Acta Universitatis Agriculturae Sueciae

Doctoral Thesis No. 2020:28
Faculty of Landscape Architecture, Horticulture and Crop Production Science

Rethinking Adequate Housing for Low-income Women of the Global South

Reflections on Women Initiated Housing Transformations to Masese Women Slum-Upgrading Housing Project, Jinja, Uganda

Eiman Ahmed Elwidaa

Rethinking Adequate Housing for Low-income Women of the Global South

Reflections on Women Initiated Housing Transformations to Masese Women Slum-Upgrading Housing Project, Jinja, Uganda

Eiman Ahmed Elwidaa

Faculty of Landscape Architecture, Horticulture and Crop Production
Department of Urban and Rural Development
Uppsala

Doctoral thesis
Swedish University of Agricultural Sciences
Uppsala 2020

Acta Universitatis Agriculturae Sueciae
2020:28

ISSN 1652-6880
ISBN (print version) 978-91-7760-574-4
ISBN (electronic version) 978-91-7760-575-1

Print: SLU Service/Repro, Uppsala 2020

Errata for
Rethinking Adequate Housing for the Low-income Women of the Global South

Reflections on Women Initiated Housing Transformations to Masese Women Slum-upgrading Housing Project, Jinja Uganda

by Eiman Ahmed Elwidaa

ISBN (print version) 978-91-7760-754-4 ISBN (electronic version) 978-91-7760-575-1
Acta Universitatis Agriculturae Sueciae 2020:28 Uppsala, 2020

Page 19	Location:	Introduction line 13
	Is now:	but by no means is it
	Should be:	but by no means it is
Page 20	Location:	Line 33
	Is now:	Goals (SDGs) of that Habitat III
	Should be:	Goals (SDGs) of the Habitat III
Page 33	Location:	Line 14
	Is now:	The GSS advocated for the equal partici-pation
	Should be:	The GSS advocated for the equal participation
Page 38	Location:	Line 7
	Is now:	Women of the family are expected to render
	Should be:	Women of the family are expected to surrender
Page 38	Location:	Line 16
	Is now:	only if she bore his children
	Should be:	only if they bore his children
Page 38	Location:	Line 16
	Is now:	Childless widows, on the other hand, are expected
	Should be:	A childless widow, on the other hand, is expected
Page 49	Location:	End of Line 12
	Is now:	Lack of integration into the low-income
	Should be:	Lack of integration of the low-income
Page 51	Location:	Line 36
	Is now:	(MoLH&UD, 2013:23).
	Should be:	(MoLH&UD, 2013:23) continued.
Page 57	Location:	Start of line 29
	Is now:	Only.
	Should be:	Mainly.
Page 63	Location:	Line 2
	Is now:	participation of MWSUHP in their
	Should be:	participation of MWSUHP women in their
Page 80	Location:	Line 6
	Is now:	Sanoff (2000:8) claims that
	Should be:	Sanoff (2000) claims that
Page 80	Location:	Line 39
	Is now:	better maintained environment
	Should be:	better maintained physical environment

Page 81	Location:	Line 21
	Is now:	involving them actively in the process)
	Should be:	involving them actively in the process)"
Page 81	Location:	Line 22
	Is now:	dominate the design system".
	Should be:	dominate the design system.
Page 85	Location:	Line 18
	Is now:	Habraken (2011)
	Should be:	Habraken (2011:X)
Page 95	Location:	Line 11
	Is now:	as illustrated in 17 above
	Should be:	as illustrated in Figure 17 above
Page 111 & 113	Location:	Lines 31 & 28 respectively
	Is now:	(Kopec, Sinclair & Matthes, 2012)
	Should be:	(Kopec, et al., 2012)
Page 114	Location:	Line 34
	Is now:	transformations the post-occupancy period
	Should be:	transformations at the post-occupancy period
Page 117	Location:	Line 3
	Is now:	Guion, Diehl, & McDonald, 2011
	Should be:	Guion, et al., 2011
Page 127	Location:	Line 14
	Is now:	They claim that they can afford
	Should be:	They claim that they can't afford
Page 128	Location:	Line 12
	Is now:	Three main stages: project introduction,
	Should be:	Three main phases: project introduction,
Page 131	Location:	Line 7
	Is now:	plots, surrounding his/her right
	Should be:	plots, surrendering his/her right
Page 136	Location:	Line 27
	Is now:	of is designers,
	Should be:	of its designers.
Page 149	Location:	Line 20
	Is now:	married women housing in cases of spousal
	Should be:	married women in cases of spousal
Page 149	Location:	Line 32
	Is now:	physical planning of and MWSUHP the design
	Should be:	physical planning of MWSUHP and the design
Page 163	Location:	Line 27
	Is now:	pf MWSUHP housing prototypes
	Should be:	of MWSUHP housing prototypes
Page 169	Location:	Last line
	Is now:	Attwood, L. (2010). *Gender and Housing.* Manchester and New York: Manchester University Press.
	Should be:	Attwood, L. (2010). *Gender and Housing in Soviet Russia: Private life in a public space.* Manchester and New York: Manchester University Press.

Rethinking Adequate Housing for Low-income Women of the Global South. Reflections on Women Initiated Housing Transformations to Masese Women Slum-Upgrading Housing Project, Jinja, Uganda

Abstract

The global discourse on low-income housing promotes participation to provide slum dwellers of the Global South with adequate housing. Despite acknowledged women's extra vulnerability to the substandard housing of slums, how their participation, or what design considerations support their housing adequacy, remains ambiguous. Case study methodology was used for the exploration of the research presented in this PhD thesis. Targeting women as its main beneficiaries, Masese Women Slum-Upgrading Housing Project (MWSUHP) was selected as the case for the research explorations at it represents the state of the art in providing adequate housing to women living in Ugandan slums. The research aims at describing, exploring and developing an understanding of the contribution of women's participation in MWSUHP housing processes, as well as identifying design considerations to support their adequate housing provision. Empirical evidence was gathered using combined methods of documents and drawings analysis, walk-throughs, interviews and focus group discussions.

The research identified the domination of the colonial ideologies, men's over representation, ad the gender blindness of the Ugandan low-income housing discourse. These factors contributed to the production of housing designs that promote gender stratification, segregation and subordination. The research results acknowledged Ugandan low-income women's substantial design knowledge to their housing adequacy and highlights the importance of interpreting housing designs in gender-related terms. To attain housing adequacy to the Ugandan low-income women, the research advocates for; i) including low-income women in their housing design processes, ii) increase women's representation in the Ugandan housing design discourses, iii) developing housing design ideologies that understand housing in gender related terms iv) developing housing designs that appreciate the Ugandan low-income women's socio-cultural contexts and lifestyles, respond to their productive, reproductive and community integration roles v) embracing women's intersectionality vi) considering flexibility, spontaneity, improvisation and incremental development in their housing designs.

This research contributes in filling the knowledge gap in the low-income housing discourse, with a focus on providing women living in the Ugandan slums with adequate housing.

Keywords: low-income women, slums, housing transformations, adequate housing, gendered space, women triple-roles women practical needs, women intersectionality

Author's address: Eiman Ahmed Elwidaa, SLU, Department of Urban and Rural Development, P.O. Box7012,750 07 Uppsala

To

Mother and Father

For

Inspiring and watching over me

To

Ola and Ali

For

Being a motivation and a blessing

Preface and acknowledgements

This research is triggered by my intersecting experiences as a practicing female architect, an architectural researcher/educator and as my home organiser as dictated to me by the patriarchal socio-cultural context of Sudan. Designing suitable homes is not only part of my professional training, but also an intrinsic part of my social responsibility as an architect. I long developed a conviction that among all building types the home is personal, as it represents its occupants' lifestyles and norms and thus by no means is only bricks and mortar. During my practice, I noted that women seem more articulate in identifying and expressing their housing needs that usually reflect first-hand experience with the daily activities practiced at home in comparison to men. Moreover, women clients become much engaged in their housing design, which in many cases a great contribution to the success of the designs I provided. This made me more appreciative to women's tacit housing designs knowledge and initiated my interest for including such knowledge to produce suitable housing designs, although I had no clear idea about how that can happen?

When I moved to live and practice architecture in Uganda, Ugandan women's showed the same attitudes towards their housing designs, despite their socio-cultural differences from Sudanese women. This further supported my intuitions to the gendered nature of housing designs. On the other hand, working as an architectural educator at Makerere, I noted gendered subjectivities in the way space was interpreted, related to and represented in the design proposals between male and female students. Reflectively, this opened another set of queries in my mind about the influences of the designer's gender on his/her proposed designs and how could that impact the living experience of the users of such buildings. These queries, I felt were pertinent to the home designs due to their personalised nature, and extra particular to women due to the recognised amount of time they spend at home. And while women who can afford an architectural service have the opportunity to argue for their interests in their home designs, what would be

the case for those who can't? And what is our social responsibility as architects in supporting low-income women convenient housing?

Memories of the appalling substandard housing conditions I saw during my masters fieldwork at the informal settlements of Khartoum, Sudan, blended with others I had observed in Kampala. The images of the notably busy women multi-tasking housework amid such challenging living environments were closely associated to those images in my mind. Ever since, I committed myself to use my privileges as an architect to support such women. Therefore, I couldn't wait to fulfil such a commitment when the opportunity to pursue my Ph.D. education was presented to me. I searched the literature to articulate the research problem and was appalled at the magnitude of the inadequate housing at the informal settlements especially in cities of the Global South. I was equally surprised at the amount of effort and resources spent to provide dwellers of the informal settlements with adequate housing, but still their substandard housing conditions persisted and their numbers continue to rise. It was extra alarming when I realised that such problems are extra acute in countries of sub-Sahara Africa that are expected to account for substantial percentage of the increase in the dwellers of the informal settlements in the coming two decades. I realised that despite the massive material on housing in informal settlements and the recognized extra vulnerabilities of women related to housing, there is no proportional efforts to address their marginalised position, or clear practical resolution to their provision with adequate housing. This made me more determined to contribute in making women's living experience at the informal settlements better. Contextualizing my literature survey to Uganda, I realised that others shared my concern that was manifested in the implementation of Masese Women Slum-Upgrading Housing Project (MWSUHP) in Jinja city. The project was expected to pose as role model in providing women of the informal settlements with adequate housing to encourage its replicability in other cities of Uganda. This motivated my research to contribute in making such an ambitious goal a reality.

Therefore, my gratitude first of all goes to the respondents I interviewed at the study area of MWSUHP who opened their hearts and homes to me and shared their lived experiences and valuable time. I salute their courage and achievements and appreciate their contributions without which I would not be able to do this work.

I pledge my gratitude to Makerere University for giving my access to develop my career, which wouldn't have happened without the support of Professor Barnabas Nawangwe who nominated me to receive the sponsorship of the Swedish International Development Cooperation Agency (Sida) and its department for research cooperation (SAREC). Thank you Sida/SAREC for generously sponsoring this PhD research.

My greatest gratitude goes to my supervisor Associate Professor: Madeleine Granvik for her diligent academic guidance, unsparing energy, outstanding

commitment and remarkable mentorship to my research. She held my hand during a very difficult time in my life and without her support, finishing this PhD would have been a challenge. To you Madeleine, I am forever grateful.

My gratitude as well goes to my former academic supervisors, Professors: Rolf Johansson and Seema-Arora Jonsson, Associate professor: Stephen Mukiibi, Assistant Professor: Burcu Yigit Turan and Dr. Assumpta Nnaggenda-Musana for their valuable guidance, sharing of intellectual discussions, comments and many other countless contributions. I extend special gratitude to Professor Rolf Johansson for his support and guidance during the time of his supervision to my work, for his support in academic and administrative issues and his patient guidance. To all of my former and current supervisors I say, thank you. Your contribution to direct this research work has been vital. In this regard, I would like to acknowledge the support of the late Professor Dick Urban Vestbro, whose insights on gender issues in housing were a source of inspiration to my research.

I am extra indebted to Professor Nawangwe for his continuous support to my career goals including this research, even after I left Makerere University. I am sure under his leadership as a Vice-chancellor, Makerere University will continue to thrive. I greatly appreciate the coordination efforts of Professor Inga Britt Werner (KTH -Sweden) and Professor Mackay Okure (CEDAT-Makerere) during their terms of office as Sida/SAREC coordinators.

I am further grateful for the support of the staff members at both SLU and Makerere institutions. At SLU, I would like to pledge special thanks to Tuula Eriksson who spared no effort to resolve much of my challenges when I was in Sweden that contributed remarkably to the progress and accomplishment of this research. My gratitude is also extended to Associate professor Kristina Marquard, the former director for PhD Studies, for her commendable support to PhD students in general and me particularly. She pays great efforts to resolve challenges for the PhD students in professional yet compassionate ways. Moreover, I pledge special thanks to the technical support of Halim David. His dedication, commitment and prompt professional response despite his very busy schedule, is spectacular and very much appreciated. Gratitude are also extended to Per-Arne Klasson, the saver and problem solver, without his support doing research at SLU would have been very challenging. My thanks also go to Marlén Tälleklint for her prompt communication and dedication in making sure that my academic records are in order. I am very much grateful to Anni Hoffrén for her professionalism, dedication, prompt response and going the extra mile to assist making this work presentable.

At Makerere, I pledge special gratitude to Associate Professor David Owiny, who from his position as the deputy director for training at the Directorate of Research and Graduate Studies continues to reflect great professionalism and commitment to support PhD students including myself. Thank you Professor

Owiny, Makerere University is blessed to have leaders as you. I would also like to thank Professor: Henry Alinaitwe and Dr. Musinguzi Moses for their support to the progress of my work.

Special thanks are extended to all of my friends, colleagues, fellow (former) PhD students at the Department of Urban and Rural Development at SLU and College of Engineering, Design, Arts and Technology CEDAT at Makerere University, who might not care to be referred to by name, but to whom I am deeply indebted for their support in the reading, discussions, debate, wiping the tears and sharing the laughter.

I extend my great appreciation to Nsereko Magidu for providing me with valuable information, scares documents, contact names, not to mention his great facilitation at field work on MWSUHP. I also owe special thanks to Bakulu Ismail and Julie Hope for their instrumental support with the field work and Kintu Philly and Musinguzi Richard for their assistance with the animations and graphics.

Finally, no words can express my gratitude and appreciation to my immediate and broader family. I have been fortunate to have their sustaining support, prayers and encouragements. They have been the reason for my persistence against all odds. Of all people I want to thank my children for their strength and patience as we missed out on sharing indispensable and valuable moments during my study trips outside Uganda. It is those sacrifices we all made that pushed me to continue when giving up seemed to be the only option. My beloved children, you have been part of this struggle and I will always be grateful for your strength and support. I love you both to the moon and back!

In this instance, I can't thank enough my lady-friends in Uganda, who stepped-in and replaced the family I left behind in Sudan. Their encouragement, support to my children during my absence was indispensably valuable.

Last but not least, I want to take the moment to thank my mother for her contribution to my successes in life. Losing my father at an early age, she has been both parents. She not only took good care of me and my siblings, she showed me how to take good care of myself. She has always been a role model with her wisdom, strength, resilience and poise. Her persistence, drive and commitment to our success has always been behind my drive to do the same for my children and what kept me going when the going was tough. I will forever be proud to be her daughter and I hope to continue to do what makes her proud to be my mother.

Youma! Not being able to celebrate this achievement with you cuts through my hurt, but the only solace is that I am sure you are watching over me from your place in heaven. You will always be missed and forever be remembered. May God Rest Your Soul in Peace.

Contents

List of publications

This thesis is based on the work contained in the following publications, referred to by Roman numerals in the text:

I Nnaggenda-Musana, A.*, Elwidaa, E. A. & Nawangwe, B. (2014). User Participation in the Eyes of An Architect and Gendered spaces. *The International Journal of Techno Science and Development*, 1 (1).

II Elwidaa, E. A.* & Nnaggenda-Musana, A. (2015). Boundary-less living. *The International Journal of Technoscience and Development*, 2 (1).

III Elwidaa, E. A. (2017). Women and Low-income Housing Transformation in Uganda. *Open House International Journal*, 42 (1), pp. 35-43.

IV Nnaggenda-Musana, A. & Elwidaa, E. A. (2018). Women as Retrofits in Modernist Low-Income Housing. In: Lähdesmäki, T. (Ed.) *Time and Transformation in Architecture*. Leiden & Boston: Brill Publication, pp. 130-148.

* Corresponding author.

My contribution to the publications included in this thesis was as follows:

I I developed the research problem and& objectives, contributed most of the empirical work and its discussion, and wrote the text. Nnaggenda-Musana contributed part of its empirical work and assisted with the conceptual framework and editing of the text. Nawangwe, B. contributed to the structure and presentation of the article.

II I developed research design of the article, its empirical work, discussion and writing of the text. Nnaggenda-Musana assisted with the discussion of the findings and editing of the text.

III I am the sole author for this article.

IV I contributed with the research design, its argumentation, most of the empirical work and its discussion and writing of the text. Nnaggenda-Musana contributed part of the empirical work, assisted with the research argumentation and most writing of the text.

List of tables

List of figures

1 Introduction

This research is concerned with providing adequate housing to women living in the informal settlements within cities of the Global South. The study explores on processes and procedures for the participation of the Uganda low-income women that contributes to their housing adequacy. Moreover, the research is concerned with identifying design considerations that support their housing adequacy. For the purpose, this chapter provides a brief contextual background to the international discourse on providing dwellers of the informal settlements of the Global South with adequate housing, narrowing down the scope to focus on women. It uses the case of Masese Women Slum-upgrading Housing Project (MWSUHP) in Uganda to support its explorations. While the use of the term 'slum' is justifiably detested, its use in this research was dictated by its declaration on the title of the case used for the study's explorations. Not to mention its extensive use in most research literature sources, but by no means is it used intending to degrade.

To situate the research problem, this chapter provides a brief overview to the Ugandan housing policy direction and approaches towards providing slum dwellers with adequate housing, mainly focusing on women. The research aims, questions, methodological approach, outline of its structure and its delimitations are also included in this chapter.

1.1 Urbanization and slum dwellers

Cities of the world are continuously faced with the challenges of urbanization that are reaching an "unprecedented era of increasing" (UN-Habitat, 2017b: iv). However, it is acknowledged that urbanisation places extra challenges on cities of the Global South because they are less equipped to handle their challenges compared to cities of the Global North (Lupala, 2002). Cities of the Global South account for 90% of the universal urban growth (UN-Habitat, 2015 & 2014b).

The World Cities Report of 2016 stated that the highest urban "growth rate between 1995 and 2015 was clearly in the least developed parts of the world with Africa being the most rapidly urbanizing" (UN-Habitat, 2016:7). In the coming two decades, urbanization is expected to double in the poorest regions of Sub-Saharan Africa and South Asia (UN-Habitat, 2014b), with the first registering the highest annual urban growth among countries of the Global South in the last two decades (UN-Habitat, 2017a). Thus, urbanization presents a serious concern to countries of the Global South especially Sub-Saharan Africa.

Urbanisation in the Global South caused the emergence of slums as a dominant and special type of settlements (UN-Habitat, 2014b). Slums are described as "a heavily populated urban area that is characterised by substandard housing and squalor" (UN-Habitat, 2003:8). In 2001 slum dwellers accounted for 32% of the world's urban population (UN-Habitat, 2003). Despite continuous efforts to resolve slum challenges, still in 2016 it was reported that one out of eight people were estimated to live in slums (UN-Habitat, 2015/16), with cities of the Global South accounting for the majority of the world's slum dwellers (UN-Habitat, 2017b). While the percentage of the Global South's urban population living in slums has declined over the years from 46.2% in 1990 to 29.7% in 2014, the total numbers of slum dwellers continue to grow (UN-Habitat, 2016). In 2014, fifty five percent of the Sub-Saharan African urban population was living in slums. In 2018, Sub-Saharan Africa accounted for 23% of the people living in slums, coming second after the Eastern and South-Eastern Asia that accounts for 35.8% of the total number of slum dwellers (United Nations, 2018). With the region's high urban growth rate, this percentage is expected to increase in the coming years (Saghir & Santoro, 2018).

The United Nations Centre for Human Settlements (UN-Habitat) diligently addresses and pays much effort to put in place global frameworks and guidelines for the provision of sustainable human settlements and adequate housing for all, irrespective of people's age, gender, class or ethnicity. Improving the lives of the slum dwellers and providing them with adequate housing has continuously remained a genuine and central concern of the consecutive Millennium Developmental Goals (MDGs), including the latest Sustainable Development Goals (SDGs) of that Habitat III that was held in Quito, Ecuador in 2016. Many countries of the Global South including Uganda, launched slum upgrading programmes to provide slum dwellers with appropriate housing. But with the current trends in Sub-Saharan urban growth rates, slum settlements seem to "substantially exceed attempts at urban upgrading" (Saghir & Santoro, 2018:4).

However, participation has unceasingly been endorsed as an effective approach for the provision of adequate housing, irrespective of gender, age, class or race. Such advocacy extended into the framework of the Habitat III

Conference in Quito, Ecuador in 2016, which is considered to be among the most inclusive and innovative United Nations conferences that are committed to "make cities and human settlements inclusive, safe, resilient and sustainable" (UN-Habitat, 2017b:4). Nevertheless, there was no specific direction for the processes or procedures for the participation of the slum dwellers to support their housing adequacy.

The market-oriented approach to housing and the strained budget of the states of the Global South caused participation of slum dwellers to mainly be relegated by providing the labour force for their housing construction to support the housing projects' economic feasibility (Berrisford, Kihato, & Klug, 2003). Nevertheless, there is no clear evidence as to how such a model of participation supports housing adequacy, which points towards a knowledge gap in this regard. This research intends to contribute to filling this gap.

1.2 Housing women of the slums

It is recognised that women comprise the majority of slum dwellers (Chant & Mcilwaine, 2013 & 2016; Pate, 2009). While the substandard housing conditions of the slum settlements affect all of its dwellers, women seem to be at an extra disadvantage compared to men (UN-Habitat, 2017a). It is acknowledged that "Inadequate housing conditions have specific and wide ramifications for women as they tend to spend more time at home than men" (OHCHR, 2012:71). Pate (2009:1) claims that women seem to be the ones "who are taking the brunt of the suffering" of the adverse living conditions in slum areas, which was further confirmed by Chant & Mcilwaine (2016). This calls for placing women at the centre of concern with respect to the provision of adequate housing for slum dwellers. It is as well advocates for the adequate representation of women's interests in housing, and their participation in the elaboration of housing policies, programmes and projects at all levels and aspects of housing provision and human settlement management (UN-Habitat, 1988). Nevertheless, the marginalised position of women regarding their access to adequate housing continues to persist (UN-Habitat, 2017a:1). Therefore, the New Urban Agenda of 2016 further advocates for gender responsive planning and designs that envisage cities and human settlements that are safe and inclusive for women. Alas, how such goals can be practically achieved remains ambiguous (UN-Habitat, 2017b).

To mainstream gender in housing discourses of the Global South, Larsson (2001) identified three main points of entry: a) facilitating women's access to housing b) facilitating women's participation in the housing planning processes and, c) accommodating women's needs in the spatial planning and design of their dwellings. While commendable progress is noted in the first and second

points of entry (Larsson, Mapetla, & Schlyter, 2003; Larsson, Mateseliso, & Schlyter, 1998) accommodating women's needs in housing designs still lags behind. Bhatnagar, (1992:35) acknowledged that "[a]s the primary users, women are more aware of favourable dwelling designs and other aspects related to their living environment, such as location of infrastructural facilities and adequate plot arrangements". Nevertheless, utilising women's awareness and informal knowledge towards their housing design and soliciting their participation to support their housing adequacy are seldom addressed and/or specified. Moreover, there is no clear identification of design considerations that women assume are essential for their housing adequacy.

1.3 Situating the research problem

Uganda is located within the Sub-Saharan region with the highest annual urban growth among countries of the Global South (UN-Habitat, 2017a), which makes the country prone to slum proliferation. Housing development in Uganda has lacked guidance since the country's independence in 1962 up to late eighties, which saw the emergence of slums in most Ugandan cities (Mukiibi, 2008a). In 2008, sixty percent the Ugandan urban population were slum dwellers (Mukiibi, 2008a; MoLH&UD, 2008). Despite a relative decline in the proportion of slum dwellers in Ugandan cities, a 2014 World Bank collection of development indicators estimated Ugandan slum residents at 53.6% of the country's urban population (UN-Habitat, n.d.), which prompts the Ugandan government to act in response.

To address slum challenges and provide dwellers with adequate housing, Ugandan government launched four low-income housing upgrading projects in its main urban centres of Kampala, Jinja, Mbale and Oli. Those slum upgrading housing projects were supposed to act as role models and be replicated in other Ugandan cities upon their success and reflect on challenges in others. Acknowledging the marginalised position of low-income women with respect to housing one of these projects, namely Masese Women Slum-Upgrading Housing Project MWSUHP in Jinja, was prompted to target women as its main beneficiary group. In response to the global advocacy for including the participation of women in their housing development, MWSUHP employed women's participation in its housing delivery processes to facilitate their access to adequate housing. The project received international and national recognition as a success, causing it to stand out among similar low-income slum upgrading housing projects in Uganda, the region and internationally.

However, there is no clear evidence as to how the procedures and processes adopted for women's participation in MWSUHP influenced their housing

adequacy and what constituted ‘an adequate house’ to the Ugandan low-income women for that matter. In the same course of enquiry, a need to identify the design considerations that support housing adequacy for the low-income women living in the slums of Ugandan cities was recognized, which this research intends to explore into.

1.4 Research aims and questions

This research aims to explore on processes and procedures for women’s participation in the housing process of MWSUHP that influence their housing adequacy. It also aims at identifying design considerations to support such housing adequacy. Based on women’s experiences and reflections on MWSUHP housing process and designs, the study commenced motivated by research questions to investigate:

- How has women’s participation in the different phases of the housing process of MWSUHP been adopted? and how did their participation in these phases influence their housing adequacy?
- What design considerations can be identified to support housing adequacy to women of MWSUHP?

1.5 Methodological approach to the empirical work

This research aims at describing, exploring and developing an understanding, other than proving, to the influence of women’s participation in the housing processes of MWSUHP to their housing adequacy. The research aims and its questions suggest the belonging of this thesis to both the quantitative and qualitative research traditions (Kvale, 1988). Therefore, a case study methodology was selected for the explorations of this research as it has the capacity to incorporate different methodological strategies from different disciplines. Case study methodology was also selected due to its capacity to be used as a descriptive, exploratory and explanatory study method, allowing the researcher “to retain holistic and meaningful characteristics” of MWSUHP and develop an understanding of its real life events (Yin, 2009:4). Moreover, as Johansson (2005) claims, in practice-oriented research as in the case of this study, case study methodology has the special strength of building evidence-based design culture that enriches the collective and individual design repertoire and develops designers’ reflectivity, supporting their capacity to provide better design solutions in similar cases.

1.6 Structure of the thesis

The thesis consists of eight chapters with an annexed book chapter and three articles. Chapter one introduces and situates the research problem within the discourse of providing adequate housing to women living in the slums of the Global South. It identifies the knowledge gap this research intends to contribute in filling. The chapter explains the research aims, questions, its methodological approach, outlines its structure and explains its delimitations.

Chapter two provides an overview of the international discourse on housing slum dwellers in the Global South, identifying the research boundaries within this region. Focusing on women, the chapter addresses the visibility of women in the low-income housing discourse particularly slum-upgrading, and their participation and accessibility to adequate housing. Chapter three narrows the focus point to the Ugandan context and traces the evolution of the country's housing discourse and low-income women's visibility and accessibility to adequate housing within the Ugandan cities. It does that by tracing women's position in the Ugandan traditional governance, housing and land tenure systems ever since before colonization up to recent years. Chapter four explains the conceptual framework that directed the research investigations, while chapter five describes its methodology.

Chapter six provides a rich description of the case study of the research of MWSUHP as an introduction to the empirical work. Chapter seven provides a summary of the research annexed articles and book chapter that together present and analyse the empirical work. Chapter eight presents, discusses and concludes on the research findings and suggests areas for further research.

1.7 Delimitation of the research

Investigations of this research are confined to the public slum-upgrading housing projects that were launched under the custody of the Ugandan Ministry of Land, Housing and Urban Development (MoLH&UD) in its attempt to provide slum dwellers of the Ugandan cities with adequate housing. It thus, excludes other minor private low-income housing projects.

While the study is concerned with identifying design considerations that support housing adequacy to the Ugandan women living in slums, it has no intension of prescribing specific housing designs or prototypes. Although the research addressed all gender attributes of class, age, ethnicity and biological sex, its main focus is on the gender attributes of the sexual and/or biological differences between men and women over others.

2 Global Overview

This chapter provides a global overview of urbanisation and the low-income housing discourse in the Global South. It examines the evolving global approaches towards low-income housing provision and development in the context of the Global South. With specific concern for women, the chapter explores women's visibility in the low-income housing discourse and their accessibility to adequate housing in the cities of the Global South.

2.1 Urbanisation and Low-income Housing

Urbanisation is one of the strongest forces taking place in almost all cities of the world. In 2014, 54% of the world's population lived in urban areas. The percentage is expected to reach 66% by the mid of this century (United Nations, 2014b; UN-Habitat, 2016). Today, urbanisation causes more challenges to cities of the world than before due to the changing economic, social and cultural ecologies that are "radically different from the outmoded urban model of the 20th century" (UN-Habitat, 2016:1). It is acknowledged that while urbanisation challenges all cities of the world, it places extra burdens on the urban centres of the Global South that account for 90% of the universal urban growth (UN-Habitat, 2015 & 2014b). Moreover, urbanisation places additional challenges on cities of the Global South because they are less equipped to handle its complexities compared to cities of the Global North (Lupala, 2002).

The high rate of urbanisation in the Global South is usually caused by poverty and economic discrepancy between the urban and rural areas, which causes people to migrate to escape the rural areas in search for better life opportunities at the cities. Within the coming two decades, urbanisation is anticipated to double in the two poorest regions of the Global South, South Asia and Sub-Saharan Africa (SSA), despite SSA being the least urbanised region in the world

(UN-Habitat, 2014b). Thus, it is expected more people will live in these urban centres than rural areas in the future (UN-Habitat, 2014b).

During the last two decades, Africa has recorded the highest urban growth rate among the continents of the Global South. Güneralp, Lwasa, & Masu (2017) predict that in 2050 more than half the African population will be living in urban centres. They argue that the underlying processes that shape urbanisation in Africa are vastly different than other fast urbanising places in other parts of the world. They claim that much of African urban expansion "is characterized by unplanned and unregulated growth, exacerbated by the legacy of colonialism, structural adjustment, and neo liberalism that spawned weak urban planning institutions" (Güneralp, Lwasa, & Masu, 2017:2). Despite the limited data on migration within African countries it is estimated that "urbanisation rates remain high, and African cities, such as Lagos, Dar es Salaam, Lubumbashi, and Kampala have some of the highest urban growth rates in the world" (COHRE, 2008:91).

The high living standards in the urban centres of the Global South, including Africa, forced the low and sometimes even the middle-income people to occupy illegal sites in the peripheral areas of the city, constituting what is referred to as slum settlements. The phenomenon of slums is so common in urban centres of the Global South that they have become almost synonymous to urbanisation (Acioly, 2012). Slum settlements are thought to house a third of the Global South's urban population (Beegle, et al., 2016). While there has been a general decline in the ratio of slum dwellers between 1990 and 2014, their total number continues to grow (UN-Habitat, 2016. And with the high rate of urbanisation of the Global South more people are expected to occupy slum settlements.

In Africa, slums house 61.7% of the urban population, with variations between countries (Beegles, et al., 2016). The Sub-Saharan African region, where Uganda is located, registers the highest world slum growth rate of 4.53%, which is more than twice the world average (UN-Habitat, 2006/7). This means the Sub-Saharan region will face extra trials in combating slum challenges in the coming years, which calls for serious considerations and actions.

In its simplest form a slum is defined as "a heavily populated urban area that is characterised by substandard housing and squalor" (UN-Habitat, 2003:8). Slums are defined as "places in cities where the poor are concentrated in substandard conditions" (Peszko, et al., 2006:27). Slums are characterised by "lack of basic services, substandard housing or illegal and inadequate dwellings, overcrowding and high density, unhealthy living conditions and hazardous locations, insecure tenure or irregular or informal settlements, poverty and social exclusion, or settlement size to indicate concentration" (Peszko, et al., 2006:27). The UN-Habitat defines slum household as "a group of individuals living under

the same roof in an urban area who lack one or more of the following: durable housing of a permanent nature, sufficient living space, easy access to safe, enough and affordable amount of water, access to adequate sanitation in the form of a private or public toilet shared by a reasonable number of people, and security of tenure that prevents forced evictions" (City Alliance, 2016:1). While slums suffer multiple economic, social and environmental disadvantages, in this research the focus will be on housing in the slums of the Global South, mainly in SSA, that represent the geographical scope of this study.

2.2 Housing in the slums

The sub-standard living environment and housing conditions in slums has made managing them, upgrading them and providing their residents with adequate housing a continuous challenge and concern for the governments, practitioners, professionals and many other stakeholders at the global, regional and national levels (Majale, 2011: iii). In the first international conference of the United Nation Centre for Human Settlements (Habitat I) in Vancouver 1976, slum problems were recognised as a serious challenge to urbanisation, particularly in the countries of the Global South. At the time, the international approach to low-income housing provision was through the states' direct provision to housing projects that mainly adopt site and service, self-help and slum-upgrading approaches. In 1987 housing low-income groups was placed at the centre of the international agenda, which prompted the drafting and endorsement of the Global Shelter Strategy (GSS) in 1988 as a guiding framework for housing development (Acioly, 2012). The GSS targets eliminating the global housing shortage by providing adequate *Shelter For All* by the year 2000. The countries of the Global South were encouraged to design their individual National Shelter Strategies to support the realisation of the ambitious objective of providing *shelter for all* to the year 2000, with Uganda being among the first to draft its National Shelter Strategy (NSS) in 1992 (MoLH&UD, 2016a).

The GSS introduced and endorsed the Enabling Approach (EA) as the main approach for housing improvement and delivery. The EA acknowledged and emphasised the importance of involving community members in the processes of their housing development and delivery, leaving the market forces to control the supply of housing and other related services (UN-Habitat, 1988). The EA of the GSS introduced a paradigm shift from a provider to a supportive approach as reflected in Figure 1 below.

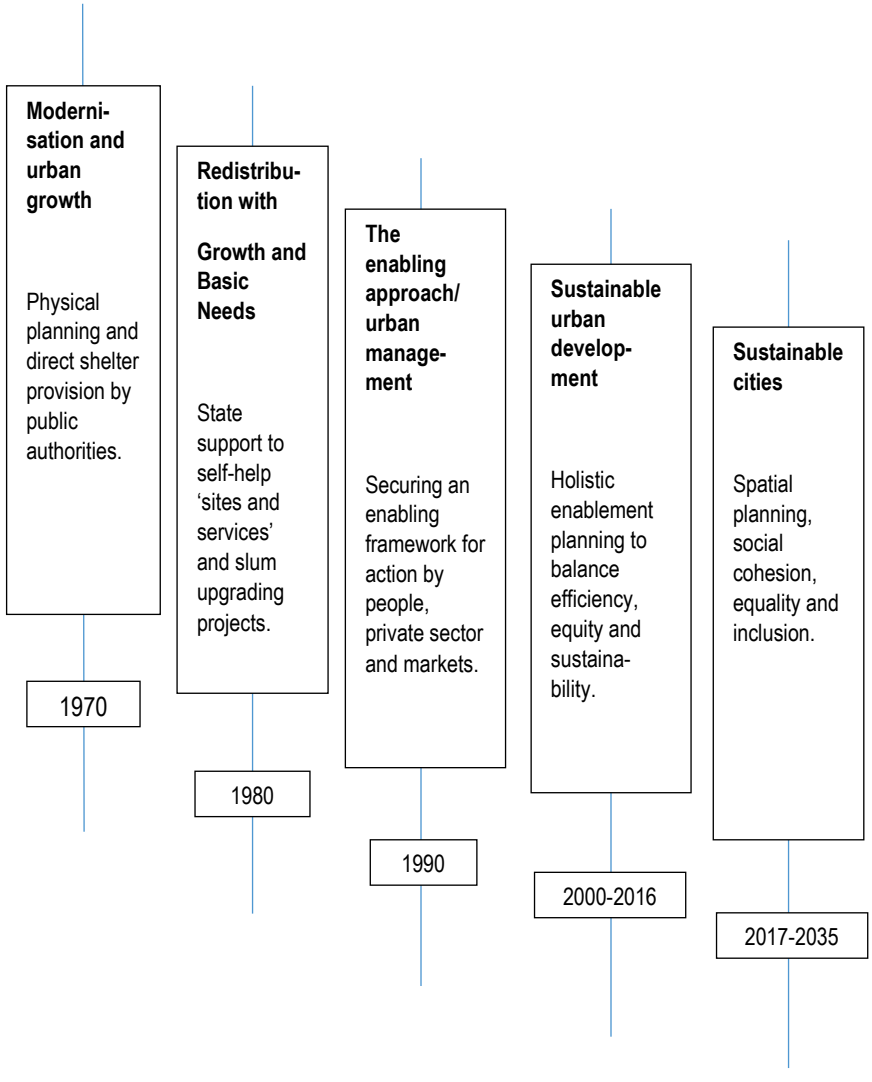


Figure 1. Global shift in the housing discourse. Adapted from: Majale, 2011.

Under the provider approach, housing is considered as a social service that is to be provided by the state to the low-income groups since they are unable to provide it for themselves. But, in the supportive approach housing is considered as a process that acknowledges, appreciates and supports the contributions of all housing stakeholders of economists, politicians, social scientists, contractors, building materials producers and particularly the communities themselves in the housing delivery process (Majale, 2011).

However, the main contribution of the EA towards housing development and provision is to modify the role of the state from a direct provider of housing to an enabler and supporter to housing stakeholders' initiatives for its development and delivery. The EA reduces the role of the state to the formation and facilitation of institutional and legal frameworks that create an environment that is conducive for all stakeholders to effectively contribute to housing delivery and development (Hamdi, 1995). Due to their strained budgets, most of the Global South states welcomed and adopted the EA, including Uganda. The EA released states of the Global South from the financial burden that challenged their efforts for housing people, particularly the low-income groups. Nevertheless, some of the states of the Global South "were reluctant to open up policy, strategy, and decisions making process to enable participation of stakeholders at all levels, especially the poor" as it was seen it would threaten their authority and power (Majale, 2011:31).

However, the international low-income housing discourse continued to advocate for the supportive approach to housing delivery. When the Second Habitat International Conference (Habitat II) of 1996 in Istanbul declared housing as a human right that is to be provided to all without discrimination, it further endorsed and comprehensively elaborated community participation for its development and delivery. The conference acknowledged the principles of partnership and participation as the most effective approach to settlement planning and housing provision (Acioly, 2012). Since its declaration and endorsement in 1988, the GSS and the EA and their principles of participation continue to guide low-income housing delivery in most countries of the Global South (Hassan, 2011) including Uganda (MoLH&UD, 2016a). Countries in the Global South acknowledged the problems of inadequate housing and have committed to the provision of adequate housing for all irrespective to race, gender, religion and age (Majale, 2011).

At the United Nations Millennium Summit of 2000, poverty eradication and resolving the challenges of slums were at the top of the Millennium Development Goals (MDGs). The international community committed itself to eradicating world poverty and established different measures to achieve such goals by the year 2015. The MDGs aimed at combating slum challenges through Goal 7, which aims to ensure the world's environmental sustainability. This goal was anticipated to be achieved by: a) reducing and reversing the biodiversity and environmental resource loss by the year 2010, b) reducing the number of people in the world who are without access to water and sanitation by half by the year 2015 and c) improving the lives of more than 100 million slum dwellers by the year 2020 (United Nations, 2012). Figure 2 illustrates the global approach towards housing provision and development over the years.

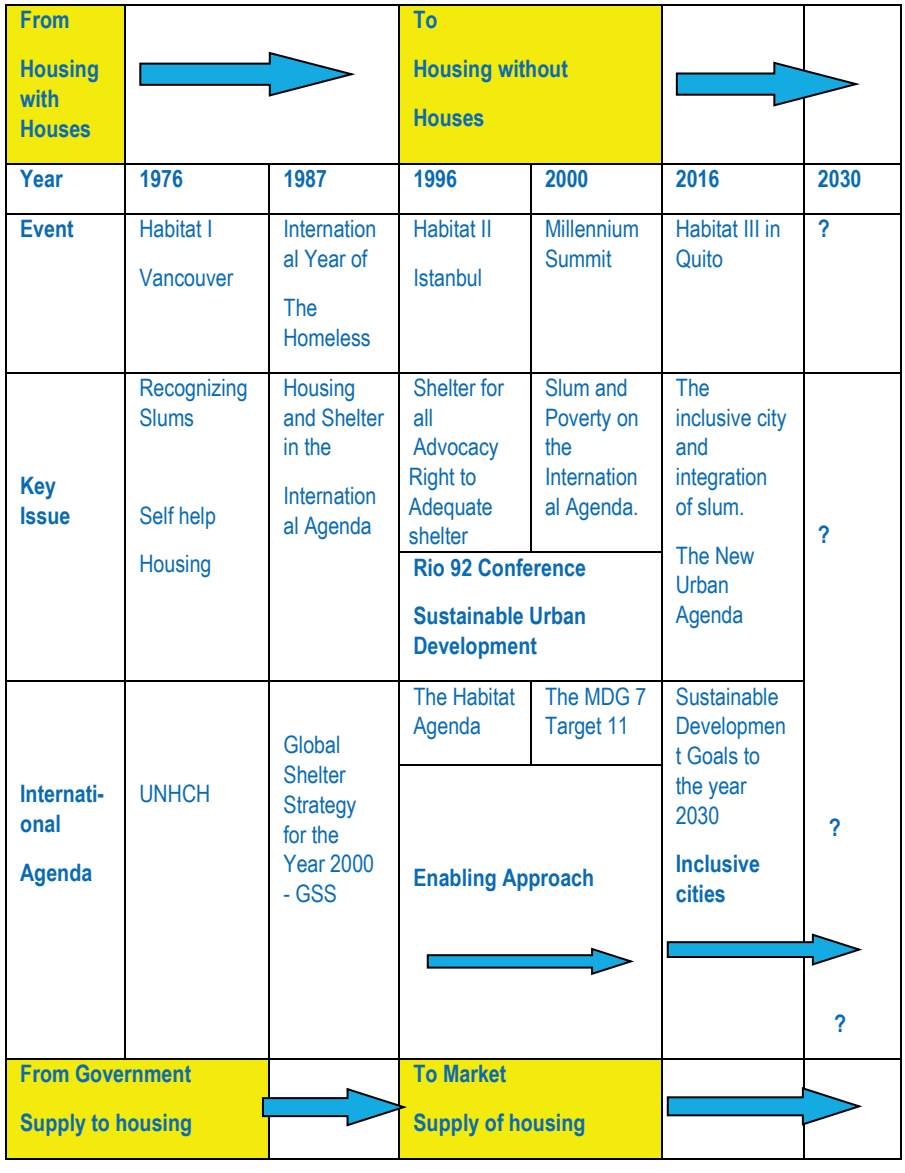


Figure 2. The evolution of the global housing discourse. Adapted from: Acioly, 2012.

While some countries of the Global South witnessed some reduction in the proportion of people living in slums between 2000-2014, their absolute number continued to increase with "Sub-Saharan Africa continues to have the highest prevalence of slum conditions of all regions" (United Nations, 2015:60). This urged a pro-poor global housing strategy. As far as Uganda was concerned, up until 2015 the country showed no evidence of any progress in achieving the

reduction of environmental resources loss and has narrowly missed reducing the number of people without access to water and sanitation. Uganda has also reported no progress towards the target of improving the lives of slum dwellers (Government of Uganda & UNDP, 2015).

However, during the Habitat III international conference that took place in Quito in 2016, some reflections were discussed on the achievements, progress and obstacles to the MDG of Habitat II. Despite genuine global efforts to provide access to adequate housing to all, it is generally acknowledged "that enabling the market has failed to provide affordable, adequate housing for the predominant low-income households in the rapidly urbanizing parts of the world" (UN-Habitat, 2016:52). The Habitat III established the New Urban Agenda and the Sustainable Development Goals to guide the international development discourse. With respect to housing, heads of state and governments reaffirmed their commitment to the support and realisation of the New Urban Agenda of 2016 for the right of adequate housing for all. Member states committed themselves to tailor policies, formulate structural frameworks, allocate funds and resources towards slums' upgrading and their integration and inclusion into the cities (UN-Habitat, 2017b). Regrettably, as the world is turning the page from the "MDGs to the SDGs, the unprecedented proliferation of slums and informal settlements, and a chronic lack of adequate housing, continues to be amongst the major challenges of urbanisation. Slums, informal settlements and inadequate housing, remain the visible manifestations of poverty and inequality in cities" (UN-Habitat, 2017a:1).

Although women's marginalised position with respect to housing continues to be acknowledged in the international housing discourse with determined commitment to their inclusion in the human settlements and housing development, there are no clear directions as to how that could be. With women being the focus of this study, the following paragraphs investigate low-income women's visibility and accessibility to adequate housing in cities of the Global South.

2.3 Housing women of the slums

Chant & Mcilwaine (2013) claim that urbanisation has a deferential impact between men and women. Although seeking better life opportunities causes both men and women to migrate to the city, it is recognised that women often have extra reasons to flee rural areas. Women of rural areas in the Global South flee to urban centres to escape socio-cultural discrimination such as forced early marriages, dropping out of schools and/ or home-labour at an early age (COHRE, 2008), which makes the rate of low-income women's migration to the urban centres higher than men. Unfortunately, upon their arrival at the city, women are found to

be “invariably disadvantaged compared to men in cities in terms of equal access to employment and shelter, health and education, transport, asset ownership, experiences of urban violence and ability to exercise their rights” (UN-Habitat SDGF, 2014:1). Due to their disadvantaged economic position, it is expected that more women will occupy slums in the urban centres of the Global South compared to men (UN-Habitat, 2014a), which causes them to constitute the majority of the slum dwellers (Chant & Mcilwaine, 2013; Pate, 2009). In the slums, women tend to take low-skilled and home-based informal jobs (UN-Habitat, 2015). In doing so, women contribute to their families’ economy and survival, making them one of the strongest forces for the development of millions of urban families living in poverty (UN-Habitat, 2014b).

Although both men and women suffer from substandard housing conditions in the slum settlements, women seem to be disproportionally affected by the adverse living conditions of the slum areas (Chant & Mcilwaine, 2016; Pate, 2009). Women were also found to be suffering from inadequate housing conditions compared to men (UN-Habitat, 2017a) since “Inadequate housing conditions have specific and wide ramifications for women as they tend to spend more time at home than men” (OHCHR, 2012:72). It was also admitted that for the low-income women, the home represents a place where they interact socially as well as a place where many of them work (OHCHR, 2012:72).

However, the marginalised position of women in the development discourse has long been acknowledged. Women, on average, are found to be poorer than men and usually lack decision-making opportunities and face “greater difficulties in accessing resources or services tailored to their needs” (UN-Habitat, 2015:3). Women’s integration in the course of development has been discussed at several international conferences and conventions. The First World Conference on Women (FWCW) took place in Mexico City in 1975 to deliberate on the status of women and set the agenda for the plan of action for women during the ‘United Nation Decade for Women’ from 1975-1985. Five years later, a Second World Conference on Women (SWCW) was held in Copenhagen in 1980 to assess the progress of the implementation of the goals of the FWCW. However, its deliberations mainly focused on employment, education and health, without so much as mentioning to women’s issues in housing. The Third World Conference for Women (TWCW) took place in Nairobi, Kenya whereby member countries convened to reflect on the achievements of the United Nations Decade for Women on issues of equality, development and peace in their respective countries. During the TWCW deliberations, the international community committed itself to include gender in all developmental sectors, including housing and human settlements. The TWCW conference set the international platform for the promotion of women as beneficiaries and agents of change in the area of human settlements (Celik,

1992). The TWCW had a recognised impact on raising awareness towards gender issues in the east African region, including Uganda. In the following Fourth World Conference on Women (FWCW) that took place in Beijing in 1995, the international community adopted the Beijing Declaration and Platform for Action that had a commendable impact on advocating for women's rights and gender equity and equality in many sectors, such as health, education, economy and politics. Although the FWCW recognised women's challenges in terms of accessing adequate and affordable housing and their suffering from the inadequate housing conditions, gender issues in housing unfortunately did not receive explicit and serious attention as critical areas of concern for action (UN-Women, 1995).

On the other hand, the resolution of the GSS of 1988 that advocated for *Shelter for All* by the Year 2000, highly recognised and emphasised the importance of the contribution of women's organisations in solving human settlements problems (Majale, 2011). The GSS advocated for the equal partici-pation of women in the elaboration of housing policies, programmes and projects. The GSS also endorsed the adequate representation of women's interests and capabilities and their participation at all levels and aspects of settlement management and housing development and delivery (UN-Habitat, 1988).

The commitment to include women and other marginalised groups in the formulation of human settlements has further been endorsed in the agenda of Habitat II (1996). At the United Nations Millennium Summit of 2000, the international community committed to women's inclusion in the housing discourse that envisions its manifestation through the advocacy for adequate housing as a basic human right for all without any discrimination (OHCHR & UN-Habitat, 2015:1). In effect, The UN Office of the High Commission of Human Rights (OHCHR) mandated itself to promote the full realisation of adequate housing to all without discrimination "as a component of the right to an adequate standard of living". The OHCHR also committed to the application of "a gender perspective, including through the identification of gender-specific vulnerabilities in relation to the right to adequate housing and land" (OHCHR & UN-Habitat, 2015:45). The commitment to the integration of gender issues in the discourse of development has clearly been instated in Goal 3 of the MDGs concerned with promoting gender equality and women's empowerment to take an active role in the development discourse and the development of their communities (United Nations, 2014a). However, despite acknowledgment of adequate housing as a human right, such a right was unrealised until recent years (UN-Habitat 2014a). The right to adequate housing is found to be most violated for slums dwellers, with women being especially marginalised based on their gender and economic disparity to men.

Thus, in Habitat III (2015), the particularly disadvantageous position of low-income women in the cities was further highlighted. Habitat III advocates for the *Inclusive City* and recommends placing special emphasis on increasing women's participation in decision-making forums for their participation to be meaningful (UN-Habitat, 2015). Moreover, the SDGs for 2016 to 2030, further acknowledge that "Inadequate housing affects women disproportionately and manifests in the form of the number of women-headed households in urban poverty" (UN-Habitat, 2017a:1). This reflects the awareness of the international housing discourse to the importance of considering the changing family structures from the stereotypical nuclear family to recognise the increasing numbers of female headed households within the slums. In some areas of SSA, female-headed households account for at least 20% of the slums' households, whereby women are the family's principal breadwinners in addition to their role as family care providers (UN-Habitat, 2014b). Habitat III also advocated for human settlements and cities that are safe and inclusive for women, which is envisaged to happen through the promotion of cities' gender responsive planning and design (UN-Habitat, 2017b). Despite the commendable concern and advocacy for human settlements and cities that are women inclusive and provide women with adequate housing, there is no explicit direction for how such ambitious goals can possibly be achieved.

While the previous paragraphs have provided an overview of women's position in the international discourse of urbanization, housing and slum-upgrading in the Global South, in the following chapter the research narrows its focus to explore the visibility of low-income women in the policy directions for the Ugandan housing discourse generally and the slum-upgrading in particular. Their accessibility, visibility and participation to their adequate housing is also addressed.

3 The National Context

This chapter explores the accessibility, visibility and participation of the Ugandan low-income women to their adequate housing at the Ugandan cities. With a gender sensitive eye, this chapter provides a historical background to women's positions in the Ugandan land tenure and housing systems. Their position in the country's customary governance system that continues to influence Ugandan people's lifestyles, the Ugandan land tenure systems and housing policy directions, is also discussed. To explore Ugandan low-income women's participation in their housing provision, a brief review to the major Ugandan slum-upgrading housing projects was provided. The chapter concludes with a summary of the issues addressed.

3.1 Women in the Ugandan traditional governance and land tenure systems

Uganda is a landlocked country located in the eastern African region. It extends over an area of 91.076 square miles, neighbouring seven countries and shares Lake Victoria's boundaries for a relatively large portion of its borders. Ugandan population was estimated as 41,830,349 with an annual increase of 3.58%. Women constitute a little more than fifty percent of the total population (UBoS, 2016).

Tracing land tenure and housing systems in Ugandan revealed its close association with the country's governance systems. Before its colonisation, Uganda was governed through the tribal and kingdom systems that continues to influence the socio-cultural norms and the political orders of the country up to recent times. Each kingdom is affiliated with specific tribes that are predominantly present at certain geographic locations within the country where they exert authority and governance, as illustrated in Figure 3.

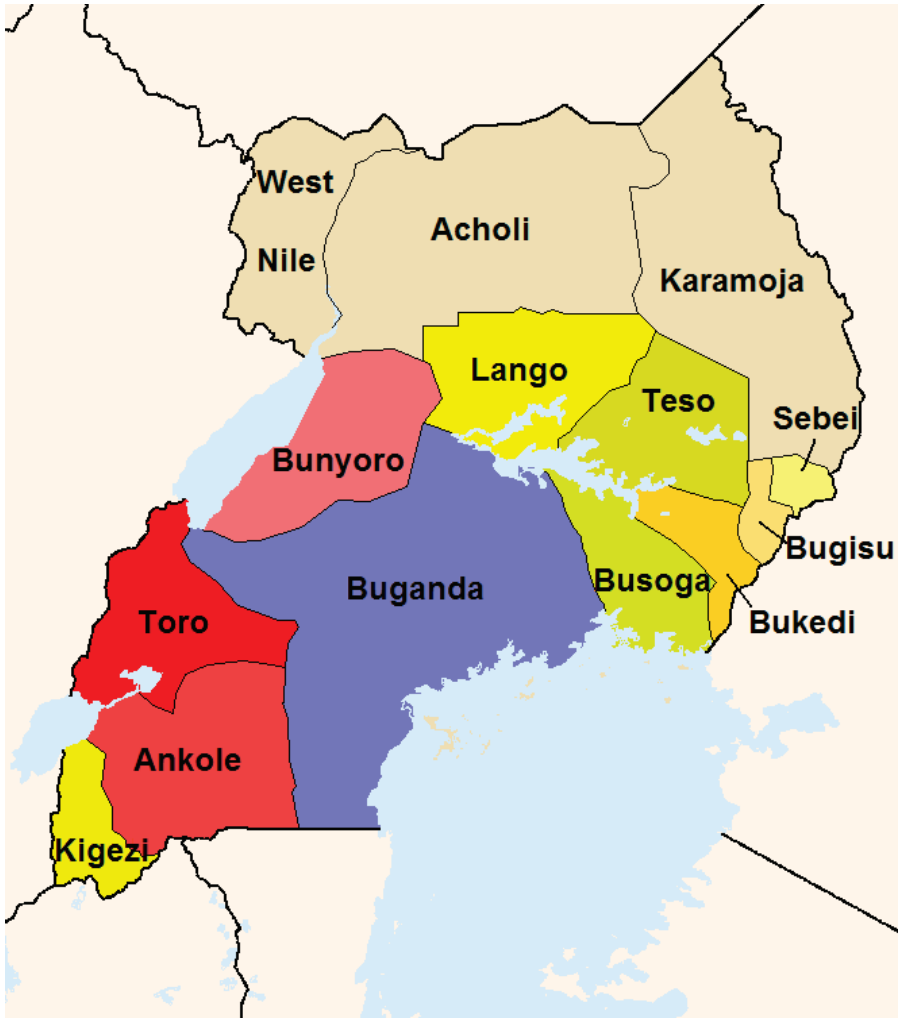


Figure 3. Geographical location of the Ugandan major tribes within the country. Source: http://www.makemeaware.com/wp-content/uploads/2016/02/Uganda-tribal-map-wiki-free-to-share-and-use.png, on 2nd March 2017.

The rules and orders within the tribal kingdoms were enforced by the kings and their appointed clan leaders, chiefs and assistant deputies. The authoritative powers of those clan leaders and assistant deputies were determined and consented by the tribe members, which gives them somewhat legitimacy. The patriarchal society of the Ugandan kingdoms assigns leadership positions to men only, which places women in subordinate position. The tribe leaders are responsible for performing both civic and spiritual duties within the kingdom,

which includes peace keeping, spiritual rituals, settling social disputes among tribe and family members and ruling on inheritance and land rights conflicts.

The land tenure system of the Ugandan kingdoms is closely associated with the tribe's production system, which influences how people relate to their land. Despite the numerous tribes within Uganda, two basic production systems, sedentary agrarian and nomadic pastoralism, can be identified. Land ownership is of high importance among the predominant agrarian tribes of Uganda. Land's size, location and type determine its cultivation process, productivity and thus its economic returns and the tribe's wealth. On the other hand, land value for the pastoralist tribes is determined by accessibility rights to nutritive grazing lands and water sources at different times of the year, rather than the land's perpetual ownership. Such accessibility rights are usually possessed by mutual agreement among pastoralist tribes and clans (Lastarria-Cornhiel, 2003). However, within both societies land is communally owned by all tribe members who reside on it, with no clear recognition of individual land rights. Thus, every tribe member is assumed to contribute to land protection and development and has the right to enjoy its benefits and returns under the administration and governance of the tribe leaders. Nevertheless, an individual can claim the right to use a certain portion of their family's or clan's sanctioned land for residency, cultivation or renting out, but he has no authority to sell or dispose of the land without the approval of the clan leaders (Rugadya, 1999). Thus, in pre-colonial Uganda, land is communally owned with consented strict rules and conditions to individual ownership and use.

The patriarchal socio-cultural norms of traditional Uganda vest land ownership to men across almost all Ugandan tribes (Veit, 2011). This includes the Busoga tribe that is predominant in Jinja, where the Masese Women Slum-Upgrading Housing Project (MWSUHP), the case study of this research, is located. Accordingly, women's access to land/house ownership is mainly facilitated through the male figures in their families, which places them in a disadvantageous position compared to men (Tripp, 2004). In fact, a woman who owns her own land or house is detested and stigmatised in the socio-cultural norms of Uganda. Women land/homeowners are labelled as out of control and terrible women who "can engage in unsanctioned, illicit and casual sexual liaisons" (Manyire, 2002:2). This discourages women from owning land or a house, which threatens women with forced eviction—a practice that is still taking place in Uganda (Manyire, 2002).

Moreover, customary land inheritance rights are usually reserved for the sons of the family; daughters are either completely deprived of inheritance or receive a smaller portion compared to their brothers. However, daughters are still entitled to use their late father's land for housing or cultivation purposes. Although women

are generally expected to be economically dependent on their male next of kin, they still are expected to participate in activities that support the family's economy, such as farming or animal and poultry rearing (Forum, n.d.). The collective cultivation efforts among the households of the family seems to present each family as an individual economic unit, with each member contributing to the economy and prosperity of the family, regardless of their gender. However, upon marriage, women of the family are expected to render their cultivation land to the family or clan (Veit, 2011) as they are expected to move to their husband's place of residence. At their marital home, women are entitled to use part of their husbands' land for farming, contributing to the sustenance, subsistence and welfare of their matrimonial families (Veit, 2011). Nevertheless, women have limited decision-making power (Veit, 2011) and have no ownership rights over the land they cultivate, despite their contribution to its cultivation and development, which exposes them to exploitation and abuse.

In the case that their husband dies, widows are permitted to manage their late husband's land, but only if she bore his children. Childless widows, on the other hand, are expected to return to her natal homestead unless she marries from her in-law's clan and they grant her permission to stay and land use rights. Widows with children on the other hand, are granted to stay within their in-law's homestead as custodians of their minor son(s) as future heirs to their father's land (Veit, 2011). In such cases, widowed mothers with minor sons are expected to marry one of their brothers-in-law, usually the eldest, which will grant her the clan's protection and safeguards the interests of her minor children in their late father's land (Aciro, 2016). In case a widow has an adult son, he becomes the main heir to his father's land and grants his mother and younger siblings their stay and the clan's guardianship and protection. If a widow opts to live away from her in-laws homestead or remarry outside their clan, she loses her in-law's protection and guardianship and may lose custody of her children to her in-laws. In cases a widow decides to go back and live at her natal family's homestead, she is entitled to their protection, support and to use part of their land for housing and farming (Veit, 2011). However, single women lose their land rights and their families' support and protection if they decided to live independently. These forces women to rely completely on themselves or surrender part of their autonomy and freedom to their clans in exchange for their support.

Although women under the traditional Ugandan socio-cultural norms are not completely deprived of land rights and benefits, they receive such rights under strict conditions and rules that are preserved and enforced by the clan elders and/or leaders who are customarily men. With weakening monitoring and accountability systems, some clan leaders abuse such authoritative powers

against the vulnerable position of women to deny them access to their land and sometimes use or sell the land to their own advantage (Veit, 2011).

3.2 Women in Ugandan traditional housing

Traditionally, Ugandans live in homesteads that are located close to the clan's cultivating lands to ease commuting and facilitate their land's supervision and protection. The spatial patterns and built form of a homestead consists of several detached or semi-detached single housing units, whereby each unit constitutes an autonomous housing unit for one family within the homestead (Nayenga, 2002). The territorial homestead area is commonly demarcated by light plantation fences or other landmarks that do not necessarily embed physical or visual trespassing (Nawangwe, 1994) but rather identify its territorial limits. Such homestead settings still prevail in some rural areas of Uganda, with minor variations in their design dictated by the climatic conditions and the available building materials (see figure 4).

Figure 4. Traditional homestead of the Karamonjong tribe in Uganda. Source: KWS, 2017.

In the patriarchal society of Uganda, men are the principal breadwinners, responsible for their families' wellbeing and prosperity, including the housing provision. Upon marriage, men are expected to build their matrimonial house within their clans' homesteads, while women are expected to move into their

husbands' homesteads when they marry. Therefore, land ownership is identified as an essential component in supporting and asserting men's authoritative powers and their gender role as heads of their families yet assumed insignificant for women.

On the other hand, women of the homestead assume the responsibility of organising and managing their individual housing units' indoor spaces, as part of their reproductive gender role of caring for their families. They do this together with any other work central to the survival of their household members, with little or no contribution from men of the family (Nayenga, 2002). Thus, while men's authority over the homestead is overtly asserted, women seem to claim a subtle authoritative power and control over the spatial layout and living environment within their individual housing units that is rarely acknowledged.

The indoor space of each housing unit represents the private domain of the individual family within the homestead, but the outdoor space is communally used by all members of the homestead, irrespective of their gender. However, most of the daily home chores are usually performed by women, individually or collectively, at the outdoor space of the homestead, presenting it as an essential functional space for women as illustrated in Figure 5 below.

Figure 5. Women performing house chores at the homestead outdoors. Illustrated with adaptation from Nawangwe, 1994.

Closer examination to the spatial patterns and built forms within the Ugandan traditional homestead, a hierarchical physical setting is recognised. As illustrated in Figure 6 below, the main house is usually the housing unit of the male head of the clan or the extended family that lives within the homestead. The main house is usually the biggest in size and located at the centre or a prime location within the homestead. The location of the male head of the clan in prime locations seems to connote and accentuate his authoritative powers and control over the rest of the homestead occupants.

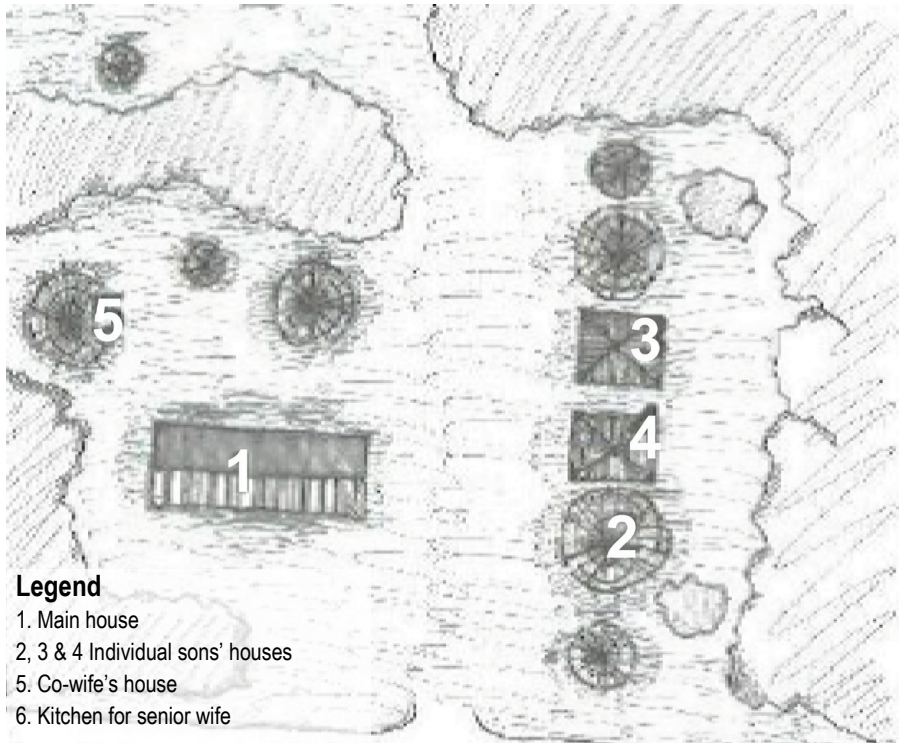


Figure 6. A plan of a Busoga traditional homestead. Adapted from Nawangwe, 1994.

It is interesting to note that only housing units for the married sons are included within the homestead since daughters are expected to leave their parental homestead to live at their husband's. Thus, the housing units of the Ugandan traditional homestead seems to signify men's presence and power while render women's subordination and invisibility.

In Uganda, polygamy is traditionally recognised as a common socio-cultural practice. Although on the decline, it was recently reported that 14.7% of Ugandan men have more than one wife (Harshbarger, 2018). Within the homestead of a polygamous family, each co-wife has her own housing unit. The

sizes and the location of the housing units of the co-wives are reciprocal to their status within the polygamous family. For instance, the first wife, usually the oldest, is granted higher status among the other co-wives (Forum, u.d.). This grants her a housing unit that is usually bigger than the housing unit of the other co-wives, denoting her corresponding higher authoritative position among them. In Uganda polygamy has "reinforced some aspects of male dominance but also gave women an arena for cooperating to oppose male dominance" (Forum, n.d.:3), which they seem to claim through their collaboration in the daily activities and family life within the homestead.

Most Ugandan tribes are patrilineal. Traditionally, the family household includes other relatives of the father such as the younger unmarried or widowed sisters and daughters together with his aged parents (Mwizenge, 1988). These women relatives are also housed within the family's homestead at their respective housing units but in less prime locations within the homestead. Thus, some heterogeneities among women of the same homestead based on their marital status can be noted.

Thus, it can be argued that the spatial patterns and the built forms of the traditional Ugandan homestead are influenced by the gender relations and status of its occupants.

3.3 Women in the colonial land tenure system

In the period of 1894-1962, Uganda was declared a protectorate under the British Crown (Rugadya, 2003). As a protectorate, the British colonisers did not inflict major changes to the existing civil institutions of the country nor did they interfere with people's social cohesion, traditional housing or living styles. Nevertheless, the British introduced a new land tenure system that influenced housing systems, particularly in the urban centres of the country. Upon their arrival to Uganda, the British colonisers recognised the Buganda kingdom as the strongest, with the most organised and powerful administrative setup among the Ugandan kingdoms (Afritorial, 2013). To avoid conflicts with the indigenous Ugandans and maintain peace, the British colonisers signed an agreement with the king of Buganda in 1900 that authorised the tribe with full control of the tribe's 19.6 square miles land. To appease the chiefs and notables of the Buganda tribe, the British colonisers facilitated the official registration of some portions of the tribe's land under their names despite the existence of the local communities living on them (Lastarria-Cornhiel, 2003). The land registered under the tribe leaders was recognised as 'Mailo land' as it was measured in miles. The tribe leaders were officially acknowledged as landowners to the Mailo land and the people living on it as their tenants (Rugadya, 2003), which

grants the latter the right to continue living on the land but without legal rights to its ownership.

In an attempt to regulate the relationship between the Mailo landowners and the people/tenants occupying the land, the 1928 land laws of the Busuulu and the Envuio were introduced. Tribal chiefs were granted freehold to their registered land as Mailo owners and "permitted their peasants to retain possession of the land (called kibanja land) they were occupying" (Lastarria-Cornhiel, 2003:2). This arrangement introduced the kibanja land holding that provides customary land rights and authority to people over the land they were occupying. It was resolved that tenants should pay some dues to the landowners in kind and/or monetary terms. By virtue of these dues, tenants claim the right to use their sanctioned land as they see adequate for habituation, sustenance and subsistence farming. Subsequent legislation in effect acknowledged these rights and made tenancy and the right to use the land inheritable, pending the landlord's consent, which protects tenants against eviction (Nicholas, 2013).

Moreover, the British colonisers offered a few ownerships to the land occupied by churches and academic institutions, declaring the rest of the country under the control of Queen of England, with no consideration of the rights of occupant peasants or cultivators. Under the Crown-controlled area, the British introduced the lease holding system that allows the lessee to enjoy the right to use the land for an agreed-upon limited period of time, liable for renewal in return for paying a certain lease amount to the Crown (Lastarria-Cornhiel, 2003). However, prior occupants to both the leased and institutional owned lands continued to live on them, claiming informal customary landownership, but without the obligations of paying any dues to the lease holder or institution owners.

However, it is recognised that occupants of the Mailo, leased or public lands usually implement some physical development within them for their personal use or subletting for economical returns, which further accentuates their informal authority over the land they occupy.

By introducing the individuals' ownership of the Mailo lease and freehold land tenure systems, the British set in motion the conversion of communal land ownership to an individual ownership system. In this instance, it is important to highlight that since most of the individual landowners were either male tribe leaders or financially capable leaseholders, land ownership remained unattainable to women, marginalising and rendering them invisible to the land tenure systems in colonial Uganda. Instead, women's access to land use and/or housing ownership remained through the male figures of their families, despite women's contribution in the maintenance and development of the land and/or houses they occupy.

3.4 Women in the post-colonial land tenure system

The colonial land tenure system continued to prevail in Uganda after the country's independence in 1962, up until the enactment of the first Land Reform Decree in 1975 that "decreed that all land in Uganda be vested in the state in trust for the people to facilitate its use for economic and social development" (Rugadya, 2003:4). The land that was previously administered under the British Crown had been declared as public land under the control of the Government of Uganda and administered by the Uganda Land Commission (ULC). Districts' municipalities, in return, are responsible for the administration and management of the public lands that fall under their jurisdictions (Rugadya, 2003). In effect, the decree abolished all ownership rights, including Mailo ownership rights and legislation that used to protect the *kibanja* tenants, i.e. the customary landowners. Instead, some regulations to the tenant-landlord relationship were introduced that stated, "Individuals occupying land, whether under customary or Mailo tenure, could obtain long-term leases" (Lastarria-Cornhiel, 2003:3). However, the introduced tenure structure has not fully been implemented and Uganda continues to operate in "the semi-customary arrangements they were practicing previous to 1975" (Lastarria-Cornhiel, 2003:3).

In 1998 another land act was introduced that recognised individual and communal customary land ownership (Lastarria-Cornhiel, 2003), reinstating customary land rights. Again, the rules and practices for land transactions and ownership became entrusted to the existing socio-cultural norms that assign land ownership to men only. However, the constitution of 1995 and the Land Act of 1998 consider any discriminating customary practices against women as null and void and requires the consultation of women and adult children in any land transactions. Although the Land Act advocated for including the co-spouse in marital property ownership, such assertions were not approved by procedural matters (Lastarria-Cornhiel, 2003), which might be attributed to the under-representation of women in the approval decision-making forum to argue for women's interests in the act. Although The Land Act considered all family/clan members as legal owners of their land, it regards the head of the family as their representative for land transactions. This entitles the head of the family and/or a clan, (who is usually a man), to perform all land transactions, even if it does not safeguard the interest of women, which renders them vulnerable to exploitation and abuse. However, the contemporary land tenure arrangement in Uganda remains "a mixture of customary (called kibanja), freehold, leasehold, and Mailo tenure systems" (Lastarria-Cornhiel, 2003:4).

While the current Ugandan statutory land law made commendable progress in supporting women's access to land by recognising their property rights and outlawing their discrimination (Veit, 2011), women's constrained financial

capacities undermine their ability to purchase land through the market, making their accessibility to customary land ownership a more feasible option. Asiimwe (2001:176) argues that while the:

> […] statutory law provides greater protection for women, allowing for female inheritance and land ownership and although it trumps customary law in theory, statutory law is less utilized in practice. This is especially true in rural communities, where ignorance of statutory law is compounded by high illiteracy rates and inaccessible courts. (Asiimwe, 2001:176)

With "more than 80% of land in Uganda held under undocumented customary tenure systems" (Veit, 2011:2) the customary land ownership practices and rules that restrict women's land ownership prevails in most parts of the country. This prompted some Ugandan gender activist to advocate for exploring ways and means for strengthening the customary land rules to safeguard women's land rights interests. They argue that "rather than replace customary with statuary systems […] traditional institutions responsible for implementing and enforcing customary rules should instead be strengthened in ways that enhance women's property rights" (Veit, 2011:2).

With the continuous weakening of the customary land tenure systems, tribe leaders have lost their authoritative power, which has weakened their ability to safeguard women's customary land rights, as diminutive as they are (Tripp, 2004). This calls for revisiting the land tenure systems in Uganda, to ensure women's accessibility to land and to protect their land rights across all forms of land tenure systems within the country.

3.5 Women in the Ugandan colonial urban housing

The administrative structure during the colonial period, divided the country into provinces that are further divided into districts. The headquarters of the districts were later developed to become the urban centres of the country. During colonisation, housing was one of the social services provided by the colonial government to the country's urban residents, while people maintained their traditional housing and living styles in other parts of the country. However, like other services, some disparities were noted in housing distribution and access that are based on social and racial grounds (Onoria, 2007). It is recognised that "housing and, at a later phase, urban development during the colonial period was geared towards the socio-economic convenience of the colonial government" (Onoria, 2007:13).

In the urban centres of the country, the British housed themselves on high latitudes and prime locations to safeguard themselves against air- and water-

borne diseases. During colonisation of Uganda, living in prime locations was a recognised practice in most urban centres of the East and South African colonies (Okalebo, 2011). The occupancy of the British families to high latitudes was also presumed to support and accentuate their authority, supervision and control over the colonised city residents of the lower latitudes.

The British neighbourhoods are characterised by spacious subdivisions of well-planned and well-serviced plots, wide roads and ample public spaces as illustrated in Figure 7. The houses are in the form of bungalows that are constructed from durable materials with red bricked walls and tiled roofs. Bungalows are usually located at the centre of a spacious plot, surrounded by large gardens. Plots were fenced off to demarcate territory, achieve privacy and maintain security to individual houses.

Figure 7. British colonisers housing neighbourhoods in the Ugandan cities. Source: Nnaggenda & Elwidaa, 2018.

At the time of the British colonisation in Uganda, its cities were also inhabited by Indian families brought by the British from their colonised India, to assist them in governing Uganda. Indians occupied senior civil service posts as administrators and traders or as skilled labourers. The families of the Indians and a few Ugandan elites occupied neighbourhoods that are in lower latitudes or less prime locations than those of the British, but still in higher latitudes or better locations than the

neighbourhoods of the indigenous Ugandans. Indian neighbourhoods seemed to form a buffer zone between the British and the Ugandan labourers' neighbourhoods at the lower latitudes, leaving the rest of the Ugandans to fend for themselves in the peripheries of the Ugandan cities (Ssengendo, 1992). Although smaller than the British houses, the housing of the Indians and the Ugandan senior civil servants were a bit larger and more spacious compared to those of the Ugandan labourers as reflected in Figures 8 and 9.

Figure 8. Asian housing during British colonisation of Uganda. Source: Nnaggenda & Elwidaa, 2018.

Figure 9. African housing during British colonisation to Uganda. Source: Nnaggenda & Elwidaa, 2018.

The Asian and African housing were built in the form of semi-detached housing blocks, usually located within fenceless communal open spaces to facilitates monitoring and control. The housing blocks are usually constructed with red-bricks and roofed with corrugated iron sheets.

The introduction of farm-waged labour during colonisation, which replaced the family's work on their personal farms, encouraged the migration of the Ugandan men to the cities in search of formal employment, leaving wives and children behind in the rural areas (Keet, 2013). The British colonisers encouraged the presence of the Ugandan middle aged men in the cities to work as labourers. Ugandan families were thus separated according to age and gender, which caused them to either live in "rural areas or at the fringes of towns where conditions of living from shelter to water are deplorable" (Onoria, 2007:13). While the Ugandan presence in the cities was mainly comprised of middle-aged men working to support their families, women of the family remained in the rural areas to care for the children and the elderly on their own.

Thus, British and Indian neighbourhoods in the Ugandan cities were occupied by families, while Ugandan neighbourhoods were mainly dominated by middle-aged men. Accordingly, housing spatial patterns and built forms of the Ugandan cities evolved demonstrating class, ethnicity and gender stratification that rendered Ugandan women, children and the elderly invisible. Hence, it could be argued that like in the traditional Ugandan homestead, the social and gender stratification of the Ugandan cities' residents impacts its physical planning and spatial patterns, further demarcating the interlinkages between the physical order of space and the social construct of its occupants.

3.6 Women in the postcolonial housing discourse

After Ugandan independence in 1962, house replacement took place in the country's urban centres, whereby houses that used to accommodate the British colonisers were taken over by Indians and Ugandan senior civil servants. Houses that were originally built for Ugandan middle-aged men labourers were then occupied by the common middle-income Ugandan families. Common Ugandans remained un-catered to and were left to fend for themselves within the cities, which eventually led to the creation of slums. Moreover, middle-class Ugandan elderly, women and children were forced to occupy houses that were originally designed for middle-aged Ugandan men, without consideration of their specific housing needs (Nnaggenda & Elwidaa, 2018).

The political and economic instability that followed independence in Uganda, exposed the country to civil wars that continued to threaten the country and caused many Ugandans to lose their jobs and lives. Coupled with the influx

of migration of the Ugandan families from rural to urban centres in search for security and better life opportunities, the country witnessed a massive internal displacement, which constituted the first waves of the country's urbanisation. Losing their male supporters to internal wars, rural Ugandan women migrated to the urban areas in search for opportunities that would assist them in caring for their families, giving a gendered face to Ugandan urbanisation that is not statistically substantiated due to the absence of comprehensive gender segregated data.

With the high living expenses in the Ugandan urban centres, low-income Ugandans resolved to occupy self-built houses on illegal sites that are, in most cases, nothing more than flimsy dwellings and shacks. These eventually multiplied into slums (Ssengendo, 1992). Coupled with the rigid application of unrealistic building rules and regulations and the lack of integration into the low-income communities in the cities' these settlements paved the way for the uncontrolled pre-urban developments in the Ugandan cities.

Soon after its independence, the Ugandan government established the National Housing Corporation (NHC) to direct, organise and control the housing growth, as well as to ease the acute housing shortage. The NHC adopted a provider approach to housing, where it provided national housing to the Ugandan civil servants, both for sale and rent. They also supplied the market with building materials at affordable prices. However, due to its limited resources and the economic instability within the country, the NHC failed to fully recognise its objectives. Accordingly, the NHC confined its main input to housing provisions for middle- and upper-income Ugandans. Hence, the low-income group was neglected, which further emphasised the need for a comprehensive and inclusive housing policy to guide the housing provision and development within Uganda (MoLH&UD, 2005). Therefore, in 1977 Uganda established the Ministry of Housing and Public Buildings to guide and satisfy the housing shortage in the country. Unfortunately, the ministry continued with the NHC provider approach of providing national housing to civil servants without much concern for low-income Ugandans.

However, the international policy direction of Habitat I in 1976 declared slums as a global challenge and advocated for a self-help upgrading approach to the housing provisions and development (Acioly, 2012). Accordingly, in 1979, Uganda drafted a housing policy that emphasised "the provision of housing to the low-income people and the amelioration of the housing conditions in the slum areas" (MoLH&UD, 2008:26). Uganda conceived self-help slum-upgrading housing projects in four of its major cities namely, the Namuwongo Project (1985) in the capital city of Kampala, the Masese Project (1989) in Jinja, the Malukhu Project (1992) in Mbale and Oli (1996) in Arua (Ssengendo, 1992).

Unfortunately, efforts of the 1979 housing policy were stalled by the continuing economic and political crises within the country. But in 1986, the current regime of the National Resistance Movement Government (NRMG) seized power and pronounced itself as a popular movement for the people. The NRMG committed itself to enhancing the living conditions of Ugandans, with special concern given to marginalised people including low-income groups, women and children, the disabled and the elderly (Isaac, 2011). Hence, the NRMG coming to power revived the ambitions for a comprehensive housing policy that would cater to low-income Ugandans. In effect, the NRMG outlined a National Housing Policy for the period 1986-89 that aimed at increasing housing stock and facilitating access to affordable services and infrastructure for all Ugandans, especially low-income groups (Ssengendo, 1992). The housing policy of (1986-1989) acknowledged the appalling housing conditions in the slums and "emphasised on the provision of housing to the low-income people and the amelioration of the housing conditions in the slum areas" (MoLH&UD, 2005:12). Accordingly, the government of Uganda continued the implementation of the previously designed and planned slum self-help upgrading projects (MoLH&UD, 2008). Unfortunately, the genuine efforts of the 1986-1989 housing policy for housing the low-income groups was undermined by the continuous socio-economic and political instabilities of the country (MoLH&UD, 2005; Ssengendo, 1992). As a result, rural-urban migration was accelerated and caused the informal sprawl of cities between 1989-1991 (Mukiibi, 2008b). This further emphasised the urgent need for a housing policy to direct the urban growth and provided the Ugandan people with adequate housing.

Persistently committed to the international direction of housing provision and development, Uganda was among the first countries to respond to the call of Habitat Global Shelter Strategy (GSS) in 1988 and drafted the Ugandan National Shelter Strategy (UNSS) in 1992 to guide its housing provision and improvements (MoLH&UD, 2005). Uganda adopted the Enabling Approach (EA) of the GSS towards housing provisions and development by supporting "individual households, the private sector, NGOs and CBOs to operate effectively and efficiently to provide descent affordable shelter as well as provide social development and improved quality of life" (MoLH&UD, 2016a:3). The UNSS demarcated the shift in the housing policy direction from a provider approach to housing to a the supportive one, which mandates the state to create an environment in which all stakeholders, NGOs, community members, local governments and community-based organizations operate effectively and efficiently for the provision of affordable and adequate housing to all Ugandans, including the low-income groups. Unfortunately, the UNSS "did not address the housing needs of the urban poor sufficiently" (MoLH&UD, 2008:27). Instead, it left the housing

provision and development to market forces as recommended by the EA. Such a market approach to housing challenged the low-income Ugandans and failed to provide them with adequate housing, causing extra proliferation of the Ugandan slums. On the other hand, the supportive approach of housing by the EA of the UNSS marked an end to the direct provision of housing through public housing projects. However, implementation of the already conceived four slum-upgrading projects continued as planned.

On the other hand, the 1980s witnessed a gender awareness wave in Uganda due to the impact of the 1985 Third World Conference on Women (TWCW) in Nairobi, the capital city of neighbouring Kenya. UN member countries convened in Nairobi to address and deliberate on gender issues in development, committing themselves to the promotion and support of gender issues in their respective countries. Country members agreed to convene again in ten years to reflect and further deliberate on their challenges and progress in promoting gender equality in their respective countries. They declared 1985-1995 as the International Women Decade. As a manifestation to its commitment to gender issues, Uganda endorsed the Dakar Declaration of removing "all obstacles that hinder advancement of women and the achievement of gender equality in all spheres of life" (MoGL&SD, 2007a:1) and explicitly stated its support of women's inclusion in all sectors of life in the National Constitution of 1995. Moreover, in 1997 Uganda formulated its first National Gender Policy (NGP) to act as "a legitimate point of reference for addressing gender inequality at all levels of government and by all stakeholders" (MoGL&SD, 2007a:1), including housing (UNDP, 2010). Uganda also formulated its National Action Plan on Women (NAPW) in 1999 for the design and implementation of many programmes that targeted the elimination of obstacles against women in exercising their full rights equal to men. But despite general progress in supporting gender issues in Uganda, some sectors were noted to have fared better than others. While there were commendable gender accomplishments in the fields of politics, governance, education, employment and health, the housing sector remained behind and is absent from the priority list of the Ugandan Gender Policy and its National Action Plan on Women (MoGL&SD, 2007a&b).

Nevertheless, the commitment to protect women's land rights by outlawing "discriminatory cultures, customs and practices in land ownership, occupation use, and requiring spousal consent to transactions involving family land" (MoLH&UD, 2013:23). The Ugandan National Land Act (NLA) of 1995, indirectly supported women's access to housing. Unfortunately, while the Ugandan NLA safeguarded the rights of married women "it did not tackle the land rights for widows, divorcees, and children" (MoLH&UD, 2013:24). Moreover, NLA rendered female-headed households and women in polygamous

families invisible although quarter of the Ugandan families are female headed (UBoS, 2017b) and 14.7% of the Ugandan men have more than one wife (Harshbarger, 2018). The comprehensiveness and inclusivity of the NLA is therefore doubted, which perpetuates Ugandan women's subordination and marginalisation in housing.

Concerned with sustainable urban governance, MoLH&UD contracted an independent consultancy firm in 2005 to undertake a situation analysis for secure land tenure and urban governance. The situation analysis reviewed and analysed prior housing policies to finalise a comprehensive national housing policy. Recognising the weak participation of women, the situation analysis advocated for women's empowerment in housing by easing their access to human settlement entry points like finance, inheritance, credit and land rights (MoLH&UD, 2005). While women's visibility in the situation analysis is commendable, its focus on the economic challenges against women's access to housing seems to have side-lined the impact of the socio-cultural traditions on obstructing women's access to housing.

For some time after the situation analysis report of 2005, gender concerns in the Ugandan housing discourse seemed to have faded away. Gender issues were absent in both the First Uganda National Development Plans (NDPI) of 2010/11-2014/15 (Republic of Uganda, 2010) and the Second National Development Plan NDPII of 2015/16-2019/20 (Republic of Uganda, 2015). However, the Ugandan National Urban Policy in 2013 identified gender as one of the "critical factors needing full integration in the National Urban Policy (NUP) if it is to address the needs of the poorest residents of Uganda's cities" (ICIG, 2013:1). Fortunately, gender concerns in housing seem to have surfaced back in the latest Ugandan housing policy of 2016 that is currently directing the Ugandan housing discourse. The Ugandan housing policy of 2016 identified women's non-involvement "in the decisions regarding planning, design, and implementation of housing projects at both household and community level" and the existence of "some cultural practices, norms and values negatively impact on housing

construction and land ownerships" (MoLH&UD, 2016a:29). as challenges that need to be addressed to facilitate Ugandan women's access to adequate housing. Therefore, the Ugandan national housing policy of 2016 advocated, among other things, for including women in the "planning, design, and implementation of housing projects at both household and community level" MoLH&UD, 2016a:29). Thus, for the first time women's participation in housing planning and design has explicitly been emphasised. In fact, the UNHP took further strides and devised more explicit strategies for mainstreaming gender in housing at variant levels. The UNHP advocated for: "(i) Sensitise the public on mainstreaming gender in housing, (ii) Design housing projects and programs especially targeting women involvement in housing development, (iii)

Research and document gender related information on housing, and (iv) Advocate for women to be accorded full and equal rights to own and inherit land and other properties, and the right to adequate housing" (MoLH&UD, 2016a:30).

The apparent awareness, determination and explicit advocacy of the latest Ugandan National Housing Policy of 2016 to the sensitisation and integration of gender at different levels of the housing delivery and development discourses, reflects the potential for supporting women's visibility, inclusion and accessibility to adequate housing in Uganda.

3.7 Women of the slum accessibility to adequate housing

Although Uganda is mostly rural, the rate of its urban development is considered among the highest in the world (Brown, 2012). Failure of the Ugandan Enabling Approach to cater to low-income earners made occupying the slums a feasible option for many (MoLH&UD, 2008). The disorganised manner with which urbanisation was managed in Uganda caused the growth of slums at a mushrooming scale. Slums in Uganda are reported to house over 60% of the country's urban population (MoLH&UD, 2016b).

Slums in Uganda are considered "the most conspicuous manifestation of urban poverty" (MoLH&UD, 2008:20). It is reported that 13% of slum households could not specify their sustainability means, which causes most to occupy petty trades and vending (MoLH&UD, 2008). Among single parent families, Brown (2012:79) claims that "female headed households in urban centres in Uganda have lower incomes than male-headed ones". She further argues that "substance abuse of alcohol and drugs is widespread" in the slum communities of Uganda with "women and girls often turn to prostitution to secure their livelihoods". Such a multi-dimensionality of poverty and its interrelationship with housing, caused slum housing upgrading in Uganda to be integrated within poverty alleviation initiatives.

Although their informal occupancy to land does not guarantee Ugandan slum dwellers legal rights to land, the length of their habituation period and the amount of development they undertake grant them customary ownership. Although after Ugandan independence customary ownership was abolished, it was reinstated by the Land Act of 1998 (Lastarria-Cornhiel, 2003). This created a complex multi-layered land tenure system in Uganda that poses as a major contributor to the slum proliferation in the country's cities, constituting a challenge to the Ugandan urban planning and development (MoLH&UD, 2008). Due to the Ugandan patriarchal society, customary landowners are usually men,

which restricts women of the slum from accessing land/housing ownership and places them at a disadvantaged position compared to men.

In the Ugandan slums "informality of housing overlaps with informal employment, service provision and legal status" (ICIG, 2013:3). The previously mentioned gendered evolution of the Ugandan cities spatial patterns caused slums to occupy low-lying wetlands and swamps (Nnaggenda & Elwidaa, 2018). Combined with the long rainy seasons and poor drainage services, dwellers of the Ugandan slums are continuously exposed to floods and health hazards as illustrated in Figure 10.

Figure 10. Poor drainage of the Ugandan slums. Source: MoLH&UD, 2008.

Sanitation services in the slums are mostly in the form of communal pit latrines that are usually constructed from depleted materials (see Figure 11). This system further degrades the living environment in the Ugandan slums. Such communal public toilets are usually located at a far distance from homes, which Massy (2011) claims further exposes women to violence and shame. Moreover, the poor hygiene of public toilets in the Ugandan slums sometimes forces women to use 'home toilets' in the form of disposable containers or plastic bags, which expose women to additional shame and inconvenience (Massy, 2011). Women and

children of the Ugandan slums were found to spend a great deal of time at home; thus, they suffer disproportionally from the degraded living environment compared to men, which makes slum housing a gender issue (Massy, 2011).

Figure 11. Pit Latrine in the slums that serves 15 household. Source: MoLH&UD, 2008.

Housing conditions in Ugandan slums are substandard, with only 40% built of permanent materials and only 22% of those are owner occupied (MoLH&UD, 2008). The prominent housing tenancy in the slums, combined with the constrained financial capacities of the slum dwellers, discourages investing in housing development, which makes the formalisation of land titles an integral component of slum housing-upgrading.

Housing prototypes in the slums mimic the Ugandan homestead style and mainly take the form of single-room housing units, commonly known as ‘muzigos’. Neighbours in slum neighbourhoods substitute for the extended family/clan of the homestead of the rural areas and share the use of the surrounding outdoor space. The congested and limited indoor space of individual muzigos forces women of the slums to perform most of their reproductive and productive activities outdoors, claiming this space as their domain and as an essential functional space as seen in Figure 12.

Figure 12. Women of the slums cooking outdoors. Source: Rijn, 2017.

The *muzigo*s housing units of the Ugandan slums are usually self-built single rooms consisting of traditional depleted and improvised building materials such as earth, thatch and iron sheets, giving them a temporary nature. The *Muzigos* are built with almost no space between them or sometimes separated by a narrow corridor or veranda, which makes them congested, unventilated and with little natural light (MoLH&UD, 2008). *Muzigo* rooms are occupied by more than four people on average, which impedes privacy and contributes to the exposure of women and youth to violence, harassment and sexual abuse (Swahn, Leconte, Palmier, & Kasirye, 2015).

For a long time after independence, the consecutive Ugandan housing policies that were issued did not cater to housing the low-income groups of the slums. Only in 1979 the government gave attention to housing people of the slums by conceiving the four self-help slum-upgrading housing projects of Namuwongo in Kampala (1985), Masese in Jinja (1989), Malukhu in Mbale (1992) and Oli in Arua (1996). At the time of the conception of these projects, Uganda's shifted to the supporter approach towards housing. This stalled launching more slum-upgrading housing projects, but the implementation of the already conceived ones continued. Thus, these four slum-upgrading projects symbolise the state of the art with respect to governmental slum upgrading housing projects in Uganda, which warrants their discussion.

Basically, the four slum-upgrading projects share similar principles, approaches and frameworks for administrative structures. This was done in order to

exchange knowledge and build on experiences for their replicability in other parts of the country. The projects target upgrading living standards at existing slum areas by formalising land titles, providing services and infrastructure and supporting community members in upgrading their housing and economic status. With women being the primary slum dwellers, all projects can be perceived as a support to women of the Ugandan slum visibility and accessibility to housing. However, they have been the primary beneficiaries of Masese project of Jinja only.

The four slum-upgrading projects were designed and administered under the custody of the Ugandan MoLH&UD, that was responsible for undertaking the respective initial socio-economic and physical land surveys, preparing the project documents, housing designs, processing land titles, providing technical services and participating in community mobilisation. The basic approach of the Ugandan slum-upgrading projects was to involve the beneficiaries as the labour force for the production of the projects' building materials and construction activities, irrespective of their gender (MoLH&UD, 2013a,b&c). However, beneficiaries of the first project of Namuwongo had the option for including the labour cost in the loan amount. This was presented to beneficiaries and was accepted by many but there is no clear data on variations among women and men.

However, initially the designs, approaches and activities of all four Ugandan slum-upgrading projects were gender neutral, they provided no special consideration to the beneficiaries' gender. However, the gender awareness wave that swept Uganda in the second half of the eighties and with the Danish International Development Agency DANIDA, the project donor, interest in supporting gender issues in all of its activities in Uganda (DANIDA, 2006) it was decided that Masese slum-upgrading housing project in Jinja would focus on women as its main beneficiaries. This caused the training on building materials' production, construction and management activities to target women only. The trained women later on, acted as trainers to the other beneficiaries of Masese Women Self-help Housing Upgrading Project MWSHUP irrespective to their gender. Posing as role models to learn from each other's experiences, the two following projects of Malukhu in Mbale (1992) and Oli in Arua (1996), took after MWSUHP and trained women in building material production and construction activities. While involving the community in the design of their own houses was recommended for both Malukhu and Oli projects, none of them involved their beneficiaries in their housing design. Instead, women's contributions were restricted to their participation in producing building materials and performing construction activities. Nevertheless, the building technologies introduced in both projects were expensive and impractical and thus resented by the beneficiaries (MoLH&UD, 2013a,b&c). The projects thus

resolved to the use of semi-permanent local materials, which compromised the quality of the homes and wasted the resources used for women's training with no recognised impact on the housing adequacy for women. Thus, despite MWSUHP's positive impact on highlighting women's deferential vulnerabilities in housing, there were no reflections on exploring alternative procedures for women's participation to support housing adequacy in the projects that followed MWSUHP. Instead, MWSUHP seems to have constructed for the participation of women in building material production and construction activities as the best model for their empowerment in housing and their housing adequacy. While women's support in housing was advertised as the main objective of these projects, concern for loan recovery seems to have been the primary concern. Such concern directed the focus on beneficiaries' participation to mainly support the projects' economy over housing adequacy matter, which according to Choguill (1996) a scenario that commonly takes place in low-income housing projects of the Global South. Despite the recognised influence of the beneficiaries' participation in these housing projects in reducing the projects' costs, most of these projects suffered financial constraints that impeded them from achieving their assumed objectives.

Private agencies were formulated to administer the projects' funds, coordinate and implement the projects' activities and recruit the projects' technical and support staff. Moreover, each project established a respective Community-Based Organisation – CBO to represent the community in the decision-making process, mobilise the community to the projects' management and loan recovery activities. While these CBO's contribution in mobilising and training community members, including women, to administrative, accounting and construction activities is acknowledged, it was realized that no efforts were made on their utilization to raise the communities' awareness towards housing design issues that would influence their housing adequacy.

The projects were implemented on public land within the jurisdiction of their respective city's municipality. Each municipality participated in the initiation of the respective project document by ensuring the consolidation of the projects' plans into their respective municipalities' land use, infrastructure and zoning plans. Municipalities were also responsible for surrendering the land ownership to the projects' beneficiaries after their identification, verification and registration. Municipalities were also well responsible for maintaining the infrastructure and services after the closure of the project. It is admitted that the projects provided both customary landowners and tenants opportunities to own their houses if they satisfied the eligibility criteria. But it was noted that all projects were opposed by the customary landowners of the projects' lands, who were mostly men. This is because the projects will deprive them from the

revenues they used to receive from people's tenancy. However, The projects appeased the customary landlords by providing them the priority to the plot's ownership and offering them minor compensations for the resources they used on the land development (MoLH&UD, 2013 a, b & c). In all projects, ownership was offered to families, including female headed households, except MWSUHP, which offered ownership to single persons, regardless of their gender. By providing tenants, who were mostly women, access to housing ownership, the Ugandan slum-upgrading housing projects contributed to their protection against forced eviction. Nevertheless, except for MWSUHP the Ugandan slum upgrading housing projects seem to exclude women outside the stereotypical nuclear family, which undermine their inclusivity. This highlights the importance of adopting an inclusive approach to housing people of the slums to ensure their inclusivity to all categories of women across their intersectionality.

As mentioned before, the shift in the Ugandan approach to housing from provider to supporter marked the end of the implementation of governmental slum-upgrading projects. However, the thrive for a holistic or comprehensive slum-upgrading approach that "combines both provision of basic infrastructure and tenure security" (MoLH&UD, 2008:25) continues to influence the Ugandan policy direction towards slum housing development. Nonetheless, slums continue to pose a developmental challenge to Ugandan cities. In response, Ugandan formulated its National Slum Upgrading Strategy and Action Plan (NSUS&AP) to target the satisfaction of Goal 7 and Target 11 of the MDGs for improving the lives of at least 100 million slum dwellers around the world by 2020. The Ugandan NSUS&AP aims to uplift "the lives of at least one million people by the year 2020 through implementing the developed slum upgrading strategy and action plan" (MoLH&UD, 2008:v). Moreover, the NSUS&AP seeks to "ensure that slum upgrading, or improvement efforts are integrated into national policies, legislation, programmes and plans to enable their implementation" (MoLH&UD, 2008:vii), by providing a framework for the coordination of policies and actions related to slum-upgrading. To achieve its goals, the NSUS&AP adopts strategies to slow down slums' growth concurrently with preventive strategies to manage "the surge of urbanisation and forestalling the challenges of the brutal urban poverty typified in slums" until they eventually stop (MoLH&UD, 2008:vi). The NSUS&UP identified "the complex land tenure system and the inadequate capacity of the local government to plan, guide and enforce development control as the main drivers for the mushrooming scale of slums in Ugandan cities" (MoLH&UD, 2008:20). Thus, to achieve its goal, the NSUS&AP envisaged applying legal and land market reforms by providing land tenure security and readjusting the planning and building codes and regulations to facilitate housing affordability (MoLH&UD,

2008). The NSUS&AP adopted a participatory approach that advocates for the inclusion and participation of the slum residents in their housing upgrading and development (MoLH&UD, 2008:vi). It adopted a "process through which informal areas are gradually improved, formalised and incorporated into the city itself, through extending land, services and citizenship to slum dwellers" (SSA, 2016:2). While the NSUS&AP constituted a sound platform and framework for the consolidation of slum upgrading activities within the targeted cities, it remains with no clear direction as to how such strategies will be translated in practical terms.

Following in the footsteps of the NSUS&AP, the government of Uganda, represented in MoLH&UD, drafted a policy in 2010 that visualised a future of Ugandan urban centres "that are inclusive and are free from poverty" (Brown, 2012:77). Together with other concerned partners, namely the UNDP- City Alliance, Shack/Slum Dwellers International SDI and Actogether, MoLH&UD drafted a pro-poor urban policy to regulate urbanisation and slums in Uganda. The policy devised, among other components, the initiative of 'Transforming the Settlements of the Urban Poor in Uganda- TSUPU' with the objective of managing the rapid urbanisation in Uganda proactively. The TSUPU aims to achieve this objective through aligning "activities at the national government, local government, and community levels to maximise the alignment of effort and foster a more coherent urban agenda that is focused on inclusive, pro-poor cities" (Government of Uganda, 2015:2).

The TSUPU aims to:

- "Develop a National Urban Policy (NUP) that will guide sustainable urbanization in Uganda, ensure the empowerment of the local governments, and reinforce the importance of active community participation;
- Build the capacity of local governments to strategically manage urbanisation;
- Empower organisations of the urban poor to actively engage in local development" (Government of Uganda, 2015:1).

Although TSUPU is currently confined to a few cities within the country, it is explicitly designed to develop into a national initiative to guide proactive management to the rapid urbanisation and improve the living conditions of the urban poor all over the country (Government of Uganda, 2015). TSUPU emphasises the importance of the inclusion and participation of urban poor communities in the development and transformation of their settlements.

Although the percentage of slum dwellers in Ugandan cities was reduced from 93% in 2001 to 64% in 2008 (MoLH&UD, 2008:12) still in 2015 "more

than 60 percent of the urban population living in slums" (The world Bank, 2015:x). This portrays slums as a persistent challenge to the Ugandan cities.

Despite the genuine and commendable efforts of both the NSUS&AP and TSUPU in upgrading slums, it is noted that they are both devoid from gender segregated statistics and data. Slum dwellers were consistently perceived as homogeneous groups without much attention to their gender differences. Such a gender-neutral approach to slum dwellers threatens the perpetuation of women's invisibility and exclusion in the Ugandan slum-upgrading housing policy direction, which might cause further marginalisation and inaccessibility to women of the slums to adequate housing. Moreover, the current Ugandan approach and recommendations towards slum upgrading remains at the policy and strategy levels and lacks direction on how such strategies can practically be implemented. This brings doubt to the actual capacity of the Ugandan slum-upgrading housing discourse for providing slum dwellers with adequate housing, especially women.

3.8 Concluding remarks

What transpires from the above submission is that despite the stable and solid formal governance system in Uganda, the Ugandan patriarchal traditional systems still influence the socio-cultural practices, gender relations, housing norms and the lifestyles of low-income Ugandans. Such systems subtly influence the Ugandan formal land tenure and housing discourses as they seem responsible for the complicated and multi-layered land-tenure systems that continues to influence the Ugandan housing discourse and challenge the provision of adequate housing at the Ugandan urban centres.

It is recognised that the spatial patterns and housing built forms of the Ugandan cities has evolved based on colonial ideologies that denote class, ethnic, gender and age stratification and subordination. This caused the low-income Ugandans to occupy remote and low-lying locations within the cities that eventually turned into slums, with women constituting the majority of its residents.

There is commendable recognition, efforts and resources committed to resolving the housing challenges of the Ugandan women living in the slums, with MWSUHP advertised as a success story in this regard. It is acknowledged that MWSUHP contributed in making women of the slums visible in the Ugandan housing discourse. However, MWSUHP seems to have constructed for women participation to their housing by their contribution to the production of building materials and construction activities, without giving much attention to how such form of women's participation influence on their housing adequacy.

The shift of the country's policy direction to the supporter approach and the continuous adoption of the Enabling Approach to the low-income housing delivery put an end to the implementation of slum-upgrading housing projects in Uganda. This left housing delivery to market forces that defeated the Ugandan low-income groups and slum dwellers and placed Ugandan women living in the slums at an extra vulnerable position with respect to housing. With the continuous neglect of gender issues by the Ugandan housing discourse, low-income women's invisibility and inaccessibility to adequate housing in the Ugandan cities is likely to be aggravated.

4 Conceptual Framework

This chapter presents the main concepts that guided the research explorations on the processes and procedures for the participation of MWSUHP in their housing process and identifying design considerations that influence their housing adequacy.

The main concepts of this study are 1) gender, 2) gendered spaces, 3) participation and low-income housing adequacy, 4) users' satisfaction and housing adequacy and 5) adequate housing for Ugandan low-income women. The sections below explain each concept and defines how it is used for the exploration of the research.

4.1 Gender

In its simplest form, the term gender refers to the "socially constructed set of differences between men and women" (Rendell, Penner, & Borden, 2000:15) that denote "what a society describes to be male and female" (Larsson, 2001:5). Whereas sex is biological, gender is a social construct that assigns meanings, expectations, roles, attitudes and behaviour to people according to their sexual or biological differences (Larsson, 2001). Being socially, culturally and historically produced, gender is thus by no means static and viable to change over time, place and context (Rendell, Penner, & Borden, 2000:7). Gender as well can be understood as a "a form of relationship between men and women" and can be used as a category of analysis to discuss and address issues related to each sex independently and/or in relation to each other (Larsson, 2001; Rendell, Penner & Borden, 2000). Although gender studies advocate focusing on one sex within the society including but not in isolation to the other, Larsson argues that "gender studies may very well focus on women" only (Larsson, 2001:5). Since this research is concerned with providing adequate housing to low-income women living in the Ugandan cities, the focus of this research will mainly be on women.

In their investigations on an "integrative approach to generate gender sensitive planning theories" Damyanovic and Zibell (2013) recognise the systematic differences and heterogeneities not only between men and women, but also among women's and men's groups independently. They therefore advocate for considering the intersectionality within each sex group according to age, class, ethnicity, socio-cultural backgrounds and ways of life, as gender is continues to be defined and redefined. Larsson (2001:5) argues that "the concept gender should be understood as a tool to understand the world of women and men respectively" and that it "was created to distinguish cultural and social perceptions of what is considered by society to be male and female from the biological differences linked to sex". On the other hand, Damyanovic and Zibell (2013) claim that gender other intersectional attributes of age, class and ethnicity are critical and need not be overlooked.

Arora-Jonsson (2013) argues that in the context of research, gender can be used as: 1) an issue or a problem that needs to be solved or at least addressed, b) an analytical category to study the power organisation and relation that governs our world and c) a way to describe the world around us based on sexual attributes.

In this research, the first use of gender is employed to highlight the gender gap in the Ugandan low-income and slum-upgrading housing discourses. Gender attributes of class, sex, age and ethnicity, were used to analytically examine the power organisations and relations that influenced the evolution and formation of the housing spatial patterns and built forms of the Ugandan cities and their influences on the visibility and accessibility of the Ugandan low-income women to adequate housing in the Ugandan cities.

Gender is also used as an analytical category to explore on the processes and procedures for the participation of women in the housing processes of MWSUHP to influence their housing adequacy. The research used gender concept as an analytical tool to identify MWSUHP women's subjectivities in housing and their influence on their housing adequacy.

4.2 Gendered spaces

The relationship between gender and space was first suggested in the field of anthropology, where it was defined through power and how power relations are inscribed in the built space (Rendell, 2000). Spain (1992), in her examination of the association of gender stratification with the spatial institutions in different times and cultures within the USA, argues that the physical organisation of space reflects, affects and sometimes determines the gender relations within it. She argues that the spatial segregation between men and women limits women's access to the source of knowledge that men use to produce and reproduce power,

which reinforces women's lower status in society. In her discussion of the intersections between geography and gender, Massey (1994:179) interprets space as a product of intersectional social relations that are gendered. She argues that "spaces and places are not only themselves gendered but, in their being so, they both reflect and affect the ways in which gender is constructed and understood". With both gender and space being socially and culturally produced, Rendell (2000) argues that space is productive to, as well as a product of, gender relations. Space therefore can be thought of as not only a social and a cultural product, but also as a condition for social production.

On the same grounds, Spain (1992:6) claims that "the spatial structure of building embodies knowledge about social relations, or the taken for granted rules that govern the relations of individuals to each other and to society". For example, Kuhlmann (2013:2) in her investigations on gender in architecture, recognises that "the planned use of space sometimes indicates very strict hierarchies and distinct gender differentiation". She further argues that gender segregation within a building by assigning spaces that are accessible or usable by one gender over the other, was quite acceptable in the western societies for a very long time. And while she acknowledges changes to these designs over time, Kuhlmann (2013:2) claims that the spaces of our buildings today are still designed along gender lines that send subtle signals, which are sometimes taken for granted, about the accessibility, visibility and use of one gender over the other and that "serve the purpose of strengthening the social practices and hierarchies of the sexes" within them.

Thus, to perceive space, and buildings for that matter, as a passive and/or neutral physical product would be misleading and deceptive. In fact, space and buildings need to be understood as "an integral and changing part of daily life, intimately bound up in social and personal rituals and activities" (Rendell, 2000:102). This understanding of space and buildings prompted feminist researchers like Hayden (1980) to advocate for producing built environments in all scales of homes, neighbourhoods and cities that appreciate and accommodate both women's and men's needs. She therefore argues for deconstructing the polarity between the gendered spaces of our built environment. She claims that through the design, structure, patterns and accessibility of space, the social order and gender relationship and power status between men and women can be challenged, changed, mitigated and reproduced.

The relationship between gender and space cannot be discussed without addressing their association, distinction and/or connection between the public and private spheres. Attwood (2010:7) argues that historically "the relationship between the public and private space resulted largely from the processes of urbanization and industrialization". She claims that in pre-industrialised societies,

the mode of production was mainly reliant on the agrarian economy whereby "there were no distinct boundaries between the workplace and the home". Family members collectively contributed to farming activities as an economic unit to support their livelihood irrespective of their gender. But with industrialisation, a division between the home as a living place and the outside space as the workplace emerged. Socio-culturally stereotyped as the family's main breadwinner, men assumed the productive paid work that takes place in public spaces away from the home, whereby women became responsible for the reproductive unpaid work performed in the private sphere of their homes (Kennett & Wah, 2011; Schlyter, 1996). Accordingly, a polarity between the public and private spaces emerged. Public spaces were connoted as men's places, where they perform (valued) paid work and with limited accessibility and accommodation to women's presence and visibility. Whereas "the home was considered primarily female" (Attwood, 2010:7) where women are expected to do nonmonetary (devalued) family-care activities confined to the private space of their homes (Hayden, 1980). Massey (1994:179) argues that women's confinement in one place over the other limited their mobility, and in some cultural contexts became a "crucial means of subordination". Moreover, Torre (2000:140) argues that "appropriation of public space by women" can be thought of as "an empowering and political act". Such claim seems to assume women's liberation through their accessibility, use, visibility and occupancy of the public space.

The interlinkages between the spatial and social construct of gender is noted to intensely enact in the context of homes. Housing is perceived as a spatial context where social order is formed, influencing the realities and ideals about the relationships between men and women within the micro-scale of the family or/and the macro-scale of society. Spain, (1992), states that "domestic architecture mediates social relation specifically those between men and women" (Spain,1992:7). Kennett and Wah (2011), in their study of the interface between gender and housing in some countries of the Global North, relate the housing systems and the opportunities embedded within them, to the institutionalised relations of power that are gendered, with men claiming higher authority and power over women.

Researchers on gender and housing, such as Chant (2016) in the cities of the Global South, Attwood (2010) in the Soviet Russia and Weisman (1994) and Hayden (1980) in the United States, claim that people develop deferential subjectivities to the physical space, especially in the homes, based on their gendered personal experiences with the space. McDowell (1999) in her discussion of the interlinkages between gender identity and the home in Britain and some western countries, arguably concurs with Massey (1994) and Hayden (1980) in relating men's and women's differential subjectivities towards housing

to their gender roles that stereotype men as bread winners and women as family care takers.

But recognising the intersectionality amongst men and women groups in their subjectivities towards the home, Gardiner (1992) claims that the construction of public space as the men's sphere and the private space of the home as women's domain most likely refers to the experiences and housing conditions of the middle-aged white women of the late twentieth century and does not necessarily relate to women's housing experience in other contexts and times. For example, Spain (1992) considers women's confinement to their homes in the United States during the eighties, attending to reproductive roles, as a form of suppression. On the same grounds, McDowell (1999:73) argues that the home of the British women used to present as a place for tedious, monotonous and never-ending work and a "site of disenfranchisement and abuse". While during the time of slavery in the United States the home for the black women represented a place for receiving solace from the hardship of the unfairness of the outside world. Black women then, used to find safety, solidarity and empathy from their male partners against the discrimination and racism they received from the white communities outside their homes. Thus, while Spain (1992) and McDowell (1999) portray the home as a place where women need to be emancipated and freed from, McDowell (1999) acknowledges the home as a place of affirmation and dignity restoration. This highlights intersectional subjectivities to the home among women across socio-political and geographical contexts that continue to change with time. The intersectionality and disparities of women's experiences and subjectivities to their housing is also noted within the same ethnic groups, according to class variations. For example, whereas the Victorian home for the British upper-class women, with its multiple large rooms and halls, represents a place of isolation, segregation and alienation from the outside world, it symbolises a place of work for the British lower-income women house keepers. Such houses represent a place that separates low-income British women housekeepers from their families and children (McDowell,1999). Thus, despite acknowledged deferential gender subjectivities between men and women, their intersectionality according to class, race, age and their socio-political, cultural and geographical contexts influences such subjectivities within the same gender groups.

On other grounds, Habraken (2000) argues that the spatial patterns and forms within our built environment can be perceived as hierarchical structures that are formed out of deferential levels of spatial territories. Each level represents a domain of control for certain groups of actors or 'controlling agents', as he titles. These controlling agents has the authority and/or the power to influence the spatial configuration and the built forms within each respective level. As such, the spatial patterns and built forms within each level are produced according to

their creators' actions and/or interactions that represent their perspectives, values, goals or any other subjectivities they hold towards the place. Hence Weisman (2000:1) argues that our built environment needs to be perceived as "a cultural artefact that is shaped by human intentions and interventions, a living archaeology through which we can extract priorities and beliefs of the decision-makers in our society". Likewise, Hamraie (2013) argues that the physical environment we live in today should not be perceived as value-neutral but as a value-laden context that reflects its creators' views and beliefs on who will and should inhabit which part of the world.

Spain (1992) realised that historically the construction of women as caretakers and men as breadwinners used to restrict women's access to educational disciplines and centres of knowledge that are socially constructed as unrelated to their reproductive role as family caretakers. On the same grounds, access to housing related disciplines such as engineering, physical planning, civil engineering and architecture and engineering used to be mainly restricted to men. This caused the historical male domination of housing-related professional disciplines in most contexts around the world. While such scenarios have changed over time and more women are now joining such professions, still some gender imbalances are noted in these fields. These imbalanced are witnessed even in countries that are relatively progressive with gender balances and women's rights, such as the United Kingdom and North American countries. For example, the Los Angeles Times acknowledged the domination of men in the architectural sector in the United States and The Telegram of Canada noted the same in engineering fields (The Telegram, 2015). In their study of women's involvement in engineering disciplines in the UK, Silim and Crosse (2014) found that "engineering is still seen as a career for 'brainy boys'" and not suitable for girls. Elwidaa and Nawangwe (2005), in their investigation into women's participation in the Ugandan construction workforce, recognised that despite girls high academic performance in the housing related academic disciplines of Makerere, the main public university in Uganda, they are rendered almost invisible in the housing related work force. Housing related work-force in Uganda is found to be largely dominated by men (Elwidaa and Nawangwe, 2005).

It can be argued that the domination of men of the professional disciplines that are related to the space and built form design such as geography, physical planning, landscape architecture and architecture presents men as the 'controlling agents' to the spatial patterns and built forms of the world we live in today. Weisman (2000:1) claims that "the man-made environments, which surround us reinforce conventional patriarchal definitions of women's role in society and spatially imprint those sexist messages on our daughters and sons". She claims that people have been conditioned to environmental biases, which

limits their vision and life choices and deprives them of others that support or give access to their autonomy. Thus, the assumed gender-neutrality of the spatial patterns and built forms of our built environment become questionable, debatable and deceptive. Our built environment thus, needs to be thought of as 'man-made' product that is shaped and configured under men's' authority, power and control and that reflects and represents men subjectivities that are oblivious to those of women (Weisman, 1994). Chant and Mcilwaine (2016:3) recognise that "cities are overwhelmly designed by men, and for men", which they further claim, exposes women to many disadvantages and vulnerabilities in the cities. In that sense, the male-dominance and control to the design of the spatial patterns and built forms of our world supports the accentuation, restoration and perpetuation of men's superiority and authority and further reinforces women's invisibility and marginalisation in the world physical space and eventually in society. In effect, the "spatial arrangement of our buildings and communities reflect and reinforce the nature of gender, race and class relations in society" (Weisman, 1994:2).

Kennett and Wah (2011), in their explorations on women and housing in few western contexts, acknowledged the dominance of gender-neutral perceptions to housing as a basic human right and service that is assumed to serve people equally, irrespective to their gender differences. Physical planning and housing policies are assumed to "serve the needs of the whole society or community equally, and the distribution of housing resources serves the needs of the whole family equally" (Kennett &Wah, 2011:1). But Larsson (2001) cautioned that assuming gender-neutrality of housing has the potential to turn in practice into gender-blindness and/or one-eye-ness to housing. Such gender biased perspective to housing might cause the production of housing designs and spatial patterns that side-line women's perspectives, interests and needs in housing, compromising on housing adequacy for women. Therefore, feminist researchers (Larsson et al., 2003, Larsson 2001, McDowell, 1999; Massey 1994; Weisman 1994, Spain, 1992; Moser 1992 & 1989, Hayden, 1982, 1980) across various contexts of the Global North and South advocate for the provision of spatial patterns and built forms that are inclusive, representative and responsive to women's needs to avoid the production of built environments that exclude women.

It is noted that in most patriarchal societies of the Global South, assigning low-income women the reproductive gender roles of family care, causes them to spend extra time and do more chores within their homes, compared to men. This causes women to become more exposed and thus vulnerable to adverse housing design conditions (Chant, 2016; Marais, 2006:69). Therefore, women became with a higher interest in the upgrading of their housing living environment compared to men.

Kishindo (2003) argues that in many socio-cultural contexts in the Global South, women are tasked with organising their home space to the convenience and comfort of the household members as a part of their reproductive gender role. Similarly, Kalabamu (2009:235) in his investigations of the changing gender roles in housing delivery and construction in Botswana, identified "setting and design structures on the plot" as part of women's traditional gender role in housing construction. Therefore, as home designers and organizers, women's informal knowledge and skills about housing-favourable design conditions are nurtured (Kishindo, 2003; Weisman, 1994; Dandekar, 1992). Bhatnagar (1992:35) argues that "As the primary users, women are more aware of favourable dwelling designs and other aspects related to their living environment, such as location of infrastructural facilities and appropriate plot arrangements". This presents women as the design experts and "forces of change and adaptability" to their housing as Wilkinson (2005:4) claims. Women's efforts for the organisation, adjustment and rearrangement of their homes attempt to make them more convenient for habituation also signifies them as the "controlling agents" (Habraken, 2000) to the living environment within their homes. Thus, it could be argued that while men at the formal level (as they dominate the engineering and design disciplines) create spatial housing patterns and built forms that are gendered based on their housing subjectivities, women informally create another sets of gendered housing spaces that are more aligned to their housing subjectivities.

On the other hand, Rendell (2000) finds defining how space is gendered problematic. Nevertheless, she suggests three ways through which a space can be gendered: a) through the intentional acts of the designer/creator based on his/her gendered perspectives, values and representation to space, b) according to the biological sex of the occupants of the space and/or c) in accordance to the gender associated with the activities performed within them that are socio-culturally assigned as part of men's or women's roles (Rendell, 2000:101).

In this research, the term 'gendered space' will be used to refer to the one produced according to the intentional acts of its creator, prompted by his/her subjectivities and assumptions on its accessibility, use and the type of activities performed in it that are affiliated to one gender or the other. Focusing on women, the concept of gendered space will be used to examine the spatial layouts and built forms that are assumed by MWSUHP designers against the ones informally produced by the transformations women of MWSUHP applied to their housing in an attempt to increase their convenience and attain their adequacy. Such explorations are intended to identify design considerations that support housing adequacy for women of MWSUHP. During the course of the research, the term

controlling agent will be used to refer to actors responsible for the creation of the spatial patterns and built forms within MWSUHP.

4.3 Participation and low-income housing adequacy

Community participation as a concept first emerged in the field of development (Sanoff, 2000). There is no agreed upon definition of the concept of participation as its meaning varies according to the context where it is used. But in basic terms, community participation implies "the active process whereby beneficiaries of the developmental initiative, influence the direction and execution of development projects" (Paul, 1987: V) to ensure the response and accommodation of the projects' outcome to their needs, desires and benefits.

In the context of low-income housing in the Global South, the concept of community participation accompanied the housing policy shift from the provider to the supporter approach to housing development and delivery. Such policy shift entailed shifting "away from direct provision of housing by governments to alternative approaches to housing development and improvement involving all stakeholders (including the public, private, academic and civil society actors) and, most importantly, people themselves" (Majale, 2011:10). The supportive approach to housing advocates empowering community members to contribute, if not take the lead, in the provision and development of their housing. Choguill (1996:431) claims that in the context of housing and infrastructure development "[a] fundamental component of community participation is self-help, that is, community mutual help" for housing and infrastructures development. As an alternative to the famous Arnstein (1969) ladder of citizen participation that has been guiding the discussion in community participation for many years, Choguill (1996) suggests participation model that he claims is more relevant to the context of the Global South. Whereas Arnstein perceives community participation as a "means to enable the people to influence decisions in the political arena about issues that affect them" relating it to levels of control and power, Choguill (1996:435) argues that community participation in the context of the Global South needs to be seen "as a means to obtain, through mutual-help initiatives and possibly with outside help, the basic needs which would not, otherwise, be available to them" due to the inability and/or unwillingness of their government to provide them with such services. In this case he claims the constrains for the housing and services provision and development will not be political or financial, but rather technical and motivational, to encourage community members providing their energy and time to upgrade their housing and services. Choguill (1996) therefore places empowering community

members to reach their desired housing at a higher value than the control and power they would have over their housing as in Arnstein ladder of participation.

Duveskog (2013:51) foresees the advantage of community participation in its ability to be used to empower the project's beneficiaries and influence the response of its outcome to their needs, desires and interests. He claims such advantages can be attained through "changing power relation in favour of those who previously exercised little power over their own lives" in order for them to become active agents of their own development.

John Turner (1977), a reliable source in housing studies and practice across different contexts of the Global North and South, long advocated for the participation and control of the dwellers in their housing design and/or management. He argues that when dwellers make decisions about their housing, they will have more tolerance, acceptance and responsibility to the outcome, compared to decisions made by someone else. This will not only increase dwellers' self-reliance and autonomy, but will encourage them to do more and better for themselves rather than expecting others to do for them, which will contribute to the production of environments that "stimulate the individual and social well-being" (Turner, 1977:xxxiii). Moreover, he perceives the flexibility of the informality of low-income housing of the Global South as an opportunity for residents to direct their housing to satisfy their needs, which he claims will contributes to its adequacy.

Governments of the Global South adopt different approaches to regulate slums and provide people with adequate housing. Most of the approaches they adopted to housing delivery and development endorsed community participation and inclusion as its underpinning concept, including the Enabling Approach that continues to guide the housing delivery in the Global South up to recent years (Hassan, 2011). Community participation is assumed to provide community members with the opportunity to influence the outcome of the housing project "according to the needs and priorities that they themselves define" (Majale 2011:3). Hence, community participation effectiveness needs to be assessed by its capacity to empower community members to influence the outcome of the housing process to their needs and satisfaction.

In this instance, it is essential to distinguish between defining housing as a noun or as a verb. As a noun, housing refers to the physical artefact that people occupy, which emerges as a product and/or the outcome of the housing process. As a verb, housing refers to "the processes that subsumes products" (Turner, 1977:66). According to Turner (1977:67) the housing process can basically be describes as "the interaction of the people (or actors) and their products (or achievements) through the medium of their roles and responsibilities (or activities)" that takes place between a pre-existing context that needs modification to a context where

houses are already modified. Despite its complexity, the housing process can be simplified into three basic phases of: a) the design phase, including both the housing physical planning and architectural designs b) the construction and/or implementation phase and c) the post-occupancy phase. Nevertheless, a preparatory phase to identify the actors involved in the housing process, their roles, responsibilities and probably the mode of their interactions and communications usually precedes the design phase.

To adapt the discussed housing process to the context of this research, the pre-existing situation can be thought of as the inadequate housing and living environment of the slums and the outcome of the housing process is represented by the modified or adequate housing that MWSUHP intended to provide to its beneficiaries particularly women as illustrated in Figure13 below.

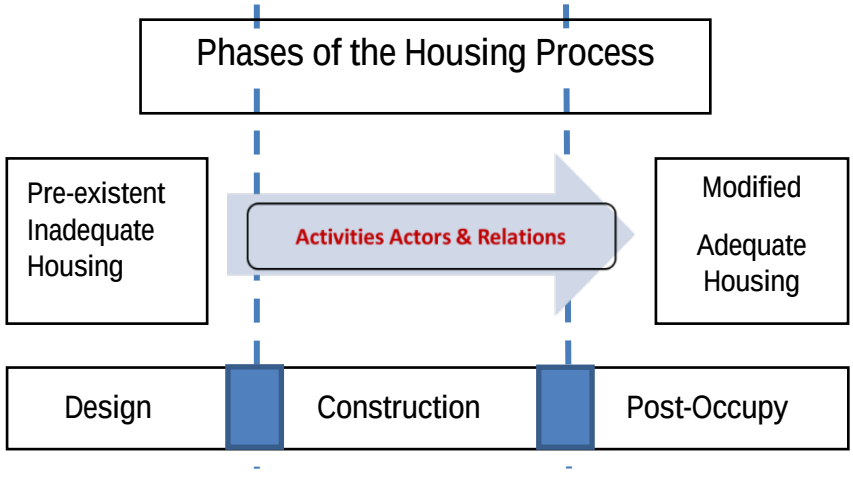


Figure 13. Phases of the slum-upgrading housing process. Adapted from Turner 1977.

The phases of the housing process are thus: the design, the construction and the post-occupancy phases that are briefly explained here below.

A) The design phase: In its simplest terms, the design phase of the housing process refers to the decisions, activities and procedures that housing designers, including both physical planners, landscape architects and architects, do to devise housing design solutions. In their designs, designers provide detailed descriptions for the spatial housing layouts and built forms in terms of shapes, sizes, proportions and orientations, materials and construction technologies that need to be used for the realisations of the modelled designs. The design phase of the housing process needs to be thought of as a problem-solving process that "begins when an individual or team first thinks about a project" (Zeisel, 2006:19). The clients' needs and/or requirements of the project are usually listed

in a checklist referred to as the project brief, which prompts the start of the design process towards their satisfaction by the design solutions (Ambrose & Harris, 2010). To enable the designers to arrive at a satisfactory design solution, the project's "brief needs to include anything that will allow the design team to initiate" and undertake the design process (Ambrose & Harris, 2010:14). Although it is difficult to describe the design process "because it includes so many intangible elements such as intuition, imagination and creativity" (Zeisel, 2006:19), Ambrose and Harris, (2010) suggests some main stages to the design process that can be described as 1) formulation of the brief that includes the project's users' or clients' requirements 2) researching about the project and the site where it is to be implemented (Zeisel, 2006) 3) proposing alternative design solutions to satisfy the project's requirements 4) presenting the alternative solutions to the clients or users in a model form 5) selecting the design option with the highest potential for satisfying the clients' or users' requirement as listed in the brief 6) providing construction details to guide the implementation of the selected solution that is usually presented in two dimensional drawings or in three dimensional visual or physical forms. Although, three-dimensional models better demonstrate the living environment and artistic impression of the proposed design solution, making them more comprehendible to the clients or users, they are sometimes not produced due to the amount of effort, time and resources they require. Therefore, two-dimensional models are the most common to use for the provision of the details for the realisation of the design solution (Schon, 1983).

Although Zeisel (2006) claims that the design process ends with preparing the model forms for the implementation of the design solution, Ambrose and Harris (2010) extend the process to include post-occupancy as the seventh stage of the design process. They argue that the post-occupancy phase enables designers to receive feedback on the performance of the design solutions from the users point of view. Such feedback, they claim, enables designers to reflect on their designs and facilitate better designs in the future (See Figure 14).

Figure 14. The seven stages of the design process. Source: Ambrose & Harris (2010).

It is important to note that details on the outcome of the housing process (the artefact of a house) and what determines their adequacy, are decided upon at the design phase of the housing process. But the physical materialisation to these design decisions takes place in the implementation or construction phase of the housing process.

B) The second phase is the construction or the implementation phase, whereby the design solutions devised by the designers in the model world are implemented in the actual physical world. Other than minor adjustments that sometimes arise during construction, the implementation of the housing follows the detailed instructions of the models set by the designers during the design phase. Therefore, the construction phase can be thought of as an execution of the designers' decisions and instructions based on their assumptions about the adequacy of their design solutions.

C) The third phase of the of the housing process is the post-occupancy phase, which refers to the period when the outcome of the housing processes, (i.e. the selected design solution) is fully constructed and inhabited and the occupants are experiencing its living environment. In the post-occupancy phase, user's assessment of their housing adequacy is mainly based on their satisfaction with its response to their housing needs and aspirations that are listed in the project's brief.

The effectiveness of community participation in influencing members' housing needs can also be assessed by its capacity to empower users to make their own effective choices or decisions, to influence the outcome of the housing process to their desires (Alsop, 2005). To ensure the positive impact of their choices and decisions on their housing designs, community members need to be equipped with the relative knowledge to support their informed decisions on their housing designs. Therefore, Wood and Hood (1994) identify sharing information and ideas as important components for empowering community members to make informed decisions and choices that serve their interests in housing. However, discussing choices and decisions that affect the outcome of the housing process usually takes place during the design phase.

With a market-oriented approach to low-income housing in the supportive housing approach and the constrained budgets of Global South countries, community participation in low-income housing has mainly been through community members constituting the labour force for the housing construction activities in order to reduce its labour costs and contribute to the project's economic feasibility. Low-income groups are expected to use their *non-productive* time to construct their own houses. But Hamdi (1995) contests considering low-income people's time as non-productive. He argues that low-income people are usually occupied in the informal market to increase their already strained finances, which might make them reluctant to deter their energy

or time away from the possibilities that support their livelihoods. However, with the highest interest in upgrading their housing, community members are more likely encouraged to render their labour services to the housing project in what Berrisford, Kihato, and Klug (2003:13) refer to as 'sweat equity' contribution. But it can be argued that redirecting their energy and time to non-paid construction work, causes low-income people to lose on opportunities for increasing their personal economic revenues which brings doubts to the impact of their participation on the economic feasibility of the project as a whole.

It is worthwhile to highlight that such conventional form of community participation by including beneficiaries of the housing project to provide its labour force for its construction activities doesn't influence the projects' outcome, since the design decisions that impact its outcome have already been made during the previous design stage. Thus, it could be argued that participation of the project's beneficiaries in their housing construction activities has no significant influence on ensuring the satisfaction of the outcome to their needs, interests or aspirations, which support their housing adequacy. In this sense, community participation can be perceived as an exploitation of the beneficiaries' time, energy and resources to execute decisions that are taken by others on issues that are related to their own housing. Such form of community participation in the housing project, arguably, presents its beneficiaries as passive recipients rather than active contributors to their housing delivery and development.

It is important to note that the discussions of community participation in the context of low-income housing usually address community members as a homogeneous group without particular considerations of their gender differences. But, due to its focus on women, this research employs community participation concept to particularly explore on women's participation in the phases of MWSUHP housing process and its influence on supporting women's capacity to make decisions and choices to influence the project's outcome to their housing needs, interests and desires. The concept is also used to investigate on women's participation in the phases of MWSUHP housing process and its influences on their housing adequacy.

4.4 User satisfaction and housing adequacy

In the slums, people usually live in self-designed and built houses that are typically constructed using available or improvised building materials. With no formal training, people use their indigenous knowledge, passed on from earlier generations, to produce built forms "that meet their basic social and physical needs" producing what Lawson (2006) refers to as 'vernacular architecture'. In these self-designed build forms, the right way to design and

build are established by tradition (Cherry, 1999:5). In their self-built houses, people exploit and make use of opportunities available within their context using readily available material, construction technologies that are "commensurate with the builder's skills. Form, layout, and decoration reflected what the residents deemed important" (Marcus & Sarkissian, 1986:2). By attempting to provide themselves with reasonably habitable housing that is within their means, people take the stand of the designer. Simon (1969:55) defines a designer as anybody "who devises courses of action aimed at changing existing situation into preferred ones".

Occupants of such self-built houses are generally also their designers, financiers and builders. Hence, their needs are automatically accommodated and responded to in their such self-built houses (Cherry, 1999). Occupants of self-built houses, being the users, designers, builders and the financiers, exhibit the highest level of autonomy and ability to make choices and decisions about their housing considerate to their resources and circumstances. However, they are usually bound by their limited financial capacities, unsecured land ownership and ignorance to technical knowledge on best building practices, which sometimes reduces on the physical quality of their houses.

But with the introduction of the slum-upgrading housing project, slums dwellers are usually perceived as occupants of the houses it will provide, while designing their housing is thought of as the responsibility of the projects' professional designers. Marcus and Sarkissian (1986) noted that such attitude or perception is commonly witnessed in mass housing projects. Equipped with their formal training, professional project designers, are assumed to have the knowledge and expertise to provide project beneficiaries with improved houses compared to their self-built houses (Lawson, 2006).

But to arrive at such housing design solutions, designers follow the stages of the design process that were described in previous paragraphs of this chapter illustrated by Figure 14. While such description to the design process presents it in a number of linear and sequential stages, it is essential to admit that the design process entails series of overlapping and repetitive activities of: i) image formulation to the possible design alternatives that are ii) presented and discussed with the users or clients to select from and iii) for the designers to continue revising and refining the selected design option based on the negotiations and discussions took place with the clients and/or users to ensure their satisfaction with the final outcome (Zeisel, 2006). Figure 15 illustrates the representative and overlapping cycles of the design process activities.

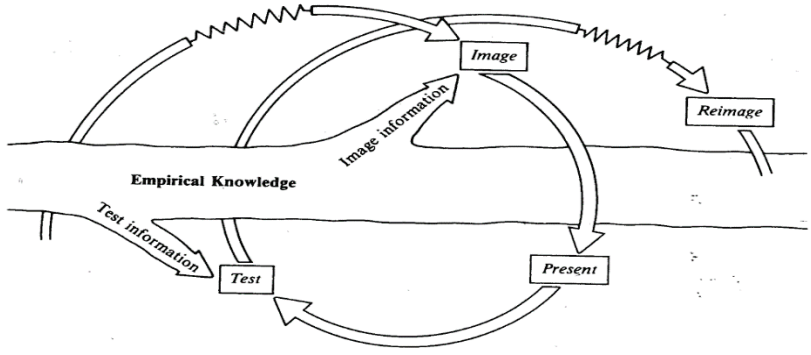


Figure 15. The repeated cycle of the design process activities. Source: Zeisel, 2006.

Researchers in the design fields (Kopec, Sinclair, & Matthes, 2012; Ambrose & Harris, 2010; Zeisel, 2006) acknowledge satisfying users'/clients' needs as basically the ultimate goal of any design process. Therefore, arriving at a design proposal that is satisfactory to the users/clients entails a proficient level of communication between them and the designers to ensure mutual understanding, consensus and a good level of agreed upon expectations between the two (Ambrose & Harris, 2010). While it is important for the users/clients to clearly state their needs and aspirations to the designers, it is equally essential for the designers to communicate their proposed design solutions in a presentation style and language that are comprehendible to them to "avoid potential misconceptions with both the clients and the members of the designing team" (O'Grady & O'Grady, 2006:60). Designers also need to provide users/clients with relative information to support their ability to make informed choices and decisions about the buildings they will occupy. Good communication between the users/clients of the building and its designers not only enables them to reflect and give constructive feedback on the proposed designs but will also support the designers' ability to provide more satisfactory and adequate designs. Such discussions, negotiations, exchange of information and resolutions that take place between designers and the users/clients, makes the design a self-correcting process (Sanoff, 2000), which contributes to the adequacy of its outcome.

However, in mass housing, like slum-upgrading housing projects, the users, represented as the project's beneficiaries, have little opportunity for communicating their housing needs to the designers directly. Their needs are usually communicated to the designers through the project's administrators. Zeisel (2006) refers to the project administrators as the paying-clients who commonly have their own agenda in the housing project. In effect, a gap in communication between the users and the designers emerges as illustrated in Figure 16. Zeisel (2006) claims

that such communication gap will not only compromise the capacity of the users to communicate their housing needs to the designers but will also reduce the designers' ability to devise housing design solutions that are responsive to their needs and aspiration, which can compromise on the design's adequacy.

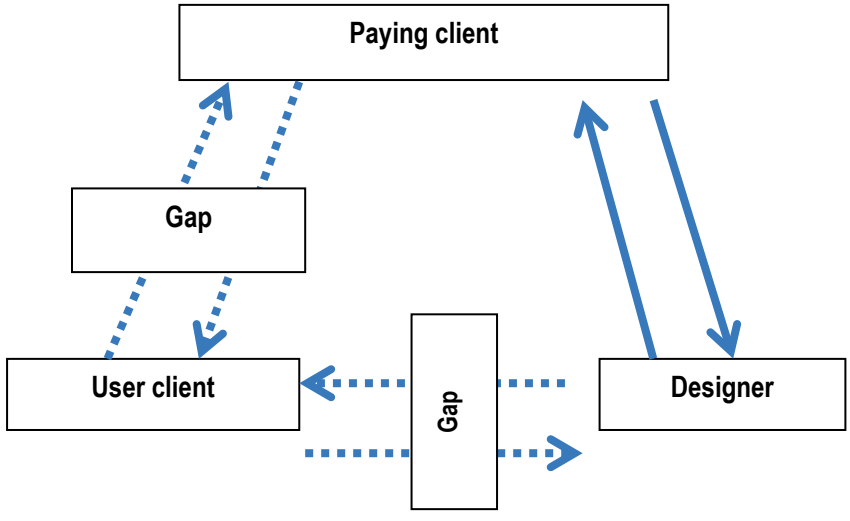


Figure 16. The communication gap in mass housing. Adapted from Zeisel, 2006.

Marcus & Sarkissian (1986) recognise that in mass housing designers usually take an elite position that is close to the paying-clients but distant from the users. Designers, therefore, provide design proposals that are more aligned with the project administrators' agenda than the users requirements. Motivated by the agenda of the paying-clients' of mass housing that are commonly of cost reduction, space minimisation, speedy delivery and maximisation number of the housing units, designers are prompted to provide standardised housing prototypes. Turner (1977) argues that such housing prototypes are prone to excludes users' needs and aspirations, reducing their convenience and satisfaction with the proposed designs and their adequacy.

Zeisel (2006) claims that fitting the built forms to the socio-cultural contexts where they are implemented is a determinant factor of their adequacy. But Bloom & Lasner (2016:8) recognised that in the context of mass housing projects, "architects and administrators too often dismissed neighbourhood context, traditions, and family needs", which reduces the adequacy of their proposed designs.

To enhance the response and accommodation of the designs to their users' needs to support their adequacy, several design approaches were developed.

Some of these approaches are: participatory designs, user-centred designs and flexible designs.

4.4.1 Participatory planning/design (PP/PD)

Participatory Design (PD) entails the direct involvement of the users in the design process as part of the designing team. Sanoff (2000:8) claims that participatory design emerged in response to the disparities between the design solutions that technical professionals provide and the values, needs, priorities and expectations of those who use the designs. In response, PD advocates for involving the users of the design in the process of developing their physical environment to increase their satisfaction with the ensuing solutions (Sanoff, 2000; Jones, Petrescu, & Till, 2005). According to Habraken (2011:ix) The involvement of users in the environmental designs processes " had the potential of producing environments which were safe, and cared for, but also tailored to the needs of the users by the very fact that the residents were involved in making decisions relating to the house and the direct dwelling environment".

In participatory design, user-clients are included "as members of design teams, giving them control" and share the decision-making power over the design solutions "that is traditionally reserved for paying-clients" (Zeisel, 2006:50). Engaging the users' in the planning and design of their housing came as a response to the criticism of unfavourable housing designs of mass-housing in Europe in the 1970s, which "generated a new era of design, production, decision-making and relationship between all parties involved in housing" (Habraken, 2011:viii).

Habraken (2011), a prominent Dutch architect, educator and theorist, introduced his concept of *support structures* that separate the structure from its infills to allow for the provision of houses that can be built, taken down and altered independently from each other. Support structures were designed to solve the problem of the rigid neighbourhoods and housing plans, for which the environment refused to respond and lead to their relocation, demolition and replacement with new buildings (Habraken, 2011, p. viii). Through his introduction to the support buildings, Habraken (2011) invited users into the complexity of the housing process to become members of the designing team, creating a dialogue between the users and the designers that he claims would produce designs that are "safer, and cared for, but also tailored to the needs of users" (Habraken, 2011:ix).

Sanoff also (2000:8) argues that residents' active involvement in the design development will lead to "better maintained environment, greater public spirit and more user satisfaction". In the process of participatory design, designers

exchange their professional technical knowledge, which they received through their formal training, about the built environment. Users, on the other hand, share their indigenous knowledge of their surroundings and what they wish for in their future housing. Sharing knowledge on the design surroundings will support the fitting of the design to socio-cultural contexts where it is to be implemented, which supports its adequacy (Zeisel, 2006). This act of knowledge exchange between the designers and the users is, arguably, assumed to enrich the housing design knowledgebase, supporting the provision of adequate housing designs. Despite the acknowledged benefits of the PD approach, it is found to be time, effort and resource consuming, which discourages its use for being impractical and unfeasible.

4.4.2 User-centred designs (UCD)

User-centred designs UCD are those that employ users' satisfaction as the guiding principle to the design process. UCD access the (past, current and potential) experiences of the users of the design (object, events or place) to become the source of inspiration and ideation of the design solution (Sanders, 2002). Advocating for UCD in the context of technology, Gulliksen et al. (2003:397) claim that the basic principle of UCD is to emphasise "the importance of having a good understanding of the users (but without necessarily involving them actively in the process) but nevertheless make their needs dominate the designed systems". Applying UCD principles to the context of housing entails ensuring that users' housing needs are the guiding principles for their housing designs, and they are accommodated in the outcome. However, Gulliksen, Lantz, &Boivie (1999) argue that UCD has a serious challenge with respect to the decision-making power and control that can create tension between the designers, project managers and users. They stated that in UCD

> The designers are still likely to expect to be judged by their peers in the usual way and the users may be more likely to judge by how well their requests were met, rather than by whether the design actually works. Furthermore, designers in a user-centred process may feel less creative and less innovative, as they may believe that their task is simply to meet the users' requests. And, of course, users can feel increasingly frustrated as they are consulted ad nauseam, but seemingly to no avail, as the final design is usually not a translation of their own visions. There is a real danger of the user feeling patronized, as designers feel bound to say, Yes we heard you ask for <x>, but we thought <y> would be better for you. (Gulliksen, Lantz, & Boivie, 1999:55)

Therefore, although UCD provides users an opportunity to express their needs in the design outcome and be responded to, it does not provide absolute decision-making power or control over the design process. Instead, satisfying users' needs

guides the design process and influences its outcome but final decisions are taken by the designers. UCD provides a commendable opportunity for communication, negotiation, information sharing, reconciliation and conflict resolution between the users and the designers, which have the capacity to bridge the communication gap between the users and the designers. Users will be informed on technical issues of the design, while designers will be informed on the contexts of the designs and users' needs in the design, which collectively contribute to the designs' adequacy.

4.4.3 Flexible Designs FD

Acknowledging the individuality of housing occupants and their diverse and changing housing needs prompted the promotion of flexible housing design solutions that can easily and affordably be adapted to their changing housing needs (Abbaszadeh, Moghadam, & Saadatian, 2013). Flexible designs basically imply the capacity of their built forms for reconfiguration and reorganisation to suit users' diverse and changing housing needs. They "provide user clients with more direct control over their surroundings by enabling them to adapt a structure themselves" to their own needs, aspirations and convenience (Zeisel, 2006:50). Flexible design ideas were manifested in many design concepts such as: support and infill, base-buildings, open buildings that sometimes referred to as open-plan systems and skeleton structures. All of these building types share the basic principle of developing building systems that are made "out of sums of total smaller parts, simple, integrated, finely attuned, with joints that disconnect and other parts which unite" to provide the flexibility needed for maximising the possibilities of accommodating changes that might occur at different pace and speed levels (Habraken, 2011:xi).

With respect to housing, Schneider and Till (2007:13) identify two ways through which housing flexibility has developed. The first came about as a "result of the evolving condition of the vernacular" whereby occupants transform their housing according to their patterns of use and cultural formation.

In her investigation of the housing transformation of self-built houses in the Global South, Khan (2014:21) considers housing adjustments and transformations "as an integral phenomenon of inhabitation irrespective of the type of housing". She claims that with habituation, people tend to adjust the original housing designs in response to their changing circumstances and evolving housing needs to facilitate convenient living.

The second form of housing flexibility that Schneider and Till (2007:13) identify, is the one that was developed due to the architect's response to "external

pressures that prompted housing designers and providers to develop alternative design solutions, including flexible housing".

Flexible designs received major interest in the domain of mass-housing. Space reduction of the dwelling unit necessitates flexible designs to increase efficiency (Leupen, 2005). Habraken (2011) foresees that happening by maximising occupants' options for adjusting their standardised housing designs to personal housing needs

The above submission highlights users' satisfaction as a basic element for housing adequacy, which can be attained, among other things, by the accommodation and response of the housing designs to their users' needs. But users' needs are diverse and change with time according to their personal circumstances. This highlights housing flexibility in responding to these variations as essential design consideration to attain users' satisfaction, which contributes to their housing adequacy.

Focusing on women, this research uses the concept of user satisfaction to explore on their satisfaction with MWSUHP housing designs in responding to their housing needs as a basic determinant to their housing adequacy. The research utilises the concepts of participatory design (PD), user centred designs (UCD) and flexible designs (FD) to explore on women's participation in the phases of MWSUHP housing design processes and its influence on the adequacy of the housing designs the project provided.

4.5 Adequate housing for low-income women

Schlyter (1996:6), a feminist architect concerned with housing women in Africa, advocates for include "all the rules and processes which are involved in providing the everyday living environment" when defining housing concept for women. She claims that for women of the Global South housing extends beyond the territories of their individual homes to embrace the surrounding neighbourhoods and services. Therefore, to explore on housing adequacy for MWSUHP women, the research extends its investigations beyond the boundaries of their individual homes to include the spatial and built forms of their neighbourhoods.

For its explorations, the research also utilises the gender analysis framework of Caroline Moser, a prominent researcher concerned with gender planning. In her framework, Moser aims at setting gender planning as a type of planning in its own rights that aspires for the "emancipation of women from their subordination and their achievement of equality, equity and empowerment" (March, Smyth, & Mukhopadhyay, 1999:55-56). However, she admits the wide variance of such issues between contexts "depending on the extent to which

women as a category are subordinated in status to men as a category" (March, Smyth, & Mukhopadhyay, 1999:56).

Two of the basic concepts or tools in Moser's gender analytical framework that are relevant to the context of this research will be utilised. These are: i) women's triple gender roles and ii) women's practical and strategic needs. The triple gender role tool of Moser's framework is based on the gender role theories that assign tasks to people according to their biological sex (Schlyter, 1996). The tool is therefore concerned with who does what in the community.

Chant (2016) recognised that for women of the slums, poverty and constrained and/or expensive mobility might cause women to get involved in home-based income generating activities that support their families' economy amid their family care responsibilities. Thus, researchers concerned with women and housing in the Global South (Chant & Mcilwaine, 2016; Schlyter, 2003; Larsson 2001, Kellett & Tipple, 2000, Moser 1992&1989, Dandekar 1992) recognised the home as a place of work for low-income women in many contexts of the Global South beside a place of residence. Such recognition reconciles the dichotomy between the home as a private women's domain and outside it as a public domain for men. For the low-income women of the Global South thus the home becomes both a place of residence and work congregated in one.

Acknowledging both functions of the home for the low-income women of the Global South, Moser in her gender analytical framework, introduces the concept of women's triple roles that includes women's: 1) productive roles, that support their families' economy 2) reproductive roles, that include all activities related to their families' care and she added the third role of 3) community management, that facilitates their integration into their communities and contribute in their development (March, Smyth, & Mukhopadhyay, 1999:56).

Although rejecting or contesting against the notion of 'gender roles' that stereotypes specific roles to people based on their biological/sexual difference, is understandable, Larsson (2001) in her study to the gender perspectives to the housing in the Global South, places special emphasis on the influences of housing, both as social and physical surroundings, on women's everyday life activities. With the focus of this study on MWSUHP women, investigating on their everyday life activities becomes an essential component for the exploration on their housing adequacy.

Discussing MWSUHP daily activities relates to Moser's gender analytical tool of women's practical and strategic needs. In her gender analytical framework, Moser (1989) distinguishes between women's practical and strategic needs, that she claims are both important for gender planning. She defines women's strategic needs as those "formulated from the analysis of women's subordination to men" targeting "more equal and satisfactory organisation of

society than that which exists at present". Moser thus claims that women's strategic needs necessitate long-term institutional change to eliminate their subordination. On the other hand, Moser defines women's practical needs as the ones that "are formulated from the concrete conditions women experience in their engendered position within the sexual division of labour and deriving out of this their practical gender interests for human survival". Women practical needs are usually "formulated directly by women are usually a response to an immediate perceived necessity which is identified by women within a specific context" (1989:18032). Women practical needs thus require short term interventions that focus on their everyday life and their engendered position in the home arena.

Acknowledging the intersectionality among low-income women of the Global South, Schlyter (1996) identifies the stereotyping of the nuclear family as the norm as one of the basic challenges and considerations for mainstreaming gender in the housing discourse. She claims such stereotyping excludes women in non-conventional family structures.

On the same grounds but from the perspective of architectural design, Habraken (2011) contests against the standardised and rigid designs of the mass housing that are produced by professionals. He claims that the such rigidity fails to embrace the changes in society and the "dramatic shift away from the standard nuclear family of the standard 'couple with two children' to mean husband and wife with children to fragmented 'single parent families', 'single professionals', 'divorcees', or communal groups of individuals electing to live together in one form or another". Thus, in his quest for housing design concepts that embraces such social changes, Habraken (2011) advocates for flexible building/housing designs, perceiving housing flexibility as an opportunity for reconciling the relationship between the housing buildings and the inevitable changes in the built environment.

Therefore, this research embraces the concept of flexible housing to maximise users' satisfaction with their housing by increasing its adjustability to their diverse and changing housing needs. Moreover, this research extends the meaning of the housing flexibility concept to embrace the intersectionality of MWSUHP women and include women in non-conventional family structures.

Using Moser's analytical framework, this research explores on the adequacy of MWSUHP housing designs to women by exploring on their capacity to: 1) accommodate women's productive, reproductive and community integration roles and 2) satisfy women's practical needs that are related to their daily life activities. MWSUHP housing designs flexibility in responding to women's diverse housing needs and embracing their intersectionality is also explored. To explore on the adequacy of MWSUHP housing designs to women, the research

extends the concept of housing beyond the extents of their individual houses and includes the spatial patterns and built forms of their neighbourhoods.

4.6 Concluding remarks

Thus, the main concepts that guided the investigations of this research are: gender, gendered spaces, participation in low-income housing process, user satisfaction in housing and adequate housing for low-income women.

The research used the gender concept to highlight women's invisibility in the Ugandan low-income and slum-upgrading housing discourses and their inaccessibility to adequate housing in the Ugandan cities, emphasising such issues are areas of concern that need to be addressed. Gender, attributes of class, ethnicity, age and sex, are used as analytical categories to examine the deferential gender subjectivities and power relations that influenced the formation of housing spatial patterns and built forms in the Ugandan cities and the production of MWSUHP housing designs, in relation to their adequacy to the Ugandan low-income women.

The research used the concept of gendered space to examine the spatial patterns and built forms of the three interlinking spatial scales of: i) the Ugandan cities that represent the spatial or geographical contexts of the Ugandan slums, ii) MWSUHP neighbourhoods and iii) the individual houses of MWSUHP women. Gendered spaces in this research refer to the ones that materialised 1) due to the intentional acts of their creator and/or designers, 2) based on their accessibility and use by gender and/or 3) based on the activities performed in it that are socio-culturally associated to one gender or the other.

With women being the focus of the study, the concept of community participation is used to explore on women's participation in the phases of the MWSUHP housing process and its influence on their housing adequacy.

Considering user's satisfaction as a guiding principle in the housing design process, and one of the determining factors for the adequacy of its outcome, the research explores on women's satisfaction with MWSUHP housing designs to examine their adequacy to them.

The research used Moser's gender analysis tools of i) women's triple roles and ii) women's practical needs to examine their satisfaction by MWSUHP housing designs as well as the designs materialised from women's initiated housing transformations, as a contributing factor to the housing adequacy for women.

The research used the flexibility concept to examine the capacity of MWSUHP housing designs to respond to women's variant and changing housing needs as well as their capacity to embrace MWSUHP women intersectionality. These research concepts guided the research explorations on

processes and procedures for women's participation in the phases of MWSUHP housing processes and the identification of design considerations to influence housing adequacy for women. The research concepts influenced the research methodological approach, as will be demonstrated in the following chapter.

5 Methodology

This chapter explains the research methodology and describes its underlying assumptions, the methods used to collect its empirical evidences and the strategies applied for their interpretation and analysis. The chapter also address the measures taken to determine its quality and validity.

5.1 Methodological approach

Methodology, in research, is used to mean the tools or methods selected to do a certain research task (Payne, 2005). In other cases, methodology can be interpreted as the whole process of doing research, including its theoretical or conceptual positioning and the practical activities of data collection, synthesis, presentation , discussion and analysis of the findings up to the stage of drawing conclusions (Payne, 2005; O'leary, 2004; Creswell, 2003). The latter interpretation of methodology is used in this research, as it is perceived to be more comprehensive and provides better coherence to the different parts of the research.

The research employed a set of assumptions to guide its explorations on the processes and procedures for women's participation in the phases of MWSUHP housing process and to identify design considerations to influence their housing adequacy. O'leary (2004) claims that any research needs to develop a strategy to undertake it. Grundström (2005:27) claims that a research strategy is needed to make "a complex reality susceptible to research". The basic assumption of this research is that MWSUHP women, by the virtue of the long time they spend and the extra chores they perform in their homes, suffer the most from adverse housing design conditions, concurring with what Chant & Mcilwaine (2016 0 and Marais & Venter (2006) noted. Moreover, it is noted that low-income women in many patriarchal societies of the Global South such as Uganda, are socio-culturally assigned the role of organising the home space for the convenience of the households as part of their reproductive roles (Kishindo,

2003). In effect, women tend to develop first-hand informal knowledge towards their housing favourable design conditions, which they employ to improve on their housing convenience and adequacy (Kishindo, 2003; Weisman, 1994; Dandekar, 1992). Simon (1969) claims that anybody who changes a situation to a better scenario can be thought of as a designer. Hence, through their housing organisation and improvements, low-income women can be thought of as their housing designers. Based on this assumption, the research carries its explorations seeking identifying processes and procedures for consolidating low-income women's informal housing design knowledge to support their housing adequacy. Moreover, Khan (2014) claims that housing transformations at the informal settlements can be assumed as an inevitable phenomenon. Hence, the research assumes that by studying the spatial patterns and built forms resulting from the transformations women of MWSUHP applied on their housing to attain their adequacy, some design considerations can be identified to support the provision of housing designs that are adequate to the Ugandan low-income women.

In this research my preunderstanding to the research issues influenced its design and methodological approach. Granvik (2005) identifies one's individual experience as part of the constituents of his/her pre-understanding. Therefore, my pre-understanding of the research issues was formed from the combination of my experiences as a practicing architect, an architectural educator and researcher, as well as a woman home-user who is socio-culturally ascribed the gender-role of a home-organiser. Moreover, the choice of the research design has also been influenced by my assumptions about the issues under investigation, which concur with Wang (2002) in her discussion of the systems of inquiry and standards in architectural research methods. She claims that "any researcher's choice of particular research design is necessarily framed by the researcher's own assumption about the nature of reality and how one can come to apprehend it" Wang (2002:21). These multi-folds of my pre-understanding and assumptions to the research issues influenced my observations, reflections and data interpretations during my exploration of the spatial patterns and built forms of MWSUHP. But feminist researchers cautioned against "presuming to know, speak for or advocate for others" (Doucet &Mauthner, 2006:41). Therefore, I was cautious and conscious to the socio-cultural and contextual differences between myself and the researched subjects to avoid subjectivities and/or biases to the research material and analysis.

5.2 The choice of Case Study Methodology

The nature of the research entailed the use of both quantitative and qualitative approaches. While quantitative measures, such as statistical records, gender segregated data, housing dimensions and proportions, were employed in this research, qualitative methods for the interpretation of verbal conversations, actions and opinions were also utilised for its explorations. This triggered the need for a mixed methodology, whereby the biases of the qualitative approach are moderated with the quantitative approach and the first filling the gaps of the latter in support of each other strengths, and, as Creswell (2003) argues, make their combination the most viable way to undertake the research investigations. With the capacity of *Case-Study Methodology* to incorporate both, qualitative and quantitative approaches in its course of inquiry, as Yin (2009) and Stake (1995) claim, it was selected to undertake the research investigations. According to Yin (2009) and Stake (1995) case study methodology is best suited for exploratory research. Therefore, case study methodology supports the research explorations into the processes and procedures for women's participation in the phases of MWSUHP housing process to contribute to their housing adequacy.

Moreover, the multi-disciplinarily of the research as it interrelates architecture, gender and housing disciplines, substantiated the selection of case study methodology as it facilitates combining different methodological strategies from all the involved disciplines, which according to Johansson (2005) enhances the research validity and reliability. A key advantage to the use of Case Study Methodology in this type of practice-oriented research, is that the research outcome will contribute to building an evidence-seeking design culture within the Ugandan low-income housing discourse, enriching its knowledge-base. This will also enrich the individual and collective Ugandan housing designers' repertoire(s), which will in turn develop their reflectivity on housing designs provided in prior cases and enable them to provide better designs in other situations (Johansson, 2005). This has a particular importance to this research, since learning from each other is one of the basic principles for the Ugandan slum-upgrading housing projects to support their replicability (MoLH&UD, 2013b).

5.3 Selecting the case

To select a 'case' that has the best capacity to yield information to support the research explorations, documents that are relevant to the Ugandan low-income housing and slum upgrading were reviewed together with the consultation of authentic resource persons in the field of the Ugandan low-income housing. As a result, four slum-upgrading housing projects were identified namely the

Namuwongo project in Kampala (1985), Masese project in Jinja (1989), Malukhu project in Mbale (1992) and Oli project in Arua (1996). Among the four, Masese Women Slum-Upgrading Housing Project (MWSUHP) in Jinja stood out with its main point of departure from the others, was targeting women as the main beneficiaries. MWSUHP thus reflects the state of the art regarding providing the Ugandan low-income women with adequate housing. In this regard, MWSUHP represents an atypical or unique case with respect to the Ugandan low-income housing. Thus, MWSUHP represent an atypical or unique case that Stake (1995) argues, has the capacity to illustrate research issues that might be over-looked in other typical cases. Moreover, MWSUHP represents a contemporary real-life situation that can be investigated in its natural setting with minimal control of the researcher. This circumvents any manipulations to the empirical evidence and provides real representation to the issues under exploration. Thus, MWSUHP, with its contemporaneity, complexity, contextuality and its natural settings that prevents the researcher's control, fulfils the criterion for a good case study to explore the interrelated research issues within its specificity, as claimed by Yin (2009), Johansson (2005) and Stake (1995).

5.4 The study area within MWSUHP

MWSUHP was the second project in size and date, among the four low-income slum-upgrading housing projects that were launched to regulate and upgrade the living standards in the slums of Ugandan cities. Although details will be provided in later chapters, brief data that influenced the research methodology will be provided here. The project aimed to construct 700 housing units on a 20-acre area of Masese village in Jinja. The project's housing plots were designed in clusters composed of several plots, that are grouped into three blocks. In the original drawings, the project's blocks were coded as block 153, 105 and 106, but for better understanding and easier reference in this research, they were renamed as Cluster 1 to represent block 135, Cluster 2 to represent block 105 and Cluster 3 to represent block 106 as illustrated in Figure 17.

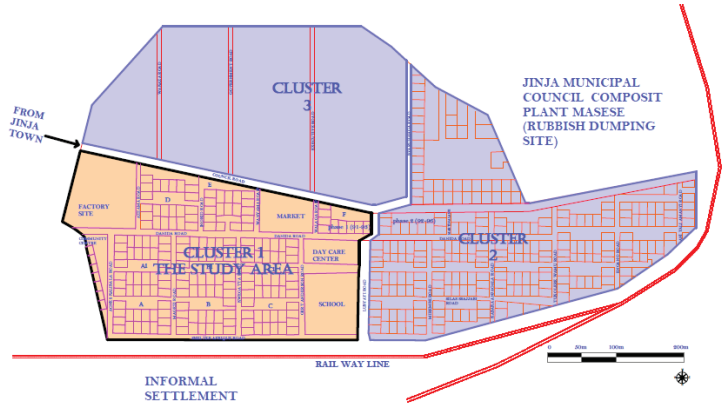


Figure 17. Housing clusters of MWSUHP and the research study area.

Clusters 1 and 2 were designated for small housing units, while Cluster 3 was designed for bigger plot areas that are to receive medium and large housing units. Cluster 3 targeted beneficiaries employed in the formal workforce and thus with higher income compared to the rest. However, when the project stalled, 523 plots were surveyed, 391 plots were allocated to beneficiaries and only 372 houses were fully or partially constructed (Kakuze, et al., 2013).

Construction first started in Clusters 1 and 2, but when the project stalled, 98.4% of the houses in Cluster 1 were constructed (186 out of 189), registering the highest housing implementation rate compared to the other two clusters that registered only a 10% implementation rate (MoLH&UD, 2013b). Initial visits to the project's site revealed a remarked housing development in Cluster 1, while many of the houses in Cluster 2 were incomplete. The main methodological approach for the explorations of this research is based on women's experiences and reflections on the housing adequacy of MWSUHP housing designs and the housing transformations women initiated to attain their housing adequacy. This necessitate lengthy occupation to MWSUHP housing designs. Thus, the high completion rate of the houses of Cluster 1 and the extended duration of their occupancy support their capacity to yield rich information in relation to the research investigations. Thus Cluster 1 was selected as the study area for the research.

5.5 Research methods

The mixed nature of the study—quantitative and qualitative—and the multi-disciplinary issues it explores, entailed a combination of its methods, which were selected according to their capacity to obtain relevant and rich empirical

evidence. Accordingly, the methods used in this research are: document review, walkthroughs, maps and drawing generation, key-informant and in-depth open-ended interviews, and focus group discussions. Details of the rational use for each method and how they were utilised will be provided in the following sections.

5.5.1 Documents and statistical records review

Ugandan policy documents of low-income housing, gender and their intersecting areas were reviewed to formulate a background understanding of the country's policy direction and approaches regarding the provision of adequate housing to the low-income women. These documents such as the consecutive national housing policies, the national land and gender policies and the country's slum-upgrading strategies. Such documents were reviewed to identify processes, challenges and opportunities for the participation of the Ugandan low-income women in their housing provision and development and their access to adequate housing. Data received from reviewing such policy documents assisted in identifying the gender gaps of the Ugandan housing and slum-upgrading housing discourses towards its mitigation to support the provision of adequate housing for the Ugandan low-income women.

Project documents and evaluation studies of the four Ugandan slum-upgrading projects were reviewed to investigate their aims, housing processes and the approaches they adopted for their beneficiaries' participation, especially women. Empirical evidence from the review of these project documents was synthesised, identifying points of intersection and/or departure in relation to the procedures they adopted for women's participation in their housing processes to in influence their housing designs' adequacy.

Evaluation reports, studies and articles relevant to MWSUHP were also reviewed to compensate for the deficiency in appropriate documentation for MWSUHP, for its comprehensive and detailed understanding as the case study for this research. The study also reviewed the available MWSUHP archives at MoLH&UD to establish basic gender segregated data for its population size, gender composition, house types, status of tenure and ownership and house construction completion levels at the time of the study, which further justified the selection of the study area. Data received on MWSUHP was synthesised into tables that provided detailed information on each plot within the study area with respect to its land tenure status, owners' demographic data, house type and level of housing development, which facilitated mapping the field work investigations and assisted in the selection of the respondents to the in-depth investigations.

Literature documents that address the formation of the housing spatial patterns and built forms at the Ugandan cities' were consulted and analysed to explore on their spatial interlinkages and influences on the formation of the slum areas within the Ugandan cities.

5.5.2 Drawings and maps generation and analysis

The scarcity of proper and complete documentation to MWSUHP drawings, entailed the generation of clear and accurately measured and labelled drawings for the MWSUHP project area. Available old and ragged drawings for the MWSUHP project and study area were scanned and digitally regenerated for convenient documentation and reference as illustrated in 17 above. The digitally generated map that demonstrates the outlines of the project's plots was then superimposed on an aerial photo, generated through Google Earth software (see Figure 18 below), to contextualise MWSUHP. The drawing of Figure 18, provided an idea to the implementation status within the project area, which although not very clear, verified the general information on the housing development within the project are that further justified the selection of Cluster 1 as the study area for the research explorations.

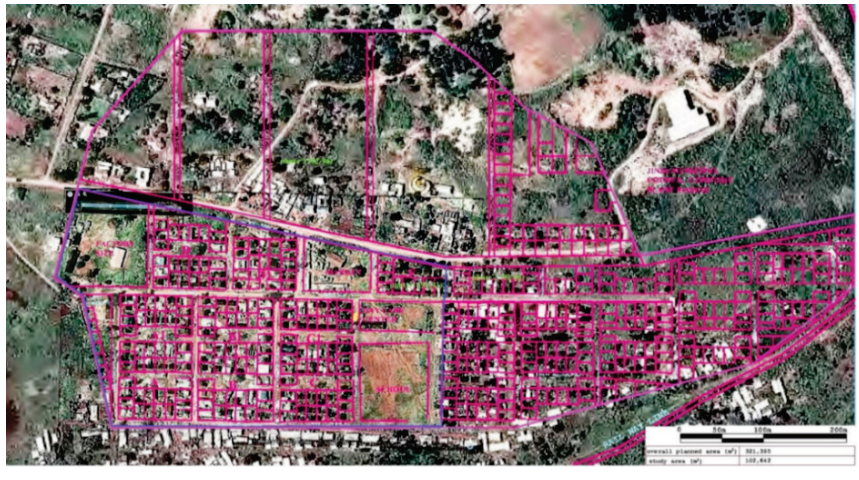


Figure 18. An outline of MWSUHP plots superimposed on an aerial photo of the project area in 2013.

Narrowing down the focus of the study area, a ragged blueprint copy of the drawing that reflects the layout of the plots at the study area was retrieved among the few project's documents that were salvaged. This map was scanned (Figure 19) and digitally regenerated as illustrated in Figure 20, for its convenient retrieval and archiving.

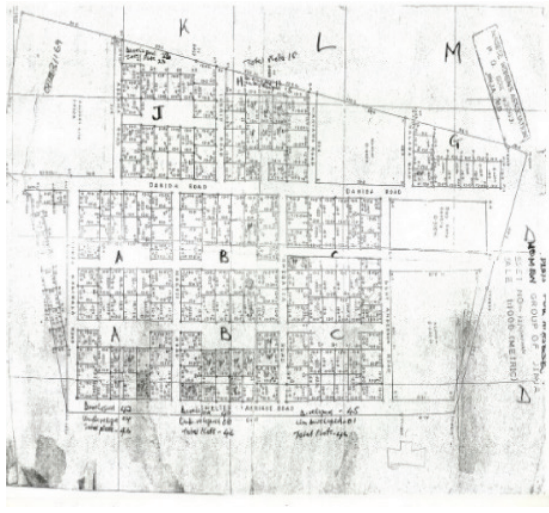


Figure 19A. The scanned map of the study area.

The drawing of Figure 20 was used as a basic reference map to the other thematic drawings generated during the course of the research. Details of the plots' numbers, locations and owners' names were documented on this reference map.

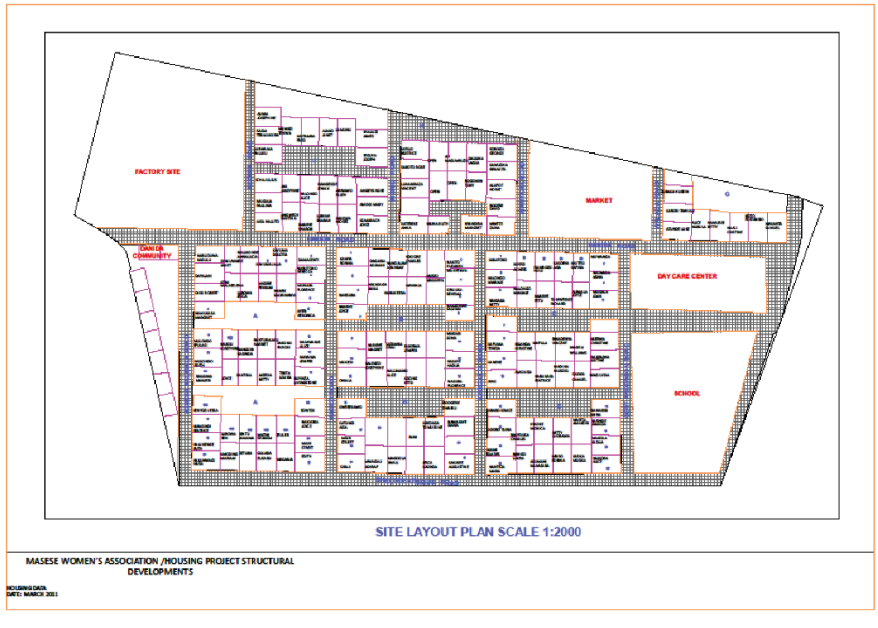


Figure 20. The digital map of the study area.

A map of Figure 20 was used as a refence to generate another drawing that incorporates the houseblocks within the plots of the study area as illustrated in Figure 21. This drawing intends to simulate the spatial patterns and built forms as envisaged by MWSUHP designers (See Figure 21). Information on the house types implemented within each plot was retrieved from the project's statistical records. Locating and orienting each houseblock within their respective plots was determined by the MWSUHP stipulated by the project's building bylaws and regulations and that are further verified by direct field observations. With a gender lens, the spatial patterns and built forms of MWSUHP, as illustrated in Figure 21 were explored. The assumed spatial patterns were categorised through colour coding by public (all spaces outside the plots including roads and open spaces coloured dark grey), semi-public (the front yard at each plot coloured light grey) and private spaces (the backyards of each plot coloured white). The house blocks within the plots were colour coded dark orange. Examining the spatial layout at the study area noted the subtle associated hierarchical gendered spaces of MWSUHP housing designs as assumed by the designers.

Figure 21. The spatial pattern and built form of the study area as assumed by the designers.

Physical developments in the study areas were measured at the time of study. Using the basic drawing of Figure 21 a that demarcates the physical developments at the study area at the time of the study was generated as illustrated in Figure 22. Using colour coding, MWSUHP housing development were recorded

using a lighter shade of orange to differentiate between the house block provided by the project and the extensions performed by the occupants. The drawing in Figure 22 demarcated the hazy current boundary walls/fences, highlighting the spatial patterns emerged as a result to the physical development and the absence of the stipulated boundary walls at the study area. The drawings were used for the comparative exploration and analysis of the emerging spatial patterns due to the housing transformations against the ones assumed by the project's designers and the associated gendered spaces in both scenarios.

Figure 22. Housing transformations at the study area at the time of the study.

The drawing was also used to note unique housing transformations that were marked as interesting cases for the in-depth analysis.

Based on the few available hazy single-lined non-scaled sketches (see Appendix 1), a set of drawings that illustrates the plans, elevations, sections and three dimensional (3D) projections for the MWSUHP housing prototypes were generated, as illustrated in Figure 23. The drawings were used as terms of references for the generation of more detailed drawings that document housing transformations at the individual cases of the in-depth investigations. These maps assisted the exploration on the spatial patterns and built forms and their associated gendered spaces emerged due to the housing transformations took place at the individual cases.

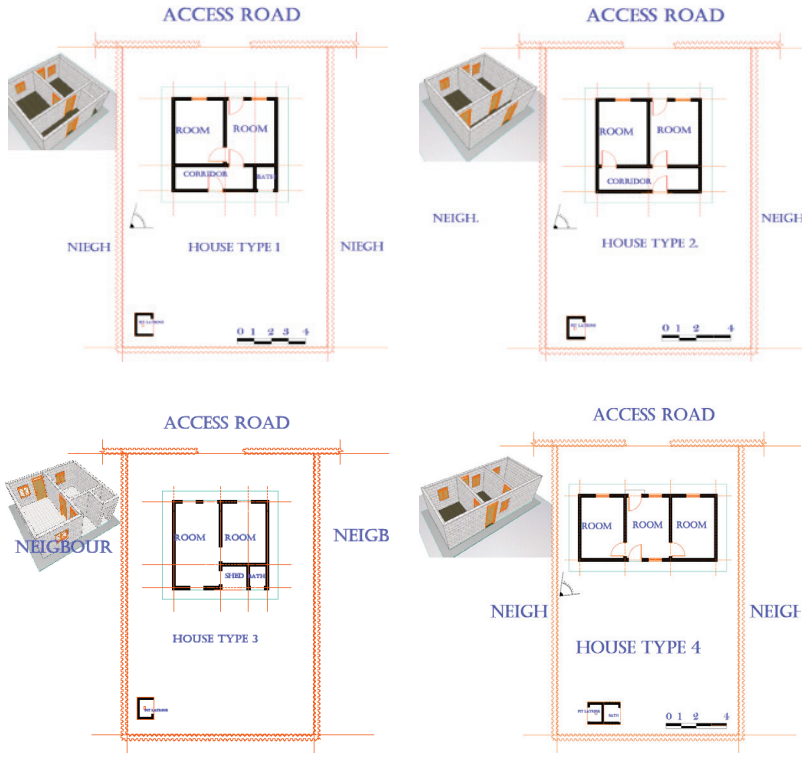


Figure 23. MWSUHP housing prototypes.

Measurements were taken at the houses of the cases that were selected for the in-depth investigation. This was done to generate sets of measured drawings for each case indicating their housing prototype plans, elevations sections and site plans together with demarcating the transformations that took place at outside and inside the respective house block. Individual case drawings provided detailed documentation of the name and gender of the house owner, house prototype and its location within the study area. Each set of individual drawings was associated with the respective respondent's in-depth interview for their future analysis in relation to each other.

5.5.3 Walk-through the study area

The walk-through method was used at the beginning of the field work to introduce myself to the researched community and gain their acceptance, that Bernard (1994) emphasises is essential when carrying out field work. My acceptance by the researched community was extra challenging due to my non-Ugandan origin, which presented me as an outsider, which might cause their

reservations and obstructs the data. Moreover, the walk through was used to tone down the tension in the uneven "power relations between interviewer and interviewee" that Jones, Bunce, Evans, Gibbs, and Hein (2008:3) claim might cause intimidation to the latter and affect the data quality. The walk through of the study area was an unhurried but serious, oriented by the generated map of the study area. To further avoid being alienated by the researched community and make my presence acceptable, I was escorted by the Secretary General (SG) of Masese Women Association MWA, which is the community based organization at the study area in my walk through. The SG was recommended by the engineer in charge of MWSUHP at the MoLH&UD as a resource person. The SG was a resident of the study area before, during and after the implementation of the MWSUHP project, and an active member of MWA. He acts as a liaison officer between MWSUHP residents and project administrators at MoLH&UD. The presence of the SG of MWA during the walk through assisted introducing the research team to the community and provided informative responses to any questions raised during the walk-through, which facilitated better understanding to the context of the study area.

The walkthrough group was later joined by the chief of Local Council 1 for Masese village LC1, which is the smallest public administrative unit. Two ladies holding the positions of the Chairperson and Treasurer of MWA, also joined the research group in their walkthrough. Eventually, the walkthrough managed to introduce the research group to the community, which normalised their presence at later stages of the study and facilitated field work activities. As beneficiaries to MWSUHP who continue to reside in the study area, members escorting the research team during the walk through were marked as potential respondents for in-depth interviews.

The walkthrough had the advantage of verifying the information about the study area as recorded in the drawing of Figure 20 with regards to the plots' layouts orientations, the house prototypes distribution within the study area as well as the demographic data of the plots' owners. Such information formed the basic database to support the selection of the respondents to the in-depth investigations.

Field notes and observations were documented during the walkthrough in relation to the gender use of the public spaces and the kinds of activities performed together with the housing transformation patterns, which contributed to the demarcation of interesting cases for the in-depth investigations at later stages.

5.5.4 Field interviews

Interviews are considered "one of the most important sources of case study information" (Yin, 2009:106). Two types of interviews were employed in the course of this study: key-informant interviews that targeted officials who were closely involved with MWSUHP and in-depth interviews that were administered to selected respondents from the residents of the study area. Details for both types of interviews are provided hereafter.

i) Key informant interviews

The basic criteria for selecting the respondent of the key informant interview was based on the intensity of their involvement and/or deeper knowledge of MWSUHP. Accordingly, seven officials who were closely involved with MWSUHP at the time of its implementation or at the time of the study were selected as respondents for the key informant interviews.

The key informant interviews were carried out as guided face-to-face conversations (Yin, 2009). These interviews were carried out in the form of "evolving conversation between two people" (Kvale, 1988:97) rather than one way structured queries for which answers are expected that according to Kvale (1988:97) causes the interview to be "technified into transcripts" that are "frozen in time, abstracted from the on-going action and decontextualized from the social interaction". The issues to be addressed in the key informant interviews were decided according to the position of the interviewee in relation to MWSUHP. This was done to capture their unique experience (Stake, 1995) and to enrich the research investigations. An interview guide was designed for each key informant interview to ensure its focus and comprehensive coverage of the specific research issues it addressed.

The interviews' guides were designed in open-ended questions to allow the researcher to request elaboration and clarification when needed. Questions in the key informant interview guides were designed in an open and fluid way, to allow for receiving extra unanticipated information during the conversation encouraged through probing. Questions were designed in a non-intimidating way to avoid provoking defensiveness of the respondents and to stimulate attaining maximum information, as Yin (2009:106) recommends.

The scarcity of comprehensive and organised documentation for MWSUHP increased the importance of the data obtained through key informant interviews, assisting in better understanding of the case. Since the project had been implemented more than twenty years before the commencement of the study, which caused respondents of the interviews to rely on their memories and reflections that sometimes intermixed with their personal views and judgments

to some aspects of MWSUHP. Despite their subjectivities, their diverse views on MWSUHP presented diverse evaluative perspectives of the project.

Preliminary consultations at the MoLH&UD about MWSUHP, resulted in identifying key officials who were in direct involvement with the project, who identified others in a snowball effect. Eventually, the identified respondents to the key informant interviews were:

- The officer in charge for MWSUHP from the MoLH&UD side as well as the assistant to the Housing Commissioner at MoLH&UD at the time of the project's inception. Her role as the officer in charge of MWSUHP and her involvement in the introduction of the MWSUHP project to the local communities, identification of the project's beneficiaries, their registration and mobilisation, guided her interview. Her perspective and reflections as a woman, and the only woman, at the administrative and decision-making level of the project was instrumental in providing information with the gender power relation at the administrative level of MWSUHP. She as well provided valuable insights with regards to women's mobilisation, training and their participation from the administrative side. As a former resident of Jinja city, the responses of the MWSUHP officer in charge was useful in providing insights to the socio-cultural context of the MWSUHP community (Appendix 2, Interview Guide 1).
- The Housing Commissioner at the time of the study was interviewed, as he was also one of the leading MWSUHP administrative managers from MoLH&UD. He was responsible for overseeing the implementation of MWSUHP, including the coordination between MWSUHP partners. Therefore, the guide for his interview aimed at receiving insights on the approach, aims and implementation process of MWSUHP, in line with the country's low-income housing policy direction and in relevance to the other low-income slum-upgrading housing projects in Uganda. The respondent provided his perspective on the political context at the time of MWSUHP's inception and subtle issues that might have influenced MWSUHP to mainly target women. Moreover, as project coordinator, the Housing Commissioner, was able to explain some of the issues that hindered the project from reaching its intended goals, which was informative since all available project documents were silent about these issues (Appendix 2, Interview Guide 1).
- The lead architect for MWSUHP housing prototypes was interviewed to explain the guiding design concepts and motivations for the design process of MWSUHP housing prototypes. The interview also explored women's participation in the MWSUHP design process and the communication

modes at the stages of needs identification, housing prototypes design development, the modes of the design display and presentation to the beneficiaries and their selection criteria. (Appendix 3, Interview Guide 2).

- The physical planners of MWSUHP were not reachable. However, a female member of the physical planning team at Jinja Municipal Council, who was responsible for drafting the drawings of MWSUHP cadastral maps, was interviewed. Although she was not directly involved in the decision-making process of MWSUHP's physical planning design, sharing her experience as a woman working in the male-dominated Ugandan housing sector provided insights to the challenges they faced in MWSUHP and how they impacted the design outcome. She also gave her views and reflections on the adequacy of MWSUHP's physical planning designs for Ugandan low-income women and on their participation in the design process (Appendix 3, Interview Guide 2).
- An interview was administered with the General Secretary GS of Masese Women Association MWA, a community-based organisation and a partner of MWSUHP. The GS was also acting as a liaison officer between MWA and MoLH&UD. His combined positions as a beneficiary to MWSUHP, a community leader within the study area and a credible person for the MoLH&UD presented him as an information rich interviewee at different levels. He shared his experience and reflections on his participation in MWSUHP, the responses of MWSUHP customary landlords at the inception of the project, the past and current administrative challenges of MWSUHP and his perspective as a male beneficiary and member of MWA compared to the perspectives of the women members of MWA (Appendix 4,Interview Guide 3).
- Key informant interviews were administered to two women who used to be members of a former women community-based organisation and current members of MWA that replaced the former one with the project's introduction. The ladies were also part of the group received training in building material production and construction activities and acted as trainers to project's beneficiaries on the same. These two respondents used to live in the study area before, during and after the ending of MWSUHP till study times. Therefore, they were able to contribute rich and relevant information regarding women's participation in MWSUHP as well as the adequacy of MWSUHP housing designs to them (Appendix 4, Interview Guide 3).

Attempts to reach key informants from DANIDA was futile as none of their staff at the time of the study were knowledgeable about MWSUHP. Failure to reach key informants from DANIDA was somewhat compensated by the analysis of the evaluation report on Danish assistance to Uganda, which included views of a few DANIDA representatives on MWSUHP. Similarly, attempts to interview representatives of African Housing Fund or Shelter Afrique as partners of MWSUHP were unsuccessful, as neither organisation had representation in Uganda at the time of the study.

Of significant consideration to the key informant interview is the busy schedule of the interviewees. Therefore, after the initial introduction of the researcher and the researched topic to the interviewees, they were given the option to decide on interview timing and duration, according to their convenience. This contributed to the effectiveness and efficiency of the interview.

With the interviewees' consent, the interviews were usually voice or video recorded. Recording of the interviews allowed the researcher to be more focused and engaged with the respondent, take notes, probe and ask for clarification to ensure capturing relevant information (Stake 1995). Interview recording, as Yin (2009) argues, was a good practice for data documentation for future reference, cross-checking and verification, which Stake (1995) considers as part of the research artistry. Moreover, it constituted an appreciated procedure in case study protocol, which concurs with Yin (2009).

Data received from each key informant interview was first transcribed, and their contents were condensed, and their expressed meanings were categorised (Kvale, 1988) under the respective research issues the interview was designed for. They were then thematically synthesised. Their extracted meanings were combined with empirical evidence received from other data sources for their further analysis.

ii) In-depth interview with community residents

The in-depth interview was the main source of empirical evidence in this research. Darke (1994), argues that feminist research should name women's own experience, starting with the personal. Therefore, the in-depth interview was designed to facilitate exploring women's experiences, perspectives, reflections and responses to their participation in the MWSUHP implementation processes and to the adequacy of the housing designs of MWSUHP.

The first part of the interview registers the respondent's and their household members' demographic data. This is registered in a Table 1, annexed to the interview. Details about the respondent's house number, location and the housing prototype were also included in this first part. The rest of the interview was organised into sections that investigate women's reflections on their

participation and its influence to their housing adequacy at the three phases of MWSUHP housing process of: 1) The preparation of the project's physical planning and housing designs. The section also included explorations on the project's introductory phase, including land registration, women's mobilisation and training in project activities, 2) the housing construction phase and 3) the post-occupancy phase.

While all three sections discuss women's participation in MWSUHP and how it impacted the adequacy of their housing, another part explored and records in details the daily activities, gender roles and gender space-use patterns of the interviewee and their household members within their homes and neighbourhoods that were documented in Table 2, accompanying the interview. The section also explores on the transformation women applied to attain housing convenience and adequacy. Questions in this section attempt to understand and interpret what constitutes 'adequate housing' to MWSUHP women, to facilitate identifying design considerations that contribute to their housing adequacy.

Schlyter (1996:6) argues that housing for the low-income women of the Global South should be thought of as a concept that includes "all the rules and processes which are involved in providing the everyday living environment". Therefore, the fourth section of the in-depth interview focuses on the explorations of women's activities, space-use patterns and interactions within their neighbourhoods. Women's perspectives, reflections and satisfaction with the services and infrastructure of their individual homes and the study area, were recorded in Table 3 accompanying the interview. Interviews with each respondent was accompanied by drawings and photos of their houses' spatial patterns and building forms, including the project's houseblock and any transformations that took place both indoors and outdoors. Table 4 of the interview records the offsets, dimensions, orientation and built-up ratios and other measurements that support the generation of the accompanying drawings.

Questions from the in-depth interview were open-ended to moderate the rigidity of its structure and to allow for the accommodation of any unexpected or overlooked information. The in-depth interviews were carried out non-obstructively by avoiding hindering or interfering with the respondents' daily activities. The time and place that was convenient for administering the interview were agreed upon beforehand, which supported the respondent's willingness to render their time and provided focused and useful responses to the interviewer's queries.

Selection of the in-depth interview respondents

The selection of the in-depth interview respondents, that Yin (1999) referred to as 'units of analysis' or 'embedded cases', was based on their potential to provide rich and relevant information to the research issues. Selection of the

respondents was based on the theoretical position of the research that considers women of MWSUHP as primary stakeholders in their housing adequacy; therefore, women were mainly interviewed. To facilitate their response to all of the research issues addressed by the in-depth interview, respondents needed to have experienced the housing conditions at the study area before the introduction of MWSUHP through the phases of its housing process. Moreover, consistent and continuous occupancy of MWSUHP housing, up to the time of the study, was deemed an important criterion for selecting respondents, as they were able share their occupational experience and provide constructive and relevant data on their experience and reflections on the transformations they made over the years to achieve their housing adequacy. Akiiki (2010), in her study on gender and homeownership in Kampala, Uganda argues that women have a higher likelihood of having uncontested decision-making power over the houses they own independently compared to the ones they co-own with their spouse.
Moreover, Asiimwe (2001:178), in her study of the Ugandan women land rights argues that "women would be more willing to invest their labour, time, and resources in land that they own". Since the research is concerned with examining women's housing transformations to attain their adequacy, their ownership of their houses was used as another criterion for selecting the respondents for the in-depth interviews. Accordingly, the criteria developed for selecting the in-depth interview respondents were that they 1) had been living in the project area before its inception, 2) participated in all the phases of MWSUHP housing process, 3) were consistently living in the study area in one of MWSUHP housing prototypes up to the time of the study and 4) have transformed their housing to attain its adequacy.

Based on the criteria set for the selection of the in-depth interview respondents, a table was created using MWSUHP archival and statistical records to identify the housing tenancy status within the study area by gender, as illustrated in Table 1.

Table 1. Housing ownership in the study area by gender.

Ownership/ gender	**Female**	**Male**	**Spouse**	**Un-named**	**Total**	
Tenancy status	NO.	NO.	NO.	NO.	NO.	%
Owner occupied (O)	48	15	13	0	76	40
Sold houses (S)	33	25	5	0	63	34
Tenant occupied (T)	26	8	6	0	40	21
Empty plots (E)	0	0	0	7	7	
Undeveloped plots (U)	1	0	0	0	1	5
Total	108	48	24	7	187	100

Statistical records revealed that of the 187 housing plots of the study area, 63 were sold to new owners and 40 houses were occupied by tenants. Therefore, all plots that were occupied by tenants or new owners do not satisfy the respondent selection criteria and thus were excluded from the in-depth investigations. With eight plots remaining undeveloped, only 76 houses were constructed and occupied by their original owners. Out of these 76 houses, 48 were owned by women, against 15 houses owned by men, and 13 registered under spousal co-ownership.

The information in Table 1 was used to generate a labelled colour coded map/drawing to illustrate gender segregated data on housing ownership in the study area, as represented in Figure 24.

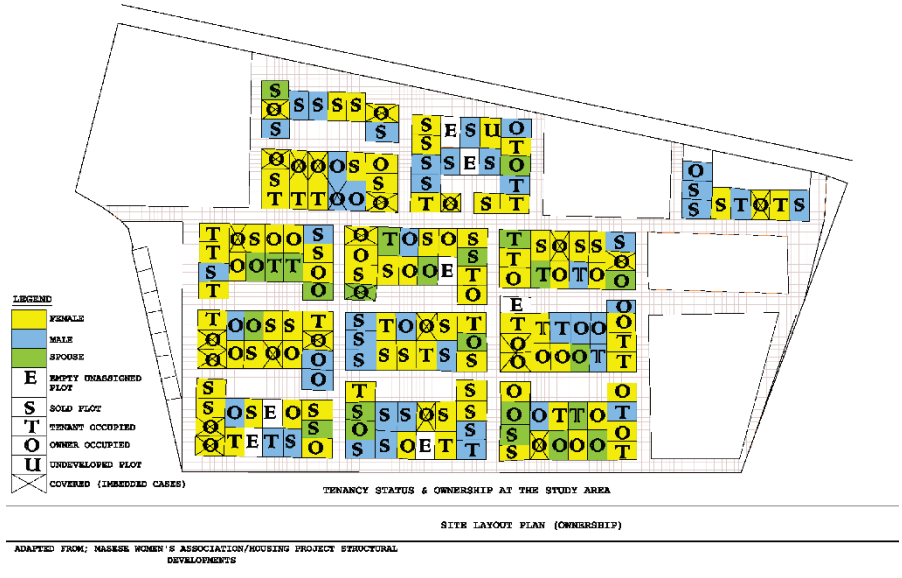


Figure 24. Tenancy and occupation status of the study area by gender, demarcating respondents. of the in-depth investigations.

One of the considerations the research adopted for selecting the respondents of the in-depth interview was ensuring the proportional representation of all housing prototypes to minimise biases that could arise from the minor variations in their designs. For this purpose, a map/drawing that reflects the distribution of the different house prototypes within the study area, indicating the gender of the owner, was generated from MWSUHP statistical records and further verified during field work, as illustrated in Figure 25.

Figure 25. Housing prototypes at the study area by gender, demarcating interview respondents of the in-depth investigations.

Based on the above-mentioned criteria and considerations for selecting the in-depth interview respondents, the interview commenced with houses noted as interesting cases during the initial walk through. There were 48 houses identified, based on the developed selection criteria. While, one might argue that judging one case as 'interesting' might reflect some subjectivity and bias to the selection of the respondents, such favouritism was based on the researcher's observations of the amount and type of housing transformations that seemed to have the capacity to render relative information to elucidate the research explorations. According to Yin (2009), such ability of the researcher to identify information rich cases is a sign of a well-articulated research question.

The in-depth interviews progressed in a snow-ball manner, whereby interviewing one respondent gave a lead to another who satisfied the selection criteria. The interviews continued until the data was saturated, whereby responses to the interview questions became repetitive and "no new data, no new themes, no new coding" seemed to emerge from interviewing more respondents and the data collected from the covered cases seemed to "have the ability to replicate the study" (Fusch & Ness, 2015:1409)

At the end, 25 respondents were interviewed, indicated by cross mark (X) in Figures 24 & 25. Table 2 indicates the house types of the interviewed respondents.

Table 2. Houses prototypes of the respondents.

House type/plot	Type 1	Type 2	Type 3	Type 4	Empty	Own design	Total cases
No. of house prototypes in the study area	14	132	5	18	8	10	187
No. of cases	5	12	2	6	0	0	25

The use of research assistants

My non-Ugandan background was challenging in many aspects. Being an outsider to the researched community might affect the respondents' views about me, which Silverman (2006:127) argues might affect the interviewees' responses. Moreover, my unfamiliarity with the socio-cultural context of the respondents constrained my ability to interpret some of their subtle social codes or non-verbal gestures, which might unknowingly cause me to miss out on valuable information and obstruct the data. The language barrier between the researcher and the respondents created a communication gap that threatened to obstruct data and impact the quality of the research. On the other hand, being an outsider to the researched community, supported focusing on the research issues/categories during the interview and making observations more objectively (Stake, 1995). However, to overcome some of the mentioned challenges, the support of research assistants was deemed important for the administration, translation and transcribing of the in-depth interviews.

The main consideration for the research assistant was their knowledge of the respondents' local language. Sharing the ethnical background of the residents of the study area was evaluated as an asset, not a condition, as it facilitates the understanding and interpretation of the respondents socio-cultural and non-verbal gestures, contributing to data interpretation. Deciding the research assistant should be a woman, was assumed to reduce any possible reservations and/or inhibitions to the respondents' responses that might obstruct the data.

Accordingly, two research assistants were appointed for administering the in-depth interviews, after they were made aware of the research issues the interviews were expected to cover. Pilot testing of the in-depth interviews was employed to train the research assistants on interview skills, as well as test the design of the questions to render valuable information. The research assistants were trained on active listening by looking beyond the surface of the conversation and giving attention to the meanings of the answers reframing the question, in case respondents gave meaningless answers (Arendell, 1997). The use of the research assistants to carry out the in-depth interviews assisted in bridging the socio-cultural gap between the researcher and the respondents. This moderates the advocacy stand that researchers sometimes unconsciously take

while conducting the interviews, compromising on the objectivity of the research investigations (Stake, 1995). Issues of humbleness and objectivity were highlighted to the research assistants when conducting the interviews.

Research assistants were introduced to the study area, the field facilitators and the interview respondents before the actual date of the interviews. At the time of the interview, research assistants alternated between conducting the interview and listening and writing the answers. This technique facilitated validating the translations and interpretations of the answers at a later stage. The research assistants supported in taking measurements of the housing transformations to generate measured drawings for the respondents' houses that accompanied the interviews.

Analysing the in-depth interview data

The first step of analysing the in-depth interview was to transcribe the material, which entailed translating the ones conducted in the local language to English. Translation was carried out by one research assistant and was cross-checked and verified by the other. The second step was synchronising and verifying the answers of the written interviews against the transcribed audio/video recordings in cases where they were available. Watching and/or listening to the video and/or audio tapes brought life to the interviews, which enhanced the "empathetic access to the meaning of what the other say" (Kvale, 1988:99) and contributed to better comprehension and interpretation of the respondents' answers. Interview answers were then digitally typed for record keeping.

Secondly, an open general reading through of all the interviews was done to generate a general impression of their contents. Each transcript was then systematically reviewed to identify emerging themes or meaning units that Malterud (2012:797) defines as "a text fragment containing some information about the research questions". This means not all that is included in the text proved to be of relevance. Therefore, only parts of the texts that were relevant to the main themes of the research investigations were extracted. Four main themes were identified for the interview analysis:

1. women's participation in the phases of MWSUHP housing process;
2. women's space use patterns and activities performed within their neighbourhoods and at their individual houses;
3. women's experiences and reflections on the adequacy of the MWSUHP housing designs, in support of their triple roles and daily activities and their flexibility in responding to their variant and changing housing needs;
4. women's experiences, perspectives and reflections on the transformations they performed to attain their housing adequacy.

The third step of the interviews' analysis was to categorise or breakdown the empirical findings under each theme into subthemes. Empirical evidence of the first theme that addresses women's participation in the housing implementation processes of MWSUHP, was categorised then synthesised into the subthemes that reciprocate the phases of MWSUHP housing process including the 1.1) introductory phase of beneficiary registration, selection, mobilisation and training; 1.2) the physical planning and housing designs phase; 1.3) the building material production and housing construction phase; 1.4) the post-occupancy phase whereby women experienced MWSUHP designs and transformed them to attain their adequacy.

The theme of investigation that addresses women's activities and space use patterns was divided into the spatial scales of MWSUHP neighbourhoods their individual house levels, with the latter further categorised into indoor and outdoor space use patterns. Women's activities and space use patterns were coded relevant to women's triple roles of productive, reproductive and community integration roles. The third theme of the interview analysis that addresses housing transformations was categorised into exterior transformations, referring to those taking place within the premises of the individual's plot but outside to the houseblock; and transformations to the interior of the house block. Both housing transformations are further categorised according to their forms, spatial layouts, construction material and technology and their functional use to support women's triple roles and practical needs.

The fourth step in the interviews analysis was the study of the drawings and photos documenting the transformations that took place at each respondent's house, further verifying the transformations identified in the text analysis of the interview and synthesising them to the corresponding to its thematic areas.

5.5.5 Focus group discussions

The focus group discussion (FGD) method was carried out to engage a limited number of people in an informal discussion about the research issues (Kopec, Sinclair & Matthes, 2012). At the FGDs, the researcher acted as a moderator to ensure the participation of most group members and to direct the discussions and keep them flowing and focused as recommended by Silverman (2006). During the discourse of this research, three FGDs were carried out with each FGD targeting a certain research issue.

The first (FGD1) took place at the beginning of the field investigations immediately after the initial walk through, but before the administration of the in-depth interviews. The aim of FGD1 was to collect basic information about MWSUHP, reflecting on its introduction and reception by the targeted

community. It also aimed to gather general information on the study area, preparing the grounds for the in-depth interviews. There were eight participants in FGD1 (six women and two men) including the researcher. It was composed of the Chief of Local Council 1 (LC1) and the chief of Local Council 2 (LC2). The LC1 chief was also a member of Masese Women Association (MWA). Two other members of MWA were also present, together with two elderly ladies who, although they did not hold formal positions at any community organisation, they had respectable position within the community of the study area. One of the group members was a fifth-year architectural student, who was writing her graduation thesis under the main researcher's supervision. The student attended FGD1 to be trained in the use of FGDs as a research method for writing her graduation thesis. She assisted in taking notes during FGD1 and contributed her feedback, observations and reflections on the design and implementation of FGD1 to provide directions to the design of the following FGDs. The student was also familiarised with the study area as her thesis study area.

FGD1 was meant to be impersonal to encourage openness and avoid reservations and intimidation that can sometimes arise when the group is composed of men and women. The environment of FGD1 was purposely intended to be friendly and relaxed, in order to act as an ice breaker between the researcher and the members of the FGD1, who were potential facilitators for the field work at later stages.

The second focus group discussion (FGD2) was seeking women's views and reflections on their participation in MWSUHP implementation processes. FGD2 also targeted exploring women's experience and reflections on MWSUHP housing designs in relation to their adequacy in facilitating their triple gender roles and the performance of their daily activities. Therefore, participants of FGD2 were only women. Men's presence was restricted, to avoid reservations that might arise from their presence and also to allow for openness and interaction between the participants, which is a 'hallmark' for FGD research, as Silverman, (2009) claims.

Participants of FGD2 were mainly members of a Women's Community Based Organization (WCBO) within the study area that provides advisory and training sessions for making and marketing paper-bead jewellery as an income generating activity. FGD2 took advantage of the WCBO regular weekly meetings and scheduled the discussion in the same place and date but at a different time of the day. This encouraged the members' voluntary attendance. FGD2 took place outdoors under a big shady tree where the WCBO weekly meetings were generally held. An hour after the end of their weekly meeting, FGD2 commenced. At the beginning only 12 ladies returned to attend the FGD2, but by the time it ended it attracted around 19 women. At the start of

FGD2, the researcher and the topic of the research and the purpose of FGD2 were introduced to the participants, in both English and the local language since many were not English speakers. The researcher used the help of the community member who was involved in the research as a field facilitator to translate the discussion back and forth. The fifth-year student attended FGD2 as well and assisted in taking notes, recording the FGD2 and taking photographs during the discussion. The familiarity of the participants to each other caused the environment of FGD2 to be smooth and relaxed, which encouraged participants in expressing their views without reservations, contributing to the fruitfulness of FGD2.

The main themes of FGD2 addressed women's use of their homes and public spaces within the neighbourhoods for the performance of their productive, reproductive and community integration roles. FGD2also addressed women's contribution to their housing transformations to attain adequacy. Women participants of FGD2 were a combination of house owners and tenants in the study area. Therefore, FGD2 explored its themes across women's deferential positions as homeowners and tenants, bringing another variable of ownership to the discussion of the research issues. Due to the positive impact of holding FGD2 outdoors in facilitating a fruitful discussion environment, it was decided that FGD3 should also take place outdoors.

Initially FGD3 consisted of 16 women-participants, excluding the researcher and the research assistant. But as the discussion proceeded, it attracted three more women and five men. Initially, there was a general reluctance among FGD3 group members towards the men's presence, as it might cause women's reservation and intimidation. However, with women consent, men joined FGD3. I noted that men's participation in FGD3 had the advantage of preventing the *group thinking* that might have taken place in case participants were only women, which according to (Kopec, Sinclair & Matthes, 2012) can sometimes cause biasness to the data.

With participants consent FGD2 and FGD3 were both video recorded. FGD1 on the other hand was not recorded, as its main objective was to act as an ice breaker between the research team and the leaders of the study area. However, each FGD was followed by a meeting between the research group to exchange and consolidate their notes. Video recordings were then transcribed. An overview ofFGD2 and 3 transcription was made and text that has meaning units (Malterud, 2012) was extracted and condensed into a brief summery format and categorised under the themes of a) women's participation in the phases of MWSUHP housing process, b) women views and reflections on the adequacy of MWSUHP housing designs and c) women's perspectives and reflections on their housing transformations to achieve their housing adequacy in relation to their

ownership status. Data under each theme was further categorised relevant to the gender space use patterns at home and in the neighbourhoods to facilitate the performance of women's triple roles and daily activities. Men's views on the issues addressed were noted seperately.

5.6 Data interpretation and analysis

According to Miles, Huberman, and Saldana (2013) data analysis is basically about the tactics used to draw meaning from the configurations of data on display. Hence, in this research, data analysis is carried out with the aim of "making sense out of text and image data" (Creswell, 20003:190) collected during the course of investigations. Data received from multiple sources was analysed both deductively by testing the research assumptions that were based on its questions and objectives as well as inductively by reading, interpreting and extracting meanings from the raw data (Thomas, 2003). The guidance of the research objectives, its conceptual approach and methodological assumptions assisted the researcher to "focus attention on certain data and ignore other data" (Yin, 2009:130) during data analysis.

Empirical evidence of this research collected via its multiple methods were synthesised under the main thematical areas of 1) exploring the processes and procedures for women's participation in the different phases of MWSUHP housing process and examining its influence on their housing adequacy, and 2) identifying design considerations that influenced housing adequacy to women of MWSUHP. Nevertheless, some data that seemed to be unaffiliated to either themes was synthesised separately. This data was not completely ignored but sometimes used to support some reflections to the analysed data.

Each of the two main themes was further categorised into subthemes. Empirical evidence that addressed the first theme of women's participation in the phases of MWSUHP housing process was further subcategorised into four subthemes/categories regarding their participation 1.1) at the introductory period of the project referring to their mobilisation, registration and training 1.2.) in the design process of MWSUHP physical planning and its housing prototypes, 1.3) in the production of the building materials and housing construction activities, and 1.4) in their housing transformations the post-occupancy period to attain its adequacy.

On the other hand, empirical evidence concerned with identifying design considerations that support housing adequacy to MWSUHP women, was subcategorised into the subthemes/categories of housing transformations, space use patterns and activities performed at; 2.1) MWSUHP neighbourhoods and 2.2) in their individual homes—indoors and outdoors.

Data within each subtheme was then decontextualised and coded according to its relevance to the variables for attaining housing adequacy for MWSUHP women by 1) supporting their triple roles of productive, reproductive and community management and integration, 2) facilitating women's daily activities to support their practical needs and 3) flexibly embrace women's intersectionality.

MWSUHP spatial patterns and built forms were coded according to their gendered use and the gender of their designer and/or creator. Drawings, photos and field notes were synthesised to document and substantiate empirical evidence gathered from other sources of evidence under the relevant research main and/or subthemes.

Research findings were presented and analysed the publications annexed to this research, answering its research questions, satisfying its objectives and identifying areas for further research.

5.7 Research quality and validity

Ensuring validity is an important consideration in research . The nature of the research might favour certain types of validity over the other. According to Guion, Diehl, and McDonald (2011:1), validity in case study methodology "refers to whether the findings of a study are true and certain—'true' in the sense that research findings accurately reflect the situation, and 'certain' in the sense that research findings are supported by the evidence". This research obtained its validity through the documentation of its data together with its data and method triangulation and transferability as further explained below.

5.7.1 Study database

One of the crucial issues to the quality and validity of qualitative research is how its data is handled. Distinction between data recordings or displaying against data interpretation and analysis should be made. Miles and Huberman (1994:11) define data display as "an organized, compressed assembly of information that permits conclusion drawing and action" while data reduction "refers to the process of selecting, focusing and simplifying, abstracting and transforming the data that appears in the write-up field notes or transcriptions". Data display therefore, refers to recording data and organising it in a way that makes it comprehendible without its manipulation, while data interpretation involves the researcher's interference with it. In qualitative research generally, and case study methodology in particular, recording data in a well-organised database, whereby raw data is accessible to other researchers or investigators to review directly without interpretation, is considered one of the elements that can enhance its

reliability. Yin (2009) recommends that researchers should develop formal, organised and presentable data bases to enable other researchers to review the collected evidence directly, without being limited to the written case study report. In this way, he argues a case study's validity and reliability are strengthened and enhanced.

Based on this recommendation of Yin (2009), a database for the empirical evidence of this research that was gathered through its multiple source of evidence was documented and organised as follows:

a. All interviews with officials have been video or voice recorded and maintained in their original digital format without manipulation.
b. All original maps, plans, drawings were kept in their original hardcopy format, despite their ragged condition, for reference and verifications. However, these drawings have been scanned and saved in digitised format. They were sorted out and synthesised under the relevant sections of the research. Plans, maps, aerial photos and drawings of the physical layout of MWSUHP have been saved in both digital and manual folders. Sketches, plans, photos and drawings for MWSUHP housing prototypes as envisaged by its designers were saved in separate digital and manual folders.
c. Tables that record the demographic and statistical records for the residents of the study area were digitally generated and archived together with their synchronization and documentation in the drawing/map of the study area.
d. Digital and manual folders were generated for each in-depth interview respondent, labelled with their names plot number and location, gender and demographic details of their household members. The manual folder enclosed the hardcopy of their filled interviews, together with their relevant sketches and the notes made during the field work (in case of any). Hard copies of the photos that demonstrate the transformations that took place at the individual homes, indoors and outdoors, were also included in this folder. A parallel digital folder that includes the same information of the manual folders, but as soft copies were generated. Such folders include the respondent filled interview, photos of their housing transformations, their recorded interviews in case of any, digitalised drawings of their individual houses that reflect its housing prototype and the housing transformations applied.

5.7.2 Triangulation

Triangulation, defined as "a method used by qualitative researchers to check and establish validity in their studies by analysing a research question from multiple perspectives" (Guion, Diehl, & McDonald, 2011:1). Researchers (Guion, Diehl, & McDonald, 2011; Yin, 2009; Johansson, 2005; Stake, 1995) identify different types of triangulation that can be applied when doing research. These are; method triangulation (when many methods are used to investigate the research problem), investigator triangulation (when many researchers do the same study), data triangulation (when variant types of data are used to address an issue), and theory or concept triangulation (when the same study is done with various theoretical or conceptual positions).

By employing multiple methods to collect its empirical evidence, this research attained its validity through method triangulation, whereby the convergence of evidence from multiple sources supports and validates the findings of the other. Johansson (2005) argues that method triangulation is entrenched in the nature of the case study methodology. Moreover, the convergence in the explanation and/or interpretation of the multiple visual, textual, sketched and drawings data on some of the research issues can be thought of as data triangulation that further supports the research validity.

5.7.3 Transferability

Critics of case study methodology base their criticism on the fact that its findings pertain to a specific case (i.e. contextualised) hence they are not representative, and thus "can provide little basis for scientific generalization" (Yin, 2009:15). However, similar to other case studies, this research was carried out with no interest of generalising its results, but it was rather undertaken with an intrinsic interest in the case in order to develop an understanding and/or attain knowledge that can be of good use elsewhere (Johansson, 2005). While conformity of typical cases strengthens the validity of research through generalisation, in this research, conformity is not the concern, but generating knowledge by studying an atypical case is the concern.

The type of generalisation achieved in this research is operative in nature and is commonly referred to as *naturalistic generalisation*. This type of generalisation occurs when conclusions or generalisations arrived at from previously acknowledged cases are used to address a problem by making adequate to cases of similar nature (Johansson, 2005). Transferring the knowledge obtained and lessons learned from this research to inform the Ugandan low-income housing discourse on spatial patterns, built forms and housing designs that are adequate for the Ugandan low-income women, and share that knowledge to inform other

cases of the same concerns and interests (Johansson, 2005; Wang, 2002) is what awards this research its validity.

In the next chapters, analysis of the research findings is provided. Creswell (2003:191) argues that in case study methodology, data analysis "involves a detailed description of the setting or individuals, followed by analysis of the data for themes or issues" (Creswell, 2003:191). Therefore, by providing a rich description to the case of MWSUHP, the next chapter can be thought of as an introductory section to the research analysis that is provided in the chapters that follows it.

6 Masese Women Slum-Upgrading Housing Project – MWSUHP

This chapter provides detailed presentation to Masese Women Slum-Upgrading Housing Project MWSUHP that represent the case study of this research. It elaborates on the project's approach and objectives and identifies how women's participation has been solicited in its implementation processes and the assumed impact it had on their housing adequacy. The chapter provides a contextual background to Jinja city where MWSUHP is located and a detailed description of the MWSUHP, in order "to develop vicarious experiences for the reader, to give them a sense of 'being there'" as Stake (1995:63) recommends.

6.1 Jinja the district, the municipality and the city

The administrative structure of Uganda subdivides the country into 121 districts that are illustrated in Figure 26. Each district is composed of municipalities that are further divided into divisions. Each division is then subdivided to parishes that are composed of villages, which are the smallest administrative units.

Figure 26. Districts of Uganda. Source: https://guidetouganda.net/districts-in-uganda/.

Jinja is a name that was given to the three administrative levels of the district, the municipality and the city. MWSUHP is located in Jinja District, which is situated in the south eastern part of the country. The district is composed of 13 municipalities, with Jinja municipality being the main (See Figure 27).

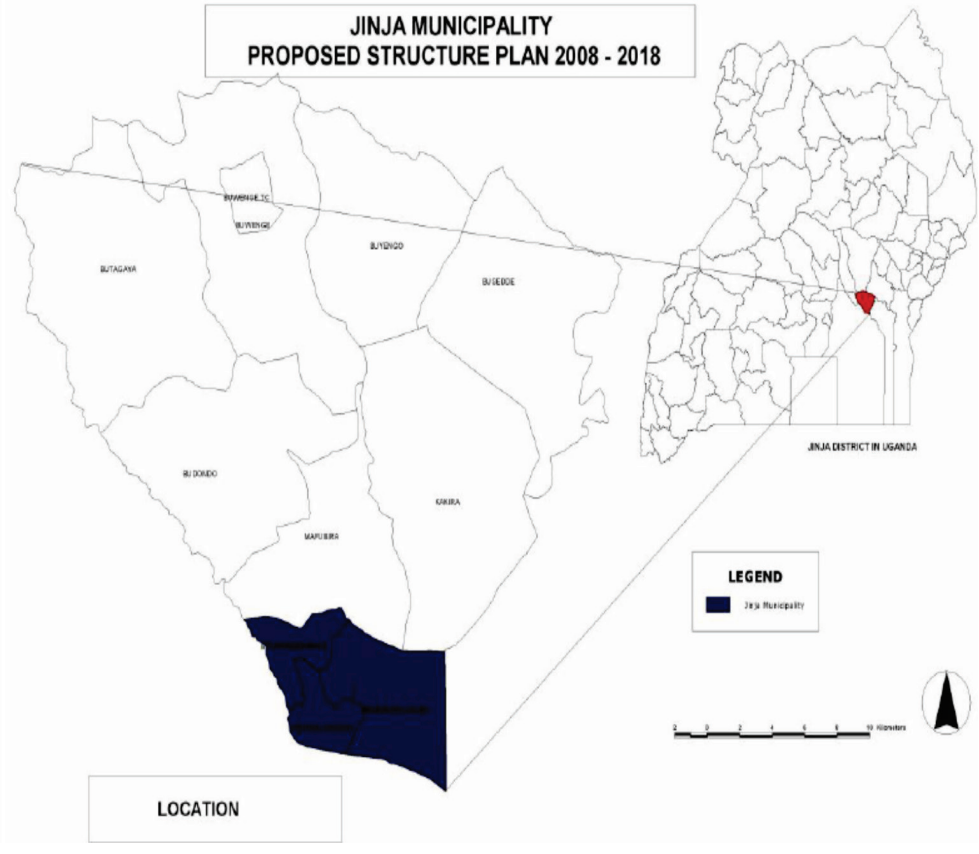


Figure 27. Location of Jinja municipality within Jinja district. Source: IDF, 2014.

Jinja municipality is composed of the three administrative divisions: Walukuba/Masese Division, Mpumudde/Kimaka Division and the Central Division, where Jinja city, the administrative unit of Jinja district, is located.

Masese-Walukuba division, where MWSUHP is located, is composed of three parishes: Walukuba East, Walukuba West and Masese parish. MWSUHP is located within Masese II village, which is one of the six villages of Lwabitooke Island, Kilembe, Kisima, Masese I, Masese II and Masese III, which together compose Masese parish. Table 3 illustrates Jinja municipality administrative divisions.

Table 3. Divisions, parishes and villages of Jinja municipality.

Division/Sub-county	Number of parishes	Number of villages
Jinja Central	4	20
Masese - Walukuba	3	20
Mpumudde – Kimaka/Nalufenya	4	14
Total	11	54

Source: Kakaire, 2009.

Jinja district has a population of 471,242 with little variation in its gender ratio (95.5/100 men to women) (UBoS, 2017a). Seventy percent of the district's total population resides in Jinja municipality, the urban centre of the district, with a sex ratio of 100:96.7 men to women (UBoS, 2017b:30). Figure 28 illustrates the population distribution within the different counties and municipalities of Jinja district.

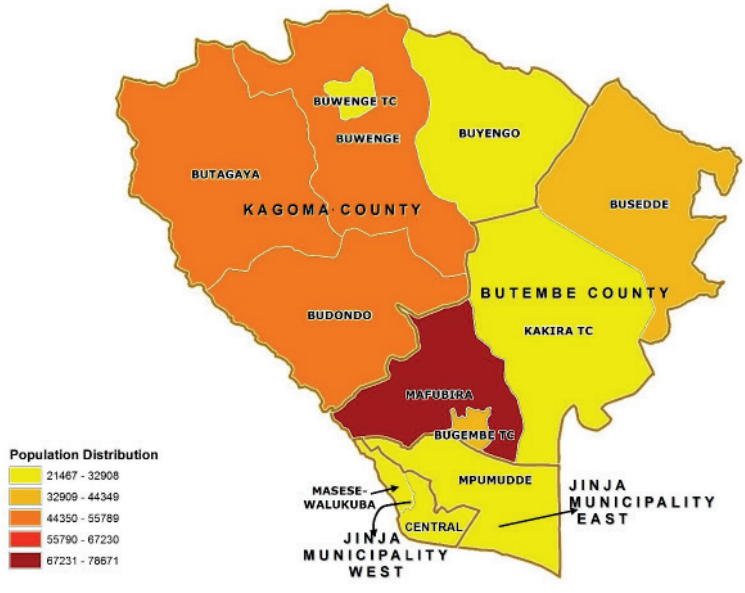


Figure 28. Population distribution within Jinja district. Source: UBoS, 2017a.

The flourishing industries in the 1970sthat were served by a huge hydro-electric power scheme at the Owen Falls Dam, made Jinja municipality the industrial heart of Uganda (Actogether, 2010). Coupled with the political instability in the late 70s and 80s many Ugandans were forced to flee the war zones in search for safer life opportunities. With its flourishing industries Jinja received a huge population influx. As a result, Jinja municipality was exposed to rapid urbani-

sation over the last 20 years (UN-Habitat, 1992) that caused the proliferation of informal settlements within the municipality (Kakaire, 2009). Of the three divisions of Jinja municipality, Masese-walukuba has the highest population (40 %) compared to Kimaka-Mpumudde/Nalufenya (31%) and Jinja central (29%) (See Table 4).

Table 4. Population of Jinja municipality by division.

	Division	Males	Females	Total	
				No.	%
1	Jinja Central	11,193	10,254	21,447	29%
2	Kimaka-Mpumudde/Nalufenya	11,230	11,234	22,464	31%
3	Masese-Walukuba	14,236	14,786	29,020	40%
	Total	36,659	36,232	72,931	100%

Source: (UBoS, 2014).

The physical and spatial planning of Jinja municipality was designed and developed according to land use zones. Fifty-one percent of the land in Jinja is used for agriculture and is mostly undeveloped, though some portion of this undeveloped land is occupied by abandoned industries (Kakuze, et al., 2013). However, the developed land within Jinja municipality is divided between industries, businesses and residences, as well as public and government-owned land. While Jinja Municipal Council owns 30% of the land in Jinja, 49% is individually owned, leaving Uganda Land Commission owning 10%, institutions owning 7% and leased public land comprising 4% (Kakuze, et al., 2013)

Most of the vacant land in Jinja municipality was encroached upon by low-income residents, who make up 80% of Jinja municipality's population (Kakuze, et al., 2013). This resulted in the emergence of slum settlements that continued to challenge Jinja municipality and calls for their serious mitigation (Kakaire, 2009). People living at slum settlements for long periods of time usually claim customary land ownership against nominal fee payment to Jinja Municipal Council.

As in many Ugandan urban centres, the spatial patterns and housing development within Jinja municipality evolved around colonial ideologies that connote race, ethnicity and gender segregation and stratification (Nnaggenda & Elwidaa, 2018). Europeans and Asians used to occupy prime areas of Jinja municipality. Ugandan upper-class civil servants occupy lesser prime locations but that are more organised compared to the residence of the low-income Ugandans who used to reside in peripheral areas that are characterised by poor housing conditions. While in Kampala, prime areas were located a top its numerous hills, in Jinja prime locations are located on the lakeside with big houses on large plots, wide roads, nice lake-view scenery and breezes (Okalebo, 2011).

The Busoga kingdom is one of Uganda's monarchy governance systems that was restored in 1993 but were relegated to cultural functions outside the political sphere (Johannessen, 2005). With Jinja being the capital of the Busoga kingdom, its population are predominantly Busoga tribe descendants. The Busoga tribe constitutes the third biggest tribe of the Ugandan population after the Buganda and the Banyankore (Mugerwa, 2016). The Busoga tribe, therefore, have a strong influence over the socio-cultural norms of other minor tribes that reside in Jinja, influencing their lifestyle and other cultural traits.

6.2 Contextual background to MWSUHP

Walukuba/Masese division, where MWSUHP is located, is the most densely populated, compared to other divisions of Jinja municipality, which characterises it as a compact and congested development with high prevalence of slums (IDF, 2014). In the villages of Masese I and II, female-headed households make up 70% of the residents (MoLH&UD, 2013b). Most of the residents "were single mothers, widows and orphans" (Kakuze, et al., 2013:21). Most widows lost their husbands to the long years of to civil wars within the country (Kakuze, et al., 2013). Another category of women used to live at MWSUHP area were those who were involved in unsteady relationships with their partners not permanently living in the study area. In effect, these women became the principal breadwinners and caretakers for their families (UN-Habitat, 1992). Most of the women lived at MWSUHP area earned their living through petty trades, local liquor distillation and prostitution (Kakuze, et al., 2013; Wekiya, 1995).

When MWSUHP was introduced, the area lacked proper services and infrastructure. The main roads leading to the project area were impassable during the rainy season with foot paths as the only way between the huts (Wekiya, 1995). The community was characterised by low levels of income, poor social organisations, and abuse of alcohol, exposing the area to a social stigma and crime (Kakuze, et al., 2013; Wekiya, 1995). At that time, 18% of the project area's residents were customary landlords who are predominantly men. Eighty percent of the residents reside as tenants, leaving a small portion of 2% receiving shelter in return for their caretaking services or rent free.

Traditionally, the Busoga tribe used to practice subsistence farming, which caused most of the farming lands to be located closer to their homesteads. Each individual family used to occupy a one-bedroom (Muzigo) dwelling, whereby the average number of persons per room was 4-5, which is quite common among Ugandan low-income families. Houses were in the form of "small mud and wattle huts, 80% of which were roofed with corrugated iron sheets, 18% grass

thatched while only 2% were permanent buildings" as demonstrated by Figure 29 (Wekiya, 1995:3).

Figure 29. Houses in the study area before the inception of MWSUHP. Source: Wekiya, 1995.

However, such single houses that made of mud and thatch, still prevail at many slum areas of Jinja municipality as illustrated by Figure 30 below.
To improve their housing conditions and support residents in getting out of their poverty, MWSUHP was implemented by the Ugandan government to upgrade the living standards of the Masese slum dwellers.

Figure 30. Traditional Muzigo houses that prevails in Jinja slums.

6.3 Masese Women Slum-Upgrading Housing Project (MWSUHP)

MWSUHP was the second project of its kind in terms of the Ugandan slum-upgrading projects. The first was Namuwongo project in Kampala. Recognising the dominance of female-headed families in Masese who were living in poverty, and as a manifestation of the Ugandan government's commitment to improving the lives of the Ugandan women living in slums, MWSUHP targeted women as its main beneficiaries.

The project was launched in 1989 as Masese Women Slum-Upgrading Housing Project (MWSUHP) in Jinja under the custody and administration of the Ministry of Land, Housing and Urban Development – MoLH&UD (Wekiya, 1995). Motivated by the successful preceding collaboration between MoLH&UD and the DANIDA in the Namuwongo low-income housing project in 1985, both parties decided to join hands again in implementing MWSUHP. In the report that evaluates DANDIA's support to Uganda during the period of 1987-2005, it is stated that "DANDIA's support to Uganda has been at the forefront of addressing the cross-cutting issue of gender" (DANIDA, 2006:55). Thus, the support of the MWSUHP to women, has motivated DANDIA to fund its implementation to the tune of $1million USD.

While MoLH&UD was responsible for the "planning, designing and supervision of the project", Jinja Municipal Council (JMC) "opened the road network and provided land for the project" (Kakuze, et al., 2013:21). MoLH&UD was responsible for conducting preliminary studies prior to rolling out the project. They assisted in processing the land titles and were responsible for the preparations of the house designs and the project documents with consultation and assistance from the African Housing Fund (AHF), the implementing partner and monitor for the project's funds. AHF was also mandated for the provision of technical services and recruitment of the technical and support staff to oversee the implementation of the project. MoLH&UD also participated in the mobilisation of community awareness campaigns, offering technical support and backstopping for the project. MoLH&UD sponsored the travel costs of eight women to receive training on the implementation of low-cost housing projects' in Nairobi, Kenya.

On the other hand, DANIDA, through the African Housing Fund, was the main donor to MWSUHP. The funding was estimated at $1 million USD (UGX 0.5 billion Ugandan shillings at the time) to cover key project components, project planning and design and for conducting prerequisite surveys. However, MoLH&UD contributed an additional UGX 305 million Ugandan shillings, bringing the total project funding to UGX 805 million.

Jinja Municipal Council (JMC), the host of MWSUHP, was responsible for the allocation of the land on which the project was implemented and the provision of technical support for its physical planning, design and implementation. This included field surveys and preparation of cadastral maps, together with post project infrastructure maintenance. JMC also contributed to community mobilisation and organising awareness campaigns.

An existing community-based organisation, Abali-Awamu Women's Group, was renamed Masese Women Association (MWA). The organisation was made a partner of the project to represent and mobilise the community in the project's activities and to participate in the decision-making process at the administrative level of the project (MoLH&UD, 2013b). The notable organisational capacity of MWA encouraged the project partners to assign them leading roles in MWSUHP administration and implementation processes. However, men refused and showed no interest in registering with MWA. They claim that they can afford the time and they assumed they are already represented in MWA through the membership of spouses (DCD, 2013b). This seems to indicate men's negative attitudes towards MWSUHP and moreover, highlight their perception towards their wives as extensions of themselves, disregarding the importance of their wives' time.

6.3.1 Approach and objectives of the project

Following the global and local approach towards low-income housing at that time, MWSUHP adopted the self-help approach, endorsing participation of its beneficiaries in the project's activities and decision-making process. As an integrated project, MWSUHP aimed at achieving multiple goals including improving the living standards of the project's community, mainly women, reducing their poverty level and providing them with adequate housing. These goals were assumed to be met through:

- Formalisation of land and housing tenure
- Provision of adequate housing through modified building material and technology
- Improving the social services and infrastructures in the project area
- Empowering women and strengthening their income generating activities (Wekiya, 1995) by training them in managerial and administrative matters, construction activities and the production of building materials (AHF, 1988).

Women were expected to use their learned skills to become small-scale entrepreneurs in building components and material production and marketing to alleviate their poverty (UN-Habitat, 1992).

6.3.2 MWSUHP housing process

The project was expected to be implemented in two phases. The first phase (1989-1992) targeted the preparation and housing construction activities and the second(1993-1995) mainly involved the socio-economic development of the people. It focused on the provision of social services, revolving funds, employment opportunities and capacity building for people to manage these services sustainably (AHF, 1988).The first funds were released in 1990 to finance phase one, which was composed of three main stages: project introduction, design preparations, and housing construction.

The introduction phase

MWSUHP introduction was launched through sensitisation workshops whereby the project was explained to the community. Although the project's land formally belonged to Jinja Municipality, it was customarily owned by few landlords, mostly men, who opposed the project as they claim it has confiscated their land. Although the customary land law was not yet reinstated in 1989, but it was recognised that landlords' opposition could subtly sabotage the project's progress. Thus, to overcome their opposition and attain their support, the project compensated the customary landlords in monetary funds and/or in land, depending on the size of the land they owned and the amount of development they had implemented. It is interesting to note that most of these landlords did not register for the project, and thus rejected the housing designs, building materials and technologies the project introduced, as they maintained their traditional housing on their acquired plots (See Figure 31).

Figure 31. A traditional house that was preserved at the study area.

This reflects lack of appreciation by the landlords to the housing prototypes offered by the project. However, deeper investigations into such attitudes of the landlords revealed that most of them seized to live within the study area but are using their former houses as rental properties. Landlords thus have no interest in investing their resources on upgrading the houses they own at the study area.

However, the main beneficiaries' registration criteria the project developed was:

- Payment of a registration fee of 1000 Ugandan shilling (equivalent to 1USD at the time).
- The beneficiary must be eighteen years old or older irrespective of their gender.
- The beneficiary must have lived in the project's area for five years or longer at the time of the project's inception, irrespective to his/her tenancy status whether a landlord or a tenant.

This phase also included preparation and development of the project documents, including feasibility and concept papers to ensure its success.

The physical planning and housing design phase:

This stage entailed preparation of the project's physical planning and housing designs while simultaneously training women on administrative and management skills for the building material production and construction activities. Initially, the government of Uganda, through Jinja Municipal Council, provided 10 hectares of land for the project and another 10 hectares later (UN-Habitat, 1992). MoLH&UD commissioned the services of Geodetic Surveyors to conduct the cadastral survey. The project's physical planning design was prepared at the technical office of Jinja municipality to ensure the congruence of the project planning with the municipality land-use plan, building regulations and bylaws. Based on several preliminary surveys, a land-use plan for the project area was prepared, which provided a framework for optimal demarcation for the plots' sizes and road networks, together with services and infrastructure for the project (MoLH&UD, 2013b). Although community members were consulted in the initial physical planning proposal, they were not involved in the modified one that was implemented. The first proposal suggested two families sharing one plot, which was strongly rejected by the community. Thus, the plan was adjusted to allow for individual ownership of the plots (MoLH&UD, 2013b).

MWSUHP's physical planning design entailed the organisation of the plots in three clusters, with each cluster composed of a number of plots. While one cluster was proposed to cater to medium and large houses, the other two were demarcated for small houses that were given priority in their implementation to cater for the most marginalised of the beneficiaries.

Simultaneously, the architectural department of the MoLH&UD prepared the designs of MWSUHP housing prototypes without much involvement of the beneficiaries. Four prototypes were offered for the small houses. Three of them shared the same generic area as illustrated in Figure 23 of the previous chapter, and had a loan amount of 2, 317,667 UGX (equivalent to almost $2000 USD). A fourth prototype was a bit larger in size, and thus had a higher loan amount of 2,454,002 UGX (almost equivalent to $2100 USD). This prototype was rarely selected due to its higher loan amount.

While the selection of the house prototypes seemed voluntarily, some women beneficiaries reflected that they were manipulated by the project's technical staff to choose one prototype over the another, despite their equal generic space and their loan amounts. It was recognised that the housing prototypes were displayed to women in two-dimensional drawings that seemed to be incomprehensible to them, as revealed by field investigations. Moreover, research explorations revealed that the prototype that was selected the most was Type 2 that shares the same shape and size of its generic space with Type 1 and 3 in but requires less building material compared to the others. Thus, the construction of Type 2 is

much cheaper compared to 1 and 3, however still, its loan amount remains the same. Nevertheless, following the recommendations of the project's technical staff, most beneficiaries opted for housing prototype 2.

MWSUHP placed payment of twenty percent of the loan amount as a condition for the beneficiaries to access the housing loan it offered. However, one might still opt for claiming their legal rights and ownership of their housing plots, surrounding his/her right in accessing the projects loans, building material or technical training to construct their houses (MoLH&UD, 2013b). Due to their financial constraints, many women were not able to pay the advanced payments and thus they were forced to continue living in their depleted houses. However, women who managed to raise the initial 20% payments were eligible for the project's loan and ownership to their plots, which secured them against forced eviction.

During the housing design stage, eight women were nominated to receive training in administration, management, building materials production and construction activities at a Kenyan based organisation and learn from their experience. This boosted the confidence of MWSUHP women representatives in regard to their ability to perform the project's activities and improve their housing conditions. Upon their return, the eight women disseminated their acquired knowledge through training other women of MWSUHP (DCMD, 2013b; UN-Habitat, 1992).

The building material production and housing construction phase:

At the beginning of the construction phase, the project mandated beneficiaries a six month voluntary period for producing enough building materials and housing components for the commencement of the housing construction. Most men refused to adhere to the voluntary period since, as main breadwinners, they could not afford to leave their informal but paid work. However, some of the married men managed to access the project's benefits through their wives' registration. Although great percentage of women beneficiaries were also main bread winners to their families, still they accepted the project's conditions and committed to the unpaid six month period. This although added other obligations to their family care responsibilities, but it reflects their keenness and eagerness to own their houses.

Elwidaa and Nawangwe (2006) noted that the unfamiliarity of the construction work placed a burden on women of MWSUHP, which caused many of them to fall sick. Moreover, most women admitted that working away from their home challenged their fulfilment of their family obligations and care for their children especially among female-headed households. To overcome this challenge,

women used to organise small shifts among themselves where they would take turns in fulfilling each other's home chores and family obligations.

However, due to a deficiency in the number of volunteers needed to produce the amount of building components required, the voluntary period was reduced to three months, after which AHF introduced a modest monthly wage for the project's workers. Half of the salary was used towards repaying the loan that financed the building material necessary for the construction of their individual houses and the other half women were free to use to support their families. The introduction of paid salary attracted beneficiaries to the project, whereby the amount of one's wage was evaluated against the amount and type of building component he or she produces (DCMD, 2013b).

Housing construction started by building demonstration houses to model MWSUHP alternative housing designs, which facilitated women's comprehension and appreciation to their housing prototype physical forms and living environment. The demonstration houses confirmed their economic feasibility, which encouraged more community members to join the project (MoLH&UD, 2013b). Reflecting on their selected housing designs after inspecting the demonstration houses, some women showed interest in revisiting their selection for another prototype with the same loan amount. However, women's requests were frequently denied. Despite women's contempt to the rejection of their requests, they had no option but to surrender to the will of the project's administrators, who were mostly men, and resolve to their initial choices. For the occupation of the demonstration houses, priority was given to the senior women, displaying respect and appreciation for the elderly that is entrenched in the Ugandan socio-cultural values.

However, in1992 some disputes among the project's partners started to surface. And by 1993 funds were depleted without the project reaching its target. Still committed to the support of MWSUHP, women and the gender cause in general, DANDIA released extra funds to support the project's activities (AHF, 1988). However, in 1996 the offices of AHF in Uganda closed down, causing the disappearance of most of the project's documents and a loss of its resources.

Keen on finalising the project, MoLH&UD took over MWSUHP. However, their main role was confined to the record keeping of land ownership and monitoring the loan repayments that were still active till the time of the study. By the time the project first stalled in 1992, only 278 houses were completed (AHF, 1988).When the project was completely stalled in 1996, only 302 out of the 700 houses were completed, according to MoLH&UD (2013b), though Kakuze, et al. (2013:21) claim 372 houses were actually built by the end of the project.

While MWSUHP did not achieve its targeted goal of constructing the 700 houses, it has indeed managed to improve the living and housing conditions of its beneficiaries. MWSUHP has contributed to raising the self-esteem of the women of MWSUHP and empowered them by raising their skills in construction-related activities. However, there is no recognised indicator of the utilisation of their acquired skills to increase their income to alleviate their poverty as assumed, which warrants further investigation.

It is important to acknowledge that the Post-occupancy phase of MWSUHP housing process was not part of the project's planned phases. But for the purpose of this research investigations, the post-occupancy phase was included as a part of the phases of MWSUHP housing process.

With this background to MWSUHP, research findings are presented and discussed in the next chapter that are summarises the research publications. The following chapter provides discussions and reflections on the research findings, suggesting areas for further research.

7 Summary of the articles of the study

The research findings are presented and discussed in three articles and a book chapter. This chapter provides a brief summary of each publication, describing its aims, conceptual approach, methods and a discussion of its findings. The contribution of each publication to the research explorations are also included.

Despite its inclusion as part of this PhD study, it is important to admit that Article I was carried out before the start of this research. However, as it shares the concerns for this research issues it was included as part of its explorations. Article I was inclined to explore alternative uses to the concept of participation by spatial designers and architects to support housing adequacy for women living in the Ugandan informal settlements. The three other publications are concerned with identifying design considerations to support the same goal. Article II, III and the book chapter explore the adequacy of the spatial configurations and built forms to the Ugandan low-income women housing at the three intersecting spatial scales of the Ugandan cities, the housing neighbourhoods and the individual houses. The spatial patterns and housing built forms of Ugandan cities, including Jinja where MWSUHP is located, are addressed by the book chapter. The spatial patterns and built forms at the intermediate scale of MWSUHP neighbourhoods are explored by Article II, while the housing designs at the microscale of MWSUHP individual houses are investigated by Article III. While the book chapter and Article I utilises some data outside the case study of MWSUHP but that are relevant to its explorations, Article II and III employ empirical evidence from MWSUHP only. All publications use gender and gendered spaced as analytical tool to examine housing adequacy for MWSUHP women. They share methodological approaches that explore housing transformations by women of MWSUHP to interpret and deduct meanings, explanations and considerations that support housing adequacy to women of MWSUHP. The three articles utilise the biological/sex attribute of gender mainly. The book chapter utilised class,

ethnicity and age attributes of gender in its explorations. Due to the scale of its geographical scope, the book chapter was more inclined to the use of text and drawing analysis over other methods. Article I, II and III recognise Ugandan low-income women's informal housing design knowledge and their contribution to their housing adequacy and thus advocate for their inclusion in the housing design processes to support the provision of their adequate housing. All articles concur in identifying flexibility, spontaneity, improvisation and incremental development, as essential design considerations for housing adequacy to the Ugandan low-income women and MWSUHP women in particular. Additionally, the publications recognized that responsiveness of the housing designs to the socio-cultural contexts and the lifestyles of the Ugandan low-income women, the accommodation of their triple roles and practical needs and housing flexibility to embrace their intersectionality as key design considerations to support their housing adequacy. The full text of all publications are appendices to this thesis.

7.1 Article I: Participation in the Eyes of an Architect and Gendered Spaces

The article aims to explore alternative uses of the concept of participation by Ugandan housing designers, to support the provision of adequate housing for the Ugandan slum dwellers, particularly women. The article explores the recognised mismatch between housing designs offered in the Ugandan slum-upgrading housing projects and their users' housing needs and lifestyles, hinting towards their inadequacy.

The concept of gendered spaces, which refers to the assumed deferential use of space between men and women and the spaces created according to the gender of is designers, were used to guide the article's explorations. Adopting the concept of user satisfaction as an essential criterion for housing adequacy, the article explores methods for users' participation in their housing process, to increase their satisfaction with its outcomes and attain their housing adequacy. The article assumes women as the main stakeholders, by the virtue of the amount of time they spend and number of chores they perform in the home. This causes them to experience their housing designs' shortcomings more acutely than men. The article therefore examines women's use of their housing space to facilitate the convenient performance of their gender roles and daily activities as a basic motivation for their housing transformations. Results of such explorations will assist in identifying procedures for women's participations in their housing process and design considerations to support the provision of housing designs that are adequate for the Ugandan low-income women.

For its explorations, the article utilised empirical evidence from two low-income housing contexts. The first is Masese Women Slum-Upgrading Housing Project (MWSUHP), which targeted women as its main beneficiaries. The other is the project is Mbuya informal settlement in Kampala, the capital city of Uganda. While the houses in the first case were provided by the project and were made of modified building materials and technologies, houses in Mbuya were self-built and were made using traditional building technologies and improvised materials.

The methods the article used for obtaining its empirical evidence was a combination of text analysis of the Ugandan slum-upgrading housing projects' documents, open-ended interviews with beneficiaries of MWSUHP and residents of the Mboya slum settlement. The methods of systematic sketching, photography and the researchers' observations were used to collect empirical evidence for the space configurations of the housing transformations and their gendered use.

The article attributes the mismatch between the provided houses and the users' needs in their housing, to the exclusion of the users from the housing design process and the designers' lack of consideration for the gendered space use patterns of the occupants. While designers seem to assume housing adequacy by the use of modified building materials and technologies, resolving to use traditional materials and technologies by the users reflects their lack of appreciation for the modified materials and technologies introduced by the project to signify housing adequacy.

The article's results revealed that while women decide on design issues for their housing transformations pertaining to their type, location, size and proportions, the labour force needed for the implementation to these transformations is mostly performed by men. The article argues that women's identification of the housing need and deciding on its design details, presents them as design experts to their housing and thus calls for their inclusion in their housing design process. This will ensure the response of the housing designs to the women's needs, increases their satisfaction with their housing designs and support its housing adequacy.

The article recognises subtle gendered spatial stratification in MWSUHP housing designs that are prepared by professional designers. The spatial configurations informally emerged according to women's housing transformations in both MWSUHP and Mbuya seem to be more inclusive and convenient to women, contributing to their housing adequacy. Moreover, the article established outdoor space as an essential functional space for the performance of women's reproductive and productive roles. This also signifies the importance of the home as a workplace for Ugandan low-income women besides being a

place of residence, which needs to be considered for the provision of adequate housing for the Ugandan low-income women.

Thus, the article contributed to the research exploration by recognising users' satisfaction as a determining factor of their housing adequacy, regardless of the quality of their construction material and/or technology. The article admits the Ugandan low-income women's knowledge of their favourable housing design conditions and therefore it advocates for their inclusion in their housing design process, as an alternative to their participation in the construction activities, to support their housing adequacy.

The article claims that understanding housing as gendered spatial contexts, recognising the home as a workplace for the Ugandan low-income women and realising the outdoors as an essential housing space for women are essential factors for their housing adequacy. Through its exploration of housing transformations, the article identified flexibility, spontaneity, improvisation and incremental development, as essential design considerations to the housing adequacy for the Ugandan low-income groups, particularly women.

7.2 Book Chapter: Women as Retrofits in Modernist Low-Income Housing

With a gender lens, the chapter explores the visibility and the accessibility of the Ugandan low-income women to adequate housing in Ugandan cities that represent the spatial and geographical contexts for the Ugandan slums, including MWSUHP, the focus of this research. It traces the evolution of the housing spatial patterns and built forms in the Ugandan cities to facilitate a better understanding to the formation of the Ugandan slums.

The concept of gender, which assigns meanings, expectations, roles, attitudes and behaviour to people according to their sex, class, age and ethnicity together with the concept of gendered space, in relation to the gender of the housing designers and users, were used to examine the spatial patterns and housing designs at the Ugandan cities and MWSUHP. To collect its empirical evidence, the chapter employed combinations of documents, text and drawing analysis, in-depth open-ended interviews with women of MWSUHP, photography and sketching methods.

Through text and drawing analysis the chapter revealed that housing spatial patterns and built forms in the Ugandan cities, including Jinja where MWSUHP is located, evolved based on colonial ideologies that connote and reinforce race, class, age and gender stratification and segregation. Such colonial ideologies are manifested in the occupation of the privileged British colonisers of prime and high latitudes within the Ugandan cities. Other than facilitating their enjoyment

of the nice scenery, such locations protected them against air and water-borne diseases and accentuated their dominance and control over the colonised residents of the Ugandan cities. Targeting social engineering of the residents of the Ugandan cities, the British assigned the immediate lower latitudes for Asian accommodation, leaving the Ugandans to occupy the low-lying latitudes and remote areas within the Ugandan cities. While the British colonisers used to live in large, spacious and fenced bungalows in well-planned and serviced neighbourhoods, the Asians and Ugandans occupied semi-detached, unfenced and crowded houses with the Indian houses somehow bigger than the Ugandans. It was revealed that the presence of Ugandans in the cities was delimited to middle-aged men for use as a labour work force, discouraging Ugandan women's access to the Ugandan cities.

However, the chapter noted that after independence, housing occupancy replacement that is based on class and race took place in most Ugandan cities. For example, the houses that used to be occupied by the British colonizers were then occupied by the Asians and Ugandan senior civil servants after their departure from Uganda. On the other hand, the houses inhabited by the Asians were then occupied by the upper and middle-class Ugandans, which leaves the common Ugandan to occupy the small and congested houses that were originally designed for the Ugandan middle-aged men.

The high and uncontrolled rate of immigration to the Uganda cities after independence, and the high living standards forced the low-income Ugandans to informally occupy low-lying and remote areas within the Ugandan cities, setting the stage for slum formation. In effect, hierarchical spatial patterns and built forms that decode racial, class and gender stratification emerged in the housing neighbourhoods of the Ugandan cities that disregard women and renders them invisible.

Examining the drawings of MWSUHP hints a continuation to the domination of the colonial ideologies to its spatial patterns and built forms. Such ideologies sanction modernity to the rigid order of the grid-iron layouts, boundary walls between houses and the use of developed building materials and technologies. Moreover, the housing designs of MWSUHP produced under such colonial ideologies seem to disregard the Ugandan socio-cultural norms and lifestyles, which compromised on their adequacy to Ugandan low-income women. And while colonial ideologies had consciously constructed for the exclusion and subordination of Ugandan low-income women during colonisation, their continuation to dominate the Ugandan low-income housing discourse threatens the perpetuation of the same unintentionally.

Hence, the chapter contributes to the research explorations by advocating for rethinking the existing spatial planning and housing design ideologies and

developing others that appreciate the Ugandan socio-cultural norms and lifestyles, construct for the inclusion and emancipation of the Ugandan low-income women to support their housing adequacy.

The chapter supports the research investigations by emphasising the importance of understanding spatial planning and housing designs in gender specific terms. It establishes interlinkages between the spatial patterns and built forms at the spatial scales of the city, the housing neighbourhoods and the individual housing units and their influence in supporting housing adequacy for the Ugandan low-income women.

7.3 Article II: Boundary-less living

Article II narrows down the focus of investigation to the spatial patterns and built forms of MWSUHP neighbourhoods, to explore on design considerations to support housing adequacy for the Ugandan low-income women, using gender as an analytical tool. While the gender lens of the book chapter included gender elements of race, class, age and ethnicity, this article confined its use of gender to the biological differences between men and women. The concept of gendered spaces is used to guide the explorations on women's accessibility and convenient use of the spatial pattern of MWSUHP neighbourhoods in relation to attaining their housing adequacy.

To collect its empirical evidence, the article generated measured drawings to document and analyse the spatial patterns and built forms of MWSUHP as envisaged by the designers against the ones that resulted from the housing transformations initiated by women. Photography, in-depth open-ended interviews, sketching and observations were also used to collect empirical evidence.

Analysis of MWSUHP drawings revealed the appreciation of its designers for the orderly and structured arrangements of the housing plots. Each eight to sixteen plots were designed in grid-iron layouts that cluster around a public open space. Such orderly plots' layouts were assumed to signify housing adequacy. This assumption was further accentuated by the restricted stipulation of boundary markers to demarcate individual houses, as well as the strict dictation to the location and orientation of the houseblock within the individuals' plots. In effect, a hierarchical spatial pattern of public, semi-public/private, and absolute private spaces was recognised in the assumed MWSUHP housing neighbourhoods. While the demarcation between the public space outside the individual house and the private housing space was envisaged by boundary markers, the house block demarcates a threshold between the semi-public/private space of the front yard and the absolute privacy of the back yard, within the plots' extents. This hierarchical spatial pattern of MWSUHP neighbourhoods seems to subtly denote associated

hierarchical gendered use of space, constructing for women's presence at the privacy of the house back yard attending to house chores, and men's presence at the semi-public house front yard accentuating their authority as gate keepers to their house's territories and its household.

However, examining the spatial layout and built forms of MWSUHP study area at the time of the study, revealed some discrepancies to its assumed designs. Empirical evidence revealed that the boundary markers that were stipulated by MWSUHP designers to maintain the assumed spatial patterns, were rarely implemented or were done in a hazy manner, if they ever existed. Moreover, substantial extensions prevailed that sometimes spilled beyond the houses' extents and are facilitated by the absence of boundary markers. In effect, new organic spatial patterns and built forms emerged in MWUSHP, which blurred the distinction between public and private spaces, deconstructing their associated gendered space stratification that was unintentionally assumed by MWSUHP designs. Despite the seemingly chaotic emerging boundaryless spatial patterns at MWSUHP neighbourhoods, they were noted to facilitate women's accessibility and visibility in both public and private spaces, which denotes their liberation and contributes to satisfaction with their housing.

Moreover, the emerging boundaryless spatial patterns were found to be more convenient for women as they increased their feeling of security by facilitating natural surveillance within the neighbourhood against vandalism, child abduction and domestic violence. Moreover, the boundaryless spatial patterns at MWSUHP seemed to appreciate women's lifestyle and promote their social interaction and integration within their communities, which increased their satisfaction with their housing and hence its adequacy. The boundaryless spatial setting in MWSUHP promoted women's home-based enterprises, recognising the home as their workplace and facilitated attendance to their reproductive and productive roles concurrently.

On the other hand, the article revealed that the houses with solid, physically and visually impeding fences that although supports their occupants' feelings of security and privacy, it caused occupants social alienation and antagonism within the community of MWSUHP, which compromised on their housing adequacy.

Hence, the article supported the research investigations by deconstructing the strict orderly spatial setting as a constituent to housing adequacy for women of MWSUHP. It advocates for more flexible housing neighbourhood spatial patterns to increase women's feeling of security as well as support their reproductive, productive and social integration roles, which increasing their convenience with their housing and thus their adequacy.

7.4 Article III. Women and Low-income Housing Transformation in Uganda

As an extension of and complementary to the explorations of the book chapter and Article II, Article III further narrows down the focus of investigations into the individual housing units of MWUSHP. The article explores the housing transformations women of MWSUHP made to attain their housing adequacy. This was done to identify design considerations that support housing adequacy for MWSUHP women. Housing transformations in this article refer to any physical extensions and/or alterations or modifications to the external and internal space of the standardised housing prototype offered by MWSUHP that took place within the extent of the individuals' housing plots.

The article used the concept of housing flexibility, which refers to the housing capacity in adjusting to its occupants' variant and changing housing needs as a guiding tool for its explorations on housing adequacy for the MWSUHP women. Admitting 'family' as a basic concept in housing research and acknowledging intersectionality of MWSUHP women, the article extends the boundaries of the housing flexibility concept to include women outside the conventional nuclear family in its explorations.

In its conceptual approach, the article identified two ways in which housing flexibility evolved over time. The first came about as a result of the evolution of the vernacular in response to people's continuously changing needs and the other through the efforts of professionals in developing flexible designs to do the same. The article can therefore be thought of as a dialogue and conversation between the vernacular and professional housing designs on housing flexibility to support adequacy for Ugandan low-income women. The concept of gendered spaces is used to investigate women's convenient use of MWSUHP housing spaces created by the actions of both MWSUHP professional designers and its women users to attain housing adequacy. Such explorations are assumed to inform the Ugandan low-income and slum-upgrading housing discourses on design considerations that support the provision of adequate housing for the Ugandan low-income women.

The article used the methodological approach of post-occupancy evaluation (POE) to document and analyse the influences of the housing transformations women of MWSUHP made in response and accommodation of their changing housing needs to attain their housing adequacy.

The article used in-depth open-ended interviews with MWSUHP women to gather empirical evidence. Identifying housing ownership as an essential motivator for investing time and resources on housing transformations, the article confined its explorations to women-owned transformed houses. Measured

drawings, photographs and observations were also used to document and analyse housing transformations and designs.

Findings of the articles revealed discrepancy in the reference and appreciation of term 'house' between women of MWSUHP and its designers. While, women refer to their 'house' as all spaces included within the plot's territory including the outdoor space, designers mostly focus on the enclosed houseblock, considering outdoors as a redundant none-functional space. However, empirical evidence revealed that outdoor space accommodates most of MWSUHP women's reproductive, productive and community integration roles and facilitates the practical needs of their daily activities. Such lack of appreciation to the outdoor space as an essential functional space for women, compromised with the adequacy of MWSUHP housing designs to women.

The prevailing housing transformations observed in MWSUHP illustrate housing transformation as an inevitable phenomenon that needs to be considered and enabled to support housing adequacy for Ugandan low-income women.

The article noted that most of the housing transformations were motivated by women, as they seem to be socio-culturally mandated to configure their housing space to their households' convenience, which presents them as their housing design experts.

It is recognised that all house types offered at MWSUHP lacked a cooking space. This basically inconvenienced women and compromised their housing adequacy. Such omission was attributed to the domination of men to MWSUHP design team, causing women's housing needs to be side-lined in the proposed designs and compromising with their adequacy to women. Appreciating women's informal housing deign knowledge, Article III, like Article I, advocates for including Ugandan low-income women in the process of their housing design to support their adequacy of its outcome.

The article categorised housing transformations into: i) extension structures to the main houseblock but confined within the individual's plot territories and ii) reconfigurations to the internal space of the main houseblock.

i.External extensions:

Results revealed that the extension structures women of MWSUHP applied to the main block were in the three forms of sheds, single rooms and wooden kiosks.

a) Sheds: Results revealed that sheds are usually the first type of extension adopted by MWSUHP women. They are usually made of modest improvised building materials and technologies to support the convenient performance of their productive, reproductive and community integration roles concurrently. Sheds seem to have an extra value in their capacity for incremental develop-

ment in accordance to their occupants' changing housing needs and financial capacities and the capacity to be converted into a fully enclosed room. Moreover, sheds were found to provide women with outdoor spatial and functional qualities while protecting them from adverse climate conditions. Hence, sheds seem to be a convenient housing component for the MWSUHP women, which support their housing adequacy.

Despite their prevalence and proven convenience to women, empirical evidence noted that none of the housing prototypes offered at MWSUHP included a shed in their design, which points to the ignorance of the MWSUHP designs to women's housing needs.

b) Single rooms were the second prominent extension noted at the study area. This was in the form of detached and/or semi-attached single room housing units that are usually constructed from traditional building material and technology. Such rooms were usually laid out in linear forms that are sometimes interconnected with a door. Their interconnecting door facilitated their flexible use and adjustment according to the different occupancy scenarios and the occupants' changing needs. Each single room acts as an autonomous housing unit, which proved to be a convenient housing option for women outside conventional family structures as that facilitates the independence they need to foster their own identities, without compromising the feeling of belonging and security they receive by their proximity to each other and the main houseblock. It is observed that the construction of those rooms created spatial patterns that mimic the traditional Ugandan homestead that appreciates the Ugandan lifestyle, which supports their adequacy to the MWSUHP women.
c) Wooden kiosks are also noted as a common type of housing transformation. They are commonly used to support MWSUHP women's home-based enterprises. Most kiosks were noted to be located at the front yard of the house to maximise marketing their merchandise. This constructs for women's presence at their houses front yard that are assumed as men domain as denoted by the designs of MWSUHP housing prototypes. As a result, kiosks contributed to the reconfiguration of the spatial patterns in MWSUHP to facilitate women's accessibility, visibility and inclusivity.

ii.Internal transformations

Empirical evidence revealed that MWSUHP women configured their internal housing space to accommodate multi-functions. That was achieved through a) functional zoning within the single room, b) subdividing single rooms to

accommodate multiple functions and c) timetabling the functions performed within the single room.

a) Functional zoning is achieved by the accommodation of the single room to multiple functions concurrently. This is usually achieved by arranging the furniture and/or simple equipment to facilitate the performance of many functions within one space. Functional zoning was also noted to be achieved vertically. The roof vicinity was noted to commonly used as a storage space. Despite its recognized importance for women of MWSUHP, a storage space was not catered for in any of MWSUHP housing prototypes. This further reflects the ignorance of MWSUHP designers to women's housing needs, which compromised with the adequacy of their proposed housing designs to women.
b) Subdividing single room, which depends on the proportions and sizes of the room. The material, sizes and extensions of the internal partitions are noted to depend on the relationship between the occupants on its both sides. In cases whereby occupants of both sides are family related, partitions are made from humble, lightweight and improvised materials that provide a relative level of security and privacy. When occupants of both sides are not related, as in the case of renting one or both parts to support women's productive roles, more solid material is used, and partitions are extend to the roof ridge to achieve a maximum level of privacy and security. It is observed that the undividable room proportions and the unjustified bulkiness of the non-loadbearing internal walls, restricted women's ability to adjust the internal space to their convenience, compromising on their housing adequacy.
c) Time tabling is used to maximise the utilisation of the spaces by using the same room space for the performance of various functions, at different times of the day. It is noted that maximising the use of the space by timetabling is sometimes restricted by the rigid and non-convertible furniture, compromised on the convenient use of space.

Results of this article acknowledged the use of traditional building technologies that, in most cases, employ simple and improvised materials, and refute the use of modified building materials and technologies introduced by the project. This indicates that the quality of the building materials has little influence on housing adequacy to women of MWSUHP.

Hence, by admitting the substantial housing design knowledge, and the essential role women of MWSUHP played in supporting their housing adequacy, Article III contributed to the research explorations by making women visible in the Ugandan low-income housing design discourse. This prompted the article to

advocate for the inclusion of the Ugandan low-income women in their housing design process to support their housing adequacy. Moreover, the article recommends increasing women's representation in the design teams of the Ugandan low-income housing and slum-upgrading projects to argue for the accommodation of women's housing needs and interests in the provided housing designs in support of their housing adequacy.

The findings of Article III supported the research explorations by acknowledging the outdoor space as an essential functional space for MWSUHP women, advocating for the serious consideration to its design to support housing adequacy for the Ugandan low-income women. The article as well established the importance of the autonomy of the housing built forms in fostering women of MWSUHP independence and support their housing adequacy.

Results of the article recognised housing transformation as an inevitable phenomenon for women of MWSUHP, which signifies flexibility as an essential design consideration for their housing adequacy. Therefore, the article advocates for the careful consideration to the sizes and proportions of the houses' plots and the internal generic spaces. Additionally, developing building materials that are readily available, affordable and easy to assemble would maximise the flexible use of the generic housing space, which will support its adequacy to the Ugandan low-income women.

The article further affirmed that appreciation of the women's lifestyles and accommodation to their reproductive, productive and community integration roles, as key design considerations for their housing adequacy. Similar to Article I, this article confirms that spontaneity, flexibility, improvisation and incremental development are essential design considerations that contributed to the housing adequacy for MWSUHP women.

8 Discussion, conclusions and areas for further research

This chapter discusses the research findings in support to its explorations on processes and procedures for the participation of women in the phases of MWSUHP housing process and identifying design considerations to support their housing adequacy. Conclusions and areas for further research are also presented in this chapter.

8.1 What was learned from the empirical work?

Empirical findings of this research are discussed in two sections. Section 8.1.1 discusses the findings that pertain to its explorations on processes and procedures for women's participation at the phases of MWSUHP housing process to support their housing adequacy. Section 8.1.2 on the other hand, discusses the empirical evidence that relate to the identification of design considerations that support housing adequacy to MWSUHP women at the interlinking spatial scales of the city, the housing neighbourhoods and their individual housing units.

8.1.1 Women's participation in the phases of MWSUHP housing process

The concept of gender is used as an analytical tool to explore on women's participation in the phases of MWSUHP housing process of: i) the introduction of MWSUHP, ii) the development of the MWSUHP housing designs, iii) the production of building materials and the construction of MWSUHP houses and iv) the post-occupancy of MWSUHP housing prototypes. Gender was also used to examine the influence of women's participation in MWSUHP housing process to their housing adequacy and to the visibility of the Ugandan low-

income women in the Ugandan low-income and slum-upgrading housing discourses as well as their accessibility to adequate housing within the Ugandan cities.

Women participation in the introduction phase

It is recognised that targeting women as the main beneficiaries of MWSUHP, highlighted the marginalisation of the Ugandan low-income women in housing. This also contributed to the visibility of the women in the Ugandan low-income housing and slum-upgrading discourses and emphasised their inaccessibility to adequate housing in the Ugandan cities as an important issue that needs to be addressed and mitigated.

By focusing on women, MWSUHP contributed to deconstructing the gender-neutrality of the Ugandan low-income housing discourse that perceives slum dwellers as a homogeneous group without appreciating their deferential gender subjectivities. Larsson (2001) in her advocacy for mainstreaming gender in the housing of the Global South, cautioned that adopting the assumed 'gender-neutral' approach to housing has the risk of turning into housing gender-blindness in practice, which can cause imbalanced accommodation and considerations to women's needs and interests in housing equally to men.

The recognised domination of men to the Ugandan housing related professional fields, seemed to cause the domination of men's subjectivities to MWSUHP housing designs, ignoring and side-lining women's housing subjectivities, reducing on their adequacy to women.

Research findings revealed that MWSUHP facilitated land/home ownership to women across their intersectionality, including those outside the conventional nuclear family. With family being a basic concept in housing research and planning as Schlyter (1996) claims, MWSUHP deconstructed the domination of the nuclear family as the norm in the Ugandan low-income housing discourse that used to exclude low-income women in non-conventional family structures and obstructs their access to adequate housing. MWSUHP thus acknowledged and supported the Ugandan low-income women's visibility and accessibility to adequate housing in the Uganda across their intersectionality.

By including childless, single, widowed, divorced, and women in polygamous families, MWSUHP extended the understanding of female-headed households (FHH) beyond their normative, restrictive and dogmatic interpretation as single mothers with children that Habraken (2011) claims the world is continuously moving away from. This as well made women in polygamous families visible in the Ugandan low-income housing discourse, highlighting polygamy as a socio-cultural practice that is seldomly addressed in global, regional or national housing

debates despite its wide prevalence in many socio-cultural contexts of the Global South, including Uganda.

Empirical evidence revealed that by providing Ugandan low-income women access to housing ownership, MWSUHP contributed to deconstructing the Ugandan socio-cultural norms that reserve land and housing rights for men only. Research results recognised that most women of MWSUHP were leasing their housing before the introduction of the project. Thus, by providing women of MWSUHP land/housing ownership, the project protected them against forced evictions that used to threaten them before the project.

Concurring with Schlyter (1996), land/homeownership seems to have motivated MWSUHP women to allocate resources, energy and time for their housing development. However, similar to what Akiiki (2010) noted in her investigations on gender, home ownership and the dynamic of marriage in Kampala, research results indicate that in the case of shared ownership, marriage dynamics seem to restrict MWSUHP married women's independent decision-making power for their housing development. Decisions concerning development, selling and/or renting of the spousal housing seem to depend on the husbands' approval. Such findings highlight the importance of exploring means and procedures to safeguard the interests of the Ugandan low-income married women housing in cases of spousal joint housing ownership.

Women's participation in the physical planning and housing design phase

With women being the focus of this research, the research acclimated the term 'users' to mainly mean women-users. Hence, discussions on user satisfaction, user participation and their impact on housing adequacy, needs to be understood as referring particularly to MWSUHP women-users.

Research findings revealed that MWSUHP's physical planning designs were prepared by the physical planners of Jinja Municipality. While the designs for the individual housing prototypes were developed by the architectural team of MoLH&UD in Kampala. It was noted that both design proposals were developed without the consultation of MWSUHP women. However, a minor contribution by women to the physical planning of and MWSUHP the design of its neighbourhoods was noted. Initially, women were consulted in the first proposal for MWSUHP neighbourhood housing designs that suggested co-housing and shared ownership between two families on one plot. Due to their dissatisfaction with this initial proposal, MWSUHP women rejected the proposal. This prompted the project's physical planners to revisit their designs and propose another that allocated each family its own housing plot. Most women were satisfied with the modified proposal, which motivated their support of the project activities. Failure to receive women's acceptance of the proposed neighbourhood design would have

caused their reluctance to participate in the project and challenge its progress and success. This highlights the influence of women-users' satisfaction with the housing design not only to their housing adequacy but to the success of the project altogether.

On the other hand, research findings recognised that the design of MWSUHP housing prototypes were prepared by the design team at the architectural office of MoLH&UD without women's consultation. While designers claimed that women were consulted in the development of their housing designs, women of MWSUHP on the other hand, disputed such claims and confirmed their exclusion from their housing design process. Instead, women respondents admitted that they were presented with prescribed alternative housing designs to choose from. MWSUHP architects seem to understand women's participation as providing them with the opportunity to choose between the offered alternative housing prototypes. But women of MWSUHP interpret their participation in their housing design to mean their full involvement in decision-making of their housing designs processes to influence their outcome. Such dissonance in the understanding, interpretation and appreciation to women's participation in MWSUHP housing design processes between the designers and women-users, hinted to the existence of a communication gap between the two. Such gap undermines the capacity of both parties to arrive at a common resolution regarding the project's housing designs. Moreover, results revealed that women were not furnished with detailed information on the alternative prototypes to facilitate their informed choices. Instead they were manipulated into choosing on design prototype over the other based on their ability to repay its respective loan amount. Hence, women's participation in MWSUHP was not effective in empowering women to make informed choices that would have influenced ensuring the accommodation of the proposed designs to their housing needs and interests. This in turn reduced on MWSUHP women's satisfaction with their housing designs and compromised with their adequacy.

In MWSUHP, two types of clients were recognised: the paying-clients, represented by project administrators and donors who shouldered the project's cost, and the user-clients, referring to women of MWSUHP who experience the living environment of its housing designs. Similar to what Marcus and Sarkissian (1986) claim usually takes place in mass housing such as MWSUHP, the project's designers seemed to have taken an elite position closer to the project's partners, who represent the paying-clients, and that is distant from women as user-clients. Such alienation by the designers of MWSHUP to women-users widened the communication gap between the two. This not only constrained women's capacity to communicate their housing needs, aspirations and interests to the project's designers to ensure their accommodation in the

proposed designs, but also, as Zeisel (2006) argues, constrained the capacity of MWSUHP designers' to propose housing designs that were satisfactory and adequate to women.

Instead, the designs of MWSUHP housing prototypes were found to be motivated by the agendas of the project's donors and administrators that aimed at cost reduction, loan recovery, speedy delivery and maximising the number of the MWSUHP housing units. They however, reflected less considerations to the satisfaction of the proposed designs to the women-users' housing needs, which as Marcus and Sarkissian (1986) claim, presents a common challenge in mass housing.

The communication gap that existed between MWSUHP women and its designers was also noted in the discrepancy in the understanding and interpretation of the term 'house'. Research findings revealed that MWSUHP designers interpret the term 'house' to refer to the *houseblock* within the individual plot only. On the other hand, women of MWSUHP interpreted the term *house* to refer to all physical space and built forms within their individual plots including both enclosed and outdoor spaces. The absence of mutual understanding and interpretation of the term *house* between the designers and the women-users seems to have, among other things, caused MWSUHP designers to place much attention to the internal layout of the alternative's prototypes of the *houseblock* ignoring the outdoor space within the plot as its spatial context, and rather treats it as a residual space. But similar to what Daifalla (1998) discovered in her explorations into the social factors that influence low-income housing designs in Khartoum, Sudan, empirical evidence acknowledged the importance of the outdoor space as an essential functional space for the women of MWSUHP. Ignoring the importance of the outdoor space to women of MWSUHP, seems to have caused its designers to devise individual pit latrines as a sanitation solution without paying much attention to its influence on the quality of the living environment of the outdoor space. Eventually the pit latrines degraded the outdoor living environment and undermined its functional quality to women, which compromised on their convenience and reduced on their housing adequacy.

Analysis of the drawings of MWSUHP and the examination of the spatial patterns and built forms of its neighbourhoods, revealed that designers of MWSUHP envisaged housing adequacy by the orderly and rigid organisation of the plots' layouts to signify development and modernisation. Moreover, housing adequacy at the individual housing level seems to have been envisaged by the use of modified building materials and construction technology. While the influence of the orderly plots' organization, modified housing building materials and construction technologies on housing adequacy was appreciated by many women in MWSUHP, research findings revealed that most of the women

respondents reflected extra appreciation to the capacity of the housing designs to support the practical activities of their daily life, over such design issues. This was further verified by the use of traditional building materials and technologies by most women in their housing transformations. This finding corresponds with Turner (1977) when he argues that for the low-income groups, the house satisfaction to its occupants' needs is more important than what it is made of.

Therefore, it could be concluded that including women users in the housing design process of MWSUHP would have bridged the communication gap between the two and supported the production of housing designs that, as Habraken (2011: ix) claims, are "safer, and cared for, but also tailored to the needs of users", which contributes to the housing adequacy for women.

But the deterrence of MWSUHP designers from adopting a participatory planning or design approaches, by including women-users as members of MWSUHP design team, might be explained due to the time and resources they usually consume. This concurs with Cherry (1999) who claims that adopting participatory planning and/or design consume a lot of time and resource, which makes them unfeasible despite Sanoff (2000) confirmation to their capacity to produce better maintained environments and more users' satisfactory and thus adequate housing designs.

But research results also revealed that designers did neither adopt a user-centred approach, which targets satisfying women-users' housing needs and aspirations without their direct involvement in MWSUHP housing designs processes, in spite of its relative potential for producing adequate housing for MWSUHP women by accommodating their housing needs in the housing designs as (Ambrose and Harris, 2010) suggests.

Although it is acknowledged that involving women-users in their housing design processes do not absolutely guarantees the production of designs that are more adequate than the ones produced without their involvement. But findings of this research present reasonable belief that including women or at least considering their housing needs as a guiding principle to their housing designs processes, has significant potentials to support the production of housing designs that are convenient and adequate to them.

Women's participation in the building materials production and housing construction phase

Empirical findings revealed that participation in MWSUHP was adopted by involving project beneficiaries to constitute its labour force, in the form of what Berrisford et al. (2003) interpret as 'sweat equity', which as Hek (2003) claims it would, reduces on the project's cost and supported its economic feasibility. Thus, the fact that MWSUHP targeted women as the main beneficiaries has no

implications on introducing new approaches or alternative procedures for their participation in the project. Women's participation in MWSUHP, apart from minor managerial and administrative activities, was mainly adopted by their contribution to the production of building materials and the performance of housing construction activities, for which they received training and guidance.

Research findings revealed that during the process of building their own homes, women of MWSUHP were obliged to construct their houses as specified by the design drawings of the prototype they chose exactly and without any alterations. Women were not allowed to perform any changes to the original design of the prototype they subscribed to, even if the changes might have improved on the convenience of their housing and without necessarily increasing its cost. In that sense, women's participation in the construction activities of MWSUHP, can be thought of as an act of executing decisions that were made by others, but without being given an opportunity to make choices, place demands or take decisions that might influence the housing's response to their housing needs, interests or desires. Hence, women's participation in the construction activities of MWSUHP turned women into passive recipients of the project's outcome, rather than empowering them to become active contributors in their housing adequacy.

Field investigations revealed that women of MWSUHP were obliged to participate in the production of building materials and construction activities as a condition to access MWSUHP housing. Due to their unfamiliarity with the construction work compared to men, many women of MWSUHP endured physical hardships, which was also noted by Elwidaa and Nawangwe (2006). Research findings revealed that the association of construction activities with men in the Ugandan culture seems to have prevented women of MWSUHP from being involved in the construction workforce, after the culmination of the project despite the training and the skills the project equipped them with. In fact, mandating women's participation in the project's construction activities that took place in locations away from their homes constrained their capacity to attend to their reproductive and productive roles concurrently as was the case with the home-based enterprises they used to perform before the introduction of the project, which reduced on the revenues they used to generate from them. Thus, while providing the labour force to the project supports its economic feasibility, directing women's energy and time away from their home-based activities creates doubts as to its economic feasibility for women at the individual level.

Attending to the construction activities away from their homes placed extra obligations and additional burdens on women's daily schedules that Chant and Mcilwaine (2015) recognise urban life usually does to low-income women. Hence,

women participation in the construction activities of MWSUHP compromised with their everyday life practical needs that Moser (1989) identifies as important for women, without recognized impact to their housing adequacy.

Thus, it can be concluded that women's participation in the building material production and construction activities in MWSUHP not only reflected no significant influence on their housing adequacy. Moreover, it challenged their attendance to their triple roles and increased the burden of their daily activities, which compromised with their convenience and satisfaction.

Women's participation in the post-occupancy phase

It is acknowledged that the post-occupancy phase was not considered as part of MWSUHP planned activities. But in this research, the post-occupancy phase is considered an integral phase of MWSUHP housing process. The adequacy of the housing design is experienced by its occupants at post-occupancy phase and is assessed by its capacity to attain its occupants' convenience and satisfaction. Thus, the transformations women of MWSUHP applied to their housing to attain their adequacy during their post-occupancy are explored.

Empirical evidence of the research verifies a substantial level of transformations to MWSUHP housing designs at the study area. Such housing transformations can be attributed to their occupants' attempts of mitigating the satisfaction gap between the housing designs proposed by MWSUHP dsigners and their occupants' preference. According to Khan (2014:22), such informal housing transformation usually results from the occupants' "ever-changing list of housing needs" with time ad changes in people's life circumstances. On the other hand, housing transformations can also be motivated as an attempt to personalise the standardised housing designs to their occupants' personal needs and/or preferences.

It was recognised that women of MWSUHP (in most cases) are the principal members within their families to identify the need for any housing modifications, adjustments or transformations. Women were found to have a clear vision of the kind of transformation needed and how they should be implemented. As such, women of MWSUHP can be thought of as their housing designers since Simon (1969:55) argues that anybody "who devises courses of action aimed at changing existing situation into preferred ones", should be thought of as a designer. The level of freedom of choice and decision-making power women exhibit in their housing transformations, presents them, as Habraken (2000) refers to, as the controlling agents to their home environment. In their devised housing transformations, women of MWSUHP informally practiced the tactics and procedures designers perform when proposing a design solution of: needs assessment, choosing between alternative options and opting

for the one that is feasible and best satisfies the users' needs. However, despite their principal role in making decisions over their housing transformations, implementing the transformations were noted to commonly executed by men as family members or hired labourers. Nevertheless, similar to what Cherry (1999:5) noted in self-built houses, women of MWSUHP seem to create "forms that meet their basic social and physical needs".

In their housing transformations, women of MWSUHP seem to have exhibited knowledge and made decisions on the right way to design their homes based on what is established by their tradition and lifestyle rather than their formal training. It is recognised that the spatial patterns and built forms resulted from women's housing transformations, attained a commendable level of their satisfaction and convenience compared to the ones offered by the project designers, despite their professional training. Thus, it can be argued that women of MWSUHP transformations to their housing has positively influenced their housing adequacy.

This highlights substantial informal housing design knowledge that women of MWSUHP hold that can support their housing adequacy. This also indicate that including women MWSUHP housing design process would have a good potential for supporting their housing adequacy than their participation in the construction activities. This recognition advocates for including Ugandan low-income women in their housing design process and consolidate their informal housing design knowledge to enrich the formal housing design knowledgebase of the Ugandan low-income and slum-upgrading housing discourses towards their provision with adequate housing.

8.1.2 Design considerations that support housing adequacy for women

The concept of gendered spaces was used to explore on the design considerations that support housing adequacy for women of MWSUHP. In this instance, gendered spaces refer to the spaces and built forms that are created by the intentional acts of their creators influenced by their gender subjectivities. The concept was used to examine the spatial patterns and built forms of MWSUHP at both the neighbourhood and individual houses levels. The concept was also used to examine the housing spatial pattern and built forms of the Ugandan cities, including Jinja, which represent the spatial context for Ugandan slum-upgrading housing projects including MWSHUP. The concept of user satisfaction was used as one of the essential determinant factors to their housing adequacy. The research explorations on the adequacy of MWSUHP housing designs to women were guided by examining their capacity to a) allow for women's accessibility, use and visibility, b) facilitate women's reproductive, productive and community

management/integration roles c) support women's practical needs and their daily activities, d) appreciate women's lifestyles and fit to their socio-cultural contexts and e) be flexible in responding to women's variant and changing housing needs and embrace their intersectionality.

Adequate housing for low-income women in the Ugandan cities

Preliminary findings of the research revealed that the physical planning and spatial patterns of Ugandan cities, including Jinja, were based on colonial ideologies that demonstrate power and control and construct for gender, class, ethnicity and age stratification and segregation. Such colonial spatial ideologies seem to be the signature of British colonisers in most cities of the former African British colonies as noted by Graan (2018) in Cape Town, South Africa. It is revealed that colonial social engineering of the residents of the Ugandan cities, caused the stratification of its spatial patterns and built forms, whereby the British colonisers occupy large fenced houses within serviced neighbourhoods located in the prime locations within cities. On the other hand, the native Ugandans were forced to live in compact, fenceless, semi-detached, poorly serviced houses located in low-lying and/or remote areas. African houses were mainly built for middle-aged men who were encouraged into the Ugandan cities during colonization only to provide the labour force, but they were denied from the company of their families. Ugandan families, including women, children and the elderly, were meant to remain at the rural areas, causing family disintegration by gender.

In between the British and the Ugandans housing neighbourhoods, resided the Asian families. The Asian housing neighbourhoods were in the form of fence-less, semi-detached houses that were relatively larger than those of the Ugandans. Asian quarters acted as a buffer zone between the British colonisers at the upper latitudes and the colonised Ugandans in low-lying remote locations. Research findings revealed that such spatial and housing configurations decode gender, class and racial stratification and seem to influence the spatial patterns of Ugandan cities, even after independence, setting the stage for the formation of Ugandan slum settlements.

Research investigations revealed that denying the presence of the low-income women's within the Ugandan cities during colonization, forms the origin to their invisibility and inaccessibility to adequate housing in the Ugandan cities. But the abolishment of the restrictions against low-income women's presence in the cities after independence, coupled with the political and economic turmoil within the country that caused the loss of many men to the country's internal wars, encouraged women's migration to the cities in search of better life opportunities, which denoted a gendered face to urbanisation in Uganda.

The research identified social as well as spatial housing occupancy replacement within the Ugandan cities after independence. While Asian and high-income Ugandans occupied the housing of the British colonisers after their departure from Uganda, middle-income Ugandans occupied the residences where Asians used to live. On the other hand, the middle class Ugandan families, including women, children and the elderly, squeezed into the houses that were originally designed for the occupation of middle-aged Ugandan men only. Alas, low-income Ugandans illegally occupied, low-lying, poorly or non-serviced locations within the cities that later constituted their slums.

Thus, the research recognised that the presence of the low-income women in the Ugandan cities was not considered, which renders them invisible.

Realising the appalling housing conditions of the Ugandan slums, the Ugandan government launched slum-upgrading housing projects to provide the low-income Ugandans with adequate housing, including MWSUHP. However, explorations into the spatial patterns and built forms of MWSUHP recognised the persistent influence of the colonial ideologies to the Ugandan spatial planning and low-income housing discourses. This caused perpetuation to the production of housing designs and gendered spaces in the Ugandan cities that continue to construct for gender stratification and segregation. This further instigated the subordination and invisibility of the low-income women in the Ugandan cities and challenged their accessibility to adequate housing within them.

This points towards the importance of developing and adopting physical planning and housing design ideologies that appreciate the interlinkages between gender, spatial planning and housing to support the visibility of the low-income women and their accessibility to adequate housing in the Ugandan cities.

Adequate neighbourhood design for MWSUHP women

Concurring with Schlyter (1996), who argues for including neighbourhood surroundings in the concept of housing for women of the Global South, the research explored the adequacy of the spatial patterns and built forms of MWSUHP neighbourhoods, as assumed by its designers, to women. These were compared against the ones that emerged due to the transformations women made during their housing post-occupancy.

Research results revealed that the physical planning of MWSUHP assumed plot layouts that follow the rigid order of the grid-iron design. Each 8-16 plots were arranged surrounding an open space, that is assumed to commonly be used by their households of the surrounding plots. It was discovered that MWSUHP housing designs assumed the construction of boundary walls around the individual's plots to demarcate their individual territorial areas and provide an orderly layout within the project's neighbourhoods. Closer examination to the

spatial layout of the plots hints to the domination of the colonial ideologies that constructed for housing adequacy through the rigid order of the grid-iron layouts. Such perception of housing adequacy seems to be further emphasised by the project's dictation of the encasement of each individual house within boundary walls and its strict instructions to the orientation and location of the houseblock within the extents of the individuals' housing plots.

Gender analysis to the project's drawings that portray the assumed spatial pattern and built forms at MWSUHP neighbourhoods, recognised hierarchical spatial patterns. A gradual shift from the public space outside the individual houses to the semi public-private space of the front yard of the individuals' houses that is demarcated by boundary walls was realised. The gradual shift ends with the private space of the backyards of the individuals' houses that was separated from the front yard by the houseblock within the plot. A subtle associated gendered stratification to this spatial hierarchy was recognised. Such spatial hierarchy seems to construct for men's presence at the public and semi-public spaces outside and at the front yard of their homes respectively. On the other hand, it assigns women's presence to the private space of the backyard and the indoor housing spaces. Assuming men's presence in their houses' front yards seems to accentuate for their authoritative position as gate keepers to their housing space and its occupants, while women's presence in the backyard of the house attending to house chores, seems to construct for such activities as their gender role.

However, study explorations revealed discrepancies between the spatial patterns and built forms of MWSUHP at the time of study and the ones envisaged by the project designers. Empirical evidence revealed prevalent transformations to the spatial pattern and built forms of MWSUHP neighbourhood. These transformations were mainly in the form of building new extension structures to the project's original houseblocks together with the absence of the assumed boundary walls that were assumed to surround the individuals' housing plots. This caused the emergence of new spatial pattern at MWSUHP neighbourhoods. This new emergent spatial pattern is found to be more organic than the assumed one, intermingling and blurring the distinction between the public and private spaces assumed by MWSUHP's housing designs. This caused the deconstruction of the hierarchical spatial stratification of MWSUHP neighbourhood designs together with its associated gender stratification and segregation, in support of women liberation and emancipation. This concurs with Spain (1992) who argues that de-gendering the space through spatial integration is essential for gender equality and to delude the gender differences in power and privileges. Preliminary findings noted that the emerging boundaryless spatial patterns in MWSUHP neighbourhoods although might seem chaotic at a first glance, but upon deeper

analysis, prove to be more convenient to MWSUHP women. The emerging spatial pattern seems to have deconstructed women's isolation and alienation as was connoted by the proposed housing designs and normalised for their presence and performance of their associated gender roles anywhere within the MWSUHP neighbourhoods without inhibitions and/or antagonism.

Moreover, such boundaryless physical settings in the study area seem to support women's multi-tasking and their ability to shift between their reproductive and productive roles concurrently and conveniently that Nnaggenda-Musana (2008) recognised is commonly practiced and important for women living in the informal settlements of Uganda. The performance of MWSUHP women to their home-based enterprises constructs for their houses to act as working places, which according to Kellett and Tipple (2000) and Moser (1989) represents an essential element in the housing convenience and satisfaction to the low-income women of the Global South.

It is noted that the emergent boundaryless spatial pattern in MWSUHP contributed to the promotion of women's homebased enterprises, which supported their productive roles and boosted their economy. Moreover, the emergent boundaryless spatial pattern in MWSUHP neighbourhoods, was recognised to facilitate women's integration within their communities that Moser (1989) identifies as essential for women's housing adequacy. Women were noted to be much satisfied with the emergent boundaryless neighbourhoods in MWSUHP because it enabled natural surveillance against vandalism, child abduction and domestic violence that used to threaten them before the project. This increased women of MWSUHP feeling of security, which supported their housing convenience and adequacy.

On the other hand, research findings recognised that women of MWSUHP disdained from constructing physically and visually impeding boundary walls around their houses because they believe it will cause their social alienation and antagonism among their neighbours, which reduce on their integration within their community and compromise on their housing adequacy.

What can transpire from the above submission is that spatial patterns and built forms emerged at MWSUHP neighbourhood as the result to women's housing transformations proved to be more convenient and adequate to women compared to the ones assumed by the project's designers. Such convenience and adequacy were mainly related to the capacity of the emergent neighbourhood housing design to 1) deconstruct women's isolation and allow for their presence and visibility at any location within MWSUHP neighbourhoods, 2) support women's reproductive, productive and community integration roles, 3) support women's feeling of security and 3) respond and appreciate women's lifestyles and socio-cultural contexts, which collectively supported housing adequacy for

women and thus need to seriously be considered for the provision of adequate housing for the Ugandan low-income women.

Adequate house design for the MWSUHP women

In its exploration, the research refers to the house as including all areas and built forms within the boundaries of the individual's housing plot. The transformations noted to take place at the individual houses of MWSUHP were categorised into a) external that refers to the extensions constructed extra to the project's houseblock but within the individual's plot and b) internal which refers to changes to the internal space of the houseblock.

i. External housing transformations

The research identified three main forms of external transformation taking place at the individual house level, which include sheds, single and or/ multiple rooms and wooden kiosks.

a) Sheds: The research recognised extensive use by women of MWSUHP to the sheds formed by the overhangs of the roof eaves of the houseblock. Women of MWSUHP used such sheds for the performance of their productive and reproductive roles. But the short range of the roof eaves overhangs coupled with its extended height limited their capacity to appropriately protect women against the adverse weather conditions of sun and rain. Therefore, women of MWSUHP resolved to construct other alternative forms of sheds that were recognised as the first form of external transformations women of MWSUHP performed in their housing. Sheds were mostly constructed from improvised materials and simple construction technologies that are within women's affordability and technical knowledge. It was noted that sheds provided a convenient alternative to the outdoor spatial qualities, but with the extra advantage of protecting women against adverse weather conditions. With the recognised absence of a cooking place in all housing prototypes offered by the project and the social construction of cooking as women gendered role, sheds facilitated a convenient place for women to perform cooking. The openness of sheds facilitates women of MWSUHP attendance to their reproductive and productive roles while communicating with others concurrently, which seem to increase their housing satisfaction and convenience.

   Shed's capacity for incremental development into a fully enclosed space, allowed for their flexible use, modification and development responding to women's changing housing needs and life circumstances and financial capacities. However, despite their recognised conveniences and functionality

for women, sheds were noted absent from all housing prototypes offered at MWSUHP, which reflects its designers' obliviousness to women's housing needs.

b) Single and multi-rooms: the construction of one or multiple single rooms extra to the houseblock but within the individuals' plot territory was commonly noted in MWSUHP. In the case of multi extension rooms, they were constructed in a linear lay out attached or detached to the main house block. Similar to the common Muzigo housing unit of the low-income Ugandans, each room constitutes an autonomous housing unit that either houses members of the extended family or, in most cases, is leased to support the family's economy. The Muzigo rooms are sometimes connected by a door to increase their flexible use by joining the interconnected units and turn them into one big housing unit. Such flexibility is important in accommodating varying renters' family sizes, which maximises their economic returns. This increased the rooms financial revenues for women and supported their productive roles.

   Empirical findings revealed that the autonomy of the Muzigo extension rooms seems to constitute a convenient housing option for women in non-conventional family structures, and thus appreciate women's intersectionalities. Moreover, these rooms provided women with the privacy, independence and an appreciated level of autonomy that Larsson (2001) claims is essential for women to foster their own identities. The proximity of the Muzigo rooms to each other and to the main houseblock seems to support women's feeling of belonging and community integration, solidarity and security, which contributed to their housing adequacy.

   While women of MWSUHP enjoyed the autonomy and privacy of their individual housing units they shared the outdoor space within the plots' territorial area. This created a living environment that mimic the one for the traditional Ugandan homesteads. Such living environment seems to support women's lifestyle and fits into their socio-cultural context, which according to Zeisel (2006) contributes to their occupants' housing convenience and adequacy.

   The disdain of MWSUHP women to use the modified building materials and technologies the project introduced and opt for the use of traditional ones for their housing transformations, confirmed Turner (1977) claim that for the low-income groups, what a house can do to its occupant is more important than what is made of.

c) Wooden kiosks: the construction of wooden kiosks to support women's home-based enterprises were also noted in MWSUHP. Such kiosks were usually used for petty trades, small food vending or for entertaining services such as movie watching or video game clubs. Such use of the kiosks further

confirms the construction of the home as a workplace for MWSUHP women beside a residence, which concurs with Kellett and Tipple (2000) noted for low-income women of the Global South. For the promotion and increasing the economic returns of their products and the services they provide, such wooden kiosks are commonly located at the front yard of the house. Although predominantly administered by women, the allocation of the wooden kiosk at the front yards of the house that is typically denoted as a male-domain, caused the reconfiguration of the house spatial patterns, creating gendered spaces that are more accessible and usable to women. The kiosks seem to facilitate women's attendance to their income generation activity amid their daily reproductive responsibilities and family obligations, which as Nnaggenda (2008) noted, supports housing convenience to the Ugandan low-income women.

ii. Internal transformations to the houseblock

Examinations of the spatial layout of the internal space of the different prototypes offered at MWSUHP revealed their uniform generic space but reflected variance in their internal space layouts that are determined by the position of their internal partitioning walls. Agreeing with Habraken (2011), the rigidity of the standardised designs of MWSUHP caused housing inconvenience to women. Substantiated as non-structural walls, the unnecessary thickness of the internal partitioning walls reduced on the usability of the already limited internal space. Moreover, their bulkiness was noted to obstruct women's efforts in adjusting the internal space to respond to their changing housing needs and life circumstances. This compromised on the flexible use of the internal space and reduced its convenience and adequacy to many women of MWSUHP.

Empirical evidence identified several transformation techniques that women of MWSUHP adopted to maximise the utilisation of the limited internal housing space to accommodate different functions. This was achieved by the segmentation of the room space and/or its multi-use.

Room segmentation refers to dividing the room space into multi-functional zones and/or autonomous functional spatial units. Results showed that room segmentation in MWSUHP housing prototypes was influenced by the room size and proportion. Moreover, the position of the room's access door contributes to its divisibility into separate autonomous housing units. It is noted that the material, size and hight of the partitions that are constructed to divide the room into separate functional spatial units is dictated by the relationship of the occupants/users at both sides of the partition. The closer the relationship the lighter and more flexible the partition is. In cases where both units are occupied by members of the same family, the partition material was noted to be light and

flexible to provide an acceptable level of privacy without much concern for security issues. Whereas in cases where the room is segmented into completely separate autonomous housing units, the material of the partition wall is usually noted to be more solid and opaque and, in most cases, extends to the roof ridge to achieve maximum levels of security and privacy. The autonomy, security and privacy of such segmented rooms encourage their rent and maximise their economic returns.

Research findings noted creative use to the traditional and improvised materials of the partition walls, which despite their modesty seemed to constitute a convenient option to most women of MWSUHP. Their convenience seems to stem for their easiness to assemble and dismantle, which facilitate the adjustment and the flexible use of the internal space in response to the occupants ever-changing housing needs and life circumstances.

In cases where the rooms' dimensions and proportions do not allow for their segmentation into separate functional units, maximising the use of space is commonly achieved by demarcating functional zones within the room space for the performance of a certain activity. Such room zoning is often achieved through the furniture and/or equipment layout within the room.

In other cases, women of MWSUHP maximised the rooms' utilisation by timetabling that was achieved by using the same room space for the performance of various functions, but at different times of the day. However, the flexible use of the space through time tabling is noted to be restricts by lack of convertible furniture to support the convenient performance of the variant functions.

Another creative method for maximising the functionality of the limited room space that is practiced by many women of MWSUHP, was the use of the roof vicinity as a storage space. However, the absence of a storage facility in all pf MWSUHP housing prototypes in spite of their recognized importance to many MWSUHP women signifies the ignorance and/or negligence of MWSUHP designers to women's housing needs. On the other hand, such creativity women of MWSUHP display in maximising the functional use of their housing limited space, demonstrate their housing design knowledge and presents them as their housing design experts.

Another tactic some women of MWSUHP maximised the functionality of their limited housing space, was by using the space for a different function than what was assumed in the original designs. For example, many women in MWSUHP converted the space originally designed as a bathroom into a cooking place that despite its admitted importance to most women of MWSUHP, was absent from all MWSUHP housing prototypes.

Thus, similar to what Toker (2004) found out in her study of women's spatial needs in housing, the adaptability and flexibility of the housing space to acco-

mmodate the everchanging housing needs, constitute essential design considerations for the housing convenience and adequacy to MWSUHP women.

8.2 Conclusions and areas for further research

Conclusions to the discussion of the research findings and suggested areas for further research are presented hereafter.

8.2.1 Policy implications to support housing adequacy for the Ugandan low-income women

Research findings highlighted the persistent gender gap in the Ugandan low-income and slum-upgrading housing discourses., Addressing gender issues in the Ugandan spatial planning and housing discourses was basically limited to the discussion on facilitating low-income women's access to land and housing ownership. While, the importance of facilitating low-income women's access to housing is admitted, more comprehensive and serious concerns to the integration of gender issues in the Ugandan spatial planning and housing discourse is essential. Failure to perceive spatial planning and housing designs in gender-related terms threatens the perpetuation of providing housing spatial designs and built forms that exclude the Ugandan low-income women. Moreover, gender issues in relation to spatial planning and housing designs seem to have no or little concern in the Ugandan gender discourse and its policy directions. Thus, the research urges for placing the discussion on gender in the Ugandan spatial planning, low-income and slum-upgrading housing discourses among the priority areas of concern of the Ugandan gender and housing policies. These recommendations collectively, are assumed to support the visibility of the Ugandan women in the Ugandan low-income and slum-upgrading housing discourses and their accessibility to adequate housing in the Ugandan cities.

Moreover, the research established the interlinkages and influences among the housing spatial patterns and built forms at the macro scale of the city, the intermediate scale of the housing neighbourhoods and microscale of the individual house. It further acknowledged the persistent domination of the colonial ideologies that construct for gender, class and ethnic stratification to the low-income housing designs at the three interrelated spatial scales of the city, the neighbourhoods and the individual housing. Moreover, such colonial ideologies disregard the socio-cultural contexts and lifestyles of the Ugandan low-income women, which compromised with their housing adequacy. Persistence to the domination of the colonial ideologies to the Ugandan low-income housing designs threatens the perpetuation of producing housing designs

that are inadequate to the Ugandan low-income women at all spatial scales. Therefore, the research advocates for the development of housing design ideologies that construct for the inclusion and emancipation of the Ugandan low-income women and that appreciate their socio-cultural contexts and lifestyles to support the provision of housing designs that are adequate for the Ugandan low-income women at all three interlinking spatial scales.

Research explorations revealed the dominance of men in the Ugandan physical planning and housing design discourses, which seems to influence the production of spatial patterns and housing design that are aligned to their subjectivities, excluding women's subjectivities in housing. This caused the provision of housing designs that ignores the Ugandan low-income women's housing needs and aspirations, which compromise on their convenience and adequacy to them. Will increasing women's representation in the Ugandan spatial patterns and housing design discourses support the production and provision of spatial patterns and housing designs that are more adequate for the Ugandan low-income women? will it improve on the visibility and accessibility of the low-income women to adequate housing in the Ugandan cities? The research identifies these queries as areas that deserve further investigation.

The research attests to the importance of interpreting housing in gender related terms and perceiving the low-income Ugandans and slum dwellers as deferential gender groups with associated deferential gender subjectivities in housing. This will ensure the accommodation and response of the low-income housing designs to the subjectivities of both men and women, supporting housing adequacy for both. In this regard, it would be interesting to investigate housing adequacy for low-income men in comparison to women.

However, recognising the intersectionality among the Ugandan low-income women, the research advocates for deconstructing the nuclear family as the norm that continues to challenge the Ugandan low-income housing discourse. It urges for the inclusion of women in nonconventional family structures into the Ugandan low-income housing design discourse to facilitate their access to adequate housing across their intersectionality. In this regard, the research highlights polygamy as a prevailing socio-cultural practice in Uganda that is often ignored in the Ugandan low-income housing debate and discourse, which compromises their comprehensiveness and inclusivity.

Furthermore, land and/or housing ownership were acknowledged as an essential component for housing adequacy for the Ugandan low-income women, which needs to be availed to women across their intersectionality. However, the research recognises that marriage dynamics in many instances undermine the authority and legal rights of the Ugandan married low-income women to their spousal housing. Therefore, it is essential to explore on devising strategies that

protect and safeguard the housing interests and rights of the Ugandan low-income married women as well as those in polygamous family structures on their spousal housing.

The research acknowledges the contribution of women of MWSHUP to their housing adequacy. It admits their substantial informal knowledge to their housing's favourable design conditions. Nevertheless, the research acknowledged the persistent exclusion of the Ugandan low-income women from their housing design processes, which influenced the production of housing designs that are inconvenient and inadequate for the Ugandan low-income women.

On the other hand, the research recognised limiting the inclusion of the Ugandan low-income women in their housing processes to their participation in the production of the building materials and housing construction activities despite their insignificant influence on their housing adequacy. Therefore, the research advocates for acknowledging the Ugandan low-income women's informal housing design knowledge and advocates for their inclusion in their housing design process. This is supposed not only empower the Ugandan low-income women in housing but will also enrich the housing design knowledgebase and support the provision of housing designs that are adequate to the Ugandan low-income women. While it is understandable that participatory designs can sometimes be time consuming and economically unfeasible, user-centred design approaches, whereby users' needs guide the design process, needs to be encouraged as they seem to have the potential for producing housing designs that are adequate to the Ugandan low-income women. But how can the Ugandan low-income women be included in the processes of their housing design? And how can their inclusion support the production of housing designs that are adequate to them are areas for further explorations.

8.2.2 Design considerations to support housing adequacy to the Ugandan low-income women

The research acknowledged the importance of extending the housing concept for the MWSUHP women beyond their individual housing unit to include all the acts and activities taking place in their neighbourhoods. Accordingly, the research established that both the spatial patterns and built forms of the neighbourhoods and the individual house influence housing adequacy for the Ugandan low-income women.

Thus, the key design considerations that support the adequacy of neighbourhoods' spatial patterns and housing designs to the Ugandan low-income women were identified as follows:

- Discourage the rigid and orderly designed spatial layouts and promote the ones that appreciate the Ugandan low-income women's socio-cultural contexts and lifestyles.
- Promote spatial patterns that support the triple roles and practical needs of the Ugandan low-income women.
- Encourage the Ugandan low-income women inclusion and integration within their communities, deconstructing their isolation and alienation as well as promote their feeling of security and belonging.

At the individual housing level, the research emphasised the importance of interpreting the term *house* to include all the spatial patterns and built forms within the plot's extents. The research established housing transformations as an inevitable phenomenon to the Ugandan low-income women and identified outdoor space as an essential functional space for them. Therefore, the design considerations that the research established can support the adequacy of the house design to the Ugandan low-income women are:

- the serious and careful consideration to the sizes and proportions of the housing plots together with the location and orientation of the houseblock within the plots to allow for housing transformations without undermining the living and functional environment of the outdoor housing space;
- recognising the degrading impact of the pit-latrines to the spatial quality, functionality and living environment of the outdoor space, calls for the explorations into alternative sanitation solutions that preserve its functional quality to support housing adequacy for the Ugandan low-income women;
- fitting of the housing built forms to the socio-cultural contexts and lifestyles of the Ugandan low-income women as an essential consideration to their housing convenience and adequacy;
- recognising the house as a workplace beside a place of residence. Thus, housing designs need to facilitate the Ugandan low-income women daily activities and support the performance of their productive and reproductive role concurrently;
- the autonomous housing built forms that facilitate their flexible use and incremental development support housing adequacy to the Ugandan-low-income women.

The main design considerations that were recognised to support the adequacy of the indoor housing space to the Ugandan low-income women are its capacity for:

- segmentation into autonomous functional units;
- its multiple and flexible use;
- converting its functional use;
- accommodating different functions concurrently and at different times of the day;
- maximising the usability of its square footage by expanding vertically;
- adopting traditional construction technologies and building materials that are affordable and readily available;
- flexibility, adjustability spontaneity and improvisation.

To support the adequacy of the indoor space to the Ugandan low-income women the research recommends further research into:

- Modifying locally available building materials and traditional construction technologies to support the production of flexible building components that are affordable and accessible to the Ugandan low-income women.
- Developing convertible housing furniture that are affordable and easy to assemble to maximize the functionality of the limited indoor spaces.

References

Abbaszadeh, S., Moghadam, M., & Saadatian, O. (2013). Analysing a Proper Flexible and Adaptable Pattern for Promoting the Housing Quality in Iran. *Design+Built*, 6.

Acioly, C. (2012). *Global Housing Strategy. A process leading to paradigm change.* Retrieved December 26, 2016, from www.http://web.mit.edu/incrementalhousing/WUF-Naples/Presentations/1-Acioly.pdf

Aciro, G. L. (2016). *Gender, Multiple Loss*. Retrieved March 29, 2018, from https://www.dandc.eu/en/article/death-their-husband-ugandan-women-usually-lose-their-land-too

ACTogether. (2010). Jinja Municipality Slum Profile. Jinja, Uganda.

Afritorial. (2013). *Tribe: The Baganda, Uganda's Royal Kingdom, Past & Present*. Retrieved April 2, 2017, from http://afritorial.com/tribe-the-baganda-ugandas-royal-kingdom-past-present/

AHF, A. H. (1988). Project Document, AHF Project DAP/UG/005-88/Masese Phase II. *AHF MSE II*. Kampala Uganda: African Housing Fund.

Akiiki, F. A. (2010). Gender and Homeownership: The Dynamic of Marriage in Kampala Uganda: *Journal of Arts and Culture*, 1-16.

Alsop, R. (2005). *Measuring Empowerment in Practice: Structuring Analysis and Framing Indicators.* World Bank.

Ambrose, G., & Harris, P. (2010). *Design Thinking, the act and practice of using your mind to consider design.* Case Postale Switzerland: AVA Publishing SA.

Arendelle, T. (1997). Reflections on the Researcher-Researched Relationship: A Woman Interviewing Men. *Qualitative Sociology, Vol. 20, No. 3, 1997*.

Arnstein, S. R. (1969, July). A Ladder of Citizen Participation. *Journal of the American Planning Association*, pp. 216-224. Retrieved February 25, 2013, from https://lithgow-schmidt.dk/sherry-arnstein/ladder-of-citizen-participation.html

Arora-Jonsson, S. (2013). Development Practice and Environmental Governance, Flexible Spaces for Political Action. *Gender, Development and Environmental Governance.*

Asiimwe, J. (2001). Making Women's Land Rights a Reality in Uganda: Advocacy for Co-Ownership by Spouses. *Yale Human Rights and Development Law Journal, 4*(8), 171-187.

Attwood, L. (2010). *Gender and Housing.* Manchester and New York: Manchester University Press.

Beegle, K., Chenal, J., Christiaensen, L., Joseph, R., Meltzer, J., Page, J., & Sy, A. (2016). *Foresight Africa: top priorities for the continent in 2016.* (A. Sy, Ed.) Retrieved June 15, 2017, from: https://www.brookings.edu/wp content/uploads/2016/01/foresightafrica2016_fullreport.pdf

Bernard, H. R. (1994). Participant's Observations. In H. R. Bernard, *Research Methods in Anthropology, Qualitative and Quantitative approaches* (pp. 343-385). Oxford: Altamira Press, Rowman and Littlefield Publishers, Inc.

Berrisford, S., Kihato, M., & Klug, N. (2003). *International shifts in shelter and settlement policy and their implications for South African praxis.* Mega-Tech Inc's. USAID.

Bhatnagar, K. (1992). Women's Role in Shelter Planning. In H. C. Dandekar (Ed.), *Shelter Women and Development* (pp. 33-37). Michigan: George Wahr Publishing Co.

Blanchfield, L., & Lawson, M. (2010). *The Millennium Development Goals: The September 2010 U.N. High-level meeting.* The Congressional Research Service.

Bloom, N. D., & Lasner, M. G. (Eds.). (2016). *Affordable Housing in New York; the People, Places, and Policies that Transformed a City.* New Jersey: Princeton University.

Brown, A. A. (2012). *Uganda's New Urban Policy: Participation, Poverty and Sustainability.* Waterloo: Wilfred Laurier University.

Celik, A. P. (1992). Women's Participation in the Production of Shelter. In Hemalata, & H. C. Dandekar (Ed.), *Shelter, Women and Development* (pp. 199-207). Michigan: George Wahr Publishing.

Chant, S., & Mcilwaine, C. (2013). *Gender, Urban Development and the Politics of Space.* Retrieved February 2, 2016, from http://www.e-ir.info/2013/06/04/gender-urban-development-and-the-politics-of-space/

Chant, S., & Mcilwaine, C. (2016). *Cities, Slums and Gender in the Global South.* New York: Routledge.

Cherry, E. (1999). *Programming for Design, From Theory to Practice.* New York, Chichester Weinheim Brisbane Singapore Toronto: John Wiley & Sons, Inc.

Choguill, M. G. (1996). A Ladder of Community Participation for Underdeveloped Countries. *Habitat International, 20*(3), 431-444.

City Alliance. (2016). *About Slum Upgrading*. Retrieved January 18th, 2016, from http://www.citiesalliance.org/About-slum-upgrading#What_are_slums

COHRE. (2008). *Women, Slums and Urbanization; Examining the causes and consequences.* Geneva: Center on Housing Rights and Eviction COHRE.

Creswell, J. W. (2003). *Research Design Qualitative, Quantitative and Mixed Methods Approach. Second Edition.* California: Sage Publications, Inc.

Daifalla, M. H. (1998). *Utilization and Differentiation of Space, A study of Social Factors Influencing House Design in Third Class Areas in Khartoum, Sudan.* Stockholm, Sweden.

Damyanovic, D., & Zibell, B. (2013). Is There Still Gender on the Agenda for Spatial Planning Theory? Attempt to an Integrative Approach to Generate Gender-sensitive Planning Theories, *The Planning Review*, 25-36.

Dandekar, H. (1992). Shelter, Women and Development, First and Third World Perspectives. Michigan, USA. George Wahr Publishing Co., Ann Arbor.

Danida. (2006). *Danish Assistance to Uganda 1987-2005, Volume 2: Stakeholders Perceptions.* Oxford - United Kingdom: Mokoro Ltd.

Darke, J. (1994). Women and the Meaning of Home. In R. Gilroy, & R. Woods, *Housing Women* (pp. 11-30). London: Library of Congress Cataloging in Publication Data.

Doucet, A., & Mauthner , N. (2006). Feminist Methodologies and Epistemology. In C. D. Bryant, & D. L. Peck, *21st Century Sociology* (pp. 11-36). Sage publication.

Duveskog, B. (2013). *Farmers Field Schools as a Transformative Learning Space in the Rural Africa.* Uppsala: Swedish University of Agricultural Science.

Elwidaa, E., & Nawangwe, B. (2006). Women Participation in the Construction Industry. *The International Conference on Advances in Engineering and Technology* (pp. 59-74). Kampala: Elsevier Ltd.

Forum. (n.d.). *Countries and their Culture: Culture of Uganda*. Retrieved April 1, 2018, from http://www.everyculture.com/To-Z/Uganda.html

Fusch, P. I., & Ness, L. R. (2015). Are We There Yet? Data Saturation in Qualitative Research. *The Qualitative Report 2015, Volume 20* (9), 1408-1416. Retrieved December 12, 2018, from http://www.nova.edu/ssss/QR/QR20/9/fusch1.pdf

Gardiner, P. (1992). Housing and Gender: Beyond the Public/private Dichotomy. In H. Dandekar, *Shelter, Women and Development* (pp. 62-73). Michigan: George Wahr Publishing Co.

Government of Uganda. (2015). Transforming the Settlements of the Urban Poor in Uganda (TSUPU). *Cities Alliance: Cities without slums.* Washington D.C., Washington, USA: Cities Alliance.

Government of Uganda & UNDP. (2015). *Millennium Development Goals. Report for Uganda 2015. Special theme; Results, reflections and the way forward.*

Graan, A. V. (2018). Modernism as a Mechanism of Power and Control in Colonial Contexts the Project of Modernity in Cape Town, South Africa. In T. Lahdesmaki, *Time and Transformation in Architecture (pp. 92-109).* Leiden - Boston: Brill Rodopt.

Granvik, M. (2005). Implementation of the Habitat-agenda in Local Communities. Swedish University of Agricultural Sciences. Uppsala, Sweden.

Grundström, K. (2005). *Space, Activities and Gender Everyday Life in Lindora, Costa Rica.* Lund: Housing Development and Management, Lund University, Sweden.

Guion, L. A., Diehl, D. C., & McDonald, D. (2011). Triangulation: Establishing the Validity of Qualitative Study1. Florida: University of Florida UFSA, USA.

Gulliksen, J., Lantz, A., & Boivie, I. (1999). *User Centered Design - Problems and Possibilities.* Stockholm: Royal Institute of Technology KTH.

Gulliksen, J., Ransson, B. G., Boivie, I., Blomkvist, S., Persson, J., & Cajander, A. (2003). Key principles for user-centred systems design. *Behavioural & Information Technology, 22*(6), pp. 397–409.

Güneralp, B., Lwasa, S., & Masu, H. (2017). Urbanization in Africa: challenges and opportunities for conservation. *Environmental Research Letters. 13 (2018) 015002*, pp. 1-9.

Habraken, J. N. (2000). *The structure of the Ordinary, Form and Control in the Built Environment.* (J. Teicher, Ed.) Massachusetts: The MIT Press.

Habraken. (2011). *Supports.* Cyprus: The Urban International Press.

Hamdi, N. (1995). *Housing without houses.* London UK: Intermediate Technology Publications.

Hamraie, A. (2013). Designing Collective Access: A Feminist Disability Theory of Universal Design. *Disability Studies Quarterly, 33*(4).

Harshbarger, R. (2018). Uganda's Most Polygamous Tribes. *The New Vision Ugandan Newspaper*. Kampala, Uganda: The New Vision.

Hassan, G. F. (2011). The Enabling Approach for Housing supply Drawbacks / prerequisites - The Egyptian experience. *Alexandria Engineering Journal*, 421-429.

Hayden, D. (1980). What Would a Non-Sexist City Be Like? Speculations on Housing, Urban Design, and Human Work. *Chicago Journals, 5(3),* 170-187.

Hayden, D. (1982). *The Grand Domestic Revolution: A History of feminist Designs for American Homes, Neighbourhoods and Cities.* Cambridge, Massachusetts, and London: MIT Press.

Hek, B. (2003). *Participatory Development: Guidelines on Beneficiary Participation in Agricultural and Rural Development.* Rural Institutions and Participation, Rural Development Division. Rome: Food and Agriculture Organization on the United Nations FAO.

ICIG, T. (2013). *Uganda National Urban Policy.* Retrieved from https://www.cigionline.org/sites/default/files/ai_pb_6.pdf

IDF, I. (2014). *Jinja Municipal Council: Proposed Structure Plan Report (2009-2019).* Kampala: Jinja Municipal Council.

IDF, I. (2014). *Proposed Structure Plan Report (2009-2019).* Kampala - Uganda: Jinja Municipality.

IDTG. (2011). *Kingdoms within the Republic of Uganda*. Retrieved April 2, 2018, from www.idtg.org.

Isaac, A. (2011). Housing Policy Evolution in Uganda. *Descent Affordable Housing Initiatives Uganda*.

Johannessen, C. (2005). *Kingship in Uganda. the Role of Buganda Kingdom in Uganda Politics.* Retrieved April 1, 2018, from https://www.cmi.no/pdf/?file=/uganda/doc/Johannessen-kingship%20in%20Uganda-politics-research%20notes-Dec%2005.pdf

Johansson, R. (2005). On Case Study Methodology. In Y. H. Dick Urban Vestbro (Ed.), *Methodologies in Housing Research* (pp. 30-39). Stockholm Sweden: The Urban International Press.

Jones, P. B., Petrescu, D., & Till, J. (2005). *Architecture & Participation.* London and New York: Taylor & Francis.

Jones, P., Bunce, G., Evans, J., Gibbs, H., & Hein, J. R. (2008). Exploring Space and Place with Walking Interviews. *Journal of Research Practice, 4*(2). Retrieved September 30, 2019, from http://jrp.icaap.org/index.php/jrp/article/view/150/161

Kakaire, V. (2009). Jinja Municipality Profile. Jinja, Uganda.

Kakuze, T., Sserunjogi, J., Kasede, M., Kakaire, W., Mudamba, U., & Ramathan, N. (2013). *JINJA Urban Ecological Planning AAR 4525 fall 2013.* Jinja: Housing Sanitation building and material training centre.

Kalabamu, F. (2009). *Changing Gender Roles in Housing Delivery and Construction, The case of Lobatse Township, Botswana.* Berlin: LAP LAMBERT Academic Publishing.

Keet, A. (2013). *African Women and Colonialism.* Retrieved March 12, 2018, from http://www.fantasticafrica.org/african-women-and-colonialism/#.WqaOdezwb6o

Kellett, P., & Tipple, G. (2000). The Home as Workplace: a study on Income-generating Activities within the Domestic Setting. *Environment & Urbanization*, *12(1)*, 203-213.

Kennett, P., & Wah, C. (2011). *Women and Housing, an International Analysis.* Routledge Taylor and Francis Group.

Khan, T. H. (2014). *Living with Transformation Self-Built Housing in the City of Dhaka.* Skudai: Universiti Teknologi Malaysia.

Kishindo, E. C. (2003). Women and Housing insecurity in Malawi: A study of Two Low-cost Housing Projects in Zomba District in Malawi. In A. Larsson, M. Mapetala, & A. Schlyter (Eds.), *Gender and Urban Housing in Southern Africa: Emerging Issues* (pp. 74-99). Institute of Southern African Studies.

Kopec, D., Sinclair, E., & Matthes, B. (2012). *Evidence Based Design.* New Jersey: Pearson Prentice Hall.

Kuhlmann, D. (2013). *Gender Studies in Architecture; Space, Power and Difference.*

Kvale, S. (1988). The 1000-page question. *Phenomenology+ Pedagogy, 6*(2), 90-106.

KWS, K. (2017). *Visiting the Karamojong People in Karamoja-North eastern Uganda.* Retrieved April 3, 2018, from https://kabiza.com/kabiza-wilderness-safaris/author/kabiza/

Larsson, A. (2001). Gender perspectives in Housing and Planning. *Building Issues, 11*(1), pp. 3-18.

Larsson, A., Mapetla, M., & Schlyter, A. (2003). *Gender and Urban Housing in South Africa: Emerging Issues.* Lesotho: National University of Lesotho.

Larsson, A., Mateseliso, M., & Schlyter, A. (1998). *Changing Gender Relations in Southern Africa: Issues of Urban Life.* Lesotho: Institute of Southern Africa Studies ISAS.

Lastarria-Cornhiel, S. (2003). *Uganda Country Brief: Property rights and Land Market.* Madison: Land Tenure Center, University of Wisconsin.

Lawson, B. (2006). *How Designers Think, The Design Process Demystified.* Oxford: Elsevier Ltd.

Leupen, B. (2005). A New Way of Looking at Flexibility. *Open House International*, 55-61.

Lupala, J. M. (2002). *Urban Types in Rapidly Urbanizing Cities: Analysis of Formal and Informal settlements in Dar es Salaam, Tanzania.* Stockholm, Sweden: Royal Institute of Technology, Department of Infrastructure and Planning, Division of Urban Studies.

Majale, M. (2011). *Enabling Shelter Strategies: Design and Implementation Guide for Policy Makers. Quick Policy Guide Series - Volume2.* Retrieved October 20, 2015, from http://unhabitat.org:mirror.unhabitat.org/pmss/getElectronicVersion.aspx?nr=3103&alt=

Malterud, K. (2012). Systematic Text Condensation: A Strategy for Qualitative analysis. *Scandinavian Journal of Public Health*, 795-805.

Manyire, H. (2002). *Gender and Housing Development in the Low-income Suburbs of Jinja Municipality, Uganda.* Addis Ababa: Organization of Social Science Research in Eastern and Southern Africa.

Marais, L., & Venter, A. (2006). Gender and Housing policy in Southern Africa: Policy and Practice in Bloemfontein. *Journal of Family Ecology and Consumer Sciences Vol. 34*, 69-79.

March, C., Smyth, I., & Mukhopadhyay, M. (1999). *A Guide to gender Analysis Framework; Skills and Practices.* London: Oxfam.

Marcus, C. C., & Sarkissian, W. (1986). *Housing as if People Mattered.* Berkeley, Los Angeles and London: University of California Press.
Massey, D. (1994). *Space, Place and Gender.* Minneapolis: University of Minnesota Press.
Massy, K. (2011). Insecurity and shame. Exploration of the impact of the lack of sanitation on women of the slums of Kampala. Kampala, Uganda. Retrieved from https://assets.publishing.service.gov.uk/media/57a08ae9e5274a27b2000839/VAW_Uganda.pdf
McDowell, L. (1999). *Gender, Place and Identity: Understanding Feminist Geographies.* New York: John Wiley and Sons.
Miles, M. B., Huberman, M., & Saldana, J. (2013). *Qualitative Data Analysis. A Methods Source Book Edition 3.* Arizona: Sage publications.
MoGL&SD. (2007a). *The Uganda Gender Policy,* Kampala: Ministry of Gender, Labour and Social Development.
MoGL&SD, M. (2007b). *The National Action Plan for Women (2007).* Kampala: Ministry of Gender, Labour and Social Development.
MoLH&UD. (2005). *National Situational Analysis for Global Campaign and Secure Tenure and good Urban Governance in Uganda.* Kampala: Ministry of Ministry of Lands, Housing and Urban Development.
MoLH&UD (2005). *Situation Analysis for the Global Campaign for Secured Tenure and Urban Governance: Uganda.* Kampala:. Ministry of Lands, Housing and Urban Development, MoLH&UD.
MoLH&UD. (2008). *National Slum Upgrading Strategy and Action Plan.* Department of Human Settlements, Ministry of Lands, Housing and Urban Development. Kampala: United Nation Development Program UNDP.
MoLH&UD (2013). *The National Land Policy 2013.* Kampala: Ministry of Land, Housing & Urban Development. Retrieved from https://landportal.org/sites/default/files/the_uganda_national_land_policy-_february_2013.pdf
MOLH&UD. (2013a). *Final Report: Malukhu Integrated Poverty reduction Project.* Kampala: Ministry of Land, Housing and Urban Development. DCDM,
MOLH&UD. (2013b). *Provision of Consultancy services for evaluation of slum upgrading projects (Namuwongo, Masese, Malukhu and Oli).* DCDM, Kampala, Uganda.
MOLH&UD. (2013c). *Provision of Consultancy Services for Evaluation oli Housing Project in Arua.* DCDM, Kampala, Uganda.
MoLH&UD. (2016a). *The Uganda National Housing Policy.* Retrieved March 15, 2017, from http://mlhud.go.ug: http://mlhud.go.ug/wp-content/uploads/2015/10/National-Housing-Policy-May-2016.pdf
MoLH&UD. (2016b). *Uganda Country Program; Towards achieving SDG11 in Uganda Making Cities and Human Settlements Inclusive, Liveable, Safe, Resilient, Productive and Sustainable.* Retrieved from http://mlhud.go.ug/wpcontent/uploads/2015/10/UN-HABITAT-UGANDA-Country-Program-2016.pdf.
Moser, C. (1989). Gender planning in the third world: Meeting practical and strategic gender needs. *World Development, 17*(11), 1799-1825.
Moser, C. O. (1992). *Housing Policy and Women Towards a Gender Aware Approach.* Nairobi, Kenya.

Mugerwa, Y. (2016). *Buganda, Banyankore, Busoga dominant tribes.* Retrieved May 1, 2018, from http://www.monitor.co.ug/News/National/Baganda-Banyankore-Basoga--dominant-tribes/688334-3133728-qs9a20/index.html

Mukiibi, S. (2008a). An Evaluation of Factors that Have Influenced Housing Policy Development in Uganda. 43-49.

Mukiibi, S. (2008b). *Housing Policies on the Supply of Housing to Urban Low-income Earners in Uganda: a Case Study of Kampala.* Newcastle, United Kingdom: University of Newcastle.

Mwizenge, T. (1988). The Traditional African Family. Retrieved 2019, from https://wp.bridgewater.edu/mtembo/articles/the-traditional-african-family/

Nawangwe, B. (1994). *Vernacular Architecture Series, The traditional Soga Homestead.* Kampal: Center for Vernacular Architecture Research, Makerere University.

Nayenga, P. (2002). *Busoga.* Retrieved December 20, 2014, from http://www.encyclopedia.com/doc/1G2-3458100020.html

Nicholas, M. (2013). *The 'Kibanja' interest in Mailo land tenure in Uganda: A Land Economist's perspective.* Retrieved February 17, 2016: https://nbmuyomba.wordpress.com/2013/06/28/the-kibanja-interest-in-mailo-land-tenure-in-uganda-a-land-economists-perspective/

Nnaggenda, A., & Elwidaa, E. (2018). Women as retrofits in the Modernist Low-income Housing. In T. Lähdesmäki, *Time and Transformation in Architecture* (pp. 130-151). Leiden - Boston: Brill Rodopi.

O'Grady, J. V., & O'Grady, K. V. (2006). *A Designer's Research Manual: Succeed in Design by Knowing Your Clients and What They Really Want.* Beverly, Massachusetts: Rockport Publishers.

OHCHR. (2012). *Women and the Right to Adequate Housing.* Retrieved May 5, 2018: https://www.ohchr.org/Documents/Publications/WomenHousing_HR.PUB.11.2.pdf

OHCHR, & UN-Habitat. (2015). *The Right to Adequate Housing: Fact Sheet 21.* Retrieved January 16, 2016: http://www.ohchr.org/Documents/Publications/FS21_rev_1_Housing_en.pdf

Okalebo, F. O. (2011). *Evolution of Town Planning Ideas Plans and Their Implementation in Kampala City 1903-2004.* Stockholm: Royal Institute of Technology.

O'leary, Z. (2004). *The essential Guide to Doing Research.* London, England: Sage Publications Ltd.

Onoria, H. (2007). Guaranteeing the Right to Adequate Housing and Shelter in Uganda: The Case of Women and People with Disabilities. Kampala, Uganda. Human Rights and Peace Centre.

Pate, A. (2009). *Slums and Women.* Retrieved September 5, 2015, from http://slumsandwomen.blogspot.com/2009/09/how-are-slums-around-world-affecting.html

Paul, S. (1987). *Community Participation in Development Projects, The World Bank Experience.* Retrieved May 2, 2016, from https://www.ircwash.org/sites/default/files/Paul-1987-Community.pdf

Payne, G. P. (2005). *Key Concepts in Social Research.* California: Sage Publications inc.

Peszko, G., Anjaparidze, G., Dade, D., Kapanadze, D., Pedroso-Galinato, S., Van den Berg, K., & Yatimov, B. (2006). *Monitoring What Matters: Tailoring Millennium Targets and*

Indicators of Environmental Sustainability to Local Conditions in ECA. Retrieved from http://documents.worldbank.org/curated/en/389061468250261636/pdf/561670WP0monit10Box349489B01PUBLIC1.pdf

Rendell, J. (2000). Introduction: 'Gender, Space'. In J. Rendell, B. Penner, & L. Borden, *Gender Space Architecture: An interdisciplinary Introduction* (pp. 101-111). London and New York: Routledge Taylor & Frances Group

Republic of Uganda. (2010). First National Development Plan 2010/2011-2014/2015. Kampala, Uganda. Government of Uganda.

Republic of Uganda. (2015). Second National Development Plan 2015/16 - 2019/20 (NDP II). Kampala, Uganda.

Rijn, V. v. (2017). Fighting A Silent Killer in the Slums. Kampala. Retrieved from http://standplaatswereld.nl/fighting-a-silent-killer-in-the-slums/

Rugadya, M. A. (1999). Land Reform: The Ugandan Experience. *Land Use and Villagization Workshop*, (pp. 1-12). Kigali, Rwanda.

Rugadya, M. A. (2003). *Current Status and Challenges in The Land Reform Process in Uganda: An NGO Perspective.* Cape Town, South Africa: Uganda Land Alliance.

Saghir, J., & Santoro, J. (2018). *Urbanization in Sub-Saharan Africa: Meeting Challenges by Bridging Stakeholders.* Washington: Center for Strategic and International Studies. Retrieved June 1, 2019 from: https://csis-prod.s3.amazonaws.com/s3fs-public/publication/180411_Saghir_UrbanizationAfrica_Web.pdf?o02HMOfqh99KtXG6ObTacIKKmRvk0Owd

Sanders, E. B.-N. (2002). From User Centred to Participatory Design Approach., *Designing and the social science* (pp. 1-8). London: Tayler and Francis Books Limited.

Sanoff, H. A. (2000). *Community Participation Methods in Design and Planning.* Toronto: John Wiley & Sons. Inc.

Schlyter, A. (1996). *A Place to Live: Gender Research on Housing in Africa.* Uppsala: Nordiska Afrikainstitute

Schneider, T., & Till, J. (2007). *Flexible Housing.* London: Architectural Press, Routledge Taylor & Francis Group.

Schon, D. A. (1983). *The Reflective Practitioner, How Designers Think in Action.* United States of America: Basic Books Inc.

Silim, A., & Crosse, K. (2014). *Women in Engineering, Fixing the Talent Pipeline.* London, UK: Institute for Public Policy Research.

Silverman, D. (2006). *Qualitative Research Theory, Method and Practice.* London, UK. Sage Publications Ltd.

Simon, H. A. (1969). *The Sciences of the Artificial. Massachusetts: The Massachusetts Institute of Technology.*

Spain, D. (1992). *Gendered Spaces.* Chapil Hill & London, USA: The University of North Carolina Press.

SSA, S. (2016). *Shelter and Settlement Alternatives: Uganda Human Network.* Retrieved January 3, 2016, from: http://www.ssauganda.org/index.php?option=com_content&view=article&id=113:housing-policyuganda&catid=83&Itemid=296#unlp

Ssengendo, H. (1992). *The growth of Low-Quality Housing in Kampala - Uganda between 1972-1989.* Kampala Uganda: Makerere University Press.

Stake, R. (1995). *The Art of Case Study Research.* California: Sage publications.
Swahn, M., Leconte D., Palmier, J., & Kasirye, R. (2015). Girls and Young Women Living in the Slums of Kampala. Sage open, 5, 1-8.
The Telegram. (2015, June 23). *Male-dominated engineering has an 87 per cent gender gap - but it pays pretty well*. Retrieved May 23, 2016, from www.telegraph.co.uk/women/womens-business/11692996/Women-In-Engineering-Day-Gender-gap-in-male-dominated-industry-falls.html
The World Bank. (2015). *The Growth Challenges. Can Ugandan Cities Get to Work? Ugandan Economic Updates 5th Edition.* Washington: The World Bank Group. Retrieved March 11, 2018
Tipple, G. (2000). *Extending Themselves, User-initiated transformations of government-built housing in Developing countries,* Liverpool, UK: Liverpool University Press.
Thomas, D. R. (2003). A general Inductive Approach for Qualitative Data Analysis. *The American Journal of Evaluation, 27*(2). 2488.
Toker, Z. (2004). *Women's Spatial Needs in Housing. Accommodating Gender Ideologies, Use Patterns and Privacy.* Saarbrucken, Germany: VDM Verlag Dr. Muller Aktiengesellschaft & Co. KG.
Torre, S. (2000). Claiming the Public Space: The mothers of Plaza de Mayo. In J. Rendell, B. Penner, & L. Borden, *Gender Space Architecture* (pp. 140-145). London, Routledge.
Tripp, A. M. (2004). Women's Movement, Customary Law, and Land Rights in Africa. The Case of Uganda. *African Studies Quarterly*, 1-12.
Turner, J. (1977). *Housing by People, Towards Autonomy in Building Environments.* New York, USA: Pantheon Books, Random House Inc.
UBoS, U. (2003). *Uganda National Housing Survey.* Kampala: Uganda Bureau of Statistics.
UBoS, (2014). *National Population and Housing Census 2014 Provisional Report.* Kampala: Government of Uganda.
UBoS. (2016). *Uganda Population*. Retrieved March 10, 2016, from http://countrymeters.info/en/Uganda
UBoS, (April 2017a). *National Population and Housing Census 2014, Area specific profile, Jinja District.* Kampala, Uganda: Uganda Bureau of Statistics, UBoS.
UBoS, (2017b). *Women and Men in Uganda: Facts and Figures in 2016.* Kampala, Uganda: Uganda Bureau of Statistics, UBoS.
UNDP. (2010). *Convention on the Elimination on all forms of Discrimination Against Women, 47th Session.* United National Development Programme, UNDP.
UN-Habitat. (1988). *The Global Strategy for Shelter to the Year 2000.* Retrieved October 3, 2013: http://www.nuigalway.ie/media/housinglawrightsandpolicy/files/undocs/UN-Global-Strategy-for-Shelter-to-the-Year-2000-.pdf
UN-Habitat. (1992). *GSS in Action: Global Strategy for Shelter to the Year 2000: Masese Women Lead the Way to shelter for the Poor.* Retrieved December 22, 2013, from: http://www.nzdl.org.: http://www.nzdl.org/gsdlmod?e=d-00000-00---off-0cdl--00-0----0-10-0---0---0direct-10---4-------0-1l--11-en-50---20-about---00-0-1-00-0--4----0-0-11-10-0utfZz-8-00&cl=CL2.7&d=HASH011f43e4b3330953cb473fc1.4.1.5.2&gt=1
UN-Habitat. (2003). *The challenge of Slums: Global Report on Human Settlements 2003.* Retrieved January 15, 2019, from: https://www.un.org/ruleoflaw/files/Challenge%20of%20Slums.pdf

UN-Habitat. (2006/7). *State of the World Cities 2006/7: The Millennium Development Goals and Urban Sustainability. 30 years of Shaping the Habitat Agenda.* Retrieved January 2, 2016, from https://sustainabledevelopment.un.org/content/documents/11292101_alt.pdf

UN-Habitat. (2014a). *Women and Housing. Towards inclusive cities.* Retrieved December 25, 2015, from: www.unhabitat.org: http://unhabitat.org/books/women-and-housing-towards-inclusive-cities/

UN-Habitat. (2014b). *World Habitat Day; Voices from the Slum.* Retrieved January 2nd, 2016, from: https://unhabitat.org: https://unhabitat.org/wp-content/uploads/2014/07/World-Habitat-Day-2014-Backgrounder.pdf

UN-Habitat. (2015). *Habitat III Issue Papers 1- Inclusive cities.* Retrieved January 12, 2016, from http://habitat3.org/wp-content/uploads/Habitat-III-Issue-Paper-1_Inclusive-Cities-2.0.pdf

UN-Habitat. (2015/16). *Slum Almanac: Tracking Improvement in the Lives of Slum Dwellers.* Nairobi, Kenya: UNON, Publishing Services Section.

UN-Habitat. (2016). *World Cities Report 2016, Urbanization and development: Emerging futures.* Nairobi, Kenya: Un-Habitat.

Un-Habitat. (2017a). *11.1 Adequate Housing*. Retrieved March 17, 2018, from: https://unhabitat.org/un-habitat-for-the-sustainable-development-goals/11-1-adequate-housing/

UN-Habitat. (2017b). *Habitat III: The New Urban Agenda.* Retrieved February 26, 2018, from http://habitat3.org: http://habitat3.org/wp-content/uploads/NUA-English.pdf

UN-Habitat. (n.d.). Uganda - Population Living in Slums (% of Urban Population). Nairobi, Kenya: Retrieved from: https://tradingeconomics.com/uganda/population-living-in-slums-percent-of-urban-population-wb-data.html

UN-Habitat SDGF, S. (2014). *Gender Issue Guide: Gender responsive Urban Research and Capacity Development*. Retrieved April 15, 2017, from: http://www.sdgfund.org/gender-issue-guide-gender-responsive-urban-research-and-capacity-development

United Nations. (2012). *The Millennium Development Goals Report 2012.* Retrieved January 26, 2015, from http://mirror.unhabitat.org/downloads/docs/11884_1_594738.pdf

United Nations. (2014a). *The Millennium Development Goals Report 2014.* New York, USA: United Nations.

United Nations. (2014b). *World Urbanization Prospects: The 2014 Revision, Highlights (ST/ESA/SER.A/352).* Retrieved April 12, 2015, from: https://esa.un.org/unpd/wup/publications/files/wup2014-highlights.Pdf

United Nations. (2015). *The Millennium Development Goal Report 2015; 2015 Time for Global Action for People and Planet.* Retrieved March 23, 2017, from http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf

United Nations. (2018). SDG Overview; Sustainable Cities and Communities: Make cities and human settlements inclusive, safe, resilient and sustainable. United Nations Statistics Division; Development Data and Outreach Branch. Retrieved April 10, 2020, from : https://unstats.un.org/sdgs/report/2019/goal-11/

UN-Women. (1995). *Beijing Declaration and Platform of Action. Beijing +5 Political Declaration and Outcome.* New York, USA: United Nation.

Veit, P. (2011). *Women and Customary land Rights in Uganda.* Retrieved March 4, 2018, from http://www.focusonland.com/fola/en/countries/brief-women-and-customary-land-rights-in-uganda/

Wang, L. G. (2002). *Architectural Research Methods.* New York, USA: John Wiley & Sons.

Weisman, L. K. (1994). *Discrimination by Design. A feminist critique of the man-made Environment.* Urbana and Chicago, USA: University of Illinois Press.

Weisman, L. (2000). Women's Environmental Rights: A manifesto. In J. Rendell, B. Penner, & L. Borden, *Gender Space Architecture* (pp. 1-5). New York, USA: Routledge

Wekiya, I. F. (1995). An Evaluation of Masese Women Self-help Housing Project in Jinja. Kampala: Makerere university.

Wilkinson. (2005). Editorial notes; Some Reasons for Optimism. *Open House International*, 4.

Woods, R., & Hood, M. (1994). Women and Participation. In R. Gilroy, & R. Woods, *Housing Women* (pp. 58-74).

Yin, R. K. (2009). *Case Study Research, Design and Methods.* London, United Kingdom: SAGE Publications, Inc.

Zeisel, J. (2006). *Enquiry be Design.* New York, USA: Library of Congress Cataloging-in publication.

Popular science summary

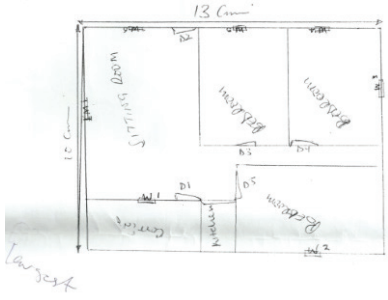
Rapid urbanization in cities of the Global South challenges low-income women's accessibility to appropriate housing. The research shows that housing appropriateness to these women is influenced by their productive, reproductive and community management roles as well as their changing housing needs. The study claims that including low-income women in their housing design processes improves their housing appropriateness irrespective to women's differences.

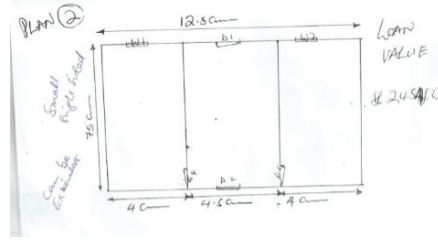
Populärvetenskaplig sammanfattning

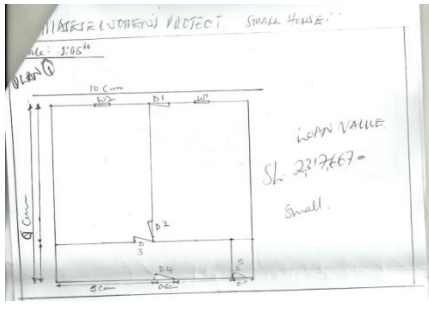
Den snabba urbaniseringen av städer i Syd innebär en utmaning för kvinnor med låg inkomst att få tillgång till en lämplig bostad. Forskningen visar att bostäders lämplighet för dessa kvinnor är relaterade till deras produktiva, reproduktiva och förvaltande roller, samt till deras ändrade bostadsbehov. Studien menar att inkludera dessa kvinnor i designprocessen bidrar till bostadens lämplighet, oavsett kvinnors skillnader.

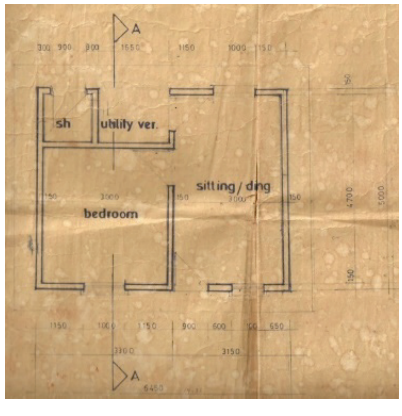
Appendix 1

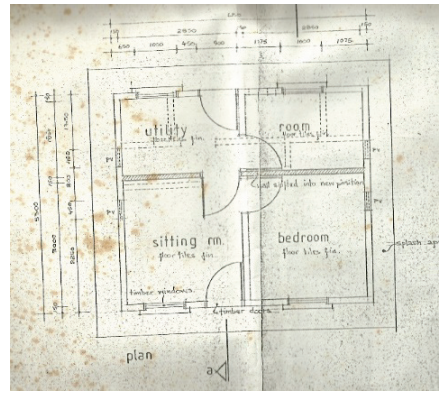
Sample of the original documents and Sketches for MWSUHP Prototypes











Appendix 2

Makerere University CEDAT, Department of Physical Planning and Architecture Research on: Housing Low-Income Women. Key Informant Interview Guide (1)

Interviewee Name: (Optional):_____ Interviewee title:_____

1. What is your current position in MoLH&UD and what was your role in MWSUHP?
2. In your view, what were the approach, aims and objectives, mechanisms?
3. What were the points of departure and/or agreement between MWSUHP and the other Ugandan low-income housing projects?
4. How did gender come about? And what motivated MWSUHP to mainly target women?
5. Why Jinja and why Masese?
6. How wouldyou describe the relationship between the MWSUHP partners?
7. Do you think the fact that you are a woman affected your role and responsibilities in MWSUHP? If yes, how?
8. How was women's participation planned for and why?
9. What motivated you to be the lead for the project?
10. What was your role before, during and after the commencement of the project?
11. How did you approach the communities? And what were their reactions?
12. What was the criteria for their registration?
13. How did you manage to mobilise the communities to the project activities, and what were your success stories and challenges in that respect?
14. What were the activities women were involved in and how?
15. What were the major challenges and opportunities to women's participation in the project activities?
16. Were you involved in the physical planning and the architectural design phases of the project? How?
17. How do you assess MWSUHP? What do you think are its major opportunities and challenges and achievements?
18. Is there anything you want to add?

Appendix 3

Makerere University CEDAT, Department of Physical Planning and Architecture Research on: Housing Low-Income Women. Key Informant Interview Guide (2)

Interviewee Name: (Optional):_____ Interviewee title:_____

1. What is your current position in MoLH&UD and what was your role at MWSUHP?
2. What was the main design approach, aims and implementing processes and procedures for MWSUHP?
3. What was the guiding criteria for the housing designs of MWSUHP?
4. Were there any similarities or disparities in the above, between MWSUHP and other low-income projects you designed in MoLH&UD low-income housing projects? Please explain your answer.
5. Did the MWSUHP main target group of women affect your approach to the housing design? how?
6. Were other project partners involved in the housing design process of MWSUHP? If yes how? And if not why?
7. How did you involve MWSUHP beneficiaries in the design process and why?
8. How were the designs communicated to the target groups?
9. What was the selection criteria and procedure placed on the beneficiaries to choose from the offered alternatives? And what were the key considerations and conditions for placing such criterion and procedures?
10. In your opinion, what were the main challenges, opportunities for MWSUHP housing designs?
11. Were you and/or your design teams involved in the construction and/or implementation stage?
12. What are your reflections on designing MWSUHP housing prototypes?
13. Is there anything you want to add?

Appendix 4

Makerere University CEDAT, Department of Physical Planning and Architecture Research on: Housing Low-Income Women Key Informant Interview Guide (3)

Interviewee Name: (Optional):_____ Interviewee title:_____

1. What is your current and past positions in MWSUHP?
2. What was/is your main role and responsibilities with MWSUHP now and at the time of its implementation?
3. How did/do you liaison between the project communities and the other project partners?
4. How did your role as a member of MWA affected your daily activities, and relationship with your neighbours and why?
5. What were the main challenges and opportunities in the above? and what did you do to resolve the challenges? Do you think they are related to your gender?
6. Tell us your reflections during your experience with MWA?
7. Is there anything you want to add?

Appendix 5

Makerere University CEDAT, Department of Physical Planning and Architecture Research on: Housing Low-Income Women

The questionnaire is directed to the head of households of the selected houses. Interview of ALL household members is recommended if possible.

Case no.1 Location: road_____ ___House no:_____

House prototype: _____

Name (optional): _____ Date:_____

1. How many people live in this house?
2. Fill in Table1: Household members demographic data:
   A) Identify the main household head within the family, specifying reasons and justification for your answer.

_____

_____

A. Section one: Introduction and housing designs of MWSUHP

3. What house have you occupied before the introduction of the project? Who else was living with you?

_____

_____

4. What were your main daily activities and income resource before the project?

_____

_____

5. How did you know about the project? And what were your first feelings about it?

_____

_____

6. What were the opportunities and challenges that you faced with respect to joining MWSUHP and how did you managed to resolve them?

_____

_____

7. How did you manage to raise that advance payments of the house?

_____

_____

8. Have you finished paying the loan now? If yes how, and if no, why not?

9. Is there anybody else in your family who has contributed in paying the loan? Who and in what way?

10. Do you think there is anything that should be different in relation to the beneficiary's registrations in MWSUHP? What is it and how?

11. Were you involved in the development of the designs of your house? Explain you answer in both cases.

12. How were the housing prototypes presented and explained to you?

13. What was the main criteria for your selection between the different housing prototypes?

14. Is the house meeting your expectations? Or did you wish for something to be different in it? What and why?

15. In a nutshell, what were your main reflections, views, feelings, reservations, appreciations and regrets about the preliminary period of MWSUHP?

B. Section two: The Implementation/construction stage

16. How have you been organised in the project implementation stage?

17. What was your role in MWSUHP? What were your main activities?

18. How long were you involved in the project?

19. What were your main challenges and achievements? Can you explain?

20. How were the communication and work relations between you and the project leaders/ administrators? Explain.

21. How was the communication and work relation between you and the other beneficiaries, and is it different between your women or men co-workers? Can you explain?

22. How did you assess the experience with your participation in the implemen-tation stage of MWSUHP and how did it affect your life before the project? Reflections, feelings and views, challenges, achievements and others.

C. Section three: The post-occupancy phase

(Fill Table 2: Household space-use patterns)

23. When did you start living in this house?

24. What are your roles in the family and what was your daily activities at home?

25. Where and how did you perform such activities?

26. What are the main things your like about the place you choose to perform these activities from?

27. Where is your favourite place within your home and why?

28. How long and at what part of the day you spend in this place and for what activities?

29. What is the house space that is favoured by other members of your family?

30. Do you practice any IGA within the home? What exactly and in which place within the house? For how long and at what timeof the day?

31. Do you think there is a place within your home that the men and women of your family favour differently? Can you explain your answer?

32. Did you need to do any transformations to your house and why? Can you explain your answer?

33. Explain what transformations you applied to your house in a chronological timeframe.

34. What was the main motivations for the transformations? And who was behind the idea for the transformations?

35. Who was the one involved in constructing those transformations? And why?

36. What are the main challenges in performing these transformations, if any? And how were they resolved?

37. Who made the decision for this transformation versus the one financed and undertaken in the transformation?

38. Are all household members satisfied with the transformations? If not who, and why?

39. Which part of the house needs regular maintenance? Why and in which way?

40. Who is responsible for the regular maintenance of your home?

41. How do you define a “comfortable house”? What are the major elements that affect the convenience in a home? and why?

42. If given an opportunity to design your house how would you want it to be?

D) Section 4:Neighbourhoods

43. What elements of the neighbourhood/ settlement do you like or dislike and why? Fill in Table 2.

44. How do you evaluate your relationship with your immediate neighbours? Can you explain your answer?

45. How often do you socialise with your neighbours, for how long at what time of the day?

46. Where do you usually meet and what is your opinion about that place?

47. What kind of activity do you do together?

48. What is your main satisfaction with the place, or do you wish to be different towards the public space within your neighbourhood?

49. How often do you visit each other at home?

50. Where do you receive your visitors in your home and why?

51. Are you a member of any social organisation? Can you give details if you are please?

52. What are the main issues/goals of the meetings?

53. Do you think men and women use the public spaces the same way? Can you explain your answer?

54. If you have to be in charge of MWSUHP, what would you like to be the same and/or different? Explain your answer.

55. Do you have anything to add?

Tables to be filled in as part of the questionnaire

Table (1) Household members' demographic data:

HH Members	Status	Age	Gender	Educaion level	Work	Income			Tribe	Occupancy		Key role	No. of hours spent at home	Space use pattern		
						Day	Week	Month		Occasional	Permanent			Activity	Challenge	Convenience

Table (2) Space use pattern at the house by gender

Use of space	Space					By whom			Duration and time of the day	Remarks
	Size	Private		Communal		Age	Gender	Status		
		In	Out	In	Out					
Cooking										
Washing clothes										
Housekeeping/ cleaning										
Rubbish disposal/burning										
Slashing										
Fetching water										
Repair / maintenance of house										
Repair / maintenance of things										
Hygiene										
Sitting/gathering										
Playing										
Sleeping										
Socializing										
Economic activity										
Eating										
Others										

Table (3) Neighbourhood Services and Infrastructure

- General maps, sketches to show layouts of the neighbourhood
- Social services, such as clinics, schools and others should be noted
- Markets and small kiosks and other major commercial activity is to be noted
- Location of the respective house should be noted
- Type of services (power/ energy supply, water and drainage) and infrastructures (roads and transport facility) should be noted

Element		Like	Dislike	Reasons	Remarks
Density					
Accessibility	Roads				
	Transport				
Security					
Water supply					
Drainage					
Energy					
Position/height					
Distance to/no. of social services					
Social environment					
Environment (views/breath/etc)					
Recreational facility					
Religious facilities					
Schools					
Clinics					
Shops					
Social organizations					
Noise/ quietness					

Table (4) House Characteristics Registration

A detailed sketch of the house should be done to detail design, sizes, demarcation of boundaries, shared spaces, building material and construction, appearance and any other remarks or detailed information about the house:

A) Sketch of the house

B) Table 2

Plot no.	Width	Depth	Plot area	Plot ratio[1]	Plot frontage[2]	Plot exposure[3]	Built up area[4]	Plot coverage[5]	Plot set backs[6]				Floor area ratio[7]	Boundary definition	Remarks
									F	S1	S2	B			

Plot no.	Water suppy	Sanitation		Buidling construction/ material				Energy	Rubbish disposal	Communal spaces						Construction date	Remarks
		Bath/kit	W.C.	Wall	Roof	Finish	d/w[8]			Size	Type[9]		Location	Use	AOB		
											OD	ID					

1. Plot ratio is determined by dividing the plot depth by its frontage to define shape of the plot.
2. Plot frontage is determined by measuring the side that faces the main access street.
3. Plot exposure determines the number of sides the built plot area contagious to public open areas.
4. Built-up area is the area covered by the actual building/rooms by adding up the areas of all the rooms and the covered areas.
5. Plot coverage is the percentage expression of built-up area to plot area.
6. Plot set backs are determined by measuring the front, sides and back distance of the building line to boundary wall.
7. Floor area ration is determined by dividing the total floor by the plot area.
8. Refers to the materials of the doors and windows and their building techniques.
9. Refers to the shared spaces whether indoor or outdoor. OD refers to outer door, ID refers to inner doors.

Publications

I

User Participation in the Eyes of an Architect and Gendered Spaces

Assumpta Nnaggenda-Musana[1], Eiman Ahmed Elwidaa [2], Barnabas Nawangwe[3]

[1]Lecturer, Faculty of Technology, Makerere University, P. O. Box 7062, Kampala, Uganda
[2] PhD Student, Faculty of Technology, Makerere University, P. O. Box 7062, Kampala, Uganda
Corresponding author email: eelwidaa@tech.mak.ac.ug
[3]Associate Professor, Faculty of Technology, Makerere University, P. O. Box 7062, Kampala, Uganda

ABSTRACT
In Kampala City, the high rate of urbanisation has led to sprawling informal settlements which are characterised by substandard housing conditions. Urban sprawl wastes valuable land and makes services and infrastructure delivery expensive. Several housing projects were undertaken by government to provide affordable, adaptable and convenient housing solutions to low-income households. Most of these projects adopted a "top-down" approach in design, which seems not to have considered how the low-incomes households actually used. The paper shows that considerations for space use would lead to the development of more appropriate housing designs. It also shows that outdoor space use, which has been insufficiently addressed in government housing projects, is both functional and a resource to the low-income households. The paper utilises a combination of methods such as literature and document searches and reviews, in-depth interviews and systematic sketching. It illustrates that involving housing users in the preliminary stages of architectural design, as well as studying the way they use both indoor and outdoor space can be a solution towards attaining more suitable housing designs for low-income households. The paper argues that to low-income households, the house as external and internal space is not only a home but a space for subsistence and sustenance. It further argues that the provision of houses with considerations for how gender is enacted spatially could lead to the development of houses that can be user friendly to low-income households. The paper ends by suggesting that developing house designs that adapt to the way low-income households use space while preventing urban sprawl in the informal settlements is an important step towards the development of more effective housing designs.

Keywords: Gender; Indoor Space, Low-income housing; Outdoor Space Use, Urban Sprawl

1.0 INTRODUCTION
In Uganda, formal housing provision by governments has been inadequate due to scarce resources. Attempts to house the low-income households resulted in isolated interventions at Namuwongo in Kampala, Malukhu in Mbale and Masese in Jinja. The Namuwongo housing scheme seems not to have benefited its intended beneficiaries, since most moved to other informal settlements elsewhere (Nnaggenda-Musana, 2008). The houses developed for the Masese housing scheme, which was developed mainly for low-income women, has also been greatly transformed, which points to the users' efforts of making them user-friendly. There appears to be a mismatch between the housing that government provides and what the low-income households actually need. Failure of government to provide appropriate housing for low-income households has forced them to develop detached one-storey houses through self-help. These houses are contributing immensely to urban sprawl and the wasteful utilisation of public utilities.

Hamdi argues that it is important to involve the users of buildings in housing decisions. He puts forwards the concept of enablement – a way of designing without detailed programs that encourage rather than discourage pluralism in built form. Hamdi also considers participatory design which refers to the involvement of users and the community in design as an important

part of project management and also as a way of ensuring that building design is a rigorous inquiry of building form, user needs and habits. He states that he spent a lot of time trying to understand the tools and skills (alternate design strategies) that need to be explored with community groups to achieve an integrated design response (Hamdi, 1991: xi- xii). We as architects need to develop more appropriate design interventions that "get things started" according to Hamdi (Hamdi, 1991:xii). As Hamdi suggests architects should be able to develop appropriate housing through the involvement of users in design decisions.

The availability of funds to develop appropriate houses is one of the problems faced by low-income households, thus ways of promoting spontaneity, improvisation and incremental housing development need to be sought. An issue which is usually not tackled in design is the issue of gendered spaces. This paper discusses gendered spaces in housing and focuses on how low-income housing can be developed by studying how space is used in relation to gender. The problem of the sprawling informal settlements and how they can be controlled is also examined.

2.0 GENDER CONSTRUCTED SPACE

The houses for the low-income in Kampala are spatial contexts in which the social order is reproduced. Public and private space in a home are understood in gender specific terms. For example houses constructed by men were found to have been transformed according to women views since they usually stay at home most of the day and do more chores in it thus show more design awareness towards spatial needs.

In the United States several books have been written about space and gender. Spain (1992) a professor of urban and environmental planning in Virginia in the book "Gendered Spaces" argues that in homes as well as academic institutions and work places spaces have been defined by gender; cultural constructions of gender have determined the definition of space. Women's access to shelter has an impact on their improvement, that of their children and the whole society and ought to be a global concern. Most past international policy documents argue that "governments should" do any number of things, this may have a rationale in the abstract but it ignores the real forces which generate change on the ground (Dandekar ,1993). Hayden an urban historian and architect (1981) wrote about the need to change the designs of American homes, neighbourhoods and cities. The main impulsion in writing the book was to acclimatise the newly industrialised society and create an ideal standard of living, such that everyone, including the women and children would live up to their potential in their daily activities. To Hayden social problems can be addressed when spatial problems are dealt with.

3.0 METHODS TO SOLVE THE PROBLEM

The results of an investigation into ways in which housing can be made more user-friendly are presented. It has been noted that various efforts and resources have been directed to this cause but the problem continues. This study considers alternative design solutions. The overall objective of the study is to develop low-income houses that will make the intended users stay in them without moving away. To fulfil the objectives the following methods were utilised:

(i) Different literature about similar topics was surveyed and reviewed to understand how more appropriate low-income housing solutions have been developed elsewhere;
(ii) Desk studies of documents and design proposals about housing projects and other government documents about low-income housing provision were studied to gain awareness on housing issues in Uganda;
(iii) Field observations were done by the researchers to be able to understand the problem in its context;

(iv) In-depth interviewing with house users and key-persons were carried out to acquire a comprehensive understanding of how space is used by the different users and the low-income housing community;
(v) An inventory of the existing houses was made and different design variants were worked out through systematic sketching to arrive at the more appropriate solutions.

Data, investigator, theory and methodological triangulation of the different design methods were done as a way of cross verification from several sources to increase the credibility and validity of the findings. The different methods used led to the same findings.

4.0 FINDINGS

4.1 User Participation in Housing Design

Participation as a concept is well integrated in all housing schemes of Uganda. A large percentage of the Ugandan housing schemes adopted the participation approach for example by involving the users in preliminary discussions, building materials provision or house construction. However user participation is rarely applied in architectural design. For example at Masese project, designs are prepared at the technical offices with different prototypes from which the users can choose. It is noted that choices are made not according to the suitability of the architectural design to the needs of the users, but mainly due to household size or due to potential users' capability to repay loans. There appears to be a mismatch between the provided design solutions and what the low-income households actually need, which compels them to alter the designs of their houses to suit their ways of living and lifestyle or in some cases forced them to move to other places. This further contributes to the horizontal housing expansion which aggravates the problem of urban sprawl.

4.2 Gender Constructed Space

Low-income housing in Kampala portrays spatial contexts in which the social order is reproduced.

Figure 1: The main house (centre). Mbuya. (Photo: Nnaggenda-Musana, 2003)

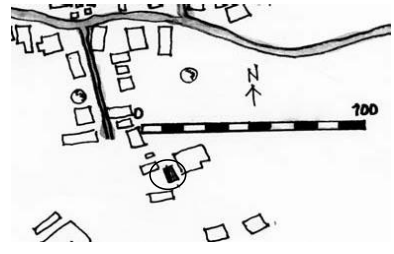


Figure 2: Location of the house in figure 1. Mbuya. (Photo: Nnaggenda-Musana, 2003)

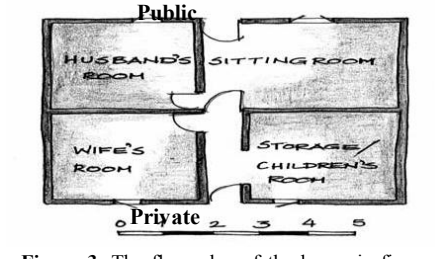


Figure 3: The floor plan of the house in figure 1, Mbuya. (Sketch: Nnaggenda-Musana, 2004)

Public and private space in homes is understood in gender specific terms, spatial relations in houses in the informal settlements show gender stratification. The main house "male sphere" usually occupies the front/important location while women and children are placed at the back and less important areas. It also signifies private versus public spheres where male sphere is closely related to sitting or public space compared to women backyard or private space. In figures 1 - 3 the male domain is positioned at the front or public space portraying importance while the women's and children's domain is placed at the back or private space. The man can be able to receive visitors easily since his space is located at the front.

4.3 Gender Transformed Space

Spatial relations in houses in the informal settlements of Kampala show that gender is enacted spatially. Houses constructed by men have been altered by the women who usually use them more since they work from home.

The timber shade in figures 1-3 was a later addition to the house that was required by a woman. The house had no kitchen and the veranda at the front of the house was used for cooking. According to the woman cooking was uncomfortable in a semi-private space at the front of the house and also during adverse weather conditions. Needing some privacy and covered space she asked her husband to construct the timber shade.

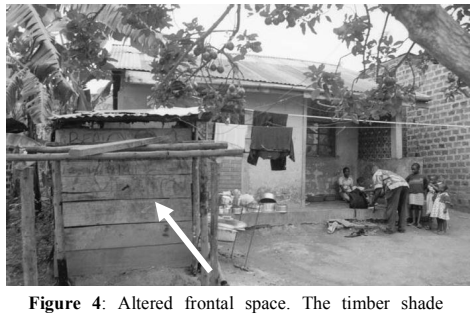


Figure 4: Altered frontal space. The timber shade (foreground) used as a kitchen is a later addition required by a woman. Mbuya. 2004

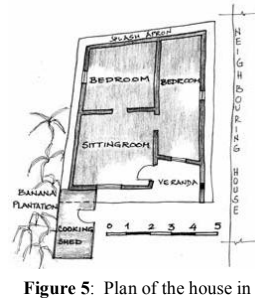


Figure 5: Plan of the house in figures 1 and 3 house. Mbuya. (Sketch: Nnaggenda-Musana, 2004)

Female and male spaces can be seen to be undefined in houses built newly (circa 90s). The dominance of the male space is reduced while women's space starts to emerge invading the formerly male-dominated public space. In figures 4 – 5 the cooking space conventionally placed at the back is now predominantly placed at the front (public space).

4.4 Outdoor Space as a Resource

In the low-income housing, outdoor space is a basic functional space just like the indoor space. This space is hardly considered when housing designs are prepared. It is considered as a leftover after locating the various rooms, conventionally referred to as the house, within the plot and what remains becomes the outdoor space, although, this space is used by women for cooking, nurturing children, washing clothes, entertaining guests, and also bathing.

Outdoor spaces can also be a place for hosting visitors and socialising in good weather which would otherwise take place in the sitting room. It can also be used for storage of property during the day and as a place for children to play. Outdoor space acts as a place for income generating activities which can be performed while women attend to their daily activities.

Figure 7: Outdoor spaces are used by women for child rearing, cooking and washing clothes in Masese, (Photo: Elwidaa, 2010).

Figure 8 Entertaining visitors outdoors in Masese. (Photo: Elwidaa, 2010).

Figure 9: A woman selling vegetables while washing clothes. (photo: Elwidaa, 2010)

4.5 Indoor Space Usage

In almost all adopted designs, interior space has been modified and adjusted to suit the users. For example corridors are closed off at one end to act as stores, kitchens or bathing spaces. In figure 10 after the corridor was closed off following a woman's decision, a bed was placed at the end and the space was transformed into a children's bed room. The women stores clothes and personal belongings in room corners and on strings above the bed. Some internal space can have multi functions. An internal space can act as a sitting room in the morning, a reception in case of visitors, a sleeping/ bed room at night and a storage place for personal property.

4.6 Communal Spaces

In the low-income housing intense use of outdoor areas was recognised. Women usually cook and wash cloth while watching their children play. Home activities are sometimes carried out communally. Carrying out activities communally makes them less tiresome or boring and more enjoyable. Neighbours socialise while cooking, planting, washing clothes or selling produce.

Figure 10: Internal corridor turned to a sleeping area, Masese. (Photo: Elwidaa, 2010)

Figure 11: Several activities taking place in a communal space Masese, (Photo: Elwidaa 2010)

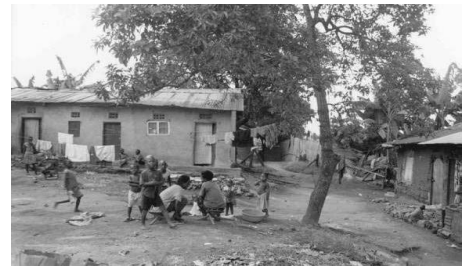


Figure 12: Women watching their children play as they cook. Mbuya, (Photo: Nnaggenda-Musana, 2004)

This solidarity among women combined with the insignificance of boundary walls and scarcity of land could indicate the need for architectural designs with communal spaces within the neighbourhood. Communal spaces would not only enable women to carry out activities in a more convenient way but can also create extra time for them away from routine chores, as well as minimise the need for house helps. As in figure 14, houses on individual plots can be joined together by backyards or front yards. This could be done easily by creating supervised play areas, to provide space for neighbourhood day care facilities, laundries, food or groceries kiosks, or elderly and homeless care centres. Toilets, kitchens or spaces for small scale agriculture can also be located in such spaces. Lack of public services such as garbage collection makes it necessary for the provision of communal efforts at the local level.

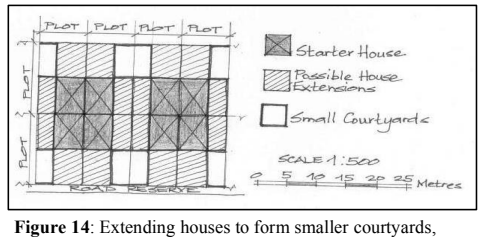


Figure 14: Extending houses to form smaller courtyards, which can be used as communal space. (Sketch: Nnaggenda-Musana, 2004)

5.0 CONCLUSIONS

User participation is not incorporated in low-income housing design resulting in a disconnection between the provided designs and what actually satisfies the users. User participation in design strengthens the ability of low-income households to participate efficiently in the development of good housing solutions and in decisions about priorities.

Housing should be viewed as a place where gender related forces and activities are continuously enacted. Design decisions should respond to these forces and activities whereby both women's and men's spatial, socio-cultural and practical needs are met. Outdoor space as key habitual and functional space is not well appreciated missing out on opportunities of attaining more convenient designs that respond to the users' life styles

Space when designed should emphasise the way it can be effectively utilised to prevent future alterations that can squander both the users and government limited resources, as well as contribute to urban sprawl, which could be reduced by guided incremental expansion.

Communal space has proved to be an important functional space, therefore, integrating it in housing design can reduce gender segregation, lessen domestic work and could support home based enterprises, which enable women to earn some income towards a more resourceful and satisfactory neighbourhoods.

6.0 ACKNOWLEDGEMENTS

The authors of this paper are grateful to Sida/SAREC for the financial support that enabled them to accomplish the present research.

7.0 REFERENCES

Dandekar H. C. (1993), *Shelter, Women and Development: First and Third World* Perspectives, (George Wahr Publishing Co.).

Hamdi, N. (1991), *Housing without Houses. Participation, Flexibility, Enablement*, (New York: Van Nostrand Reinhold).

Hayden D. (1981), *The Grand Domestic Revolution: A History of Feminist Designs for American Homes, Neighborhoods and Cities*, (Cambridge: The Massachusetts Institute of Technology).

Larrson, A. (2002), *Gender Perspectives in Housing and Planning*, (Housing Development and Management HDM, Lund University)

Naggenda, Musana A. (2008), *Housing Clusters for Densification within an Upgrading Strategy,* (Stockholm and Kampala: Royal Institute of Technology KTH and Makerere University).

Rendell J., B. Penner and Lain Borden (2000): *Gender Space Architecture: An Interdisciplinary Introduction*, (London: Routledge Press).

Spain, D. (1992), "*Gendered Spaces*," (University of North Carolina Press).

The New Everyday Life research group (1984): *The New Everyday Life*, (Norway: Nord).

II

Boundary-less Living

Eiman Ahmed Elwidaa[1], Assumpta Nnaggenda-Musana[2]

[1]PhD Student, assistant lecturer, Department of Architecture & Physical Planning, MakerereUniversity, P. O. Box 7062, Kampala,Uganda
Corresponding authors email: emanwidaa@hotmail.com

[2]Lecturer, Department of Architecture & Physical Planning, Makerere University, P. O. Box 7062, Kampala, Uganda

ABSTRACT
Governments of developing countries initiate low-income housing schemes with the objectives of enabling the urban poor: upgrade their living conditions, acquire house construction skills and, own houses. In Uganda, most of the low-income housing schemes are estate-driven. Most estate-driven housing correlates with the modernisation development paradigm that holds the assumption that modernity includes the adoption of presumed attributes of western society (Venter and Marais, 2006). This is evident in the plans of most of the low-income housing schemes in Uganda, which were developed with the assumption that each house would be encased by boundary markers to demarcate the plot boundaries by separating the public spaces outside the plot from the private space within. Siting the house block in a plot is usually stipulated by the project, thus further dividing the plot into back and front yards, with the latter posing as a transitional zone between the public space outside the plot and the very private space in the house. A hierarchical spatial pattern of a public space outside the plot, a semi-public in the front yard, the private space inside the house and the semi-private space in the backyard is assumed.

In a home setting, the backyard conventionally houses most of the home chore activities usually performed by women, while public spaces are male-dominated (Nnaggenda-Musana, 2008:147). Thus a gendered space use pattern is expected to be associated with the spatial patterns that emerge due to the existence of boundary walls around the houses both at the house and neighbourhood levels. However, it is observed that in almost all government-provided low-income housing schemes, boundary walls are rarely constructed resulting in the emergence of blurred spatial patterns whereby distinction between private, semi-private, semi-public, and public space is vivid.

This paper explores the effects of the emerging organic spatial patterns on the gendered space use, and the appropriateness of the proposed housing designs to their users. Findings of this study are expected to inform low-income planning and design both nationally and internationally, so as to enhance their appropriateness and efficiency.

The study employs the case study research approach where the Masese Women Housing Scheme (MWHS), manifesting the highest ambition of reducing women's marginalisation with respect to housing in Uganda, was selected as an atypical case for exploration of gendered space in housing. Data was collected through in-depth interviews, observation, photography, sketching together with document and drawing review and analysis.

The study revealed that the spatial patterns that resulted due to absence of boundary walls are conducive to the low-income households' life styles, of women, as they provide security, social interaction and enhance home-based enterprises. The study further revealed that the blurred

spatial patterns that emerged due to absence of boundary walls have no significance on the gendered usage of the space both at the house and neighbourhood levels. The study thus recommends low-income housing that is devoid of boundaries when planning and designing low-income housing.

Key Words: housing, boundary-walls, spatial patterns, gendered space-use.

1.0 INTRODUCTION

Sixty per cent of the urban population in Uganda lives in inadequate housing, (MLH&UD, 2008: iv). This prompted the Ugandan government, through the Ministry of Land Housing and Urban Development (MLH&UD), to implement housing projects targeting low-income groups to uplift their living environments in different parts of the country, for example the Namuwongo project in Kampala, Oli in Arua, MWHS in Jinja, and Malukhu in Mbale.

Most of the low-income housing schemes were established in the early Museveni era of the eighties (Nnaggenda-Musana, 2008:59). In the same period, Uganda underwent a period of gender awareness as a result of the impact of the Third World Conference for Women (TWCW) that took place in Nairobi in 1985. Since then, the Uganda government has been committed to engendering all sectors including housing. Hence the MWHS, which targeted low-income women as a way of reducing their marginalisation, was launched. Most of the low-income housing projects, including MWHP, emphasised providing access to housing for the low-income through credit, land ownership formalisation, building by-laws stipulation, construction material and technology introduction, as well as users' participation in the construction activities on the assumption that these would contribute to housing adequacy and convenience (MLH&UD, 2012:. 42). This reflects a quantitative approach to housing that views a house as a dwelling unit over the qualitative one which considers housing as a system of activities concerned with housing an individual household and the entire community (Horelli, 2005, p.18). The latter approach gives more importance to the socio-cultural context and values households embrace, more than the quantitative approach that focuses mainly on the mass production of housing units (Goodchild, 1991:133).

For proper management and speedy delivery of the low-income housing projects, standardised house types, plot sizes and space layouts were encouraged in their planning. These restrictions sometimes included dictating of building off-sets, orientations of buildings within the plots, and location and sizes of fenestration, leaving optimal opportunity for the households to personalise their domestic space (MLH&UD, 1992). The probable assumption was that these restrictions would yield an orderly physical setting to the neighbourhoods, hence implying upgraded living standards.

2.0 PROBLEM

Housing units within housing schemes that target low-income groups are expected to be developed encased within boundary walls, which are usually not highly emphasised, to demarcate plots and to secure the houses. But, in most housing schemes that target the low-income groups, boundary walls are rarely observed even in cases where these walls are fragmented and very modest both in size and construction material. This, coupled with the transformations that the households make to accommodate their changing needs, results in the emergence of spatial patterns that differ from the original designs. The resultant spatial configurations are characterised by blurring of spatial configurations.

Conventionally, in African Islamic societies (Fathy, 1973) and patriarchal societies like Uganda, public domestic spaces are male-dominated while women are confined to the private spaces of the home. Even within the home space, women's presence is expected to be at the backyard where they carry out domestic chores while the front is where the men sit and or host visitors. In the case of MWHS the fuzzy and intermingled spatial patterns that emerge due to the absence of boundary walls not only deconstruct the conventional private, semi-private, semi-public and public demarcations of space at the home and neighbourhood levels, but also lead to tension between the associated gendered space usages due to the lack of boundaries.

3.0 SITUATING THE STUDY

The TWCW that took place in Nairobi 1985 had a major role in raising awareness regarding gender issues in housing by promoting women as beneficiaries and agents of change in the area of human settlements (Celik, 1992). In 2002, Anita Larsson, a prominent architect and researcher in the fields of gender, housing and urban planning, advocated for mainstreaming gender in housing at all levels including but not restricted to, accommodating and responding to the needs of women in spatial planning and design of their houses. She argued that,"*Housing,... both as a shelter and its social and physical surrounding is... crucial for women as a center for their activities*" (Larsson, 2002). Research on low-income housing emphasises that women should be focused on in housing design since they spend more time and do more chores in the housing environment, and are thus affected most by inadequate housing conditions (Dandekar, 1992). This argument can apply well to the low-income women in Uganda's urban areas.

Attempts to reduce low-income women's marginalisation in housing have been made in Uganda. The MWHS located in Jinja, in eastern Uganda, is proof of such an attempt because it was mainly aimed at improving the social and economic conditions of low-income women.

4.0 STUDY OBJECTIVES

The study explores housing schemes that target the low-income groups, and analyses the spatial patterns emerging in boundary-less neighbourhoods. The influence of gender on space use and the extent to which the low-income housing is conducive to women's life styles is also explored. Findings of the study will inform housing research about ways of developing more gender-sensitive low-income housing designs.

5.0 METHODOLOGY

The study utilises a case study research approach, which allows the researcher to capture various realities that are not easily quantifiable. The approach warranties that the research topic is well explored and that the essence of the phenomenon is revealed (Stake, 1995; Yin, 1995). In this case MWHS, which manifests the highest ambition among Uganda's low-income housing schemes to reduce women's marginalisation, was selected for an in-depth analysis. In practice oriented fields, case study has a special strength of enriching the professional repertoire which in turn enhances the designer's ability to provide appropriate solutions through relating and comparing between "*known cases from the repertoire and actual design situations"* (Johansson, 2005, p.32). As researchers and reflective practitioners in the field of architecture, the authors use their personal experiences and observations to relate and deliberately reflect (Schon, 1983) on empirical evidence, existent theory and their practical experiences to generate knowledge that can inform future actions and interventions in regard to the production of flexible designs that can be more appropriate to low-income women.

Multiple research methods were employed to collect and interpret data on spatial use patterns in neighbourhoods that are boundary-less. These included personal observation, photography, in-depth interviews, sketches and document analyses, and review of archival records. Personal observation entailed the researcher actually going the study area to observe and record behavior in its natural setting. Photography, which complemented the personal observations helped in obtaining and recording of visual data. In-depth interviews were carried out with key persons and the households in the study areas to get comprehensive information and views. Houses and other physical artefacts were sketched after taking measurements of houses, and recording of how interior and exterior space was used in order to comprehend the spatial quality and space use. Analyses of archival records, and documents like maps, plans, and aerial photographs were done to understand past and present inclinations of housing development in the study area.

6.0 Findings and Discussions

6.1 Organic Growth of Plots

Plots at MWHS were designed in an iron-grid layout allowing for an open space per every cluster of 8 to 18 houses for public and communal use. This physical setting is assumed to promote orderly and upgraded living environments as is figure 1. A hierarchical spatial pattern of private, semi-private, semi-public and is expected to materialise. Fathy notes that most architects when re-planning places are prone to re-arranging houses *in straight, orderly streets, parallel to one another* (Fathy, 1973, p. 54). In present-day MWHS however, the spatial pattern in that has emerged is different from what was anticipated.

Figure 1: MWHS as planned originally

Figure 2: Actual housing development at MWHS

Adapted from Ministry of Lands, Housing and Communication, Masese Women Housing Project map. Developed by Elwidaa, Drawn: Bukulu Ismail, 2013.

In MWHS women who have traditionally been relegated to the private space of the back yard have started to move to the semi-public front yard. Housing extensions, coupled with the absence of clearly identified boundary walls, makes the distinction of the originally planned private, semi-private, semi-public and public spaces difficult to discern, see figure 2 (orange shades).

6.2 Open Public Space

Open public spaces that were for recreational activities appear to be neglected, see figure 4. The open public spaces are sometimes encroached upon by makeshift structures for domestic and

home-based enterprises (HBEs) such as bars, worship places, video halls, stand pipes for water selling, as seen in figures 5 and 6.

Photo: Elwidaa Masese, 2012

Photo: Elwidaa, Masese, 2012.

Figure 4: Neglected open spaces. **Figure 5:** Makeshift structures in an open space **Figure 6:** Stand water pipe outside plot premises

In open spaces with favourable environmental conditions the multi-use of this space by some households was noted. The households sometimes fenced-off some of the open space to accommodate subsistence farming, therefore converting part of it to individual private space, see figure 7.

Figure 7: Laundry being done in public space.
Photo: Elwidaa, Masese, 2013.

6.3 Absence of Boundary Walls

The grid-iron housing arrangements that were planned at MWHS connote gendered spatial configurations that are related to the gender division of labour, whereby men are expected to occupy public spaces outside the home attending to paid labour, while women are consigned to the home space attending to unpaid home chores, (McDowell, 1999, Hayden, 1980). Today the formal boundary walls that were planned for MWHS to encase houses are absent in most cases, in the few scenarios where they do exist , they are in the form of light boundary markers such as unmaintained hedges, reeds, and other plants as illustrated in figure 8.

Figure 8: Fragmented irregular fences between plots
Photo: Elwidaa, Masese, 2012

Solid boundary markers are preferred by a few households as they promote, privacy, territory demarcation to avoid conflict between neighbours, and facilitate tidiness by keeping property free of strewn garbage. Boundary markers were usually light or short and did not impede visual or physical interaction between neighbours, see figure 8. Although hedges were sometimes appreciated they were thought to be expensive and hard to maintain.

To ensure tight security against burglary in a few cases, solid types of boundary walls were observed around houses that are occupied by higher-income households, see figure 9. Household members occupying such houses are considered snobbish and are thus alienated. One respondent stated: "*When you place wiring around your house, it means that you do not approve of my presence in your space. So in case you or your home are in danger, I will not come to your rescue as I might be accused of trespassing"* (Joyce, interview, 2013).

Figure 9: Chain links and solid walls common to higher-income households at MWHS. Photos: Elwidaa, Masese, 2013.

6.4 Space Use at the Plot Level

The households in MWHS intimated that they preferred living without boundary walls since their absence allowed for natural surveillance whereby they could watch over each other's children and property, and interact with neighbours, see figure 10. The absence of boundary walls makes the detection of strangers easier thus enhancing security.

Figure 10: Absence of boundaries facilitates watching over children and properties. Photos: Elwidaa, Masese, 2013.

Some female respondents mentioned that the absence of boundary walls reduced domestic violence since passers-by would easily see or hear any commotion and come to the rescue of anyone who called out for help. Women also preferred to live without boundary walls around the houses as it enabled them to socially interact with neighbours and passers-by and still be able to attend to their domestic chores, like washing clothes, cooking and watching over children. The women further mentioned that a boundary-less setting facilitated the promotion of their HBEs since the potential buyers could see their goods easily. The front yards, being exposed to passers-by along the road, offered better opportunities to promote HBEs. The spaces used for HBEs sometimes extend beyond plot limits due to the absence of boundary walls without causing any disputes with neighbours, see figure 11.

Figure 11: A groceries kiosk run by a woman erected at the front yard of the house and extending beyond the plot limit.
Photo: Nsereko, Masese, 2013.

7.0 CONCLUDING OBSERVATIONS

MWHS has not developed the way its initiators envisaged that it would. The MWHS houses have transformed naturally as a response to habitation, corroborating Tipple's (2000) findings from his various researches in different countries, concerning informal housing, whereby ascertained that both the houses and households with time shape and reshape themselves to each other until there is a tolerable fit between the two.

Instead due to the absence of solid boundary walls and the on-going extensions, more organic spatial patterns emerged. To a large extent these growth patterns resemble the boundary-less physical setting of the Ugandan informal settlements where most of the low-income households live, see figure 12.


Figure 12: (Left) Part of MWHS; and (Right) An adjacent informal settlement. Both are devoid of boundary walls.
Photos: Elwidaa, Masese 2013.

Clear distinction between public and private spatial patterns is not evident; and there are no distinct variations in gendered space use patterns both at the neighbourhood and house levels.

Boundary-less housing areas are more conducive and responsive to the ways of living of low-income households and should be considered when planning for and designing housing schemes that target these groups so as to enable them realise their different gender roles and dispositions more appropriately.

REFERENCES

Celik, A, P. (1992) Women's Participation in the Production of Shelter. *Shelter Women and Development.* Michigan, George Wahr Publishing Co., Ann Arbor, pp. 199-207.

Dandekar, H. C. (1992) Women and Development, First and Third World Perspectives. Michigan, George Wahr Publishing Co., Ann Arbor.

Goodchild, B. (1991) *Postmodernism and Housing: A Guide to Design Theory*, Sheffield City Polythechnic, School of Urban and Regional Studies.

Hassan F. (1973) *Architecture for the Poor: An Experiment in Rural Egypt*, University of Chicago Press: Chicago.

Hayden D. (1980) How a Non-sexist City Looks Like? Speculations on Housing, Urban Design, and Human Work*, Women and the American city, 5* (3), pp.170-179.

Horelli, L. (2005) Inquiry by Participatory Planning within Housing, in D. U. Vestbro Hürol Y. & N. Wilkinson (eds) *Methodologies in Housing Research.* Stockholm: The Urban International Press, pp. 17-29.

Johansson R. (2005) On Case Study Methodology, in D. U. Vestbro Hürol Y. & N. Wilkinson (eds) *Methodologies in Housing Research.* Stockholm: The Urban International Press, pp. 30-39.

Larsson, A. (2002) Gender prespectives in Housing and Planning. *Building Issues*, 2002, *11* (1) pp. 3-18.

McDowell, L. (1999). *Gender, Identit & Place, Understanding Feminist Geographies.* Minisota: University of Minnesota Press.

MLH&UD (Ministry of Lands, Housing and Urban Development) (1992) *A National Shelter Strategy for Uganda*, Vol. 1, Kampala.

MLH&UD (Ministry of Lands, Housing and Urban Development) (2012) The National Housing Policy for Uganda. Policy Document final draft, Kampala.

MLH&UD (Ministry of Lands, Housing and Urban Development) and the United Nations Development Programme (UNDP) Uganda (2008) *National Slum Upgrading Strategy and Action Plan.* Policy Report, Kampala: Department of Human Settlements.

Nnaggenda-Musana, A. (2008) *Housing Clusters for Densification within an Upgrading Strategy, The Case of Kampala, Uganda*. Stockholm: Universitetsservice US AB.
Schon D. (1983) *The Reflective Practitioner, How Designers Think in Action,* New York, Basic Books.
Stake R. E. (1995) *The Art of Case Study Research*, Sage Publications, Inc, Thousand Oaks, California 91320.
Venter A. and Marais L. (2006) *Gender and housing policy in South Africa: Policy and practice in Bloemfontein1* Journal of Family Ecology and Consumer Sciences, Vol. 34, 2006.
Yin R. (1994) *Case Study Research; Design and Methods*, SAGE Publications: London.

III

Women and Low-income Housing Transformation in Uganda

Eiman Ahmed Elwidaa

PhD Student, Department of Architecture and Physical Planning, CEDAT, Makerere University
P.O. Box 7062, Kampala, Uganda
Author's email: emanwidaa@hotmail.com

Abstract

The article explores the transformations low-income women make to appropriate their housing that often goes unnoticed. The aim is to document, acknowledge and make low-income women's efforts to appropriate their housing visible. Lessons learned are assumed to inform the Ugandan low-income housing discourse on design considerations that can contribute to the provision of housing designs that are conducive to low-income women. The study confines its investigation to the housing designs provided under the governmental low-income housing projects in Uganda.

This article presents results from a case study on Masese Women Housing Project MWHP that targeted women as its main beneficiaries. Post Occupancy Evaluations POE methodology was utilised to collect data on the performance of the housing designs provided by the project and the transformations women make to increase their housing appropriateness. Open-ended interviews were carried out with women owners to investigate the transformations they apply to their houses. Results are documented through photography, sketches and measured drawings. Results are synthesised and analysed under outdoors and indoors transformations.

The study confirmed the substantial contribution low-income women make to appropriate their housing. It argues for acknowledging and including women's efforts in the Ugandan low-income housing discourse to support the provision of housing designs that are more user-friendly to them. Design considerations that are essential to attain low-income women convenience with their housing are: its capacity to accommodate women's triple roles, their potential for incremental development and their ability for segmentation into autonomous housing units to allow for their flexible, economic and functional use. The study advocates for directing efforts to the development of traditional building technologies instead of introducing improved but alien ones as an alternative that is more favourable to women.

Key words: *Low-income, Women, Housing, Transformation, User-friendly.*

Introduction

This article intends to highlight the essential but often unrecognised contribution Ugandan low-income women make to transform their standardised housing designs into built-forms and living environments that are more user-friendly to them. The article argues for acknowledging and including women's efforts in appropriating their housing in the Ugandan low-income housing discourse to support the provision of housing designs that are more user-friendly to women, reducing their marginalization in housing.

In Uganda, more than 50% of the urban population reside in informal settlements that are characterized by substandard housing conditions (MoHL&UD, 2008). Uganda government launched housing projects to regulate those settlements and provide their residents with appropriate housing. In Uganda, low-income women were acknowledged as the most

marginalized with respect to housing. To demonstrate commitment towards reducing low-income women marginalization in housing, one of those low-income housing projects, Masese Women Housing Project (MWHP) was assigned to target women as its main beneficiaries.

As in the case of many low-income mass housing in the developing world, housing prototypes were offered to the beneficiaries of MWHP that are of optimized areas to reduce on cost. The design of those prototypes are standardised to speed delivery, which as Delgado & De Troyer (2011) noted in Turkey, compromised on the designs' responsiveness to the individual households' personal traits and preferences. But with habituation, households gradually transform their housing designs in response to their personal circumstances and changing housing needs. As such housing transformation becomes an almost inevitable phenomenon to the low-income housing of the developing world (Khan, 2014; Tipple, 2000; Turner, 1977). Transformation in this sense refers to any alterations, extensions, or modifications to the external or internal housing space (Khan, 2014).

Weisman (1994) noted that the male domination to the housing related professional fields such as physical planning, surveying and architecture, contributed to the formation of spatial patterns and housing designs that often exclude women's perspectives, interests and needs. Larsson (2001) argues that the gender-neutrality with which housing is perceived as an objective and rational activity that does not need to focus on men and women in particular, caused the provision of design solutions that often side-line woman's perspectives and aspirations to their housing. Ironically, in most patriarchal societies such as Uganda, while men are held responsible for housing provision, its adjustments to make it a convenient home for its households is usually considered a woman role (Kishindo, 2003). In effect, women become responsible for modifying the design inconveniences that are created by professionals, usually men, who are ignorant of housing design conditions that are favourable to women (Weisman, 1994:89).

Two levels of change in housing design can be identified; a relatively permanent one that is decided by the designers and stipulated by building bylaws, and a relatively changeable one that individual households have some freedom to introduce changes to (Habraken, 2005). However, the capacity of the low-income women to change their housing to adequately respond to their households' needs is restricted by their modest financial resources. This calls for developing flexible and adaptable designs that can easily, quickly and affordably be adjusted to their households' housing needs and in a way that reflects their values and life style as argued by Abbaszadeh, Moghadam and Saadatian (2013).

Low-income women in the developing world are noted to spend more time and do more chores within their housing compared to men (Dandekar, 1992). This combined to their role as principal home organizers and family caretakers nourishes women's indigenous knowledge that they usually receive from previous generations towards favourable housing design conditions. Women use this indigenous design knowledge to transform their housing to their households' convenience, producing what Lawson (2006) identifies as vernacular architecture. In quest for more user-friendly living environments, women transform their housing and thus become *the controlling agents* to its spatial configuration (Habraken, 2000). Women therefore act as *"forces of change and adaptability"* to their housing design (Wilkinson, 2005:4).

Other than making women's efforts in appropriating their housing visible, this article aims at learning from the housing transformations women make to appropriate their housing to

inform the Ugandan low-income housing discourse on design considerations that support the provision of housing designs that are more user-friendly to women.

Gendered flexibility

The reduced area of the dwelling unit of mass housing dictated by cost reduction, necessitated flexible designs to increase their efficiency (Leupen, 2005). This gave way to design concepts, such as Supports and Open Buildings, that basicaly target maximizing households' options to the functional use of their buildings according to their individual housing needs (Habraken, 2011). A flexible house becomes the one that can easily, quickly and affordably be adapted to accommodate its users' changing housing needs over time. A flexible house arguably becomes a criterion or an indicator to the usefulness of a building to its user (Slaughter, 2010:208). Schneider & Till (2005:157) argue that the degree of housing flexibility is determined by its built-in opportunity for its adaptability to *"different social uses"* and capability of facilitating *"different physical arrangements"* to facilitate those uses.

Traditionally, spatial planning and housing were perceived as *"objective and rational professional areas"* (Larsson, 2001:6) that should serve the needs of the community and family members equally (Kennett & Wah, 2011) rendering it gender-neutral. Subsequently households are usually discussed as homogeneous groups in the housing debate without much consideration to their gender differences. Turner (1977) argues that housing adequacy mainly depends on what it does to its households. But men and women often have differential housing needs, interests and perceptions (Larsson, 2001) that is caused by their differential gender roles in their communities and families. Therefore, women and men develop deferent assumptions about housing adequacy that are related to what it does for them independently.

Kellett & Tipple (2000) argue that in many cases a house for low-income women, other than providing a place for living, constitutes a work-place for performing Income Generating Activities (IGAs) to increase their families' income. According to Moser (1989) low-income women's convenience with their housing is related to its capacity to accommodate the practical needs of their everyday activities. She further relates women's practical needs to their triple-roles of: a) Their reproductive role by caring for their family, b) their productive role by performing home-based IGAs to increase the family's income and c) their community management role within their communities. She argues that failure to acknowledge and respond to women's tripple-role in housing might lead to their margnlisation and compromises on the appropriatness of provided the housing design solutions to the low-income women of the developig world.

In her study of gender and housing in Africa, Schlyter (1996:8-9) acknowledged *"Family and household"* as *"basic concepts in housing research and planning"*. She advocates against stereotyping of the nuclear family as the norm in the housing debate as it excludes women in non-conventional family structures. She also cautioned against normalisations of female-headed household as composed of single mothers with dependent children that excludes living alone single women or those in polygemous families that are common in many african contexts including Uganda. Therefore, the concept of *'housing flexibility'* as an indicator for housing appropriateness needs to be redefined to accommodate heterogeneities among low-income women across all family structures to ensure its usefulness to attain their satisfaction with their housing.

In their discussion of flexible housing, Schneider & Till (2007:13) identified two ways through which housing flexibility has developed. One that came about as a *"result of the evolving condition of the vernacular"* whereby design solutions arrived at through housing transformations according to their users' patterns of use and cultural formation and another that is developed as the architects' response to the *"external pressures that prompted housing designers and providers to develop alternative design solutions, including flexible housing*".

This article explores on the flexible housing-designs resulted from the transformations low-income women make to appropriate their housing, as an act of the vernacular, to inform the Ugandan professional practice on flexible housing designs that are appropriate to the low-income women. Thus, this article can be thought of as an informative dialogue between the two ways through which housing flexibility has evolved over time.

The study's methodology

MWHP was selected as a case study for this research as it reflects the state of the art for the Ugandan government in providing low-income women with appropriate housing. MWHP represents a unique case study, which Yin (2009) and Stake (1995) argue, has the capacity to render deep insights to the study's issues. Post Occupancy Evaluation (POE) methodology is used to gather data on the housing transformations low-income women made to their housing to enhance their performance to their occupants housing needs and different life scenarios (Preiser, 1995).

Housing ownership constitutes a security factor that motivates investment of time and resources in housing development. In Uganda, Akiiki (2010) found out that women have uncontested authority over the houses they solely own. Women's ability to take decisions about their housing without being harassed or controlled by men gives them *"the ability to save money and invest in housing*" (Schlyter, 1996:9). Therefore the study focuses its investigation on houses that are solely owned and occupied by women.

Data were collected through open-ended interviews with women owners, on the transformations they made to appropriate their housing. Housing transformations were documented through measured drawings and photographs. As a practicing architect for more than twenty years, the researcher used her observations to analyse and synthesize the variant forms of housing transformations to arrive at design considerations that can contribute to the provision of housing designs that are user-friendly to low-income women.

The case: Masese Women Housing Project (MWHP)

MWHP is a donor-funded low-income housing project launched 1989 in Jinja, the second largest city in Uganda then, to mainly target women. Initially, MWHP envisaged to house 700 families in three clusters 1, 2 and 3 as illustrated in Figure 1. Nevertheless, by the time the project stalled in 1996 only 274 plots were allocated, of which houses were built on 187 plots only. Cluster 1 was the first to receive housing construction making it with the highest implementation rate (90%) compared to the other two that both registered around 10% implementation rate only (MoLH&UD, 2013). Therefore cluster 1 was selected as the study area for this research (Figure1).

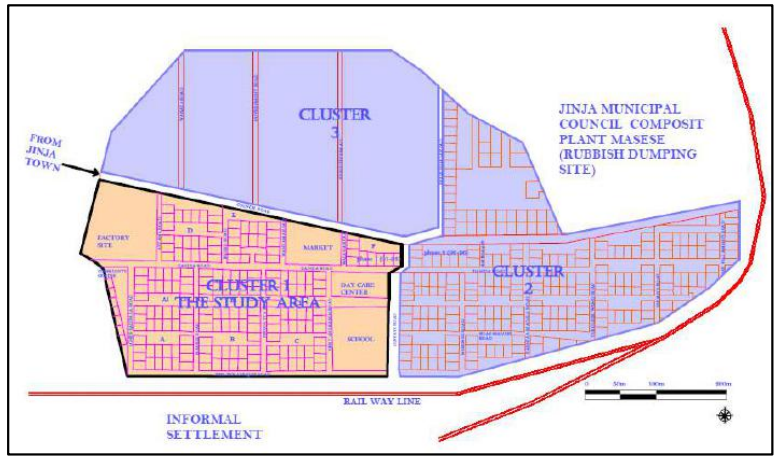


Figure 1. Cluster 1 The study area of MWHP.
Source: Adapted from Masese Women Self-help Project

Titled plots that are of almost equal sizes of 18mX12m were offered to MWHP beneficiaries to construct their houses within. Four alternative house prototypes were offered to select from. Three of them namely prototype 1, 2 &3, share the same cost and the overall dimensions of 6X5.5m,which results in their equal internal generic space of 33 M^2. The only design variation between the three prototypes is on the alternative positioning of the internal partition walls. This caused differential spatial layouts to their internal space as illustrated in Figure 2. The fourth prototype offered is larger in area, different in proportions causing it to be more expensive than the others. It was implemented by a few being unaffordable to most beneficiaries therefore it is excluded from the investigations for this study.

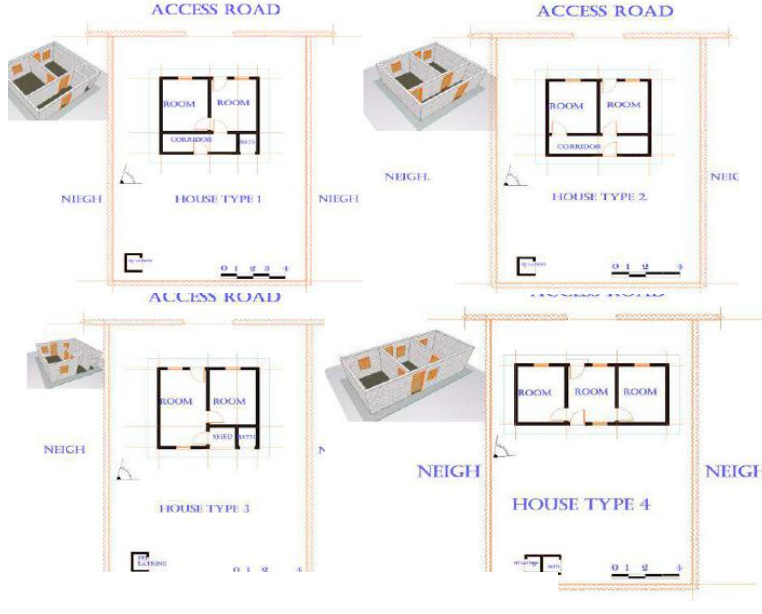


Figure 2. MWHP four house prototypes

In this study a *home* refers to the main house block offered by the project and any other physical developments within the territory of the individual's plot. MWHP plots were arranged in groups of several plots surrounding a green space to provide an orderly thus upgraded living environment at the project's area as illustrated in Figure 3.

Figure 3. The spatial layout of the study area as planned.

More than twenty years later, a general extension to the initial project's development that amounts to almost four folds is noted in the study area as illustrated in Figure 4. According to Elwidaa and Nnaggenda-Musana (2015) the resultant spatial configuration at the study area created a living environment that is more user-friendly to low-income women compared to the one anticipated by MWHP designers.

Figure 4. Physical development at the study area

The study narrowed down its focus to investigate the spontaneous transformations women made to appropriate their individual homes. Housing transformations at the home level are categorized into: outdoor transformation referring to any extension made to the main house within the plot's premises, and indoor transformations, which refers to any alteration made to the house internal space.

Outdoors house extensions

MWHP house block occupies approximately 15% of the of the plot's area. The relatively ample remaining outdoor space within the plots that are devoid of boundary markers (Elwidaa & Nnaggenda-Musana, 2015), encouraged horizontal extensions to the main house. These extensions sometimes spill outside the plot's premises (Figure 5) negating the projects building bylaws and regulations that restrict physical development within the plot's boundaries. Women as such assert their own changeable level of control (Habraken, 2005) of their homes as they reconfigure them to their personal conveniences.

Figure 5. Extensions spilling outside the plot's territory

Out-door extensions are usually in the form of: 1) Single rooms usually made of mud or red-bricks 2) wooden kiosks and 3) sheds. Single rooms' extensions are commonly constructed in linear forms attached, detached or semi-detached to the main house with no interconnection between them as illustrated in Figures 6 and 7.

Figure 6. Semi-detached single extension rooms

Figure 7. Detached single extensions rooms

The linear layout facilitates each room to constitute an autonomous housing unit mimicking the one-room house-type locally referred to as the *Muzigo house* (Figure 8), which constitutes the housing option for the majority of the low-income groups in Uganda (Nawangwe & Nnaggenda, 2005). As in the *Muzigo house*, each single room works as a multi-functional unit where all housing activities such as, sleeping, cooking, sitting, etc take place.

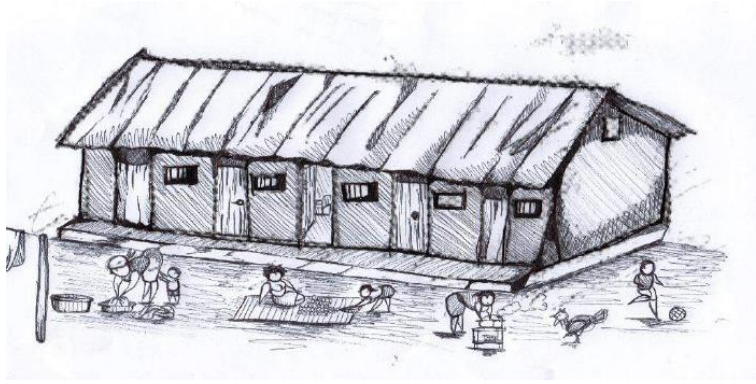


Figure 8. The linear layout of the one-bedroom Muzigo house type of the low-income groups of Uganda
Source: Adapted from Wallman 1996

The rooms' linear layout also enables direct interaction with the outdoor space. Women of MWHP perform most of their daily activities and domestic chores outdoors typical to most low-income women of the informal settlements of the Ugandan urban centres as noted by Nnaggenda-Musana (2008). Out-door space supports women multi-tasking to their domestic chores and family care and performing their home-based IGAs concurrently (Figure 9), which increases their satisfaction with their homes.

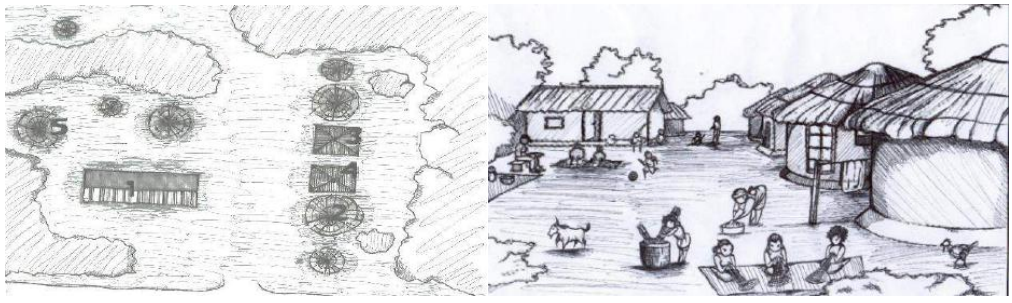
Figure9. Linear room layout to facilitate interaction to outdoors where women do most housing activities

Nevertheless, outdoor functional use and its capacity to accommodate extension rooms are compromised by the existence of the pit-latrines that are sometimes multiple in one home as in figure 10. The substandard hygiene of the pit latrines further degrades the living environment outdoors inconveniencing women the most.

Figure 10. Multiple pit latrines compromising on its functional use

The autonomy of the extension-rooms facilitates their flexible use to variety of tenancy clientele such as single tenants, families or cohabitants. This increases the rooms' rent potentials thus their economic value, providing women owners with secured *'extra earning'* that Larsson (2001) argues is essential for their financial independence.

The proximity of the extension rooms to the main house, yet their autonomy, facilitates their convenient use to older boys of the main family who are expected to live outside the main house upon reaching adolescent age according to local socio-cultural norms. The spatial configuration resulted of the extension rooms and the main house within the individual's plot that is devoid of rigid boundaries around it (Elwidaa & Nnaggenda-Musana, 2015) sometimes creates a living environment that resemble that of the Ugandan traditional homestead. As in the traditional homestead, the home in MWHP turned to be constituted of a group of single-rooms congregates within the plot's territorial area. In both settings each room forms a housing unit inhabited by a single household sharing a common outdoor space. In both settings, women are dominantly present outdoors attending to domestic chores while socializing with each other as illustrated in Figure 11. At the same time, women are also responsible for organizing the interiors of their individual housing unit assigning women as the controlling agents to their homes (Habraken, 2005).



Legend

1. Main house 2,3&4 Individual sons' houses
5. Co-wife's House 6. Kitchen for senior wife

Figure 11. The spatial pattern of the Uganda traditional homestead of the Bosoga tribe.
Source: Adapted from: Nawangwe, 1994.

The autonomy of the extension rooms also constitutes a convenient housing option for women in non-conventional family structures such as single, divorced or co-wives in polygamous families. Halima, a divorced woman lives with her kids in an extension room at her widowed sister's house. The room autonomy provides her with the independence she needs to foster her individual identity that is difficult to achieve if she had to live with other people as argued by Larsson (2001). At the same time, living closer to her sister provides both with a sense of security and belonging that they both appreciate and enjoy.

It is noted that in all MWHP housing prototypes a cooking place is not provided for. Absence of a cooking place inconveniences women the most since cooking is basically considered a women's gender role. This design oversight can be attributed to the hegemony of men to MWHP design team, which Weisman (1994) argues could lead to the provision of spatial patterns and designs that side-line women's needs and interests in housing. Although there was one lady among MWHP design team but she was mainly responsible for drafting the final design drawings. While she used to volunteer some adjustments to the designs, she had no decision-making power over the final design product. In effect, MWHP designs came out omitting functional spaces that are important to women despite the project mainly targeting women. Therefore, women found themselves responsible for correcting 'men's design mistakes' as Weisman (1994) argues, to make their housing more responsive to their housing practical needs. To have a place for cooking, women resolve to the construction of sheds that are usually made of humble improvised building materials as illustrated in Figure 12.

Figure 12. Sheds that women construct from improvised building material to serve as a cooking place

Women also use those sheds to carry out IGA and domestic chores that are otherwise performed under the main house roof-eaves. Being too short, the roof-eaves fail to adequately protect women against harsh weather conditions as illustrated in Figure 13.

Figure 3. Roof eaves that are too short to adequately accommodate domestic chores against weather conditions

Sheds also has the capacity for incremental development into housing units for personal use or renting out. Sheds thus can easily be adapted to the different social and functional uses of the households (Schneider & Till, 2005) according to their affordability as in the case of Figure 14. Ahmed (2011:82) defines affordability as *"what household feels they are comfortable to spend"* on their housing. The flexibility of sheds in adapting to women's different social and functional use in support of women's productive and reproductive roles makes them a convenient option for women irrespective to the quality of their material. This confirms Turner's (1977: xxxii) argument that for the low-income groups in the developing countries *"the physical quality of the shelter is secondary"* to what it can do for them.

Figure 14. A shed used for charcoal-selling and gradually turned into rented rooms

Women construct wooden kiosks to market their home-based IGAs. Kiosks are usually located at the front space of the house to maximize their products' promotion. However, the limited frontage space as stipulated by the project restricts the kiosks' sizes, forcing women to construct kiosks that are too small to accommodate their products properly. Otherwise, kiosks sometimes extend outside the plot's territory negating the project's regulations as in Figure 15. Although kiosks can be constructed at the amble space of the backyard, but that would compromise on the prospects of the products' promotion, which reduces on their profitability and women's opportunity to increase their income.

Figure 15. Kiosks at the house frontage to promote women's IGAs (left), that sometimes spill outside plot's territories (right). Photos by: Ms Nalubombwe

Indoor housing transformations

The designs of MWHP housing prototypes are based on the segmentation principle that assigns each room a specific housing function. Shehayeb and Kellet (2011) argue that the segmentation principle is often a luxury most low-income people cannot afford. But women of MWHP saw an economic opportunity in this segmentation by turning each room into separate autonomous housing unit. While one room is rented out to increase the family's income, the other is used as a multi-functional housing unit for all housing activities of the family. Women

had to extend the separating internal wall to achieve absolute segregation between the two rooms. Realising that extending the wall using cement blocks is too cumbersome and expensive women opt to use substandard but affordable materials (Figure 16), which compromises on the security and privacy level on both sides.

Figure 16. Use of substandard inefficient separating building material compromising privacy and security

Moser (1989) argues that a store is an essential housing space for low-income women but it is often overlooked by designers just as in the case of MWHP. Instead, women made use of the redundant roof vicinity as a store for their home and IGA items (Figure 17).

Figure 17. Women make use of the roof space as a store for housing and IGAs items.

One respondent lady used the straw-mats she weaves as an IGA as a "*non-load-bearing perpendicular partition"* (Habraken, 2000:46) to divide the rectangular room into two housing units maximising its functional and economic value (Figure 18). The use of straw-mats as a readily and affordabily available building material highlights affordability as a key motivating

factor to the material use and satisfaction to low-income women. Nevertheless, the location of the room's access-door restricted the room division conveniently. Designing accessibility of each room independently facilitates their flexible, economic and functional use, which maximises women convenience with their housing as proposed in Figure 18.

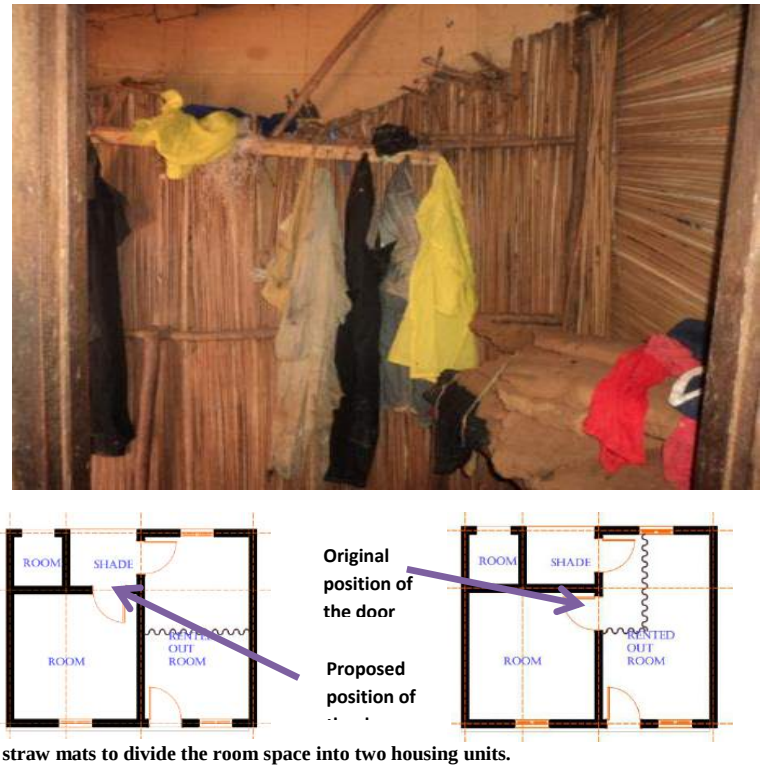


Figure 18. Use of straw mats to divide the room space into two housing units.

Women sometimes relocate the doors' openings to maximise the functional opportunities of the internal space of their homes. Nuru who performs tailoring as an IGA narrated

> *"I closed off the bathroom opening and joining its space to the corridor. Now I am able to watch over my cooking, supervise kids and chat with my visitors while attending to my tailoring business. My house also become more secured since now I need to lock one door only to secure the whole house including my cooking utensil unlike before*" (See Figure 19).

The resultant spatial pattern of relocating the door-opening facilitated Nuru attendance to her triple roles concurrently, which Moser (1992) argues contributes to women's satisfaction with their housing.

Figure 193. Relocation of door-opening created spatial patterns more conducive to women

Women sometimes use curtains as an affordable foldable dividing partition to the internal space to facilitate its flexible and multi-functional use. Curtains are used to demarcate and provide relative privacy to different housing activities within the same space (Figure 20). In such case, all spaces are usually used by members of the same household since absolute privacy and security are not a major concern among them.

Figure 20. Use of curtain as a non-loadbearing partition material

Typical to what low-income people usually do as noted by Shehayeb & Kellet (2011), women of MWHP reconfigure the limited room-space to allow for its multi-functional use flexibly. Despite women attempts to use furniture that can facilitate the flexible and multi-use of the limited room-space, a congested and stuffy environment is usually resulted compromising on the inconvenience of its occupants as can be seen in Figure 21.

Figure 21. Triple-bed decker to maximise the use of the limited space

Lastly what is evidently noted in all types of transformations women made to their housing is that they create spatial patterns and built forms that are fitting to the prevailing socio-cultural contexts, which Zeisel (2005) argues is a determinant factor to the appropriateness of any design solution. Moreover, despite the project's introduction to modified building technology and training of women to their production and assembly, women most of the time use traditional building technology in the transformations they made to their housing.

Concluding lessons

The above submission revealed that low-income women of MWHP, although without professional training, play a substantial role in transforming their housing to spatial patterns and built forms that are more user-friendly than those provided by professionals. Therefore, low-income women's efforts in appropriating their housing deserve to be acknowledged and included in the Ugandan low-income housing discourse. This will not only reduce low-income women marginalisation in housing but can also support the provision of housing designs that are more user-friendly to them.

The study revealed that the appropriateness of the housing design solutions to Ugandan low-income women is closely related to its capacity to accommodate their triple roles thus need to seriously be considered in the housing designs of the Ugandan low-income housing projects. Outdoor and open sheds proved to be instrumental in accommodating low-income women practical needs of the everyday life. Sheds are also flexible enough to adapt to the changing housing needs of low-income women, which contributes to their satisfaction with their homes. Therefore the designs of sheds and outdoor space should well be considered in the housing prototypes offered at the Ugandan low-income housing projects to ensure their appropriateness to women.

Rooms' layouts need to be designed in a way that allows for ease of interaction to outdoor space and capacity for fragmentation into individual autonomous housing units to maximise their flexible functional and economic use and attain low-income women's satisfaction across all family structures. However, focus should be on developing local building technologies over the introducing of new ones that might not be favourable to the Ugandan low-income women.

REFERENCES:

ABBASZADEH S., MOGHADAM, M., & SAADATIAN, O. 2013, *Analyzing a Proper Flexible and Adaptable Pattern for Promoting the Housing Quality in Iran*. Journal Design+Built, 6.

AHMED I. 2011, *Lifestyle and Affordability Choices in Traditional Housing of Old Dhaka,* in Open House International, *36*(3),74-84, The Urban International Press, Gateshead, United Kingdom.

AKIIKI ASIIMWE F. 2010, *Gender and Homeownership: The dynamics of marriage in Kampala, Uganda*. Journal of Arts and Culture, 1(1), 1-16, Bioinfo Publications.

DANDEKAR H. C. 1992, *Shelter, Women and Development, First and Third World Perspectives*, George Wahr Publishing Co., Ann Arbor, Michigan, USA.

DELGADO A. & DE TROYER, F. 2011, *Modeling Quality and Housing Preferences for Affordable New Housing Developments*, Open House International 36(3),27-37, The Urban International Press, Gateshead, United Kingdom.

ELWIDAA E. & NNAGGENDA A. 2015, *Boundary-less Living,* International Journal of Technoscience and Development IJTD, *2*(1), Sweden.

HABRAKEN N. 2000, *The structure of the Ordinary, Form and Control in the Built Environment,* (J. Teicher, Ed.), The MIT Press, Massachusette, USA.

HABRAKEN N. 2005, *Change and the Distribution of Design,* Open House International 3(1), 7-12, The Urban International Press, Gateshead, United Kingdom.

HABRAKEN N. J. 2011 *Supports.* London: Urban International Press, United Kingdom.

KHAN T. H. 2014,. *Living with Transformation, Self built Houising in the City of Dhaka.* Skudai Malaysia: Springer.

KELLETT P. & TIPPLE G. April 2000, *The Home as a Workplace: a study on Income-generating Activities within the Domestic Setting*, Environment & Urbanization, 12(1), 203-213, Sage Publications.

KENNETT P. & WAH K. C. 2011, *Women and Housing, an International Analysis.* Routledge Taylor and Francis Group.

KISHINDO E. C. 2003, *Women and Housing iinsecurity in Malawe: A study of Two Low-cost Housing Projects in Zomba District in Malawi*, 74-99, LARSSON A, MAPETLA M. & SCHLYTER A. (Eds.), *Gender and Urban Housing in Southern Africa: Emeging Issues*, Institute of Southern African Studies, Cape Town, South Africa.

LARSSON A. 2002, *Gender prespectives in Housing and Planning*, Building Issues,11(1), 3-18, Lund, Sweden

LAWSON B. 2006, *How Designers Think, The Design Process Demystefied.* Oxford USA: Elsevier Ltd.

LEUPEN B. 2005, *A New Way of Looking at Flexibility*, Open House International 3(1), 55-61, The Urban International Press, Gateshead, United Kingdom.

MINISTRY OF HOUSING, LANDS & URBAN DEVELOPMENT MoHL&UD 2008, *The National Slum Upgrading Strategy and Action Plan,* United Nation Development Program UNDP, Kampala, Uganda.

MINISTRY OF HOUSING, LANDS & URBAN DEVELOPMENT MoHL&UD. 2013, *Provision of Consultancy Services for Evaluation of Slum Upgrading Projects (Namuwongo, Masesese, Malukhu and Oli,Final Report – Masese Women's Self Help Project*, Kampala, Uganda.

MOSER C.O.N. 1989, *Gender Planning in the Third World: Meeting Practical and Strategic Gender Needs*, World Development17(11), 1799-1825, Pergamon Press Plc, United Kingsom.

MOSER C.O.N. 1992, *Housing Policy and Women: Towards a Gender Aware Approach* (Draft Document), HABITAT, Nairobi, Kenya.

NNAGGENDA A. M.. 2008, *Housing Clusters foe Desintification within an Upgrading Strategy*, The Royal Institute of Technology KTH, Stockholm, Sweden.

NAWANGWE B. 1994, *The traditional Soga Homestead*, Vernacular Architecture Series, 2(5), Center for Vernacular Architecture Research, Makerere University, Kampala, Uganda.

NAWANGWE B. & NNAGGENDA A. M. 2005, *Informal Response To Housing Shortage In Post-Independent Uganda - Any Lessons For Architects?* IAHS World Congress On Housing Transforming Housing Environment Through Design XXXIII, Pretoria, South Africa.

PREISER W. F. 1995, *Post-Occupancy Evaluation: How to make buildings work better*, Facilities, 13(11), 19-28, University of Cincinati, Ohio, USA.

SCHLYTER A. 1996, *A Place to Live: Gender Research on Housing in Africa.* (A. Schlyter, Ed.) Uppsala, Sweden.

SCHNEIDER T. & TILL J. 2005, *Flexible Housing: Opportunities and Limits*, Architectural Research Quarterly, 9(2), 157-166, Cambridge University Press, United Kingdom.

SCHNEIDER T. & TILL J. 2007, *Flexible Housing,* Architectural Press, Routledge Taylor & Francis Group, London, U.K

SHEHAYEB D. & KELLET P. 2011, *Towards affordability: Maximizing Use Value in Low-income housing*, 85-96, Open House International, 36(3), The Urban International Press, Gateshead, United Kingdom.

SLAUGHTER E. 2001, *Design Strategies to Increase Building Flexibility*, 208-217, Building Research & Information, Taylor & Francis.

STAKE R. 1995, *The Art of Case Study*, Sage Publications, International Education and Professional Publisher, New Delhi, India.

TIPPLE G. 2000, *Extending Themselves, User Initiated transformations of Governemnt-built Housing in Developing Countries*, Liverpool University Press, Liverpool.

TURNER J. 1977, *Housing by People; Towards Autonomy in Building Environments*, Pantheon Books, Random House Inc., New York, USA.

WALLMAN S. 1996, *Kampala Women Getting By, Wellbeing in the Times of Aids*, Long House Publishing Services, Cumbria, U.K.

WEISMAN, L. K. 1994. *Discrimination by Design, a Feminist Critique of the Man-Made Environment.* University of Illinois Press, Urbana and chicago, USA.

WILKINSON N. 2005, *Editorial note; Some Reason for Optimism*, Open House International 3(1), 4, The Urban International Press, Gateshead, United Kingdom.

YIN R. 2009, *Case Study Research, Design and Methods*, Fourth Ed. Applied Social Science Research Methods Series, Volume 5, Sage Publications Washington DC, USA.

ZEISEL J. 2006, *Enquiry by Design.* W.W. Norton & Company, California, USA.

IV

Time and Transformation in Architecture

Edited by

Tuuli Lähdesmäki

BRILL
RODOPI

LEIDEN | BOSTON

Contents

PART 3
Spirituality and Decay in Architecture

CHAPTER 6

Women as Retrofits in Modernist Low-Income Housing

Assumpta Nnaggenda-Musana and Eiman Ahmed Elwidaa

Charting Colonial Planning in Uganda

Planning in Uganda's urban areas developed on the basis of British colonial urban planning influences and ideologies.[1] Mukwaya notes that 'the Colonial period defined Uganda's spatial and urban development pattern.'[2] Under colonial planning Uganda was broken down into provinces, which were sub-divided further into districts. The headquarters of these provinces and districts were later to become urban centers and the first townships in Uganda.[3] Some of Uganda's large urban areas are Kampala and Jinja, which are the focus of this chapter.

African housing during the colonial times was not designed for female habitation. However, architects should recognize that the creation and utilization of space both shapes and is shaped by social relations. Houses should be recognized as spheres of feminine activity since women stay longer at home. Have women been considered in post-colonial housing? Integrating women's needs in housing can make their lives easier for collaborative and productive income-generating activity while permitting income accumulation and time for other activities. The empirical part of this chapter explores the adequacy of the government provided houses for women in the MWHS: Masese Women's Housing Scheme in Jinja. Findings were generated from field research, archival data, and oral histories to reveal the women's ways of living. Employing a qualitative approach enabled the researchers to ground their analysis of the women's interpretation of real life. The study attempts to understand gendered social relations in households. Gender is used as an analytical tool to explore how different groups experience their environment on an everyday basis.

1 Assumpta Nnaggenda-Musana, "Housing Clusters for Densification Within an Upgrading Strategy. The Case of Kampala, Uganda" (PhD diss., Royal Institute of Technology (KTH), Stockholm, Sweden, 2008), 40.

2 Paul Isolo Mukwaya, "Urban Change in Uganda: The Challenge of Managing Urban Areas in a Global Environment," paper for the College of Urban Planning and Public Affairs (CUPPA) Conference at the University of Illinois, Chicago, USA, July 22–24, 2004.

3 Tom Sanya, *A Study of Informal Settlements in Kampala City* (Masters diss., Universität Stuttgart, Germany, 2001).

 | DOI 10.1163/9789004376793_007

The notable features of colonial urban planning in Uganda were economic and racial segregation. Racial segregation policies determined the growth of housing areas into British, Asian, and African neighborhoods in urban centers. Wielding power the British officials deemed themselves superior beings who came to modernize the indigenes ways of living. The Asian business and trades men were next down the rung and then the Africans, who mostly came to urban areas to do menial and other low paying jobs, were considered lowest in rung. Basing himself on Cape Town, South Africa—a country that was also colonized by the British—Graan observes that the discussions of architectural modernism most especially during the colonial era are 'strongly grounded in theories of power, power relations, mechanisms of control, and terrains of contestation and negotiation of difference.'[4] Graan further observes that the city council used segregation as a way of closely watching the living spaces of those that they controlled.[5] In Uganda, racially segregated housing was constructed in most of the district headquarters.

Housing for the British officers or *senior quarters* as they were called was located on hills[6] that allowed for good views, denoted power, and also ensured that the housing areas for the Asians or *junior quarters* and Africans—*African quarters*—could be easily monitored, or as in the South African context were 'clearly visible and controllable'.[7] Graan explains that in colonial South Africa, the modernist planning implemented by the colonial government *did not have* the concern for improving the wellbeing of its entire people, but rather became primarily a mechanism for social engineering, restructuring urban areas into racially and physically segregated areas, and dealing with issues around health and slum clearance, creating spaces that enabled the 'Colonial Other' to be noticeable and controlled.[8] According to Anderson and Rathbone, the houses for the British were situated on hills because they supposed that the high altitude would prevent the spread of air- and water-borne diseases.[9] In the South African context, Graan notes that categorizing people racially was used to draw out 'the different planning approaches that would be adopted by the City Council in the housing policies applied to different groups.'[10]

---

4 André van Graan, "Modernism as a Mechanism of Power and Control in Colonial Contexts: The Project of Modernity in Cape Town South Africa," in this volume.

5 Graan, "Modernism as a Mechanism of Power and Control," in this volume.

6 Sanya, *A Study of Informal Settlements in Kampala City*, 18.

7 Graan, "Modernism as a Mechanism of Power and Control," in this volume.

8 Ibid.

9 David M. Anderson and Richard Rathbone, *Africa's Urban Past* (Oxford: James Currey, 2000).

10 Graan, "Modernism as a Mechanism of Power and Control," in this volume.

In Kampala, the British housing areas dominated hills, such as Kololo, Nakasero, and Muyenga. Physical planning in the British neighborhoods was characterized by plots with ample space. These plots were measured in acres while in other parts of Kampala city, where the Asian and African households lived, the plots were measured in square meters. Today the plot frontages in the formerly British neighborhoods are still characterized by spacious plot subdivisions, ample public open spaces, and roads. Figure 6.1 shows the generous roads and road reserves that were designed for houses in the upscale Kololo hill commensurate to the first decade of the 20th century garden-city and modernist inspired planning ideals.[11] The houses on Kololo hill were isolated and sat on large gardens in the spacious plots, well provided with the basic infrastructure and services like roads, electricity, piped water, sewerage, and telephones lines.

The British neighborhoods were separated from the houses that were planned for the Asians and Africans by large open green areas bordered with wooded expanses or roads.[12] The Asian neighborhoods were further segregated from the African neighborhoods. The large open areas and wooded areas or roads mentioned above and the Asian neighborhoods buffered the British neighborhoods from the African settlements. The houses for the Asians including

FIGURE 6.1 *Kololo Hill, Kampala, Uganda, the generous roads and road reserves that were designed for houses in the upscale areas*
PHOTO: ASSUMPTA NNAGGENDA-MUSANA.

11 Nnaggenda-Musana, "Housing Clusters for Densification within an Upgrading Strategy," 27.

12 Sanya, *A Study of Informal Settlements in Kampala City,* 18.

the gardens and plots were smaller than those of the British but bigger than those for the Africans (see figures 6.2 and 6.3).

The different plots in the British neighborhoods were fenced off from each other with boundary walls demarcating the private territories of the

FIGURE 6.2 *Single storey house types in Asian neighborhoods, Kampala, Uganda*
PHOTO: ASSUMPTA NNAGGENDA-MUSANA.

FIGURE 6.3 *Double storey house types in Asian neighborhoods, Kampala, Uganda*
PHOTO: ASSUMPTA NNAGGENDA-MUSANA.

FIGURE 6.4 *African quarters in Naguru, Uganda, built in the 1950s*
PHOTO: ASSUMPTA NNAGGENDA-MUSANA.

FIGURE 6.5 *Distance between the African quarters in Naguru, Uganda, built in the 1950s*
PHOTO: ASSUMPTA NNAGGENDA-MUSANA.

British households. In the Asian and African neighborhoods, on the other hand, different households lived in semi-detached houses. The plots in the Asian neighborhoods had boundary markers like hedges to demarcate the territories of the different households, while in the African neighborhoods the outdoor space appeared more open and communal. The British intentionally designed the Asian and African houses in open spaces to be able to monitor and control these populations (see figures 6.4 and 6.5). According to Graan, 'the link between modern housing and mechanisms of control were clearly apparent.'[13]

Colonialism and Gendered Space

Like tents are to campers, it is argued that the African neighborhoods were small only because the African laborers—mostly men—were expected to live and commute from the rural areas. Majale notes that colonial government policy promoted the construction of houses with few rooms and with common facilities for the accommodation of short-term male laborers.[14] Graan states that in South Africa the Africans were provided with 'mainly hostel accommodation'[15] as far away as possible from family structures. The houses that were provided for them within the city were basically temporary lodgings. The room sizes were small with intentions of preventing the men from bringing their families to the urban areas.

Ironically many years later in the post-colonial period, urban planning in the major urban centers of Uganda is still guided by colonial planning principles and building regulations since no major modifications have been made to planning guidelines. Sengendo states that strategies to resolve housing problems in Uganda have not been comprehensive since they were founded during the colonial times.[16] As Mukwaya notes: 'Nothing much has changed from this pattern after the independence period.'[17] The government provided housing designs in Uganda—especially the informal settlements upgrading schemes—which intended to improve the shelter needs of the urban low-income households, seem to have been developed within the colonial urban planning framework.

13 Graan, "Modernism as a Mechanism of Power and Control," in this volume.

14 Michael Majale, "Settlement Upgrading in Kenya: The Case for Environmental Planning and Management Strategies" (PhD diss., University of Newcastle upon Tyne, UK, 1998).

15 Graan, "Modernism as a Mechanism of Power and Control," in this volume.

16 Hannington Sengendo, "The Growth of Low Quality Housing in Kampala–Uganda between 1972–1989" (PhD diss., University of Nottingham, UK, 1992), 65.

17 Mukwaya, "Urban Change in Uganda," 1.

The houses in such schemes have been referred to by some scholars as being smaller prototypes of colonial models.[18]

Like the situation was in apartheid South Africa, where the ways of living of the Africans were replaced 'with a "modern" vision of urban housing, that laid open and visible the threatening alleys and spaces that potentially fomented revolution',[19] the modernized house prototypes for low-income housing schemes in Uganda seem to have been designed as though these households need to be monitored. The forms and layouts of the housing prototypes 'make access, visibility, and observation easier'.[20] As a dire reminder of the African neighborhoods designed during the colonial times, the government provided houses are small as well as the plots, even if they are not intended to be occupied only by men like during the colonial times.

The sizes of the low-income houses are similar to those that housed men *temporarily* in the African neighborhoods during the colonial times regardless of new ideologies that encourage user-friendly and gender sensitive designs. These low-income houses have inevitably been retrofitted *permanently* with household sizes that were not considered in the original designs. In other words, these households, which include women, children, and extended family, have had to squeeze into spaces that were not tailored or designed for them. It is interesting to see how the women, children, and extended family have adapted to these houses.

Designing for a particular sex, race, class, or ethnic group brings a gender element to design. The term gender, in many cases, has been associated with the biological differences between men and women making it synonymous to the term sex. Larsson defines gender as a term that 'denotes what a society describes to be male and female, varies over time and place, a social and cultural construction.'[21] Gender can as well refer to the economic, social, and political divergences involving women and men, including their perceptions of the quality of life and living opportunities.[22] Being socio-culturally contextualized, Mapetla and Schlyter emphasize race and class as important variables in gender relations.[23] Gender concerns among the women who belong to a particular

18 Sengendo, "The Growth of Low Quality Housing in Kampala–Uganda between 1972–1989."

19 Graan, "Modernism as a Mechanism of Power and Control," in this volume.

20 Ibid.

21 Anita Larsson, "Gender Perspectives in Housing and Planning," *Building Issues* 11, no. 1 (2001): 1–18.

22 Nnaggenda-Musana, "Housing Clusters for Densification within an Upgrading Strategy," 96.

23 Matšeliso Mapetla and Ann Schlyter, *Changing Gender Relations in Southern Africa. Issues of Urban Life* (Roma, Lesotho: Institute of Southern African Studies, National University of Lesotho, 1998), 3.

group might be different from those of another group. Larsson draws attention to the close relationship between the concept of gender and physical planning and housing design. She notes that the gender concept 'can be used to create a woman-friendly environment, and can be used to analyze women's subordination in society.'[24]

In the context of the MWHS: Masese Women's Housing Scheme, the houses that were designed to accommodate men and are now housing women clearly reflect gender biasness against women and stand as a symbolic evidence of how space can be *gendered*. Gendered space hereby refers to space that is expected to be used by one sex or otherwise accommodates activities that are assumed to be performed by different sex groups. Spain argues that gendered spaces can provide a solid, everyday life foundation for the status difference to be produced and transformed within different socio-cultural contexts.[25] With that understanding, it could be argued that the housing designs and the spaces that were produced under the colonial planning principles and regulations are gendered. These houses can be seen to be gendered in relation to race as we have noted above as well as in relation to sex as is the case in MWHS. The MWHS houses are evocative of the houses that were provided for the African male laborers during the colonial period.

Women Living in Male Space

Space can be considered as an ordering principle and so is gender. Space represents social organization. Space speaks; houses have been associated with women and have been the loci of female labor and the daily tasks of food preparation, childrearing, and maintenance of the physical and cultural household. According to Spain, parochial space extends the porosity of public and private—and their associated gender roles—beyond the boundaries of a discrete household to the communities in which they were situated.[26] The social construction of gender differences creates women and men spaces. Domestic space is termed as private space, thus, the sphere in which women operate.[27] Women are seen as being concerned with the particular.[28] In MWHS the

24 Larsson, "Gender Perspectives in Housing and Planning," 5.

25 Daphne Spain, *Gendered Spaces* (Chapel Hill, NC: University of North Carolina Press, 1992), 233.

26 Spain, *Gendered Spaces*, 7.

27 Ibid.

28 June Jordaan, "Architectural Agency and 'Place-Making' in a Transformative Post-Apartheid South African Landscape," in this volume.

gender roles in domestic space were altered. The boundaries between spaces are blurred, there is no clear division 'between private, parochial, and public spaces'.[29]

At the Neighborhood Level

The MWHS: Masese Women's Housing Scheme in Jinja is one of the government provided informal settlements upgrading schemes in Uganda during the late eighties. The Ugandan government was facilitated by organizations, such as the Danish International Development Agency (DANIDA), United Nations Development Program (UNDP), United Nations Centre for Human Settlements (UNCHS), and Shelter Afrique to develop these informal settlements upgrading schemes. These schemes include Namuwongo in Kampala, Malukhu in Mbale, Oli in Arua, and MWHS in Jinja.[30] This study focuses on the MWHS because unlike the other informal settlements upgrading projects, the MWHS is unique in that it targeted women as the main beneficiaries. This project was provided mainly for low-income women to avail them with modern housing probably as a relief from the inadequate shelter in the informal settlements where they had been living. The MWHS was conceived by the Ugandan government as confirmation of its commitment towards mainstreaming gender in housing. This followed the Third World Conference on Women (TWCW) that was held in Nairobi, Kenya, in 1985, whereby the East African countries dedicated themselves to promoting gender issues in all government sectors, including housing. Seemingly the TWCW impacted positively on raising gender awareness in Uganda through the formation of MWHS. However, were the houses adequate? Did the planners and architects of the MWHS house prototypes stop to think about the occupants of these spaces?

According to Jordaan, 'the role of the architect is to provide good "form" wherein communities can be stabilized, dwelling can take place, and thereby produce happy, non-alienated, non-conflicted human beings.'[31] Comparing the MWHS house prototypes to the colonial housing designs for the Africans it seems that neither the planners nor the architects of MWHS thought about the production of 'non-conflicted'[32] places. As if they were to allow for adequate surveillance, the plots of MWHS were designed in a gridiron kind of layout in small sizes of 18m × 12m. These plots were arranged around an open space facing a public road in clusters of 8–18 plots (see figures 6.6).

29 Spain, *Gendered Spaces*, 7.

30 Nnaggenda-Musana, "Housing Clusters for Densification Within an Upgrading Strategy," 58–59.

31 Jordaan, "Architectural Agency and 'Place-Making'," in this volume.

32 Ibid.

FIGURE 6.6 *Model of a cluster housing at the MWHS: Masese Women's Housing Scheme*
AUTHOR: EIMAN AHMED ELWIDAA

The house prototypes for the MWHS neighborhood were meant to be enclosed by boundary walls around the plots to demarcate the extent of each plot. However, today these walls have not been built. Did the women in the MWHS not construct the boundary walls due to lack of money to build them? The women demarcate their different plots with short hedges to mark their territories. They create their own boundaries albeit differently. Jordaan notes that a boundary 'is that point where something begins its "presencing"'.[33] Some women state during interviews that even if they were able to afford building the boundary walls, they would not, because they feel that these walls can contribute to social alienation. To the MWHS women, a neighborhood that enables them to interact with each other is an essential component to the convenience of that setting. In the MWHS context, the neighborhood concept should be understood to mean any household within five to ten minutes of walking distance. In some circumstance, the households are not only neighbors, but are also relatives or behave like relatives even if they are not. The women feel that the walls are a barrier to good social interaction, which is essential for their wellbeing and satisfaction. In order to sustain the social interaction households visit each other frequently. Sometimes the visits are formal or informal. Informal visits can be in the form of borrowing salt for cooking. Reciprocal visits are part of social interaction with people from different households. Formal and informal visits influence the continuation of households bonds, and enable the formation of new fields of interaction.

33 Jordaan, "Architectural Agency and 'Place-Making'," in this volume.

When discussing architecture and gender, Spain argues that residential architecture, among other landscape features, 'reflects ideals and realities about relationships between men and women within the family and society.'[34] In MWHS, absence of boundaries between houses, coupled with the housing transformations, has resulted in the emergence of organic spatial patterns that are in departure from the assumed ones. The emerging organic spatial patterns only hint at the original planning layout but defeat the prior rigid gridiron arrangements that were stipulated at the onset of the housing scheme. There is no clear demarcation of private and public space, since private space seems to spill over into the surrounding public spaces. The women's rejection of the construction of boundary walls can be viewed as repulsion against fixation to confinement and a pursuit for liberation and freedom. Women extend their realm beyond the captivity of their homes, and extend themselves beyond boundaries to new horizons and in a solid statement that denies submission and control. The houses are small in size and congested spaces inside, which forces the women to receive their visitors outdoors. Therefore, the outdoor space of the house becomes a reception area to compensate for the small space within the house. With the absence of demarcating fences between these houses, social bonding is maintained.

One might wonder what the rationale behind the phenomenon of boundaryless living is. Is it just a representation of women emancipation or is there more to it? What can we learn from this phenomenon that can assist architects and planners to design 'happy, non-alienated, non-conflicted'[35] housing that can enhance people's wellbeing? It is observed that the newly emerged physical setting of MWHS—whether conscious or subconscious—is conducive to women's housing needs and their ways of living. The ideals of true womanhood—as domesticity was alternatively known—elaborated women's position within the private sphere and celebrated qualities, such as piety, purity, submissiveness, and domesticity.[36] This ideology segregated male and female responsibilities. Women of MWHS feel more secure in their neighborhood because the absence of boundary walls creates defensible space allowing for natural surveillance among neighbors, which makes them feel protected. Women can embrace power within their own realm even though modernization seems to marginalize them even more. The MWHS women observed that absence of barriers and restrictions gives them a sense of belonging and social existence that is comforting and makes them *happy* human beings.

34 Spain, *Gendered Spaces*, 7.

35 Jordaan, "Architectural Agency and 'Place-Making'," in this volume.

36 Janet Giele, *Two Paths to Equality: Temperance, Suffrage, and the Origins of Modern Feminism* (New York: Twayne, 1995), 36.

At the House Level

In MWHS, there were three types of plots, which came in sizes of small, medium, and large. Three different house prototypes were designed on each type of plot. The women, who benefitted from this scheme, were supposed to choose their house designs from government provided prototypes and based on their capacity to pay back the loans that were provided to cover the house construction expenses. The project stipulated that the medium and large plots could be accessed only by those women, who had formal employment in the formal sector. However, most women who were to benefit from this scheme were working in the informal sector and could only afford the small houses on the small plots. Thus, the small houses, which are frequent in the MWHS neighborhood, are the focus of this study.

The small houses prototypes were designed in three types 1, 2, and 3 (see figure 6.7). The layout of the houses comprised of two rooms—one to act as a living room and the other as a bedroom—and a corridor as in type 1. In type 2, part of the corridor was reduced and a bathroom was introduced. In type 3, one of the rooms was enlarged by extending it into the corridor area. The remaining space between the enlarged room and the bathroom then formed a shade. However, these spaces have been transformed to date (see figure 6.8 where the house on the left has been extended on the extreme right).

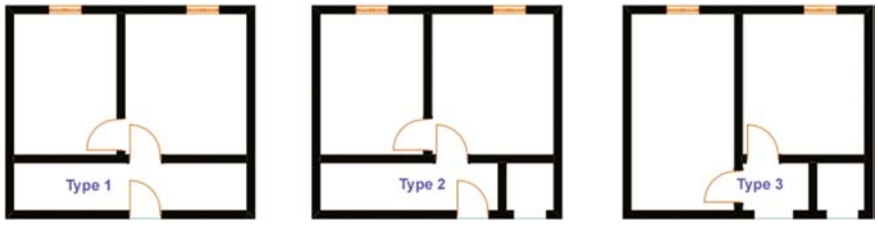


FIGURE 6.7 *Plans of the MWHS house prototypes*
AUTHOR: EIMAN AHMED ELWIDAA.

FIGURE 6.8
MWHS house that has been extended on right side, in Jinja, Uganda
PHOTO: EIMAN AHMED ELWIDAA.

Space in the MWHS neighborhood can be divided in four types: private, semi-private, semi-public, and public. Women and men can be observed in these four space types. The private space is that which is immediate to the houses, this includes the indoor and outdoor space. The semi-private spaces are those, which people close to the household can access. The semi-public space is that space closer to the houses—like in cases where Home Based Enterprises (HBEs) are present—and is accessed by complete strangers who come to buy groceries. Public space is accessed by strangers. This is unlike in the traditional modern housing where private and semi-private space is found within the plot, and the private spaces like kitchens are defined as feminine and are arenas for women's work, including female members of the household and the house helps. The kitchens in this case are usually found in the private spaces behind the houses. According to Ardener, the 'notion of "private" as opposed to "public" is seen as a criterion for "mapping" metaphysical space, as "inner" does in opposition to "outer".[37]

In the MWHS houses,—unlike traditionally when women were relegated to the backyard—the women are often found in the front yard. Thus, the MWHS private and semi-private space can be found at the front of houses. The front of the houses and the plots are multifunctional areas, and are women's spheres of influence. This is where these women interact with neighbors or with customers in scenarios where HBEs are located in front of the houses. Women also do their chores like washing clothes and cooking food in front of their houses, here they can tend to their children, do beauty care—like hair plaiting—or chat. Some can take naps too while others are working. Dishes are washed outdoors in a traditional way in a basin or bucket.

The women use traditional ways of cooking, for instance, using charcoal stoves made from oil tins, which require them to sit while cooking. Some women need privacy when cooking so they have constructed shades. Luckily, these shades are open to draft preventing heating up and allowing for a cool atmosphere in the cooking shades and enabling the women from different households to do their house chores while chatting with neighbors.

The ambitions of most women are to acquire enough space. Since most of them earn meager wages, their wishes are to be able to extend their houses so as to acquire income generation space, to be able to earn sufficient extra money to care for their households. Transformations can include rooms for rental as accommodation, salons, eating spaces, or bars. The alterations are also made to create more room for user households, for example, rooms for

37 Shirley Ardener, *Women and Space, Ground Rules and Social Maps* (Oxford: James Currey, 2000), 4.

extended family. Associations with close kin are important to MWHS households combining economic security, political influence, social support, and psychological assistance in the form of emotional security and in particular entertainment. An effective field on interaction can occur between neighbors of the same social status, and friends, these become kin by affinity.

Two main forms of transformations have been noted in MWHS. The first was mainly in the form of adjusting the internal space by zoning off new space within a larger space to accommodate variant activities of the households within the same space. Women, prompted by their traditional gender role as a homemakers, used the internal spaces creatively by for instance, extending the limited indoors space to the roof space to act as a storage area for their home accessories and belongings.

Transformations have been made on the outside of the houses in the form of semi-attached or detached extensions to accommodate rooms. These rooms are usually built to house extended family or older children—especially boys—who are expected to be separated from their younger siblings in the African culture. The internal space of the houses has been sub-divided in some cases to accommodate tenants who can pay the households some money monthly. In figure 6.9 a woman, who earns extra income from selling jerry-cans of water uses the roof area to store her merchandise on top of the trusses.

In MWHS, traditional, patriarchal, extended family still prevails. However, matrilineal tendencies cannot be disregarded. Women gain status, prestige, and relative freedom when they are self-sustaining financially. The low-income women of MWHS, beside their conventional gender role of taking care of the families by being responsible for cooking, child rearing, and other domestic chores, indulge in HBE to increase their income. In female headed-households, women are the sole income earners in the households forcing them to take both roles of the caretaker and the breadwinner. To be able to meet all of those

FIGURE 6.9
Roof storage space
PHOTO: EIMAN AHMED ELWIDAA.

obligations, necessitate women to develop their multi-tasking skills. It is a common scenario in MWHS for women to attend to customers from a distance while washing clothes or watching over their cooking food. The goods often sold are handmade crafts or groceries grown in gardens around their houses.

It is important to note that most of the women's activities are performed outdoors. The indoor areas are used in case of adverse weather conditions. The intense use of outdoor space could have been dictated by the limited sizes of the indoor space and the way the activities are conducted. Cooking on charcoal stoves, washing and drying clothes, and attending to shops, kiosks, neighbors or visitors, are all done outdoors. The absence of boundary walls between plots has had a positive impact on the women as it enables them to carry out their chores within the vicinity of their houses while chatting with each other.

The two-roomed houses of MWHS were not sufficient to accommodate the households. It is important to state that in Uganda and in the MWHS sociocultural context the phenomenon of house being able to receive extended family is familiar and essential. However, the designs of the house prototypes of MWHS seem to be based on colonial perceptions expecting the house to be occupied by nuclear family households. These houses are not designed to include extended, polygamous, or female-headed households, commonly found in the African cultures. Evidencing that housing should be a reflection of its users' values, aspiration, and motivations, MWHS women had to transform their housing space and adjust it to accommodate their housing activities and needs. Since most of them earn meager wages, their wishes were to use their houses in a way that could promote their welfare, for instance, by helping them increase their income to care for their households. This confirms Larsson's argument that the term *housing* has a broader meaning, embracing both its value as a shelter as well as its social and physical surrounding, and as such housing becomes crucial for women as a center for their activities.[38]

Updating Low-Income Housing

Space without boundaries influences the kind of social interaction that is seen in MWHS. Social identity in MWHS is determined by the physical and spatial constituents of space. In MWHS, it is important to note, however, that an absolute separation of spheres does not exist. Space is not used as it has been socially constructed, whereby the public space is occupied by men and the private by women. Gender-specific as well as sexually integrated space extends

38 Larsson, "Gender Perspectives in Housing and Planning," 4.

beyond the walls of domestic space into the outdoor areas. Blurred space or 'spaces within spaces or overlapping universes'[39] is a common phenomenon in MWHS. These social functions illustrate that the use of space in MWHS is fluid and contingent upon the type of social interaction and the human agents present in that space. In low-income housing, women have been noted to be physically dominant in domestic space that was originally masculine.

Evident in MWHS are adaptations that have developed over time, these are alterations in government provided house prototypes and the new transformations. The women in most cases are continuously transforming the houses that were provided for them. Kishindo notes that like in several African cultures in which women are assigned the role of turning a house into a home, the MWHS women managed to transform the impersonalized houses to make them a *home* that promotes their existence and bloom.[40]

The houses in the MWHS neighborhood are small and appear to be similar to the African neighborhoods. However, most of the houses have been transformed. Why are the houses being transformed? Is it because they were designed for male habitation? How can these transformations inform us? Were the ways of living of the MWHS women considered when designing their housing? Jordaan argues that space should be bound with reality. Places should be designed with relevance to reality.[41] The appreciation of physical space is dependent on the social perceptions of it. How are roles of men and women shaped in housing space? Ardener explains that 'objects are thought to structure the environment immediately around them.'[42] However, it can be observed that the MWHS houses took on a physical form not determined by the women even though they are meant to live in them perpetually. Most houses in the MWHS have been transformed from their original forms. The transformations include extensions to houses to accommodate various activities. Most of these activities are related to income generation. The MWHS was meant to house women that had been liberated from the harsh conditions in the informal settlements; in a way, the scheme should have been designed as a *healing instrument*.[43] However, the housing transformations seem to tell a different

39 Ardener, *Women and Space, Ground Rules and Social Map*, 3.

40 Emma C. Kishindo, "Women and Housing Insecurity in Malawi: A Study of Two Low-Cost Housing Projects in Zomba District in Malawi," in *Gender and Urban Housing in Southern Africa: Emerging Issues*, eds. Anita Larsson, Matšeliso Mapetla, and Ann Schlyter (Roma, Lesotho: University of Lesotho, 2003).

41 Jordaan, "Architectural Agency and 'Place-Making'," in this volume.

42 Ardener, *Women and Space, Ground Rules and Social Maps*, 3.

43 Jordaan, "Architectural Agency and 'Place-Making'," in this volume.

story that probably the Masese women might have been dissatisfied with the houses.

Interesting to note is that the house designs, the building materials, and construction techniques are in no way similar to those that were intended for the project. The construction materials and techniques for most of the transformations are indigenous, for example, adobe, and mud and wattle. It is as though—through the assertion of their socio-cultural identity—the women of MWHS are showing off their dignity and pride. These women are not 'weak' or 'emasculated'.[44] By transforming their houses, they are in fact resisting the original small houses that were imposed on them. The universal and universalizing space of modernism can be regarded as a culprit, which generates disaffection in society.[45] The house transformations in MWHS may indicate that the prototypes that were provided by government are inappropriate. Government tried to capture a state of perfection different from that in the informal settlements from which the women came, by creating an environment that was planned in a gridiron manner. The transformations that are developing in the MWHS are organic in nature exemplifying 'an ability to change and adapt to individual needs'.[46]

This chapter emphasizes the need for design professionals—planners and architects—to indulge their clients in the design process of their houses. Jordaan notes that the role of architects should be to provide 'good "form" wherein communities can be stabilized' instead of reproducing western ideals.[47] How can better designs for low-income households be developed today to evidence a departure from colonial planning and design? Seeing that the government provided housing schemes have been deemed a failure[48] since obviously the beneficiaries are not satisfied, the Ugandan planners, architects, and other building professionals should look back into colonial planning and try to 'track the failures, silences, displacements and transformations produced by its functioning.'[49] Housing has never been static as it changes over time and through transforming conditions. Designing houses for low-income

44 Graan, "Modernism as a Mechanism of Power and Control," in this volume.

45 Jordaan, "Architectural Agency and 'Place-Making'," in this volume.

46 Ibid.

47 Ibid.

48 Nnaggenda-Musana, "Housing Clusters for Densification within an Upgrading Strategy," 15.

49 Garth A. Myers, "Intellectual of Empire: Eric Dutton and Hegemony in British Africa," *Annals of the Association of American Geographers* 88, no. 1 (1998): 1–27 sited in Graan, "Modernism as a Mechanism of Power and Control," in this volume.

households calls for inspirations, aspirations, and ideologies that promote, celebrate, and advance their wellbeing and prosperity.

Currently MWHS has developed in contrast to how it had been envisaged to grow. Like the beauty one finds in handmade products over machine produced ones, the women of MWHS have manipulated their neighborhood to tame and develop it according to their ways of living. They have, thus, turned MWHS into a vivid, self-revealing, and emancipating living environment that celebrates their life, class, and race to take it beyond the borders of reticence, confinement, and suppression. Physical settings that facilitate associations with close kin, neighbors, and each other are a significant *reservoir* to low-income households.

Bibliography

Anderson, David M., and Richard Rathbone. *Africa's Urban Past*. Oxford: James Currey, 2000.

Ardener, Shirley. *Women and Space, Ground Rules and Social Maps*. Oxford: James Currey, 2000.

Byerley, Andrew. *Becoming Jinja. The Production of Space and Making of Place in an African Industrial Town*. Stockholm: Almqvist & Wiksell International, 2005.

Byerley, Andrew. *Displacements in the name of (Re)Development: The Contested Rise and Contested Demise of Colonial 'African' Housing Estates in Kampala and Jinja*. Stockholm: Intellecta DocuSys AB, 2005.

Byerley, Andrew. "Mind the Gap! Seeking Stability Beyond the Tribal Threshold in Late-Colonial Uganda. The Role of Urban Housing Policy 1945–1960." *African Studies* 68, no. 3 (2009): 429–464.

Byerley, Andrew. "Ambivalent Inheritance: Jinja Town in Search of a Postcolonial Refrain." *Journal of Eastern African Studies* 5, no. 3 (2011): 482–504.

Giele, Janet. *Two Paths to Equality: Temperance, Suffrage, and the Origins of Modern Feminism*. New York: Twayne, 1995.

Goodfellow, Tom. "'The Bastard Child or Nobody?': Anti-Planning and the Institutional Crisis in Contemporary Kampala." *Crisis States Research Centre Working Papers Series* 2, no. 67 (2010): 1–28.

Kamete, Amin Y. "Interrogating Planning's Power in an African City: Time for Reorientation?" *Planning Theory* 11, no. 1 (2011): 66–88.

King, D. Antony. *The Bungalow. The Production of a Global Culture*. London: Routledge and Kegan Paul, 1984.

Kishindo, C. Emma. "Women and Housing Insecurity in Malawi: A Study of Two Low-Cost Housing Projects in Zomba District in Malawi." In *Gender and Urban Housing*

in Southern Africa: Emerging Issues, edited by Anita Larsson, Matšeliso Mapetla, and Ann Schlyter, 74–99. Roma, Lesotho: Institute of Southern African Studies, National University of Lesotho, 2003.

Larsson, Anita. "Gender Perspectives in Housing and Planning." *Building Issues* 11, no. 1 (2001): 1–16.

Larsson, Anita. "From Equal Opportunities to Gender Awareness in Strategic Planning. Reflections based on Swedish Experiences." *Town Planning Review* 77 no. 5 (2007): 507–530.

Majale, Michael. "Settlement Upgrading in Kenya: The Case for Environmental Planning and Management Strategies." PhD Dissertation, University of Newcastle upon Tyne, UK, 1998.

Mapetla, Matšeliso, Anita Larsson, and Ann Schlyter. *Changing Gender Relations in Southern Africa. Issues of Urban Life*. Roma, Lesotho: Institute of Southern African Studies, National University of Lesotho, 1998.

Mukwaya, Isolo Paul. "Urban Change in Uganda: The Challenge of Managing Urban Areas in a Global Environment." Paper for the College of Urban Planning and Public Affairs (CUPPA) Conference at the University of Illinois, Chicago, USA, July 22–24, 2004.

Nnaggenda-Musana, Assumpta. "Housing Clusters for Densification Within an Upgrading Strategy, The Case of Kampala, Uganda." PhD Dissertation, Royal Institute of Technology (KTH), Stockholm, Sweden, 2008.

Omolo-Okalebo, Fredrick, Tigran Haas, Inga Britt Werner, and Hannington Sengendo. "Planning of Kampala City 1903–1962: The Planning Ideas, Values, and their Physical Expression." *Journal of Planning History* 9, no. 3 (2010): 151–169.

Sanya, Tom. "A Study of Informal Settlements in Kampala City." Masters Dissertation, Universität Stuttgart, Germany, 2001.

Saunders, Kriemild. *Feminist Post Development Thought. Rethinking Modernity, Post-Colonialism and Representation*. London: Zed Books.

Schlyter, Ann. *A Place to Live. Gender Research on Housing in Africa.* Uppsala: Nordiska Afrikainstitutet, 1996.

Sengendo, Hannington. "The Growth of Low Quality Housing in Kampala–Uganda between 1972–1989." PhD. Dissertation, University of Nottingham, UK, 1992.

Simone, AbdouMaliq. "Spectral Selves: Practices in the Making of African Cities." Paper presented at the Wits Institute for Social and Economic Research and New School University, Johannesburg, South Africa, 2002.

Spain, Daphne. *Gendered Spaces*. Chapel Hill, NC: University of North Carolina Press, 1992.

Acta Universitatis Agriculturae Sueciae

Doctoral Thesis No. 2017:28

Rapid urbanization in cities of the Global South, challenges low-income women's accessibility to adequate housing. The research portrays that housing suitability to low-income women relies on its accommodation to their productive, reproductive and community management roles and its adaptability to their changing housing needs. It claims that including low-income women in the process of their housing design supports its adequacy across women's intersectionality.

Eiman Ahmed Elwidaa received her M.Sc. from the University of Khartoum, Sudan. She undertook her doctoral studies in landscape planning at the Department of Urban and Rural Development, SLU.

Acta Universitatis Agriculturae Sueciae presents doctoral theses from the Swedish University of Agricultural Sciences (SLU).

SLU generates knowledge for the sustainable use of biological natural resources. Research, education, extension, as well as environmental monitoring and assessment are used to achieve this goal.

Online publication of thesis summary: http://epsilon.slu.se/eindex.html

ISSN 1652-6880
ISBN (print version) 978-91-7760-574-4
ISBN (electronic version) 978-91-7760-575-1