

Architecture & Dwelling

Open Vernacular

Exploring the Potential of an Autopoietic Framework for Critical Dialogue between Tradition and Modernity to Address Future Complexity in Addis Ababa

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I. Background

Ethiopia, like many other countries in the Global South, is currently experiencing unprecedented population growth, however, this phenomenon is not spread equally throughout the country. Likewise, although Ethiopia presents one of the highest poverty rates in the entire world, a great disparity exists between rural and urban areas. Indeed, mass rural migrations to primary and secondary cities, where more resources and opportunities are sought to be, are becoming more and more prominent.¹

Projections estimate that the country capital alone will reach over seven million inhabitants by 2030, almost three-folding the numbers registered at the beginning of this millennium.² People from all over Ethiopia migrate to Addis seeking opportunities of self-realization, or to improve the quality of life. Instead, as of today, once there, they are faced with a fragile socio-economic structure and a severe housing shortage. Despite the astonishing pace at which Addis Ababa's population is growing, the city is yet undergoing an over half-century-long housing crisis. This has, in turn, resulted in the aggravation of urban poverty among the most vulnerable, low-income groups and newcomers, and in a rapid-unregulated urban sprawl, pushing the city to its limits both physically and psychologically.

Strategically located in the central part of the country, in close proximity to vital resources, Addis, the "New Flower of Ethiopia", was established in the late 19th century by Emperor Menelik II, ending the long-lasting tradition of Ethiopian "roving capitals". Originally founded as a garrison town where villages and road were being built around the leaders' palaces, it attracted many to the area, stimulating its organic growth into the complex and unique urban reality that it is today.³ Over time, Addis became a melting pot of the Ethiopian culture, a place where different ethnicities, religions, and traditions managed to coexist.

More recently, Addis Ababa has also acquired a significant role in the international scene. Being the Seat of the African Union since its foundation in 1962, it became a pivotal political and economic centre for its continent and the African interface with the rest of the world. Its new diplomatic role attracted a great deal of international interest and foreign investments, which have been re-shaping the city from its very core, pushing for modernization of the traditional urban environment and practices: glass-walled skyscrapers redefined the urban skyline, while new massive circulation infrastructure now runs all over the city.⁴

Following this trend, over the past fifteen years, the government has tried to cope with the housing shortage, and urban poverty more in general, by playing an active, or better, a solo role in the national low-income and middle-income-housing production, launching the IHDP – Integrated Housing Development Program -, commonly referred to as the "condominium scheme". By 2018, over 160'000 dwellings have been provided in Addis Ababa, some located in the consolidated city, redeveloping informal settlements or filling in urban brownfields, and many in its outskirts, replacing rural villages and agricultural fields, in an overall attempt to redefine Addis Ababa's image as that of a modern city, more suitable to its role of diplomatic capital of Africa.⁵

¹ United Nations, "Country Profile: Ethiopia," World Urbanization Prospects, 2018, <https://population.un.org/wup/Country-Profiles/>.

² Ivi.

³ Antheneh T. Tola and Brook T. Haileselassie, "Addis Ababa's Sefers: Communities in Transformation," in *Global Housing. Dwelling in Addis Ababa*, eds. Dick van Gameren and Nelson Mota (Prinsenbeek: Jap Sam Books, 2020), 50-51.

⁴ Elias Y. Alemayehu, "Addis Ababa: A Collage of Cities," in *The Transformation of Addis Ababa: A Multiformal African City*, eds. Elias Y. Alemayehu and Laura Stark (Newcastle upon Tyne: Cambridge Scholars Publishing 2018), 60-61.

⁵ Alemayehu, "Addis Ababa: A Collage of Cities," 57-60.

2. Problem Statement

The driving idea behind the IHDP was to tackle urban poverty by providing everyone with a home.⁶ The urgency of the issue and the scarcity of resources pushed the government to look for the most time- and cost-efficient solution. However, considering that the urban land was nationalized by the Derg Regime in the 1970s, all the efforts to minimize the costs went into the only parameter defining them: the quality of the built environment. Here again, affordable housing became synonymous with low-cost and low-quality housing. Thus, a set of standardized housing typologies and arrangements, together with modern construction methods based on a modular reinforced concrete structure, allowed to contain costs, while also providing immediate response to the crisis.

The most common scheme, known as the '20-80' in virtue of the amount one must pay as down payment, the 20%, and the amount that will be covered as a mortgage, the 80%, consists of four apartment types, ranging from studios to three-bedrooms units, mixed and distributed by a gallery, one floor stack on top of the other, to compose four to seven-storey high housing blocks. Moreover, communal facilities for various activities, such as animal slaughtering and open-fire cooking, are sometimes provided for each compound, serving even more than two-hundred households each. Some commercial spaces are also built, in order to be sold at high fares and yield some revenue to be invested in new developments, and therefore not accessible by most condominium beneficiaries. Further, a new typology for high-middle income groups, the '40-60', has been introduced in the shape of twelve-storey high towers, with a distribution core equipped with elevators located in the middle, organizing three to six apartment units on each floor, while commercial and office spaces occupy the first two floors.^{7 8}

As previously mentioned, most of the IHDP resulted in green-field developments, due to the scarcity of the brownfields in the consolidated city, and to the complexity of re-developing informal settlements.⁹ Therefore, the fringes of the city have been rapidly urbanized: first, the infrastructure is set, typically a big road that connects these far-away areas to the city, second, the street layout is developed, dividing the land in regular plots and, finally, construction begins.¹⁰ The concrete skeleton is erected, floor slabs are built, and walls are filled in with hollow concrete blocks.¹¹ Ultimately, the infrastructure is completed, roads are paved, and outdoor spaces are adorned with young trees and pedestrian paths.

However, this approach relies on the unrealistic presumption that, in the context of Addis Ababa, home refers to the place where to rest after coming back from work, supposedly in a different location. The sea of identical housing blocks, variously arranged in what seems to be an attempt to generate some sort of recognisability, turned out to create a new anonymous and unfamiliar urban tissue, or better, a series of dormitory villages in the countryside, where freestanding blocks float in an undefined "public space", soon to be no man's land. Foreign standards and imaginaries of modernity were brought in and adopted as local aspirations, eventually clashing with the local reality at multiple scales, disrupting and displacing existing communities, ignoring local identities.¹²

Furthermore, the deployment of foreign materials and construction methods caused several complications. If the introduction of concrete allowed multi-story construction for firm structures, its very production soon proved to be problematic, requiring the importation of raw materials and skilled labour from abroad, causing a sharp rise in production costs while providing little improvements to the local economy.¹³ Moreover, when the condominium beneficiaries moved in, they found themselves both economically and skilfully unprepared for its maintenance and upkeep.¹⁴

Even more so, the definition of specific population targets, being them low-income or high-middle income, precluded the urban poor from accessing the formal housing market, while the definition of a

⁶ UN-HABITAT, *The Ethiopia Case of Condominium Housing: The Integrated Housing Development Programme* (Nairobi: United Nations Human Settlements Programme, 2010), 14-15.

⁷ Alemayehu, "Addis Ababa: A Collage of Cities," 58.

⁸ UN-HABITAT, *The Ethiopia Case of Condominium Housing: The Integrated Housing Development Programme*, 20-24.

⁹ Ivi., 41.

¹⁰ Ivi., 24-25.

¹¹ Dick van Gameren, "Building Houses in Ethiopia," in *Global Housing. Dwelling in Addis Ababa*, eds. Dick van Gameren and Nelson Mota (Prinsenbeek: Jap Sam Books, 2020), 89.

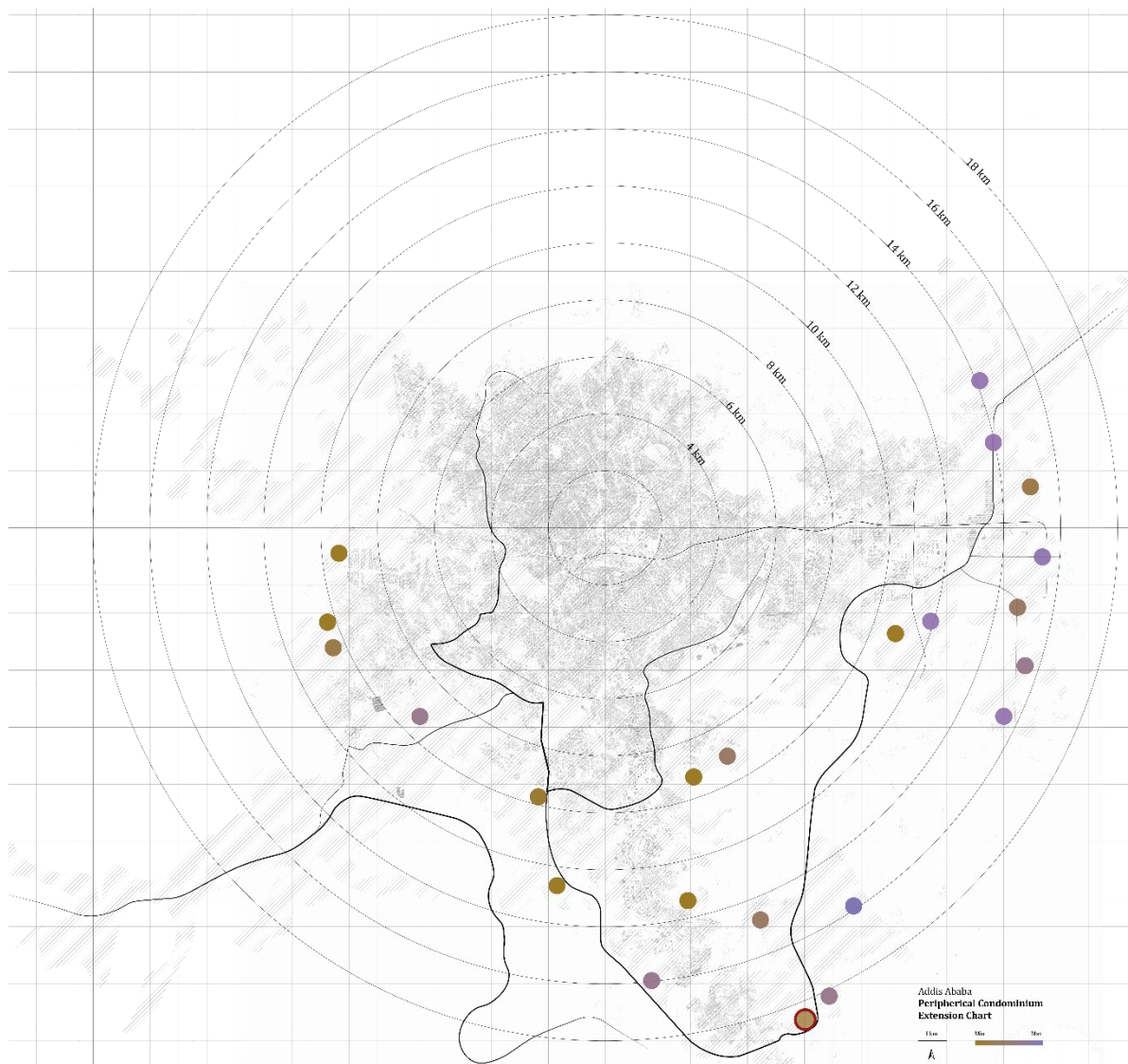
¹² Tola and Haileselassie, "Addis Ababa's Seferes: Communities in Transformation," 51.

¹³ Dirk Hebel, "Building the Future: The Application of Local Construction Technologies and Materials in Ethiopia," in *Building Ethiopia: Sustainability and Innovation in Architecture and Design V. 1*, eds. Zegeye Cherenet and Helawi Sewnet (Addis Ababa: AAU, EiABC, 2012), 185-186.

¹⁴ Ivi., 43-45.

mono-functional scheme and the location of several developments in the outskirts of the city, with very little access to income-generating activities, both in loco and elsewhere, forced many to return to informality¹⁵, hence proving that homeownership alone is not an efficient, nor an effective solution to urban poverty, nor it is a substitute to a sense of belonging.

Thus, what was designed to be an efficient solution, soon proved to be incapable of dealing with the local complex socio-economic system, and therefore inefficient in the long run. As Richard Sennett would pose it, the over-determination of form and social functions of the condominium model has produced a close system incapable of adaptation both in the immediate and in the future.¹⁶



1. Location of Condominium Developments in the outskirts of Addis Ababa, 2020.
Author

¹⁵ UN-HABITAT, *The Ethiopia Case of Condominium Housing: The Integrated Housing Development Programme*, 38-40.
¹⁶ Richard Sennett, "The open city" (Paper, Urban Age, Berlin, November 2006), <https://LSECiti.es/u3d3d134f>.



2. Akaky Kality, Addis Ababa in 2003, 2008, 2014 and 2020
Google Earth



3. Condominium Development in Akaky Kality, Addis Ababa
Ethiopian Roads Authority, 2017, <https://semonegna.com/kaliti-kilinto-kaliti-tullu-dimtu-roads/>



4. Ayat, Addis Ababa in 2001, 2008, 2014 and 2020
Google Earth



5. Condominium Development in Ayat, Addis Ababa
Desta Keremela, Public Housing, Ayat, Addis Ababa, 2016, Photograph 1024x737px, <https://urbanage-api.lsecities.net/database/api/medias/3374?download-1>

However, if the involvement of the government in the affordable housing production is a quite recent event, spontaneous and informal urbanization processes have substantially defined Addis Ababa since its very foundation. Since the last decades of the 19th century, people from all over Ethiopia started moving to the new capital, where leaders loyal to the emperor were erecting their palaces and organizing the land around them, generating work opportunities for the newcomers. Migrants gathered around the official palaces, starting off what today we identify as 'informal settlements'.

Over time, these urban agglomerations known as 'sefers', have been charged with intangible connotations related to a sense of community, sense of belonging and collective identity. In fact, to cope with rapid changes and challenges, these communities have come together through association, creating community support systems, such as the *Iddir* – a funeral association –, to look after one another in times of need, stressing the significance of social networks and social exchange in the lives of low-income groups in the city.¹⁷ Social interaction has been and still is, indeed, at the very core of informal urbanization processes, and have left visible marks on the built form of these settlements. The urban morphology of the sefers, clearly shows how the spatial organization of the public realm came about as the result of social interaction itself, of a constant negotiation between parts, as a collectively arranged residual space surrounded by individual acts of self-realization.

Furthermore, to the western eye informality has produced a hybrid urbanity, defined by an ambiguous distinction of urban and rural, opposing the clear distinction proper to western modern cities. Indeed, rural patterns of habitation – the blurry boundary between inside and outside, dwellings serving living, productive, social, and economic purposes, the capacity of the units to incrementally adapt to fluctuant spatial needs, to grow and to split, and self-building initiatives – are still common practices of low-income groups in Addis Ababa.¹⁸ Likewise, the very spatial notion of house transcends that of enclosed shelter, it is not limited by walls, it extends into the public space, where social interaction and exchange take place. Outside areas and contact to the ground are, therefore, crucial in the everyday life of the urban poor. Indeed, many dwellers in informal settlements consider their home as much more than just a place where to rest and, being it their main source of income: houses are used as a vending area or storage spaces, and are sometimes partially rented out.

"In the lower-income group, you always have to look first for a good and stable income, employment, some sort of income and, then, you want to improve your housing. [...] So, this is a very fundamental issue. The space here is not only a living space, it is also a working space, living and working go together, hand in hand."¹⁹

In this sense, the very notion of shelter is multi-layered and strongly flexible in time. Housing is, thus, a process of daily transformational and incremental growth. Piece by piece, dwellers adapt their dwellings to their economic possibilities, using local materials and techniques, recycling building components and second-hand items, making the most of available resources.²⁰

Over time, these informal processes have shown significant resiliency in shaping and re-shaping the existing urban conditions, responding to the complexity of the ever-changing needs and possibilities of their inhabitants; an autopoietic capacity, that of a system that reproduces itself from within itself. Hence, informal settlements can be regarded as the urban actualization of vernacular practices and know-how. As Paul Oliver advocates "All forms of vernacular architecture are built to meet specific needs, accommodating the values, economies and ways of living of the cultures that produce them." Vernacular practices are intrinsically intertwined with local values and customs to which they have resiliently adapted over time, yet they are also directly determined by local resources and environmental conditions, resulting in a high degree of efficiency.²¹

¹⁷ Tola and Haileselassie, "Addis Ababa's Seferes: Communities in Transformation," 57-64.

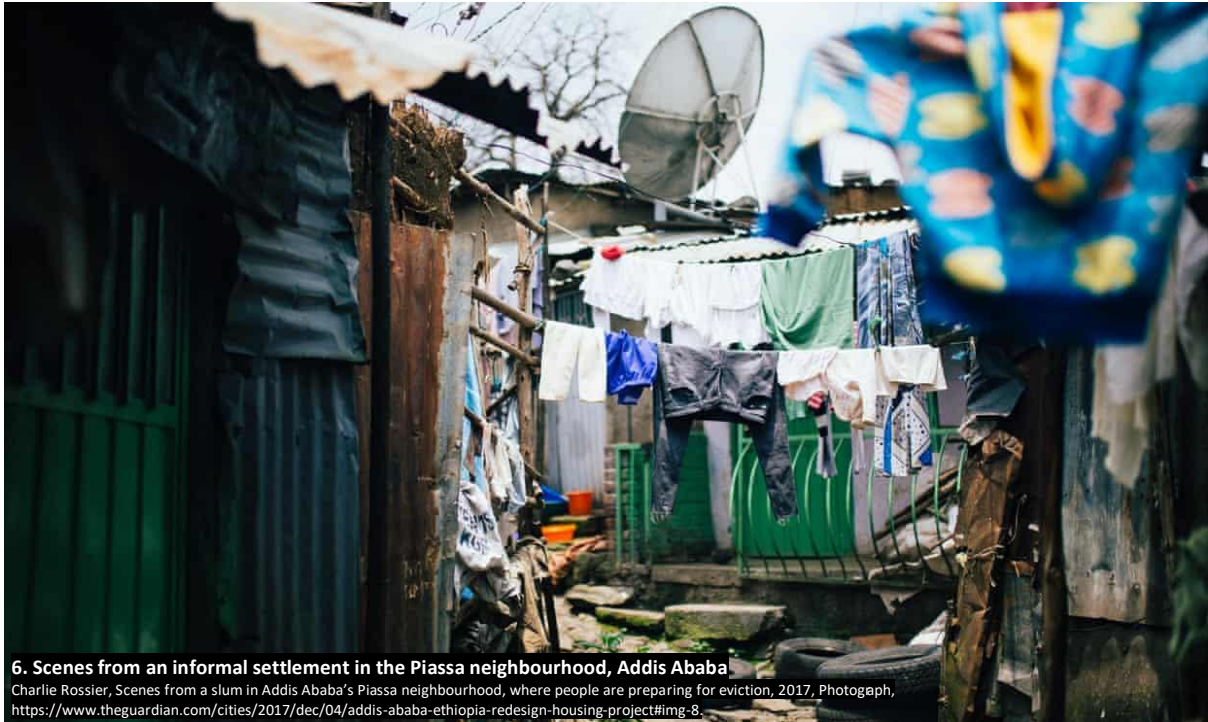
¹⁸ Felix Heisel and Heyaw Terefe, "The ruralization of urban centres in Ethiopia," in *Lessons of Informality: architecture and urban planning for emerging territories - concepts from Ethiopia*, eds. Felix Heisel and Bisrat Kifle (Boston: Birkhäuser, 2016).

¹⁹ Felix Heisel and Bisrat Kifle, "Disappearing Spaces – a day in Addis Ababa's informal city," *series_Spaces*, video file, 05:30, 2014, accessed November 20, 2020, <https://vimeo.com/105496501>.

²⁰ Felix Heisel and Bisrat Kifle, "Materializing Spaces – A day in Addis Ababa's periphery," *series_Spaces*, video file, 16:04, 2014, accessed November 20, 2020, <https://vimeo.com/95830862>.

²¹ Paul Oliver, *Built to Meet Needs: Cultural Issues in Vernacular Architecture* (Amsterdam: Architectural Press, 2006), 30.

However, the unregulated nature of informal developments proved incapable of providing sustainable solutions to the growing pressure of rapid urbanization and mass urban migration. The resiliency that for so long contributed to the growth of these communities, has eventually determined their stagnation.²² Inhabitants of informal settlements are subject to insufficient hygienic conditions, lacking even the most basic sanitary infrastructure, overcrowding, and are threatened by constant insecurity of tenure.



Up until now, in Addis Ababa, formality and informality have developed independently to one another, perpetrating inequality, and unsustainable living conditions for the urban poor. Following this trend, through the IHDP, the government has established yet another alternative to informality which does not understand, include, nor relieve the precarious conditions of the poor. Yet, quoting Richard Sennett: “‘Growth’ in an urban environment is a more complicated phenomenon than simple replacement of what existed before; growth requires a dialogue between past and present, it is a matter of evolution rather than erasure.”²³

Whereas the IHDP is consuming space, pushing the city to its physical limits, and taking over natural and socio-economic resources, the relentless pressure of demographic growth is exhausting the resilient capacity of informal settlements, pushing the city to its psychological limits.

Whereas the IHDP provides permanent solutions incapable of addressing the specific potentialities of the local context, informal settlements that have since now transformed and adapted, have become too complex and multi-layered to cope with the current pressures.

Yet, whereas condominiums provide a firm and secure built environment and have doubtlessly improved the living conditions of many, informality enhances communities’ formation, local identities, sense of belonging and opportunities of self-actualization.

²² Jan Bredenoord, Paul Van Lindert, and Peet Smets, eds., *Affordable Housing in the Urban Global South: Seeking Sustainable Solutions* (Abingdon: Oxon Routledge, 2014), 7.

²³ Sennett, “The open city.”

As a matter of fact, when new developments are undertaken in the fringes of the city, where existing local communities and practices are erased, and the socio-economic resources of the consolidated city are lacking, the consequences of the **missing-communication between formality and informality** are felt the hardest. Thus, critical and constructive dialogue between these two forces, top-down and bottom-up, as well as modernity and tradition, rapture and accretion, must be pursued and stimulated.

Introducing the **'sense of time' of traditional ways of living in the condominium schemes, is of vital importance to design an urban framework able to balance efficiency and resiliency, fundamental premises of a flexible environment capable of adaptation, anticipation, and open to the unexpected.**²⁴



7. Farmland and traditional housing next to near-finished modern apartments in Koye, Addis Ababa

Charlie Rossier, Farmland and traditional housing next to near/finished modern apartments in Koye the largest condominium site under construction, 2017, Photograph, <https://www.theguardian.com/cities/2017/dec/04/addis-ababa-ethiopia-redesign-housing-project#img-10>

3. Research Question

Could a balance between the excess efficiency of the condominium and the excess resilience of informal processes be achieved by introducing the vernacular as a mediator, this being by nature characterized by efficiency and resiliency as complementary components, in order to turn the condominium into an active participant in the process of city-making of an inclusive and open Addis Ababa?

This can be broken down in several sub-questions:

How can informality and vernacular practices and know-how inform the design of housing for the great numbers?

What is then the minimum that one should provide to support communities and enable their growth?

How could the condominium scheme be re-configured into an open system able to accommodate the fluctuant needs of low-income groups and enhance their growth?

How could vernacular promote Addis Ababa as an open city?

²⁴ Bredenoord, Van Lindert and Smets, *Affordable Housing in the Urban Global South: Seeking Sustainable Solutions*, 7.

4. Theoretical Framework

*"... the traditional dualism between being and appearance is replaced by a straight polarity of finite and infinite, which locates the infinite at the very core of the finite. This sort of "openness" is at the heart of every act of perception. It characterizes every moment of our cognitive experience."*²⁵

- Umberto Eco, 1962

Openness as a fundamental quality of human experience has been a central point of interest for architects and intellectuals since the late 20th century. In the 1960s Umberto Eco, with his *"Opera Aperta"*, defined openness an inherent condition of any artistic production, being this always subject to the interpretation of the observer. He thus noted that, following Einstein's Relativity Theory, which redefined the way we conceive reality, many 20th-century artists embraced the open condition of artistic production by involving the public in the process itself, turning it into an active participant rather than relegating it to the role of mere observer.²⁶

On the contrary, during the last century, most architectural practices have played off-key in this regard, closing rather than opening up, actively confining their public to the role of mere users in the attempt to define a clear, univocal, and ordered city. Thus, modernist ideals and most post-war architecture worked towards the definition of clear standards regarding how a city should function, how its citizens should live in it, and by extension, who can and cannot fit in.

In response to this, new approaches aiming for a more open interpretation of the built environment started to come about. In the 1950s a counter group born within the very ranks of the CIAM, the Team X, began advocating for more humanized architectural practices, able to engage with the complexity of the urban environment instead of negating it, by posing new emphasis on the specific context in its historical and social dimensions.²⁷ In their overseas work, such as the 'Moroccan Habitat', this renewed interest in the dwellers' ways of living was translated in a tangible de- and re-codification of the Moroccan social and physical context.²⁸

Not much later, in the 1960s, the Dutch architect John Habraken, while dealing with post-war Netherlands' response to the housing shortage, expressed the urgent need of a new architectural paradigm, more inclusive and capable to deal with the transformation. In this context, he introduced time as a crucial design parameter and elaborated a systematic design framework based on two complementary notions: support and infill. Grounded on the understanding of housing as a social practice in which dwellers have the right to self-determine their environments, Habraken advocated for a major shift in the professional practice dealing with the built environment. Accordingly, the architect must give up the desire of the total design, to become the enabler of a support system which enhances individuality rather than massification, which generates space for growth rather than finished space.^{29 30}

It is interesting to notice that, starting right in the 1970s, a new non-conventional housing strategy for low-income groups, known by the name of "Site and Services", was launched with the support of the World Bank to cope with the severe housing shortage affecting many countries in the Global South. By recognizing and taking advantage of the capacity of self-actualization of low-income groups and the inherent incremental nature of their self-building practices, the government role in housing production shifted from that of the provider to that of the enabler.³¹ Instead of providing ready-for-use residential units, local governments had only to prepare the necessary infrastructure – streets, electricity, water, sanitation, drainage – and to allocate the plots of land to the beneficiaries. Although not all S&S projects succeeded in delivering the

²⁵ Umberto Eco, *The Open Work*, trans. Anna Cancogni (Cambridge: Harvard University Press, 1989), 16.

²⁶ Umberto Eco, *The Open Work*, 1-23.

²⁷ Dirk van den Heuvel and Max Risselada, "INTRODUCTION. Looking into the mirror of Team 10," TEAM 10 ONLINE, accessed December 5, 2020, <http://www.team10online.org/team10/introduction.html>.

²⁸ Daniel Weiss, "A Moroccan Habitat: Building within a Colonial Context," in *Colonial Modern: Aesthetics of the Past, Rebellions for the Future*, eds. Tom Avermaete, Serhat Karakayali, and Marion von Osten (London: Black Dog Publishing, 2010), 275-277.

²⁹ John Habraken, *De dragers en de mensen: het einde van de massawoningbouw* (Eindhoven: Stitching Architecten Research, 1985) [First published in 1961].

³⁰ John Habraken and Jonathan Teicher, *The Structure of the Ordinary: Form and Control in the Built Environment* (Cambridge, MA: MIT Press, 1998).

³¹ Peter M. Ward, "Financing Land Acquisition for Self-Build Housing Schemes," *Third World Planning Review* 3, no. 1 (February 1, 1981): 7, <https://search.proquest.com/openview/a90ea2a4a6f4b3502409b72efffd25a/1?pq-origsite=gscholar&cbl=1820928>.

necessary conditions for supporting the growth of these neighbourhoods, with time many of these communities successfully grew into thriving neighbourhoods.³² An interesting exemplification of this approach can be found in the Ciudad Bauche in Bogotá (1977), where a set of unfinished housing typologies were conceived to immediately grant a minimum provision, while also providing a framework of growth for the future. What was left incomplete by the architect was soon filled in by the inhabitants in interestingly unexpected ways.³³

In his numerous works, Richard Sennett also identifies incomplete forms as fundamental premises of what he defines the 'Open City'. He, indeed, advocates for the need of new approaches to urban planning in which new emphasis is directed on user-oriented practices, towards more inclusive, resilient, and sustainable urban environments, able to cope with unpredictable changes, enabling the production of "urban imagination image formed by anticipation, friendly to surprise."³⁴ The notion of time is therefore charged with multiple connotations. In fact, according to Sennett urban development is a process resulting from the interaction of two forces: accretion and rupture, the first being the city's traditional response to the passage of time, the second being the result of rapid change, thus of modernity. In the open city, rather than being opposed to one another, accretion and rupture act as complementary forces, as part of an autopoietic system: day after day the city grows by accumulation, shaping and adapting its identity, yet ruptures trigger a critical confrontation with the existing, enabling the city to avert stagnation.³⁵

The polarity tradition-modernity has been questioned by many architects of the 20th century as depicted by Kenneth Frampton in his work "Prospects for a Critical Regionalism" published in 1983. In his view, instead of perpetrating a dogmatic search of truths, architectures should act as a mediator of these two apparently opposing poles, allowing for a dialectical and critical understanding of one another.³⁶ In fact, the notion of Critical regionalism, introduced a few years earlier by Tzonis and Lefraive, endorses contradiction and hybridity as dimensions inherent to modern cultures and identities, and an 'architecture of place' able to activate a confrontation between universal dogmas and local cultures, to initiate a dialogue with social practices.³⁷

The INA Casa Program in post-war Italy drew upon similar premises. In this occasion, the housing theme was addressed in its multi-scalar dimensions, providing *places* for the individual as well as the community, building neighbourhoods that not only constitute new parts of the existing city, but pieces of the city itself in the broader sense. Moreover, the re-evaluation of vernacular architecture, in its physical form, relation to the specific context, construction techniques and local knowledge, combined with modern standardization methods, proved to be a significant economic asset, providing job opportunities in the construction sector, for both unskilled labour and specialized figures, while also generating a sense of belonging for the communities, who could easily recognize themselves in the new neighbourhoods.^{38 39}

Indeed, from the 1960s onwards, vernacular practices started to be regarded by many as important assets in the context of housing shortages and rapid urbanization. If most feared the vernacular to be threatened by these processes, some recognized its potential to relieve them. Paraphrasing Paul Oliver, vernacular architecture physically represents a culture's values and knowledge, its context, and its evolution over time. Vernacular architecture has defined most of our cities' past, and defines many others' present, as it happens in South America, South-East Asia, Africa, so it might as well help us anticipate their future.⁴⁰

³² Patrick Wakely, *Housing in Developing Cities. Experience and Lessons* (New York, NY; Abingdon, Oxon: Routledge, 2018), 40.

³³ Eliana Silva, "Incremental Housing Project in Bogotá, Colombia: The Case Study of "Ciudad Bauché"" (Master diss., Technische Universität Berlin, 2016), 52-73.

³⁴ Sennett, "The open city."

³⁵ Richard Sennett, *Building and Dwelling: Ethics for the City* (London: Penguin Books, 2019), 278-286.

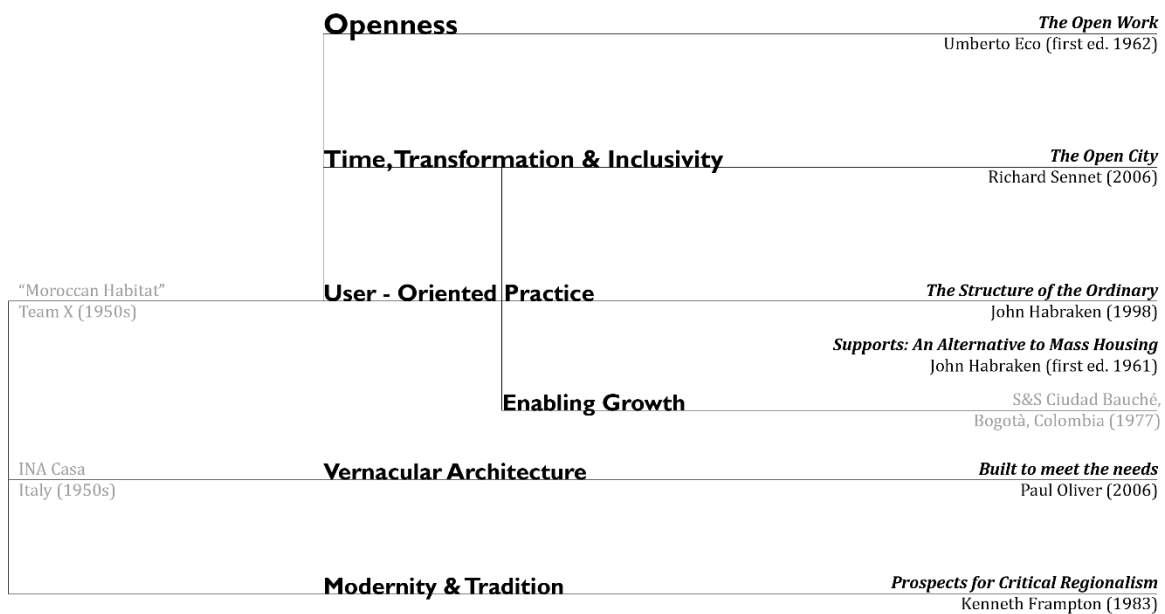
³⁶ Kenneth Frampton, "Prospects for Critical Regionalism," *Perspecta*, no. 20 (1983), 149, <http://links.jstor.org/sici?sici=0079-0958%281983%2920%3C147%3APFACR%3E2.0.CO%3B2-Q>.

³⁷ Nelson Mota, "From Critical Regionalism to Critical Realism," *DASH | Delft Architectural Studies On Housing*, no. 6 (June 2018), 51, <https://journals.open.tudelft.nl/dash/article/view/4682>

³⁸ Rinaldo Capomolla and Rosalia Vittorini, "Building practices of the post war reconstruction period in Italy: Housing by Mario Ridolfi at the INA Casa Tiburtino neighbourhood in Rome (1950-54)" (Paper, First International Congress on Construction History, Madrid, Spain, January 2003), <https://www.semanticscholar.org/paper/Building-practices-of-the-post-war-reconstruction-Capomolla-Vittorini/b8c3841086e997c59d4cdf60606a0358dac66f9c>.

³⁹ Harald Mooji, "INA - Casa Tiburtino Rome," *DASH | Delft Architectural Studies On Housing*, no. 6 (June 2018), 107, <https://journals.open.tudelft.nl/dash/article/view/4835>.

⁴⁰ Oliver, *Built to Meet Needs: Cultural Issues in Vernacular Architecture*, 30; 411-413.



5. Methodology and Methods

The complex nature of the urban processes at stake in Addis Ababa, and the broader context of demographic growth, mass urban migration and rapid urbanization affecting the Global South, stress the need for a multi-disciplinary and multi-scalar approach, able to deal with local yet global stances, values, and standards. Understanding the social, economic, political dynamics and how they interact with cultural values, is crucial in trying to decode the context in which and for which the design research aims to provide support.

In this respect, the collective contextual research produced over the last months, building upon the rich investigations carried out by previous cohorts, aimed to provide four complementary interpretations of Addis Ababa, and more in general of Ethiopia, based on hard data analysis, historical and cultural narratives, spatial mapping, and typological analysis of housing and dwelling habits, among the others. While aiming to further investigate the role played by standards in affordable mass-housing production, we carried out a typological analysis of case studies from different parts of the world, as well as of the Addis Ababa's condominium scheme. By doing so, we could grasp how they influence the design quality in all its different dimensions, from the dwelling unit to the neighbourhood, and by extension to the city as a whole.

Building upon this collective knowledge, I will further investigate Ethiopian vernacular practices and know-how, how they influenced habitation patterns, informal economies, and the form and materiality of the built environment in Addis Ababa. To do so, I will examine urban morphologies and typologies, construction methods and materials, and trace how habitation patterns, social constructs and economic activities have influenced them over time.

However, housing 'the great numbers' has been at the centre of our discipline's interest at least from the last century onwards. Hence, through historical research, I have compiled a system of theories, and precedents that have attempted to respond to the quest of housing in its social, economic, and political dimensions. Thus, I plan to investigate several case studies that I believe could increase my understanding of the vernacular as a means to mediate between resilience and efficiency in an open-time framework. I will do so by carrying out a literature review and a typo-morphological analysis, bringing together contextual and typological methods through an inductive architectural-ethnographic approach.

Nevertheless, it is necessary to acknowledge the great difference of the context in question from many previously presented in this paper, such as that of post-war Europe, or colonial Morocco. It is, therefore, crucial to decode, by acknowledging their ideals, motifs, but also available resources, and re-code each theory and case study in light of Ethiopian values and practices. For instance, drawing upon Habraken's systematic approach of support and infill, I will investigate what needs to be provided as a support system and what needs to be liberated and filled in by the dwellers in the specific context of Addis Ababa. If Habraken's ideas were highly dependent on industrialized construction processes, these cannot provide affordable solutions for Addis. Thus, other precedents with more similar economic and material resources and expertise are taken into consideration to fill the gap. Finally, by investigating these precedents, how they recognized or neglected local values in their design, how the dwellers have then acted or re-acted to it, what traces they have left, how much they have appropriated or left unused, I intend to create a solid foundation to speculate on values and standards in the specific context of Addis Ababa.

6. Relevance

The exponential population growth and the resulting rapid urbanization currently affecting most major cities in Ethiopia and the Global South, are soon to be onto secondary cities at an even greater pressure. In light of the urgency of these phenomena, new architectural frameworks able to understand and support these unique urban contexts are of crucial significance and utterly needed. If many scholars have already claimed the need for and depicted an African urban paradigm, or even a new Global South urban paradigm, current initiatives and practices aiming to cope with these critical pressures are still highly subjugated by western ideals and methods. Building upon these premises, this research work aims to investigate new approaches by reflecting on local dynamics of growth and urban organization and re-think western-initiated urban theories in their light, thus overturning the current tendency.

On the one hand, departing from Habraken's theory of support & infill, which was grounded on the opportunities offered by a highly industrialized country such as the Netherlands, this project aims to test its potential in a new, very different context, where these very premises are missing. Nonetheless, I believe the core ideas of Habraken's approach cater for some universal values, such as time, transformation, sustainability, and participation, and it can therefore be re-imagined and even re-enforced in the African context, in consideration to its unique potentialities and specificities. On the other hand, this investigation aims to test the applicability of vernacular knowledge and practices in the context of mass-housing, while also challenging the very idea of mass-housing and the values it brings about, to finally test the value of vernacular knowledge in the future of our urbanities.

By combining these two almost contradictory approaches, the vernacular – a slowly evolving cultural manifestation of resiliency and efficiency – and a standardized support system – an immediate solution – this investigation aims to develop and test a framework able to provide for the present and the future of African cities. Moreover, this research seeks to deal with the broader consequences that imported foreign standards and values, widely adopted to solve the need for affordable-mass housing in many countries of the so-called Global South, had on the urban production. If alternatives to these modalities and models are highly needed and advisable, it is also crucial to critically address them in a constructive perspective, to avoid yet another tabula rasa kind of approach. It might indeed be possible to re-read their role in light of these new contexts. "Only if we accept the city as it is right now, we will be able to plan her future."⁴¹

Finally, this research work addresses the pressing issues of urban poverty and social inequality, the exclusivity and closure of contemporary urban production and re-development, in the attempt to formulate a counterproposal that aims towards an inclusive, transformative, and open approach to city-making.

⁴¹ Crimson Architectural Historians, "Rotterdam. Story of an Open City," Crimson Historians & Urbanists, video file, 09:30, 2009, accessed December 4, 2020, <https://www.crimsonweb.org/spip.php?article101>.

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8. Time Planning

Phase 1: Housing Standards and Ideals

- Ethnographical Research: Graphic Anatomy of Home
- Typological Analysis: Design precedents

Phase 2: Contextual Research

- Addis Ababa's Research Booklet
- Typological Analysis: Addis Ababa's Condominium

P1 Presentation

Design Studio:

- Graduation Plan Draft
- Individual Research Proposal and Context Analysis
- Preliminary Design Hypothesis

Research Studio:

- Thematic research
- Draft research
- Situational research

Phase 3: Design Research

Phase 4: Design Hypothesis

P2 Presentation

Design Studio:

- Graduation Plan
- Urban Draft/Master Plan 1:1000/1:500
- Programme of requirement
- Draft Design (plans, sections, elevations) 1:500/1:200

Research Studio:

- Urban Draft (on an appropriate scale)
- Programme of requirement
- Draft Design (plans, sections, elevations) 1:500/1:200
- Graduation Plan

P3 Presentation

- Reflection Draft
- Plans, Facades, Cross-sections 1:200
- Part of the building, plan and cross-cut (on appropriate scale)
- Façade fragment with horizontal and vertical cross-section (on appropriate scale)
- Set up details

P4 Presentation

- Theoretic and thematic support of research and design
- Final reflection on architectonic and social relevance
- Site 1:5000 / 1:1000
- Plan ground level 1:500

- Plans elevations, sections 1:200 / 1:100
- Part of the building, plan and drawings 1:50
- Façade fragment with hor. and vert. cross-section (on an appropriate scale)
- Details

P5 Presentation

- Theoretic and thematic support of research and design
- Final reflection on architectonic and social relevance
- Site 1:5000 / 1:1000
- Plan ground level 1:500
- Plans elevations, sections 1:200 / 1:100
- Part of the building, plan and drawings 1:50
- Façade fragment with hor. and vert. cross-section (on an appropriate scale)
- Details