, the work that landscape architects may do or assist with?
- 4) What are the benefits of developing landscape architecture in Africa?
- 5) What could be the modes and operations of landscape architects and how could they be applied?

Specifically, the results from this survey better define the current and potential role(s) of landscape architects in other developing countries, but specifically countries in Sub-Saharan Africa. Responses from professionals and students in the varying design fields are examined and summarized. The responses further delineate the issues behind the underrepresentation of landscape architects in Sub-Saharan Africa. This research also aids in the development of speculative modes and operations for the practice of landscape architecture that are appropriate for the African context.

3.1 - Sample Method

This thesis research has led to the discovery of several key design professionals, academics, non-government organizations, firms, and community members involved in

the designing and planning of Sub-Saharan Africa. For the purpose of this research, a list of the key people is compiled and serves as the representative sample for the survey.

A survey population is, “all of the units (individuals, households, organizations) to which one desires to generalize survey results,” whereas, the sample frame “is the list from which a sample is to be drawn in order to represent the survey population” (Dillman, Smyth and Christian 2009, 42). In the case of this study, the survey population is all designers, landscape architects, architects, engineers, planners, academics, and students involved in work in Sub-Saharan Africa and/or all designers, architects, engineers, planners, academics, and students doing work in developing countries that somehow points to landscape architecture. The sample frame consists of one hundred design professionals and students generated from a nonprobability sampling method. Nonprobability sampling is a process by which cases are not selected at random (Singleton and Straits 2005, 132). There are three types of nonprobability sampling: convenient sampling, purposive sampling, and quota sampling. The participants for this survey are selected through purposive sampling, in which, “the investigator relies on his or her expert judgment to select units that are ‘representative’ or ‘typical’ of the population” (Ibid., 133). This sampling method is typically used in studies that have a limited scope or where random selection is not appropriate.

This sampling method presents issues in reliability and validity. Nonprobability samples, “do not control for investigator bias in the selection of units, and their pattern of variability cannot be predicted from probability sampling theory, thereby making it impossible to calculate sampling error or to estimate sample precision” (Singleton and

Straits 2005, 132). More specifically, purposive sampling, “requires considerable knowledge of the population before the sample is drawn” (Ibid., 134). These dominant players range in profession and in skill, but they are all professionals, academics, or students that have contributed design practices to countries in Sub-Saharan Africa or in other parts of the developing world. They are selected because of their body of knowledge. Their opinions on the current role of landscape architecture and design are a viable contribution to the future of landscape architecture in Sub-Saharan Africa and therefore, benefit the validity and reliability of this study.

3.2 - Survey

The survey is comprised of questions formulated from the findings in the literature review. The current modes and operations of landscape architects in Sub-Saharan Africa are analyzed and a list of topics and questions is compiled based on that analysis. The survey is a series of multiple choice and open ended questions that are divided into four sections:

- 1) Questions regarding the occupation and role of the survey participants
- 2) Questions regarding the profession of landscape architecture and its current role in Sub-Saharan Africa
- 3) Questions regarding the potential role of landscape architecture in Sub-Saharan Africa
- 4) Questions regarding the sex, ethnicity, age, and education level of the survey participants

This electronic survey assesses the nature of the survey participants and their stance on the role of landscape architecture and other design professions in the developing world and more specifically in Sub-Saharan Africa. If the survey participant is knowledgeable about the profession of landscape architecture they are guided to a series of questions that will inform the modes and practices that landscape architects could utilize in Sub-Saharan Africa. However, these operations derived from the survey are somewhat speculative.

Validity, “refers to the congruence or ‘goodness of it’ between an operational definition and the concept it is purported to measure” (Singleton and Straits 2005, 91) 91). The results that are derived from this survey may cause threats to construct validity, which, “refers to the degree to which inferences can legitimately be made from the operationalizations in [the] study to the theoretical constructs on which those operationalizations were based” (Trochim 2006). Not all of the survey participants are from Sub-Saharan Africa or have an inherent knowledge of landscape architecture in Africa. However, the survey participants are all chosen to be a part of the sample because they have knowledge about design in Sub-Saharan Africa or in other developing countries. Their responses should remain consistent with the purpose of this research, which helps alleviate the construct validity threat.

CHAPTER 4 - DATA ANALYSIS AND RESULTS

One hundred participants were asked to contribute their opinions on the role of landscape architecture in Sub-Saharan Africa. There were a total of twenty eight responses to the survey (Appendix B), lending a twenty-eight percent response rate. There were several themes among the survey responses including: the occupation and role of the survey participants, the current role of landscape architecture in developing countries such as those in Sub-Saharan Africa, and the benefits of expanding the role of landscape architecture in Africa.

4.1 - Occupation and Role of Survey Participants

The sample for this survey is comprised of landscape architects, architects, engineers, planners, design students and other professionals involved in design. The majority of participants for this survey, however, were landscape architects (Figure 4.1). It is important to note that even though engineers play a vital role in the infrastructure development of Africa, the engineers that were included in the representative sample did not take part in the survey. The title of the survey, “The Role of Landscape Architecture in Sub-Saharan Africa”, may have led non-landscape architect participants to believe that their contribution to completing this survey was not valuable. The survey cover letter states that the purpose of this survey is to gather data from varying design professionals in order to gain a better understanding of design in Sub-Saharan Africa with an emphasis on landscape architecture (Appendix A). Nonetheless, the title for the survey may have been reconsidered in order to obtain a better distribution of participants.

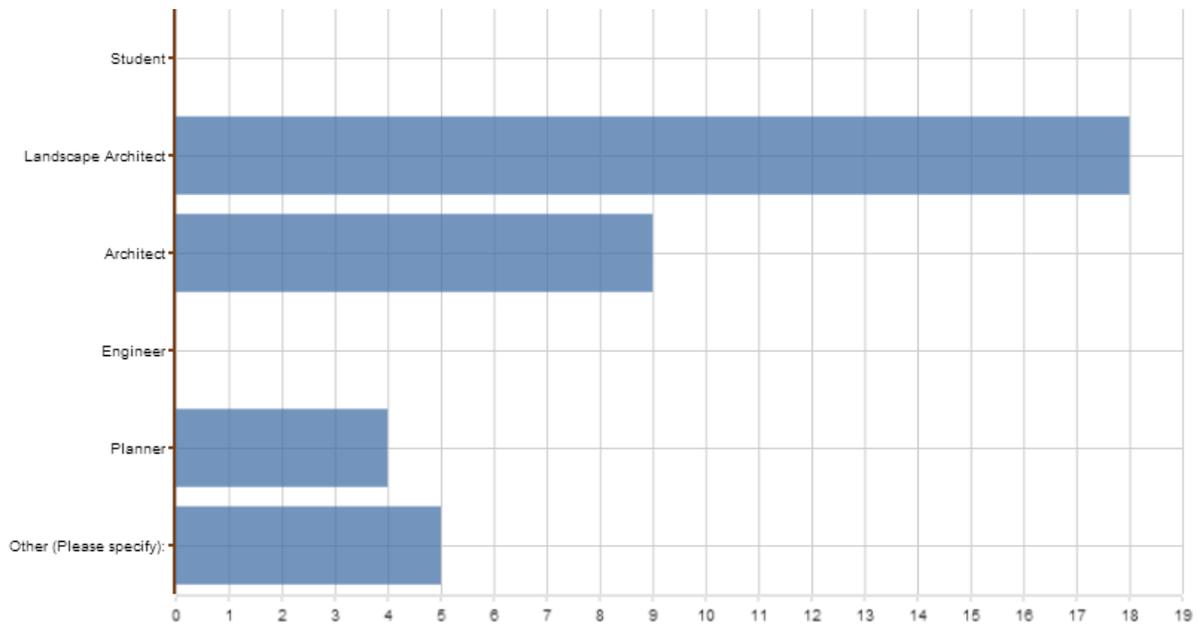


Figure 4.1: Occupations of survey participants (Participants 2015)

The type of work that the representative sample is involved with is also an important factor for this research. Many of the survey participants either work for a private firm or are in academia. Only twenty-two percent are involved in work done by NGOs. This may suggest that design and planning work being done in Sub-Saharan Africa is by local landscape architecture, architecture, and planning firms and by university classes. Furthermore, over half of the survey participants live or have lived in Sub-Saharan Africa. It should also be noted that eighty-five percent have been involved in work conducted in Sub-Saharan Africa. This work includes: design of public open spaces, landscape consulting, landscape architecture research, playground design and implementation, and ecotourism planning. This data implies that there are a variety of projects that are being pursued by landscape architects in Sub-Saharan Africa.

4.2 - Interpreting the Profession of Landscape Architecture and its Current Role in Sub-Saharan Africa

The survey participants were asked to provide a definition of what a landscape architect does (Table 4.1). The services and operations of a landscape architect can often be difficult to define as opposed to those of architects and engineers. One participant states that, “a landscape architect uses vegetation, infrastructure, art, technology, and cultural knowledge to address questions and challenges within the built and natural environment” (Participants 2015).

Table 4.1: Selected survey responses to, “please provide a definition of what a landscape architect does. If you do not know, please say so and try to speculate” (Participants 2015)

Text Response
Landscape architects are accredited professionals who plan and implement land-shaping projects. These range in scale from large infrastructural projects that intersect urban and regional planning to smaller areas like residential gardens and pocket parks. Depending on the project and to varying degrees, projects involve alterations of topography, soils, drainage, surfaces, and horticultural and built content.
Environmental Stewards and Designers of the built environment for well-being of society
A landscape architects plans & designs public as well as private open spaces in such a way that both human and environmental needs are addressed
Landscape Architects are responsible for the analysis, planning, design, documentation and detailing of out-door spaces, particularly those within the public realm, including parks, plazas, streets, sports facilities, etc. Drawing from architecture, spatial planning, ecology, environmental management, geography, biology and art, to ensure the best fit between human need and physical carrying capacity, towards resource efficiency and on-going sustainability. We are also involved in the procurement of contractors for implementation, supervision and quality control of construction, and environmental auditing and reporting.
Plans, designs, manages and maintains all aspects of the external environment both new and existing
Landscape architects are involved with planning and designing and creating usable outdoor spaces which must be ecologically responsive in infrastructure development to prevent environmental degradation.
A landscape architect uses vegetation, infrastructure, art, technology, and cultural knowledge to address questions and challenges within the built and natural environment.
Planning and design of landscape systems with regard to aesthetics, performance, sustainability, and preservation.
Design of landscape for functional and aesthetic ends
Protection and creation of landscapes, urban and rural, built and natural

There is one common theme among the survey responses: the public and the authorities rarely recognize landscape architecture as a profession. “The pressure on

development and the building of infrastructure is so great that the effect it has on [the] environment (including the social environment) is not considered” (Participants 2015). According to a survey participant, landscape architects are not utilized on this level. It is evident among the survey responses, however, that other design professions, such as architecture, engineering, and planning, have a stronger presence in Sub-Saharan Africa (Figure 4.2). According to the participants, these are long-established professions and are more easily understood by the general population. Landscape architecture is perceived as a luxury, if perceived at all. The work of landscape architecture often falls under the jurisdiction of engineers, planners, and architects. Architects and engineers, in particular, have also taken a greater initiative in the development of Sub-Saharan Africa. “There is simply a lack of concern or understanding about how to bridge the skills of [landscape architecture] to the more complex global challenges that are faced in Sub-Saharan Africa” (Ibid.).

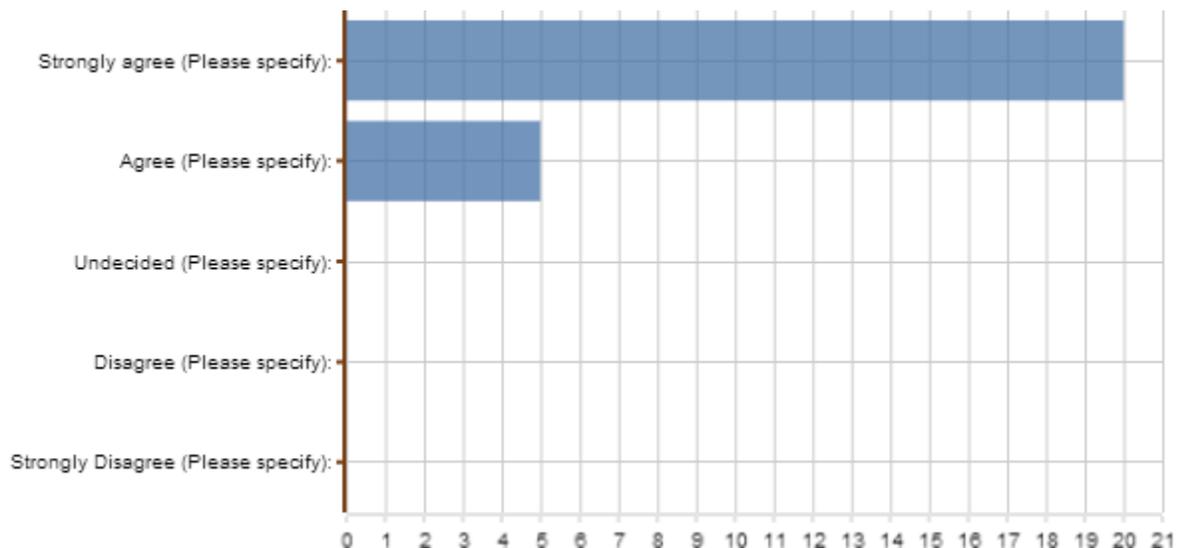


Figure 4.2: Survey responses to the question “do other professional occupations such as architecture, engineering, and planning have a stronger presence than the profession of landscape architecture in Sub-Saharan Africa?” (Participants 2015)

It does seem, however, that landscape architecture has a strong presence in South Africa. There are numerous landscape architecture projects and practitioners in South Africa that are contributing to the country's open spaces and infrastructure, such as the work of Habitat Landscape Architects and Hitesh Mehta. This is not as true for countries neighboring South Africa. According to the survey results, landscape architecture is developing in countries such as Kenya and Nigeria, but is still virtually unknown by most of the public realm. Thus, the profession of landscape architecture has potential for growth within cities and rural communities of Sub-Saharan Africa.

4.3 – Interpreting the Potential Role of Landscape Architecture in Sub-Saharan Africa

The results for this study indicate that there is a presence of landscape architects in Sub-Saharan Africa, but this presence only extends to certain countries. Should the modes and operations of a landscape architect be modified for the African context so that this profession can grow? The survey participants were asked if they agreed or disagreed with this question. Sixty four percent of the survey participants agreed (Figure 4.3). One common thread among the responses is that it is important to consider how people relate to the land they inhabit when planning and designing landscape systems. This is true in other parts of the globe, but the use of community design is particularly important for the development of the African landscape.

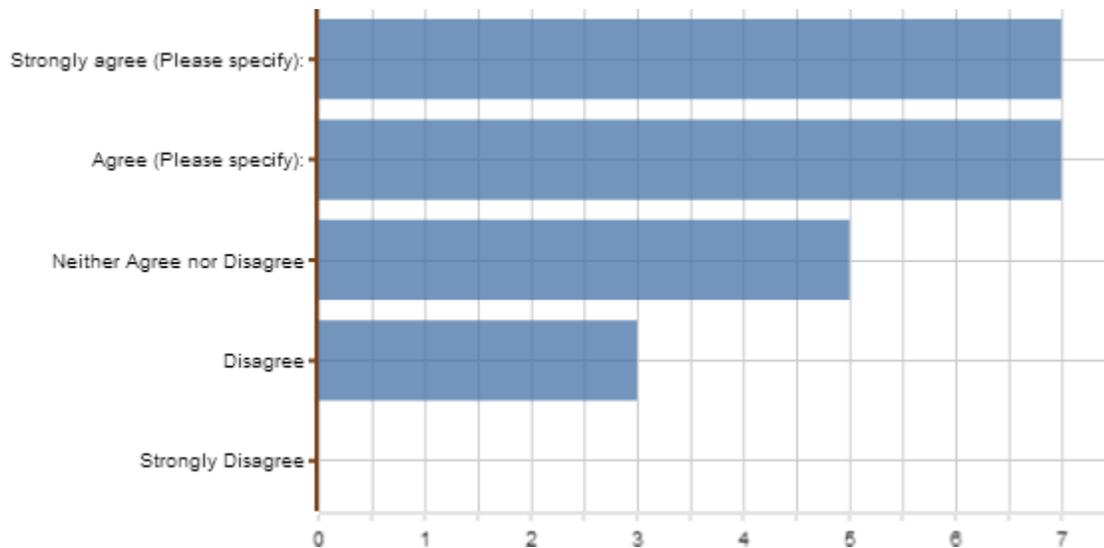


Figure 4.3: Survey responses to the question “should the modes and operations of landscape architecture be modified for developing countries such as those in Sub-Saharan Africa?” (Participants 2015)

It is essential that all landscape architects, “gain in-depth knowledge of local customs, values, aesthetics, and needs” (Participants 2015). According to the survey responses, landscape architects should work with indigenous communities and understand their needs. This work should not be purely service based. There is also the risk that landscape architects can, “showcase projects for their portfolios...that...look Africanesque – but show no deep engagement” (Ibid.). The projects that a landscape architect undertakes should be relevant to the communities and landscapes that are involved.

It is also apparent from the responses that in order for landscape architecture to develop in Africa there needs to be an advancement of, “advocacy, education, and community relations” (Participants 2015). Most African landscape architects are sent to the United States or Europe in order to gain their professional credentials (Ibid.). One respondent suggests that African universities need to expand their curriculum in order to

accommodate more professional development (Ibid.). There is a need for greater innovation, expansion, and support among the professional and academic sectors.

Table 4.2: Selected survey responses to the question, “what are the benefits of developing landscape architecture in developing countries?” (Participants 2015)

Text Response
Local people know their needs and audiences best. Certainly, there should be greater encouragement and support for African universities to expand their curricula.
Better awareness of the relationship between contextual issues and designed/built environments. Better ability to build an understanding of how to manage environments for future generations
Minimization of habitat and species loss
Better planning, coordination and sustainable (environmentally and socially) design
Landscape Architects have a huge role to play in developing countries - especially within informal settlements. In fact, this is often where we have opportunities to facilitate the design of market squares, sports facilities, public facilities and recreational amenities - to the benefit of whole communities who participate in the design process.
Developing countries face tremendously complex economically and socially driven challenges that impact the built and natural environment. [Landscape Architects] better understand how the people and their surrounding environments are connected - better than any other profession. We can use this skill to address larger global challenges, help developing countries, and change the focus of the profession.
Improving the quality of our environments, protecting landscapes and improving degraded ones
This is where we can do the most good as developing countries strive to create a balance between their cultural needs and the natural world they inhabit

Developing the profession of landscape architecture would provide a number of benefits to the infrastructure of developing countries, such as those in Sub-Saharan Africa (Table 4.2). “Developing countries face tremendously complex economically and socially driven challenges that impact the built and natural environment. Landscape architects better understand how the people and their surrounding environments are connected better than any other profession. We can use this skill to address larger global challenges, help developing countries, and change the focus of the profession” (Participants 2015). The survey responses indicate that landscape architects are able to connect cultural, ecological, social, and economic systems in a way that is mutually beneficial for the land and the people that inhabit it.

4.4 - Conclusion

The responses from the survey inform a number of conclusions. There are numerous projects that landscape architects have designed and implemented in a few countries in Sub-Saharan Africa; however there is very little advocacy for the profession. Architects and engineers have a stronger presence in these countries because their professions are better understood. Students of landscape architecture in Sub-Saharan Africa are traveling to the United States or Europe to obtain their degrees, thus limiting the number of local practitioners. If landscape architecture is to develop in Sub-Saharan Africa then professionals need to embrace community design and expand the landscape architecture curriculum. Nonetheless, there is a role for landscape architecture in Sub-Saharan Africa.

CHAPTER 5 - DISCUSSION AND CONCLUSION

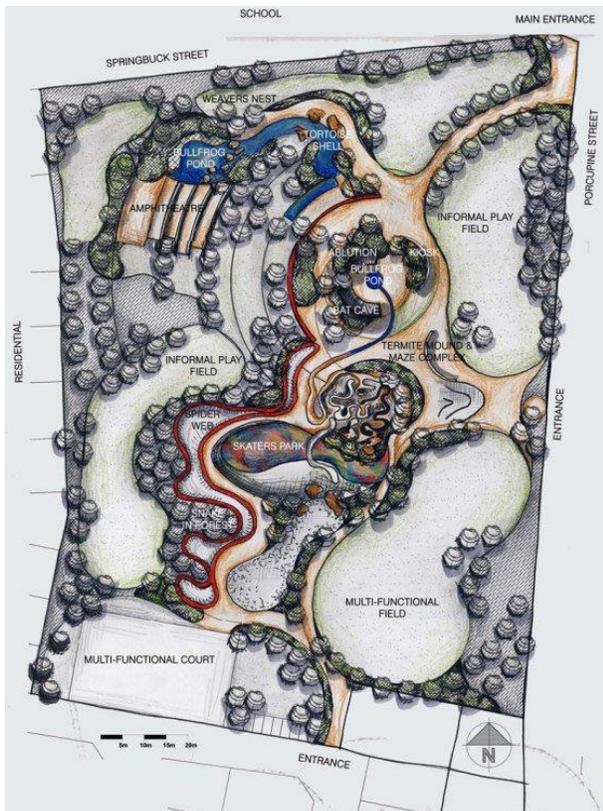
“Where people and communities exist, there is a role for the profession of landscape architecture” (Participants 2015).

Landscape architecture is an emerging profession in the developing world, but it is unclear what the potential role of the profession will be particularly in African countries. The results from the survey inform the current and future roles of landscape architecture in Sub-Saharan Africa. The purpose of this research is to use the results from the survey in order to define these roles and speculate on possible ways to develop landscape architecture in African countries.

5.1 - Defining the Current Role of Landscape Architecture in Sub-Saharan Africa

Landscape architecture has a presence in Sub-Saharan Africa as an emerging practice. According to the survey results there are numerous landscape architecture projects and practitioners in African countries, such as the work of Habitat Landscape Architects and Hitesh Mehta. These projects range from public parks to eco-tourism development master plans and can be used as precedents for other Sub-Saharan Africa landscape architecture practitioners, students, and academics.

Habitat Landscape Architects, for example, is a landscape architecture firm in Pretoria, South Africa. Their firm has designed and implemented Lehae Park which is



Figures 5.1: Plan of Lehae Park in Johannesburg, South Africa

Architects incorporates elements of sustainability through sturdy play elements and drought resistant plants. Most importantly, this park, “[explores] the relationship of nature and people and how we are connected and dependent on each other” (Ibid.). The survey results for this research indicate that incorporating this relationship should be a very important aspect to design in Sub-Saharan Africa. The implementation of this park also aids in the creation of jobs for unemployed members of the adjacent community. These community members, “[are] employed and trained in the use of alternative building techniques, horticulture, landscape installation and maintenance” (Ibid.). This project is a prime example of how landscape architecture can provide beneficial economic, sustainable, and social practices to the communities of Sub-Saharan Africa.

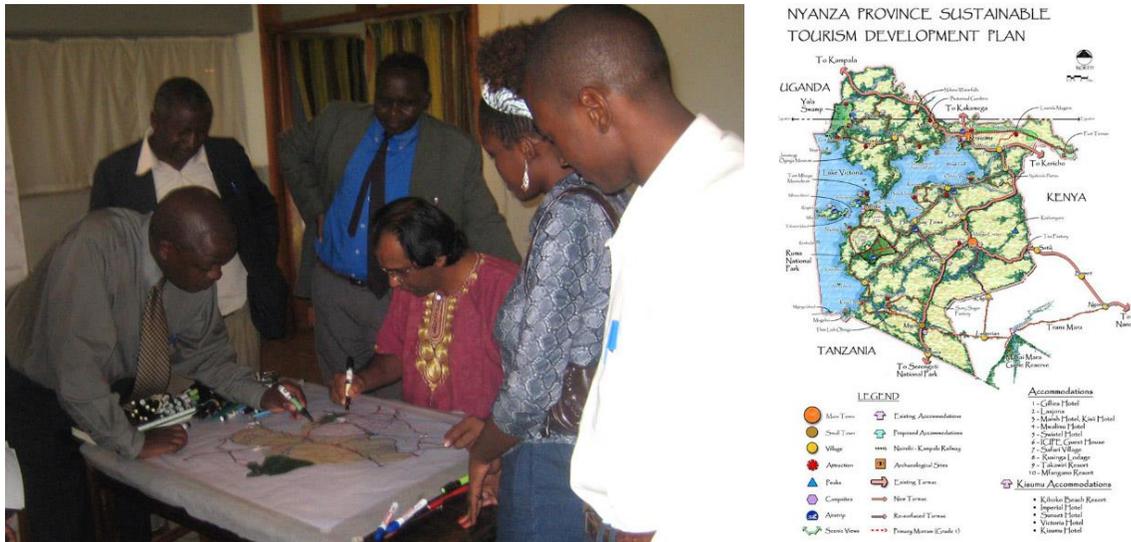
located within a government-housing community in Johannesburg, South Africa (Figures 5.1 and 5.2). The design for this park intends to bring the local community together through a focus on children’s play. “The design [aims] to satisfy the needs of a broad social grouping that include[s] a range from children to adults, different cultural, religious and social backgrounds around a common need for recreational space” (Homes 2014). Habitat Landscape



Figure 5.2: Built play structure in Lehae Park

Another example includes the work of Hitesh Mehta, the president of HM Design. Mehta's firm began in Nairobi, Kenya in 1990 and is now based in Ft. Lauderdale, Florida. Hitesh Mehta specializes in landscape architecture and ecotourism physical planning efforts in countries across the globe. Mehta was the project manager for a team that designed two sustainable development tourism plans for the Nyanza and Western provinces of Kenya. Two national parks, Mgahinga Gorilla National Park and Bwindi Impenetrable National Park, are located within these provinces. These areas are projected in order to, "harbor the last remaining populations of the Mountain Gorilla" (Mehta 2015). This master plan was designed with local stakeholders in order to develop a tourism master plan which includes community products, museums,

ecolodges, visitor center, mountain and forest trails, canopy walk, and crafts markets (Figures 5.3 and 5.4) (Ibid.). A zoning plan and various tourism circuits were also proposed for the Western and Nyanza provinces. This particular example introduces an inventive approach to protecting and enhancing Africa's natural landscapes.



Figures 5.3 and 5.4: Hitesh Mehta works with local community members to develop the Nyanza Province Sustainable Tourism Development Plan

There are several other examples of landscape architecture firms, professionals, and projects in countries in Sub-Saharan Africa. The work of Newtown Landscape Architects and Arthur Adeya are prominent examples of practitioners who are designing beautiful and sustainable spaces that are appropriate to the African context. Ratang Bana AIDS Orphanage Playscape and Freedom Park in South Africa are also two project examples that are large community gathering spaces that are beautiful and functional.

As evidenced by these project examples, landscape architecture is developing in Sub-Saharan Africa, but there is still a need for the profession to expand. The primary issue is that there is lack of support and advocacy for the profession. According to the

survey results, there are several organizations, such as the International Federation of Landscape Architects and the Institute for Landscape Architecture in South Africa that are taking steps to define the role of landscape architecture in Africa. One of the reasons why this is a difficult task is because other design professions, such as architecture and engineering, have a stronger presence and support base in Sub-Saharan Africa. These professions are more widely understood and sought out by community members, organizations, and cities. While the work of architects and engineers is needed, so are the skills that a landscape architect can provide. A landscape architect's "skill sets have the ability to resolve a myriad of systemic environmental/cultural issues that are at the heart of development challenges in the developing world" (Humanity n.d.). Landscape architects have a role to play in the design of developing countries, particularly countries in Sub-Saharan Africa.

5.2 - Defining the Potential Role of Landscape Architecture in Sub-Saharan Africa

"It is essential for Landscape Architecture to assert itself as a discipline – playing a decisive role at natural, regional and city planning scales of inquiry; and at the urban design level of city landscape intervention" (Participants 2015). Landscape architecture has the potential to be a strong and viable discipline in Sub-Saharan Africa. One purpose of this study is to identify how landscape architects can have a stronger presence in Sub-Saharan Africa.

The profession of landscape architecture is often subject to misrepresentation. Landscape architecture is perceived as a "rich-man's profession", meaning that the services of a landscape architect are a luxury that only few can afford (Humanity n.d.).

This is certainly the case for landscape architecture in Sub-Saharan Africa. Local practitioners and academics have the ability to diminish this stereotype and advocate for their profession by working on projects that benefit all classes of people and that create functional, sustainable, and beautiful places.

Another issue is that landscape architecture students from Sub-Saharan Africa are going to the United State or Europe in order to obtain their degrees. If this continues landscape architects from Sub-Saharan Africa will not travel back to their home countries to practice, thus limiting the resources of local landscape architects. A possible solution to this problem, as per the survey results, is to expand the landscape architecture curriculum in order to entice students to attend African universities that have a landscape architecture program. The more landscape architects that live and/or work in Sub-Saharan Africa, the more voices there will be to support and expand this profession.

There should also be more collaboration between all of the design disciplines. Landscape architects, architects, engineers, and planners can work together in developing countries, such as those in Sub-Saharan Africa, to design and implement places and spaces that contribute to the health, safety, and welfare of the public realm. One way that this can be achieved is if landscape architects learn and build on the model that architects, engineers, and planners have implemented in developing countries. There is the potential for landscape architects and allied professions to become unified in the quest for creating a better built environment for all people.

One survey participant notes that there needs to be a focus on, “resolving basic human needs” before landscape architects can expand their role in Sub-Saharan Africa and that other design professions, “are better equipped to handle those” (Participants 2015). There are a number of misconceptions about landscape architecture, both abroad and in Sub-Saharan Africa. Landscapes not only benefit people by providing beauty, but they also serve as tools for environmental, social, economic, and mental enhancement. Landscape architects use the landscape as their medium to aid in this enhancement for the betterment of people. Beauty can be considered a basic human need that contributes to the mental and physical health of communities. Many design professions, including landscape architecture, work to create systems that address basic human needs by implementing elements of beauty and functionality. Landscape architects, in particular, can continually solve problems that affect people from multiple places and with different ethnic backgrounds. Professionals in landscape architecture can work with community members in order to understand their particular needs and incorporate those needs into the design of Sub-Saharan Africa.

It is essential for landscape architects practicing in Sub-Saharan Africa to utilize community design. In this case, community design is defined as participatory design that involves the input of community members who are directly affected by the design and implementation of a place or space where they reside. Community design opens a number of opportunities to professionals in Sub-Saharan Africa. This important practice can be used as a means of education about the profession and about the landscape systems of Africa. Landscape architects should understand and work with local resources so that they can design and implement spaces that are used and loved by

community members. Community design also empowers the community and helps them value their landscapes more. This important practice is just one of the operations that landscape architects can facilitate. Landscape architects can act as an, “advocate, strategist, and implementer” of gardens, parks, villages, and cities that illustrate the social, cultural, environmental, and physical character of that place (Participants 2015).

Working with allied professions and utilizing community design in order to design places that are functional, beautiful, and appropriate to the African context are some of the modes and operations that landscape architects can implement in Sub-Saharan Africa. These practices can be applied on a variety of scales, such as large scale infrastructure planning and small scale residential design. It is important that these practices be applied as a means to build upon and learn from existing projects and recognize the needs of any environment that warrants the services of a landscape architect. Landscape architecture is a broad profession that strives to design and construct environments that are aesthetically pleasing and that contribute to the health, safety, and welfare of the public. Landscape architecture has the potential to be a viable profession in countries in Sub-Saharan Africa by applying these modes and operations to create more beautiful, sustainable, and functional environments.

5.3 - Further Questions

This study addresses where the profession of landscape architecture currently is in Sub-Saharan Africa and speculates where it could go. The methods for this research involve the distribution and interpretation of a survey completed by design professionals who are involved in work done in Sub-Saharan Africa. The results from the survey

inform a number of conclusions in regard to the role of landscape architecture in Sub-Saharan Africa. However, there are further questions that this research did not fully answer or address and questions that the research provokes.

For example, should the modes and operations of a landscape architect change for the Sub-Saharan Africa context? According to the survey results, there is not a clear answer to this particular question. Community design should be utilized at the highest level in countries in Sub-Saharan Africa; however, this practice is implemented in many facets of landscape architecture in places across the globe. It is concluded that the basic principles of a landscape architect are the same, but the application of those principles is modified for the circumstances (Participants 2015). This question needs to be expanded upon and researched in further detail.

The modes and operations of a landscape architect in Sub-Saharan Africa are addressed in this research, but there is not a clear distinction between local landscape architects and landscape architects from other countries, such as the United States or Europe. What should the role of landscape architecture firms and practitioners from other countries be in Sub-Saharan Africa? This particular question is addressed in the survey responses, but is not directly asked. It is important that landscape architects from other countries clearly understand the social, cultural, environmental and physical context of the projects that they are designing and implementing. It is also essential that they involve the community in this process and derive a set of procedures for maintaining their projects. It is simply not enough to complete the construction of a design and then not see that it is properly maintained and used by community members. Landscape architects from countries other than those in Sub-Saharan Africa

should utilize local resources and the knowledge of community members to develop suitable design practices.

5.4 - Conclusion

Landscape architecture is a profession that is not widely known or accepted in many developing countries. Thus, the role of this profession is often difficult to interpret and define. While landscape architecture is an emerging profession in developing countries in Sub-Saharan Africa, there is a need to better understand its current and potential roles. This thesis attempts to understand why landscape architecture does not have a strong presence in Sub-Saharan Africa. The survey responses for this study interpret the present practices of landscape architects in Africa and the future development of the profession. In conclusion landscape architects can use community design and sustainable design practices in order to educate the public about the benefits of this profession. Landscape architects have a vital role to play in the design of the built environment in Sub-Saharan Africa.

APPENDIX A – SURVEY COVER LETTER

February 5, 2015

Dear participant,

My name is Mary Nell Patterson and I am a fourth year landscape architecture student at the University of Arkansas. I am currently in the process of developing my honors thesis, “The Role of Landscape Architecture in Sub-Saharan Africa.” I am interested in hearing your views on the development of landscape architecture in Sub-Saharan Africa and in other developing countries. I am asking professionals and students in the design field, to give feedback on this very important topic.

By completing this survey, you could help to inform what the current and future role(s) of landscape architects in Sub-Saharan Africa and in other developing countries could be. As a part of this survey, I am asking that you give your awareness and interest in the topic in order to inform my undergraduate thesis research.

The short survey should take no more than ten minutes to complete. Please click on the link below to go to the survey website.

Survey Link: http://uark.qualtrics.com/SE/?SID=SV_73S05ip4XsaK5A9

Your participation is voluntary and your responses are strictly anonymous. Completion and return of the survey is considered your implied consent to participate in this study. This research has been approved by the University of Arkansas’ Institutional Review Board (IRB). IRB is a committee that approves, monitors, and reviews research that involves human interaction. If you have any concerns regarding the nature of this research, please email irb@uark.edu or call 479-575-2208.

Please read the survey carefully, and complete it clearly and honestly. Please complete the survey by 5:00 P.M. on March 13, 2015. I appreciate your time and consideration in completing this survey. It is because of design students and professionals like you that I can provide information on the current and future role(s) of landscape architects in Sub-Saharan Africa.

Thank you for your time and effort.

Sincerely,

Mary Nell Patterson

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IRB #15-02-493

Approved: 3/03/2015

Expires: 03/02/201

APPENDIX B –SURVEY QUESTIONS AND RESULTS

Section 1: Questions regarding occupation and role of survey participants

1. What is your occupation/discipline? (Select all that apply)

#	Answer		Response	%
1	Student		0	0%
2	Landscape Architect		18	67%
3	Architect		9	33%
4	Engineer		0	0%
5	Planner		4	15%
6	Other (Please specify):		5	19%

Statistic	Value
Min Value	2
Max Value	6
Total Responses	27

2. Do you work for or are you involved with (Select all that apply):

#	Answer		Response	%
1	A University class		16	59%
2	Research		12	44%
3	Private firm or company		17	63%
4	Independently		9	33%
5	A Non-Governmental Organization		6	22%
6	Other (Please specify):		1	4%

Statistic	Value
Min Value	1
Max Value	6
Total Responses	27

3. Have you traveled to Sub-Saharan Africa?

#	Answer		Response	%
1	Yes		24	89%
2	No		3	11%
	Total		27	100%

Statistic	Value
Min Value	1
Max Value	2
Mean	1.11
Variance	0.10
Standard Deviation	0.32
Total Responses	27

4. Do you or have you lived in Sub-Saharan Africa?

#	Answer		Response	%
1	Yes		18	67%
2	No		9	33%
	Total		27	100%

Statistic	Value
Min Value	1
Max Value	2
Mean	1.33
Variance	0.23
Standard Deviation	0.48
Total Responses	27

5. Have you been involved in work conducted in Sub-Saharan Africa? If yes, what is the nature of the work that you have been involved in or are currently involved in?

#	Answer		Response	%
1	Yes (Please specify):		23	85%
2	No		4	15%
	Total		27	100%

Yes (Please specify):
Education / Architecture Design
Architecture
Planning, design & implementation of public open spaces.
All aspects of professional landscape architectural practice within South Africa
design, construction and maintenance of various landscape projects
Landscape consultancy
Public Parks
Landscape architecture
capacity building, external reviewer at African university
Landscape architecture research, design, and community design assistance
CONCEPTUAL MASTER PLAN FOR KIGALI, RWANDA 2004-'08, KONZA TECHNOLOGICAL CITY MASTER PLAN, KENYA
academia/practice
I live and work in South Africa
architecture
IFLA Africa
Developing Community Parks, Tourism Related Infrastructure
many large projects
I take students to South Africa to build playgrounds and food gardens for AIDS orphanages
Landscape Architecture
strategic planning and official organizations
Protected Area Planning, Landscape Architecture, architecture, Ecotourism Planning
lecturing architecture at uct
Landscape Architecture

Statistic	Value
Min Value	1
Max Value	2
Mean	1.15
Variance	0.13
Standard Deviation	0.36
Total Responses	27

6. Have you worked in developing countries outside of Sub-Saharan Africa? If yes, where?

#	Answer	Response	%
1	Yes (Please specify):	15	56%
2	No	12	44%
	Total	27	100%

Yes (Please specify):
Turkey
South Africa
Middle East; Asia; China
Malawi my home
Botswana, Namibia, Zambia
Middle east, Mauritius
south America and asia
Egypt, China, Vietnam, Jordan, Lebanon, India, Pakistan, Indonesia,
INDONESIA, MALASIA, PHILIPPINES, KOREA, JAPAN, MEXICO,SOUTH AFRICA, CHINA,JAPAN
asia
Italy
Morocco
France - Spain - Morocco
in over 30 countries around the world. Too many to mention here
Egypt,

Statistic	Value
Min Value	1
Max Value	2
Mean	1.44
Variance	0.26
Standard Deviation	0.51
Total Responses	27

Section 2: Questions regarding the profession of landscape architecture and its current role in Sub-Saharan Africa

7. What is your knowledge of the profession of landscape architecture?

#	Answer	Response	%
1	Very knowledgeable	15	63%
2	Somewhat knowledgeable	9	38%
3	Undecided	0	0%
4	A little knowledgeable	0	0%
5	Not at all knowledgeable	0	0%
	Total	24	100%

Statistic	Value
Min Value	1
Max Value	2
Mean	1.38
Variance	0.24
Standard Deviation	0.49
Total Responses	24

8. Please provide a definition of what a landscape architect does. If you do not know, please say so and try to speculate.

Text Response
landscape architects are accredited professionals who plan and implement land-shaping projects. These range in scale from large infrastructural projects that intersect urban and regional planning to smaller areas like residential gardens and pocket parks. Depending on the project and to varying degrees, projects involve alterations of topography, soils, drainage, surfaces, and horticultural and built content.
Environmental Stewards and Designers of the built environment for well-being of society
Structuring new and existing landscapes
A landscape architects plans & designs public as well as private open spaces in such a way that both human and environmental needs are addressed
Landscape Architects are responsible for the analysis, planning, design, documentation and detailing of out-door spaces, particularly those within the public realm, including parks, plazas, streets, sports facilities, etc. Drawing from architecture, spatial planning, ecology, environmental management, geography, biology and art, to ensure the best fit between human need and physical carrying capacity, towards resource efficiency and on-going sustainability. We are also involved in the procurement of contractors for implementation, supervision and quality control of construction, and environmental auditing and reporting.
Plans, designs, manages and maintains all aspects of the external environment both new and existing
landscape architects are involved with planning and designing and creating usable outdoor spaces which must be ecologically responsive in infrastructure development to prevent environmental degradation.

Design various spaces from small gardens, small public squares to malls, stadia, parks, etc and then supervise construction
design of external spaces
He/she designs outdoor spaces and, on larger scales, undertakes planning
in South Africa similar to US. Kenya and Nigeria are developing broadening roles as more students graduate. where schools do not exist LAs have a more limited role..
A landscape architect uses vegetation, infrastructure, art, technology, and cultural knowledge to address questions and challenges within the built and natural environment.
Planning and design of landscape systems with regard to aesthetics, performance, sustainability, and preservation.
PLANNING, DESIGN PLANT MATERIALS, IRRIGATION XERISCAPE,DRAINAGE
cross disciplinary design interventions at scale of terrain
stewardship of the land
design of landscape for functional and aesthetic ends
Protection and creation of landscapes, urban and rural, built and natural
design anything external to buildings, including rehabilitation of ecosystems, urban projects, housing estates, hotels, golf courses and structures
resolve the juxtaposition of issues between man and nature
Designs outdoor spaces
A alndscape Architect is supposed to be a steward of the land

Statistic	Value
Total Responses	22

9. What is your knowledge of landscape architecture in Sub-Saharan Africa?

#	Answer	Response	%
1	Very knowledgeable	10	40%
2	Somewhat knowledgeable	15	60%
3	Undecided	0	0%
4	A little knowledgeable	0	0%
5	Not at all knowledgeable	0	0%
	Total	25	100%

Statistic	Value
Min Value	1
Max Value	2
Mean	1.60
Variance	0.25
Standard Deviation	0.50
Total Responses	25

10. Does landscape architecture have a presence in Sub-Saharan Africa? Can you please elaborate on why you answered this way?

#	Answer	Response	%
1	Strongly agree (Please specify): 	9	36%
2	Agree (Please specify): 	8	32%
3	Undecided (Please specify): 	2	8%
4	Disagree (Please specify): 	4	16%
5	Strongly Disagree (Please specify): 	2	8%
	Total	25	100%

Strongly agree (Please specify):	Agree (Please specify):	Undecided (Please specify):	Disagree (Please specify):	Strongly Disagree (Please specify):
The landscape architecture profession has a long-established presence in South Africa. Certainly this is the country where professionalization has the most institutional support. To some extent this may also be the case in Kenya. However, to obtain professional credentials most African landscape architects have to study at universities outside the region, mainly in Europe and the US. African universities include landscape design training under other departmental rubrics such as horticulture and urban planning. Dating back to colonialism non-Sub-Saharan Africans have been active in huge and small projects. Over the past two decades numerous landscape	Depends on what you mean by "have a presence". If you mean, is there a need for it- absolutely. Do the public and authorities realise this: very seldom. The pressure on development and the building of infrastructure is so great that the effect it has on environment (including the social environment) is not considered. If you mean by "have a presence", is the discipline known: then no; very few people have hear of it and even less know what it is about.	Yes and No. Yes because the professionals in the "built" industry appreciate the significance of the field. BUT, the government, the general public and the municipalities dont value landscape architecture in Southern Africa.	Existis in many instances as a "design" field, but not related to stewardship. Most people think landscape architects merely plant flowers.	very limited awareness of what we do

architects and students have come to Sub-Saharan Africa to do projects, many of them pro bono.				
specifically within South Africa, when it is a formalized profession, established by the Landscape Architectural Professionals Act, (Act 45 of 2000); but less so in our neighbouring countries, where there are far fewer practitioners, and less institutional support.	but limited due to their low numbers. South Africa is well developed.	it has a presence in the local cultural landscapes, not in the new ones	Not generally considered in developments (except where required by statutory bodies)	landscape architecture does not have a presence in sub-Saharan Africa because the field is comprised of predominantly white westerners who have no connection to sub-Saharan Africa. Also, some of the greatest challenges stand to take place in rural areas, this is not a financially feasible condition for landscape architects to practice. Essentially, the cultural, economic, and geographic barriers are too great at the moment. I also believe there is simply a lack of concern or understanding around how to bridge the skills of landscape architecture to the more complex global challenges that are faced in sub-Saharan Africa.
It may be in a completely different manner from the majority of the western world BUT it remains a landscape and an environment that needs to be managed and maintained in a manner suitable for the peoples and communities of these countries	South Africa			
the environment has been degraded so much that it is affecting survival and livelihood and landscape architecture will help with restoration depending on approach	Yes, but underdeveloped			
There are numerous well-established practices in South Africa, although the profession has potential for growth and is not well utilised on a public level	Landscape architecture is not a recognised profession in many African countries. Even in those where it is recognised (South Africa, Kenya, Nigeria, Malawi) it often falls under the umbrella of architecture in general. Landscape architecture is often undertaken by non landscape architects (planners, architects, engineers....)			
ECOLOGY, WATER, DRAINAGE, FOOD SECURITY, URBAN LANDSCAPE DESIGN	Africa Council for Landscape Architects, profession's footprint is growing throughout countries. Very strong in			

	South Africa, Nigeria, Kenya,			
Very strong presence in South Africa				
In Southern Africa, Kenya to a lessor degree and Nigeria to a lessor degree				
Landscape Architeture started in Sub Saharan africa millions of years ago way before any european or asian Landscape design! It has been present since the first humans!				

Statistic	Value
Min Value	1
Max Value	5
Mean	2.28
Variance	1.79
Standard Deviation	1.34
Total Responses	25

11. What is your knowledge of other professional occupations such as architecture, engineering, and planning in Sub-Saharan Africa?

#	Answer	Response	%
1	Very knowledgeable	11	44%
2	Somewhat knowledgeable	13	52%
3	Undecided	1	4%
4	A little knowledgeable	0	0%
5	Not at all knowledgeable	0	0%
	Total	25	100%

Statistic	Value
Min Value	1
Max Value	3
Mean	1.60
Variance	0.33
Standard Deviation	0.58
Total Responses	25

12. Do other professional occupations such as architecture, engineering, and planning have a presence in Sub-Saharan Africa?

#	Answer		Response	%
1	Strongly agree		16	64%
2	Agree		9	36%
3	Undecided		0	0%
4	Disagree		0	0%
5	Strongly Disagree		0	0%
	Total		25	100%

Statistic	Value
Min Value	1
Max Value	2
Mean	1.36
Variance	0.24
Standard Deviation	0.49
Total Responses	25

13. Do other professional occupations such as architecture, engineering, and planning have a stronger presence than the profession of landscape architecture in Sub-Saharan Africa? Can you please elaborate on why you answered this way?

#	Answer		Response	%
1	Strongly agree (Please specify):		20	80%
2	Agree (Please specify):		5	20%
3	Undecided (Please specify):		0	0%
4	Disagree (Please specify):		0	0%
5	Strongly Disagree (Please specify):		0	0%
	Total		25	100%

Strongly agree (Please specify):	Agree (Please specify):	Undecided (Please specify):	Disagree (Please specify):	Strongly Disagree (Please specify):
These fields are more widespread in the curricula of African universities. Their	Generally projects over a threshold size			

specializations also tend to be seen as more essential to the (sometimes mixed blessings of) modernization and development.	require the appointment of registered professionals			
Engineering is most prevalent, due to its long association with colonialism and military. Architecture and planning are less so, but certainly more recognised than landscape architecture as their products are more visible	natural environments = relatively intact / lack of disciplinary knowledge / restricted financial means			
Especially architecture and engineering: both professions can show physical development. Landscape Architecture is often about linking, connecting, providing a safe public environment, providing a comfortable public environment: this is so subtle that our work is seldom noticed.	less established professionally than the others			
more long-established and better understood professions than Landscape Architecture				
Because even in the western world people do not properly understand what the LA profession covers - Africa the understanding is even less				
in sub_saharan Africa those professions are like traditional and indeed looked at more important than landscape architecture which is just looked at as a luxury and fit for the affluent				
First of all they have a governing body, they have a presence in the government, they have been there longer than Landscape Architecture in the Southern Africa hence even the public has been exposed to their presence...				
Landscape Architecture is basically limited to Nigeria, South Africa, Mozambique and Kenya the other built environment professionals are involved everywhere				
Other professions are better established, perhaps because longer established and perhaps because landscape architecture has not been viewed as vital or a priority				
greater numbers and older professions.				
they have more defined professions that are easier to understand and implement. they've also taken more initiative.				
Developing countries focus money and effort on basic needs - infrastructure, institutional buildings, etc - unfortunately land arch is perceived as and unnecessary expense.				
DESIGN IS CRUTIAL TO AFRICA' FUTURE				
Landscape architecture is not a recognised profession in most African countries				

Due to the long standing presence of these professions, also large scale infrastructure development				
the profession of landscape architectur is not widely known outside of South Africa				
Their profession is better established				
landscape in still not valorized				
Just like in the USA or England, landscape Architecture is a newer profession.				

Statistic	Value
Min Value	1
Max Value	2
Mean	1.20
Variance	0.17
Standard Deviation	0.41
Total Responses	25

Section 3: Questions regarding the potential role of landscape architecture in Sub-Saharan Africa

14. What would say are the modes and operations of a landscape architect?

Text Response
I don't know what you mean.
Advocacy, education, and community relations
Design, detailing, specification and oversight
If you mean scope of work: depends on the type of project. In some cases it is about siting buildings & infrastructure; in other it is about linking elements and creating a safe and comfortable space, in other instances it is about community facilitation and communication; and in still other projects you focus on detail design and finishes. The scope is very varied.
Academic (teaching, research, reporting) and Professional - planing, design, detailing; Intervention, implementation, Private and Public sector
Everything and anything in the external environment
Platform and support from the government thus the market from the public as well
not sure what you mean by modes and operations
Design, documentation and supervision
somewhat traditional lilke opur BLA grads
to act as advocate, strategist, and implementer of
In developing countries roles are best focused on planning aspects of the profession.
WORK WITH LOCAL RESOURCES
professional and community based
can meet cores roles of landscape architecture - see previous definition

in the main professional consultancy
Don't understand the question. What is a mode and an operation in this context?
professional design services
working with people to understand their needs; looking at the land to understand its characteristics and abilities; exploring alternatives through the design process to find and facilitate mutually beneficial relationships
Consultant in the design of outdoor spaces

Statistic	Value
Total Responses	20

15. Should the modes and operations of landscape architecture be modified for developing countries? If you answered "strongly agree" or "agree", please specify how you think the modes and operations should be modified.

#	Answer		Response	%
1	Strongly agree (Please specify):		7	32%
2	Agree (Please specify):		7	32%
3	Neither Agree nor Disagree		5	23%
4	Disagree		3	14%
5	Strongly Disagree		0	0%
	Total		22	100%

Strongly agree (Please specify):	Agree (Please specify):
<p>Even though i don't know what specifically you mean by these terms, it is important for all practitioners-- of anything-- to take careful stock of where they are, gain indepth knowledge of local customs, values, aesthetics, and needs. The very idea that somehow things are different in this regard because an area has been labeled "developing" is scary. Implied in your question is the idea that outsiders-- again to anywhere/from anywhere-- might consider it OK to just dive in and do, without profound local enagement. The idea of "development" furthered by outsiders is basically colonialism by another name.</p>	<p>Look more at how people relate to the land/environment, which is drastically different from Europe, North America and Australia</p>
<p>Everything a landscape architect does must be site specific and relevant to the people and landscapes involved</p>	<p>When it comes to the practicalities of a project (especially with implementation), it would be helpful if the scope could be adjusted. During the inception & design phase of a project a lot of community facilitation is requierd to get their buy-in into the project (without which the project would fail). The current contract documentation used was written for building works and</p>

	not landscape works and has serious complications and flaws. Community facilitation during the implementation phase is once again very important.
landscape architecture isn't just about site design, it's about connecting cultural, ecological, and economic systems in a way that can benefit people and the environment. we connect ideas, objects, and systems in a way that architects, engineers and planners cannot.	possibly - perhaps more close association with urban design, civil engineering and architecture - at design level; and city and regional planners at the strategic level
LEARN LOCAL ASSETS	need to be able to work with disadvantaged communities and basic environmental problems.
more grass-rooted w inclusion of indigenous and development of local approaches / resistance to western - formalist 'best practices'	the basics are the same (fundamentals and principles) the application is, of course, modified to the circumstances
There needs to a lot more community empowerment through the planning stages. More involvement of locals.	there is room for both normative and less traditional practice.
	it needs innovation, a specific one for Africa

Statistic	Value
Min Value	1
Max Value	4
Mean	2.18
Variance	1.11
Standard Deviation	1.05
Total Responses	22

16. Do you know examples of landscape architecture projects and/or practitioners in Sub-Saharan Africa and/or in the developing world? If yes, please list them.

#	Answer	Response	%
1	Yes (Please specify):	23	100%
2	No	0	0%
	Total	23	100%

Yes (Please specify):
Over the years i have seen many and been sent plans to look over a few times. Right now my head and memory are locked on other stuff. I don't have time to go back through my files. I have seen several through the Harvard GSD, Columbia, and U of Amesterdam. I have also researched landscape design (not necessarily credentialled) such as Geoffrey jellicoe's planning for Lusaka, and other colonial city planning projects
Sarah Prinsloo (UG), Mary Karooma (UG), Graham Young (SA)
Refer to
Many in South Africa i.e. Tarna Klitzner Landscape Architects, Michelle Robertson Swift from Urbanscapes, Megan Anderson from MALA; Anton Comrie and Stuart Glen from Green Inc, Johan Barnard and Graham Young from Newtown Landscape Architects, Anthony Wain from Planning Partners

too numerous to list within South Africa - refer to www.ILASA.co.za or www.SACLAP.org.za
Too many to list
too many
Hundreds, too many to list here especially in South Africa and Nigeria
Refer to ILASA
will send more info later
kounkouey design initiative's work,
They are primarily focused on the design of "compounds" for expats and certain hospitality projects.
ARTHUR ADEYA, NAIROBI, HITESCH META, FL , EMMANUEL DIDIER, FT. COLLINS, CO
nelson mandela museums in qunu and mvesu / patrick watson's garden / simonstown cemetry memorial garden [all in S Africa]
many in south africa. some in other countries relating to land resources and community management
eg, landscape of the apartheid museum in johannesburg, cape town citc council public space upgrades, vpuuu in kayelitsha
IFLA Africa can give you a list of practising members
Habitat Landscape Architects, Lehae Community Park in Johannesburg, Dinokeng Selfdrive Route, Inanda Greens,
hundreds in South Africa
Ratang Bana AIDS Orphanage; Kei Mouth Public Schools
too many to list. My firm alone has over 30 of them!

Statistic	Value
Min Value	1
Max Value	1
Mean	1.00
Variance	0.00
Standard Deviation	0.00
Total Responses	23

17. What are the benefits of developing landscape architecture in developing countries?

Text Response
Local people know their needs and audiences best. Certainly, there should be be greater encouragement and support for African universities to expand their curricula.
Better awareness of the relationship between contextual issues and designed/built environments. Better ability to build an understanding of how to manage environments for future generations
Minimisation of habitat and species loss
Better planning, coordination and sustainable (environmentally and socially) design
Landscape Architects have a huge role to play in developing countries - especially within teh informal settlements. In fact, this is often where we have opportunities to facilitate the design of market squares, sports facilities, public facilities and recreational amenities - to eth benefit of whole communities who participate in the design process.
Where people and communities exist, there is a role for the the profession of landscape architecture
Protect the environment, be sustainable, create well planned spaces, etc

Landscape architecture should play a strong role in designing for social upliftment
improved environmental design, planning and management
developing countries face tremendously complex economically and socially driven challenges that impact the built and natural environment. Land architects better understand how the people and their surrounding environments are connected - better than any other profession. We can use this skill to address larger global challenges, help developing countries, and change the focus of the profession.
Land architects have a unique planning perspective that could be employed to make communities work with the land in a more resilient fashion.
SOCIAL, ECONOMIC, CULTURAL, BETTER FOOD SUPPLY, HEALTH ECOLOGICAL PRESERVATION, TOURISM, AESTHETICS
preservation and advancement of developing local practice and alternative [to western] cultural representations
many relating to stewardship of the land
well designed environments improve quality of life the world over
Improving the quality of our environments, protecting landscapes and improving degraded ones
Seamless and sustainable integration of the built environment.
The same as anywhere else - creating useable and meaningful projects and outdoor spaces
this is where we can do the most good as developing countries strive to create a balance between their cultural needs and the natural world they inhabit
Add value to infrastructural and public space projects
to protect the environment.

Statistic	Value
Total Responses	21

18. What are the specific benefits of developing landscape architecture in Sub-Saharan Africa? Are there specific needs of landscape architectural operations and methods?

Text Response
African landscape architects are needed for the full array of kinds of work that landscape architects do in the so-called "developed" countries.
Better awareness of the relationship between contextual issues and designed/built environments. Better ability to build an understanding of how to manage environments for future generations
Minimisation of habitat and species loss
community facilitation, community involvement, transparent decision making
Sustainable settlement design, job creation, skills transfer, environmental rehabilitation, resource efficiency, sense of place enhancement.
Sub-Saharan Africa is no different in terms of people and landscape than anywhere else in the world. How a landscape architect operates and how the 'intervention' is carried out will depend on need and country/site-specific expectations/aspirations
Sub-Saharan Africa is an arid area, soils are poor, no reliable rainfall, not many contemporary hard landscaping items, most of the irrigation items are imported, etc
As above. No specific needs.
see my journal article
Only planning at this point. The culture and society will need to evolve significantly before "design" aspects of the profession are warranted.

SAME AS ABOVE
sustainable practice / local economic and community development / non-western knowledge production
as above
sub saharan africa is a part of the earth, the above holds true.
As above
Acknowledgement of Landscape Architects from governments, principle agents, developers and leaders as principle role players in all planning and development
to help design spaces for people, often ignored when developing new cities in particular
working to engage and educate the public about their role in maintaining balance wight heir natural world
It adds value and quality of life to urban environments

Statistic	Value
Total Responses	19

Section 4: Questions regarding the sex, ethnicity, age, and education level of the survey participants

19. What is your sex?

#	Answer	Response	%
1	Male	17	71%
2	Female	7	29%
	Total	24	100%

Statistic	Value
Min Value	1
Max Value	2
Mean	1.29
Variance	0.22
Standard Deviation	0.46
Total Responses	24

20. What is your age?

Text Response
65
44
53
33
37
57

32
47
42
74
32
52
77
60
59
48
52
37
45
57
62
42
55

Statistic	Value
Total Responses	23

21. What is your ethnic background? (Check all that apply):

#	Answer	Response	%
1	Native American	0	0%
2	African American	0	0%
3	Asian	0	0%
4	Pacific Islander	1	4%
5	Caucasian	14	61%
6	Hispanic	0	0%
7	Other (Please specify):	10	43%

Other (Please specify):
African
Recent ancestry: (19th Century) Irish, Scottish, English; & distant (18th Century) ancestry: German, Bengali
British
African
African
white african

South African of European descent
South African
african
An Indian born in Kenya

Statistic	Value
Min Value	4
Max Value	7
Total Responses	23

22. What is your highest level of education you have completed?

#	Answer	Response	%
1	Did not complete high school	0	0%
2	High school or equivalent	0	0%
3	Some college education	0	0%
4	Technical or Associate degree	0	0%
5	Bachelor's degree	5	21%
6	Graduate degree	19	79%
	Total	24	100%

Statistic	Value
Min Value	5
Max Value	6
Mean	5.79
Variance	0.17
Standard Deviation	0.41
Total Responses	24

23. If you have any additional thoughts about any of the above topics or the survey itself, please share them here.

Text Response	
<p>Yes. US landscape architecture programs provide historical and cultural background for their students on virtually all other parts of the world where they may end up working. They learn mainly, however, through a Eurocentric lens. This is evident in this survey by the repeated use of "developing." Developing what? Become more like "us." Landscape architects are in grave danger of seeing themselves as people who can "help" Africans-- without knowing anything about indigenous Sub-Saharan African traditions and innovations in landscape design, dating back thousands of years. They are in danger of joining the legion of outsider 'experts' who arrogantly intervene in what they do not understand. There is also the danger that Sub-Saharan Africa is a place where practitioners can do showcase projects for their portfolios-- grounds of clinics, for example, that "quote" African design motifs and look Africanesque-- but show no deep engagement or collaboration has taken place. The attitude that one is a professional and thus knows better than local people is easy to fall into once one accepts the notion that "we" are developed and "they" are not. The region has many needs. It will be far easier to go in and do a project and leave than to work collaboratively for the long term. When residents have determined what THEY want, then landscape architects can help them realize their goals. I will be very suspicious about outsiders coming in and doing projects until they get as thorough an education in African landscape design history as they do in say, the English landscape garden.</p>	
<p>Landscape architects need to apply their skills to climate change adaptation</p>	
<p>It is essential for Landscape Architecture to assert itself as a strategic discipline - playing a decisive role at national, regional and city planning scales of inquiry; and at the urban design level of city landscape intervention. Landscape Architects ought to be appointed before architects and engineers on all scales of projects, to provide holistic site analysis and design criteria, and throughout all successive detail levels of design</p>	
<p>The landscape architectural profession is of equal (if not greater) importance to each and every built-environment profession no matter where one might be in the world. Only the scale, context and country specific details will change.</p>	
<p>I think your questions fall far short You can do a web search to find the projects in Africa, you should rather ask questions relating to why the profession is so undervalued on the continent, Africa is also regionally complex, Southern Africa is highly developed (in areas) while people in the north may never have heard of us, I hope it helps, good luck.</p>	
<p>You need an "African" category under the ethnic background question!</p>	
<p>good general survey, I will be in touch.</p>	
<p>It's a great topic to consider, and in my firm we see a growing interest in our services in those countries. But the focus needs to be on resolving basic human needs before land arch can really play a large role there. Other professions are better equipped to handle those (but a collaboration with a land arch during planning stages could create interesting opportunities.</p>	
<p>landscape architecture is exceptionally poorly conceptualised in both by practices and in schools of architecture in sub sthn africa / it has a dismal future</p>	
<p>Landscape architecture needs to be a recognised profession in Africa. Education programmes are sorely lacking, and where they do exist, they are often inadequate (South Africa being the main exception, and perhaps Nigeria and Kenya) Morocco has a programme but it is hopeless.</p>	
<p>Come and visit South Africa</p>	
<p>Landscape Architecture definitely needs to gain a hold in Sub-Saharan Africa ... although it is relative well established in South Africa</p>	
<p>Please contact me as i am one of few people that know about Landscape Architecture in sub-saharan african more than anyone out there. Am one day planning on writing a book!</p>	

Statistic	Value
Total Responses	13

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