

“IN DEPENDENCE”

Past and present futures, Tema Community 4

INTRODUCTION

The independence of Ghana in 1957 led to a process of modernization and the formation of a national identity and image which required the development of industry and economy to facilitate that process of modernization. The largest project in this process was the creation of the city of Tema, a previously small fishing village 30 kilometers away from Accra, as the industrial city of the country, and as a satellite town to the growing capital Accra. The development of Tema thus necessitated the creation of a housing program to accommodate all the immigrant populations that would be needed for its industrial operations. At the request of the first president of Ghana, Dr Kwame Nkrumah, in 1960 a masterplan for the city of Tema was developed by Greek architect and planner Constantinos Doxiadis.

In this paper, the idea of change and temporality is explored in 2 urban artifacts – the first one being Tema Community 4 and the second, the concrete grain silos in the industrial area directly adjacent Community 4.

The paper foregrounds these 2 urban artifacts because they exemplify the ideas of change in very polar ways. The built fabric in Community 4 has changed significantly from the initial visions of Doxiadis whereas the concrete silos have barely changed and still stands as a monument in Tema. By exploring these two artifacts and the various issues that have led to their present states, the paper aims to show ways in which artifacts of the built space weave their ways through time and constantly negotiate their relations to different political, cultural, social and economic forces external to the built material form of an artifact.

Key Concepts

3 key concepts are examined in this paper as they relate to the specific site of Tema Community 4 and the concrete grain silos. In this section, I also make an attempt to relate these ideas to existing larger relevant themes and theories. The ideas are examined in the following:

1. The proposal of a science of human settlements called Ekistics, as it was implemented by Doxiadis Associates in Tema Community 4.
The theory of Ekistics human settlements as developed by Doxiadis is a scientific approach to human settlements that considers how humans build their settlements and how the settlements evolve quantitatively and qualitatively through time. This manner of understanding how people live would then be the informing factors for planning the development of the settlement into a city of optimized size and that “respects human dimensions”¹. As one of the only 2 communities in Tema that were developed comprehensively on the basis of the Doxiadis masterplan, Community 4 presents an opportunity to study and understand the initial visions of Doxiadis’

¹ Constantinos A. Doxiadis, “Ekistics, the Science of Human Settlements.”, *Ekistics* 33, no. 197 (1972), 237-247.

Ekistics.² In exploring this idea, Community 4 of Tema will be examined from the point of view of the original drawings and plans, early as-built photos and photographs taken in today's time.

2. Later and current developments to the fabric of the planned city, examining Tema Community 4.

As the communities of Tema developed through history, several changes happened in the built environment that reflected the various forces shaping it. In the case of Tema, political forces and economic forces were the largest driving forces of change to the built environment. After the overthrow of the first president, Kwame Nkrumah, in February 1966, the Tema Development Corporation which oversaw the development of Doxiadis' masterplan went through a series of structural changes that would eventually lead to development models different from the ones developed by Doxiadis. In another strand, the changing economic needs have made it necessary that commercial structures be added to the homes built along the pedestrian pathways.

2 theories being explored in relation to the site are the theories of subaltern groups, as told by Gramsci, and the theory of the hero, as told by Le Guin. Gramsci (coins the term "subaltern" to describe groups that are not included in cultural hegemony in ways that deny their agency. Le Guin describes how recorded stories are usually the ones of the hero because of their associated spectacle, whilst stories without spectacle are not recorded even though they may have agency.³

In Doxiadis, we see an attempt to account for and predict (albeit inaccurately) for both the hero and the subaltern coexistence. What then results is the present state of old "heroes" around which present people express their agency in physical forms to address economic and cultural dimensions.

3. The changes or non-changes in architectural typologies and philology of the built environment, considering Community 4 and its eastern adjacent industrial hub.

The Doxiadis masterplan was based on rationality – a grid masterplan with a civic and commercial core. The buildings themselves expressed this rationality. Built in socialist modernist styles, they were arrayed along streets and pedestrian paths with some architectural techniques that would give some individuality to the buildings.⁴ With the need for repair and maintenance over time, new languages of space-making were employed in these renovations, mostly administered by the occupants of the buildings themselves. The addition of commercial structures and living quarters along planned pedestrian paths also assumed modes of expression different from the rationalist perspective in Doxiadis' masterplan. It is important to note however that in the perspective sketches of Doxiadis, we see some recognition for the agency of the inhabitants in occupying space.

Community 4 is bordered to the east by the industrial zone of Tema and has a main artery running from the west to the industrial east. When walking along this artery towards the industrial area, it is hard to miss the two large 96-cylinder concrete grain silos that shoot up to the sky. They are a visual marker of past plans for economic independence, food security and market price control developed by the country's first president. They were never used, due to

² [Unpublished manuscript] "The Role of Constantinos Doxiadis in the Development of the Master Plan 1 for Tema, Ghana", *Athens Journal of Architecture* (2022), p. 3.

³ Ursula K. Le Guin, "The Carrier Bag Theory of Fiction", (1986).

⁴ "The Role of Doxiadis in the Development of Tema" (2022), p. 13.

the overthrow of Nkrumah. The plans by the contractor, Noe Drevici, were taken away to the USSR mummifying the structure and impeding demolition (too expensive and inconvenient) and other kinds of future use.

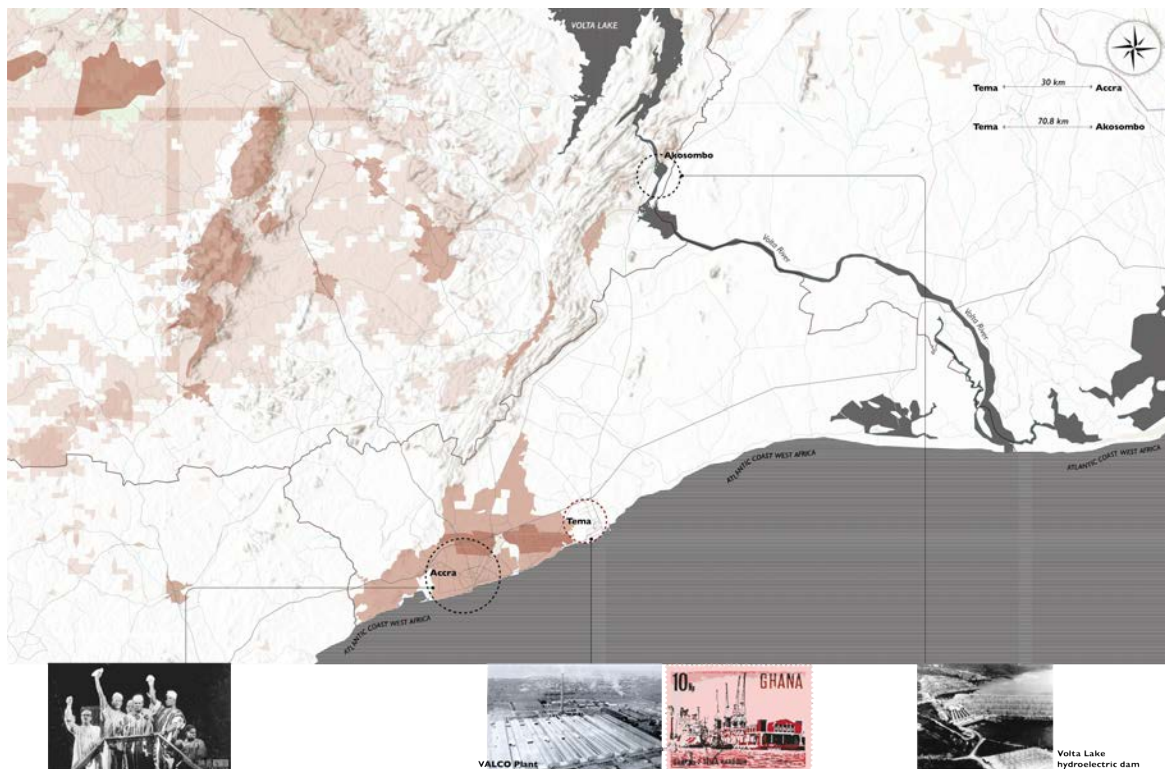
In as much as the silos were tools of economy and capital engineering, their physical form denotes an image of a modernist aspiration which Kwame Nkrumah found apt for the newly independent country. Le Corbusier called the concrete silos “the first fruits of the New Age”⁵, and they would become the signifiers of the international style eventually finding a place in Ghana’s Tema. The silos in Tema are a visceral example of an urban artifact that has resisted change to their physical form, even though their political and economic conditions are not the same as when they were built.

⁵ Lynda H. Schneekloth, “Reconsidering Concrete Atlantis: Buffalo Grain Elevators.”, (2007), p. 15.

HISTORY

The city that is today known as Tema was built on the site of an old fishing village called “Torman”. The name Tema is a corruption of the original name. The first plan to make Tema an industrial city was in the decade before independence under the colonial government. In 1952, the government identified the site and acquired about 64 sq. miles of land north of the old harbor on the Atlantic coast and handed this land into the management of the Tema Development Corporation.⁶ The first plans of Tema were made by a team led by the architect Theodore S. Clerk (also the first Ghanaian registered architect), and comprised British architects from the Architectural Association school in London. Their plans were based on the compound house with courtyard systems in them and featured winding paths to connect the various settlement enclaves. With Nkrumah in power, the nation sought a more rational way of planning and making space at the time aligned with socialist modernist styles. Hence, the Clerk-led design proposals were revised.⁷ The new architect appointed for this redevelopment was the Greek architect, Constantinos Doxiadis of Doxiadis Associates, who had done similar large master planned projects in other countries including the Greece’s national masterplan, the planning of Islamabad as a new capital for Pakistan, and of Baghdad as a capital for Iraq.⁸

The Tema-Akosombo Triangle



Drawing 1: 3 cities – Accra, Tema, Akosombo. Source: Author’s drawing

⁶ About the Tema city, accessed May 23, 2023, <https://www.temametro.org/about-the-tema-city#:~:text=Tema%20was%20commissioned%20by%20Ghana’s,Clerk>.

⁷ “The Role of Doxiadis in the Development of Tema” (2022), p. 4.

⁸ “The Role of Doxiadis in the Development of Tema” (2022), p. 2.

As Tema developed as a satellite to the city of Accra, its role as the country's industrial hub necessitated the creation of a source of electric power for the many industries that would be built in Tema. In this quest for power generation, hydroelectric power was chosen as the most potential and efficient means of power generation, having been first proposed during the colonial government in the early 1920s⁹. The location chosen for this was the Volta River at Akosombo. The creation of the dam led to the formation of one of the largest man-made lakes in the world – the Lake Volta.¹⁰ However, this creation of the lake would flood the valley regions of Akosombo displacing its many residents. The creation of the dam thus came with a comprehensive plan of resettlement for the residents.¹¹

The first and main company to be powered was the Volta Aluminum Company (VALCO) which would smelt aluminum from bauxite mined in the forest and mountain regions of Ghana. 70% of the power generated in the initial stages of the Akosombo dam went to the aluminum smelting plant 71 kilometers in the south.

The Akosombo dam would later generate enough power for the capital city and other cities in the country. The creation of the dam thus spurred the boom of industry not only in Tema where it was initially meant for, but also industries in other cities in the country. In Tema, there was a corresponding need to house the new workers brought to Tema. The VALCO flats for example were built for workers of the Volta Aluminum Company in Tema.¹² Communities 1 through 12 planned by Doxiadis Associates were also meant to house workers for the industries in the east of Tema.

Beyond the planning of Tema, Doxiadis Associates also produced a comprehensive plan for the capital city Accra to cater towards its rapidly growing population. Like Tema, the plans developed for Accra was done as a critique and improvement to an earlier masterplan that had been developed in 1958. Doxiadis would make much larger proposal for a vision of the 3 cities Tema, Akosombo, and Accra, where Accra would be the country's administrative node, Tema would be the industrial city and Akosombo would be the country's powerhouse.¹³

⁹ Piet Konings, "Political Consciousness and Political Action of Industrial Workers in Ghana: A Case Study of Valco Workers at Tema", *African Perspectives No. 2*, (1978), p. 70.

¹⁰ Glenn S. Phillips, "5 of the World's Largest Man-Made Lakes," Lake Homes Realty Articles and Info - LakeHomes.com, March 15, 2022, <https://www.lakehomes.com/info/lifestyles/5-of-the-worlds-largest-man-made-lakes>.

¹¹ Miescher, Stephan F. "Ghana's Akosombo Dam, Volta Lake Fisheries & Climate Change." *Daedalus* 150, no. 4 (2021): 124–42.

¹² Piet Konings, "Political Consciousness", (1978), p. 71.

¹³ "The Role of Doxiadis in the Development of Tema" (2022), p. 7.

Tema, as envisioned by Doxiadis Associates

The theory of Ekistics by Doxiadis implied that the planning that resulted was based on a hierarchy of built urban form where several designed communities, at their scales, would share a common public space. This could range from a few households sharing a common street to several communities sharing a civic and commercial core.¹⁴ In the case of Tema, the various communities would share a large civic and commercial zone in the south, bordering the harbor. The individual communities, at their respective scales, would also share a common civic and commercial core in their centers.

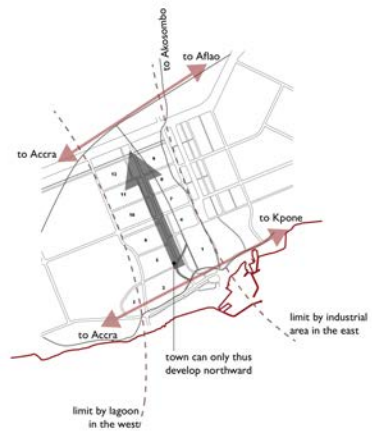
From the initial sketches of Doxiadis on the logic of development for Tema, it can be understood that the northward envisioned growth of the town was due to the three main limits of the site – the industrial area in the east, the lagoon in the west and the harbor and Atlantic Ocean to the south. The plan for the various communities were based on a grid parallel to the coastline angle. The internal grid arrangement for the residential blocks in the individual communities themselves would still follow the cardinal direction grid orientation despite their angled boundary edges. The communities are bordered to the east by the Harbour Road that connects the Tema port to the Accra-Tema motorway.

Communities 1 & 2 of Tema, which had been developed by the T.S. Clerk British-led team, was proposed to be retrofits projects by Doxiadis Associates when they were awarded the development of the Tema masterplan. The other communities would be master planned and built by Doxiadis based on their appointment as consultants by the Tema Development Corporation (8th March 1961) and later as designers and developers (26th May 1961).¹⁵

Similarities can be drawn from the first plans developed by T.S. Clerk and the plans developed by Constantinos Doxiadis despite the critique from Doxiadis of the first plans lacking rigorous organization. In both plans, there was a strong presence of a core social infrastructure that would service the residents in the communities.

¹⁴ “The Role of Doxiadis in the Development of Tema” (2022), p. 5.

¹⁵ “The Role of Doxiadis in the Development of Tema” (2022), p. 6.



"Nation Builder Meets Architect"

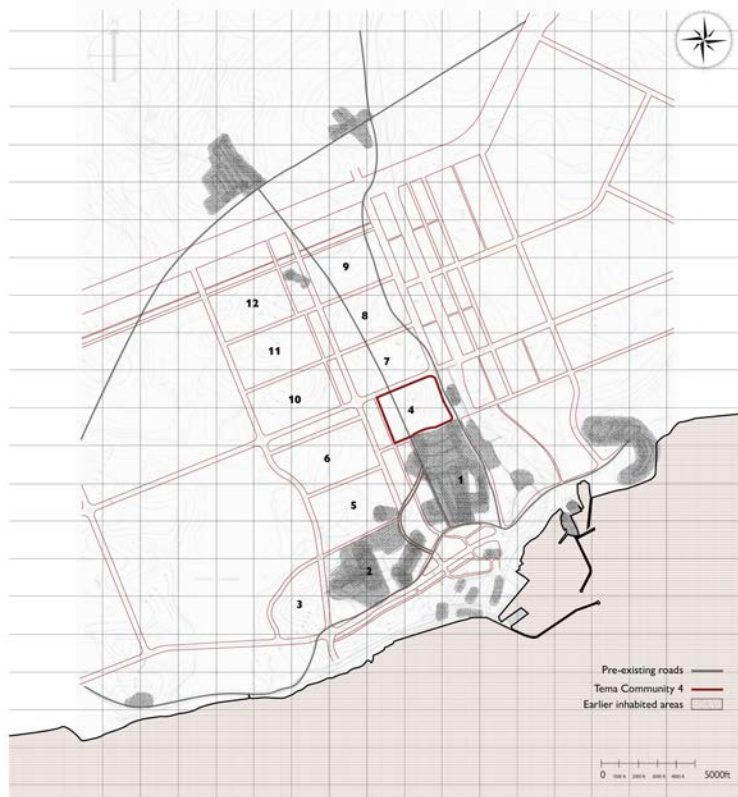
Constantinos Doxiadis meets Kwame Nkrumah for the first time.

On 12th July 1961 the Government of Ghana entrusted Doxiadis Associates with the preparation of a general Master Plan covering the whole residential area of Tema, as well as of a more detailed Master Plan and Programme for the development of the town and its industrial area during the next 25 years when the population of Tema and the surrounding area will have reached an estimated 250,000 inhabitants.

Another point that also has to be stressed in the report is the centre of the town. As the population grows and its living standards rise, there will also be a constant increase in the requirements for services. Consequently, the areas to be reserved for civic, commercial and business activities, for public buildings, for recreation and sports grounds, etc., should expand at a much swifter rate than that of the growth of population.

Background - Planning

11. While looking into the history of the Tema project, we must never forget the fact that Tema was not meant to be constructed as a town in the traditional sense. It was developed exclusively to meet the requirements of the new state which, according to its founder, was to be a prototype for the rest of the world. The objective of the international study team was to design a town which would be a model for the rest of the world.



Drawing 2 & 3: Tema masterplan communities and logic of growth. Source: Author's drawing.

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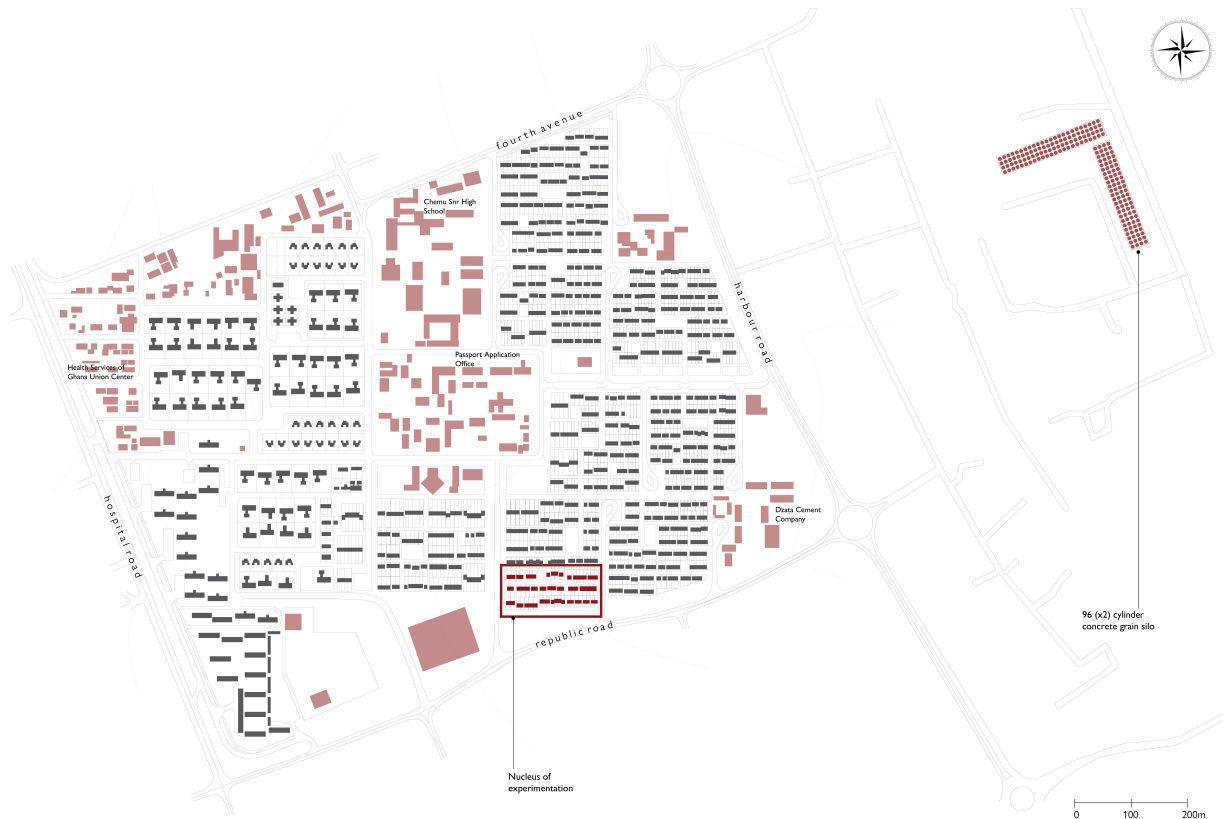
THE URBAN ARTIFACTS

Urban Artifact 1: Tema Community 4

As one of the only two communities that were built largely according to the plans of Doxiadis, Community 4 of Tema is important in understanding how the visions and plans of Doxiadis were implemented and how they changed through time, with the agency of the residents or through other shaping urban forces. The organizational structure of Community 4 featured a civic and commercial core with room for expansion, and the rest of the community organized with different housing types. The site boundary is a rectangle oriented at 22 degrees to the horizontal. The internal layout however was aligned to the cardinal points – design decision based on climatic considerations of wind movement and solar exposure in the tropics. The buildings themselves were thus arranged with their shorter sides facing the east and west to minimize solar exposure. The grid layout of the site was such that, roads traversed the east to the west ends of the site with north-south connectors across the east-west grain. There was an alternation of main roads and pedestrian paths shared by rows of houses. A main pedestrian network was proposed to centrally traverse the west to the east of Community 4, connecting the community to the industrial zone. To enable people to freely travel to work, an underground tunnel beneath the Harbour Road was proposed, even though this was not realized.¹⁶

¹⁶ "The Role of Doxiadis in the Development of Tema" (2022), p. 8.

The original proposal for Community 4 was comprised of four community class III areas that were organized around its common civic and commercial core and delineated by a road network whilst connecting the 4 regions to the core.¹⁷ Community class III was defined by Doxiadis as an agglomeration of smaller communities (class II) bound together by an element of a relatively higher order, like a primary school.¹⁸



Drawing 4: Tema Community 4 layout. Source: Author's drawing. Map © Michelle Provoost. All rights reserved. This content is excluded from our Creative Commons license. For more information, see <https://ocw.mit.edu/help/faq-fair-use/>.

Archival documents from the Tema Development Corporation in the form of reports detail the various processes, iterations, and correspondence that went into the design and implementation of the various communities in Tema. In the initial suggestions from Doxiadis, experimentation was recommended as a means to test the construction process, material quality and construction cost of the houses, to make the best decisions and improve quality control. In Community 4, a nucleus of experimentation was identified to the southwest of the community. Within this larger nucleus of experimentation, an initial area of experimentation was designed and implemented according to the plans of Doxiadis, after approval by the government of Ghana. The experimental houses were designed to standard elements, materials and assembly methods. This was to allow for speed, economy and to ensure a certain visual rhythm and cohesion in the built structures.¹⁹

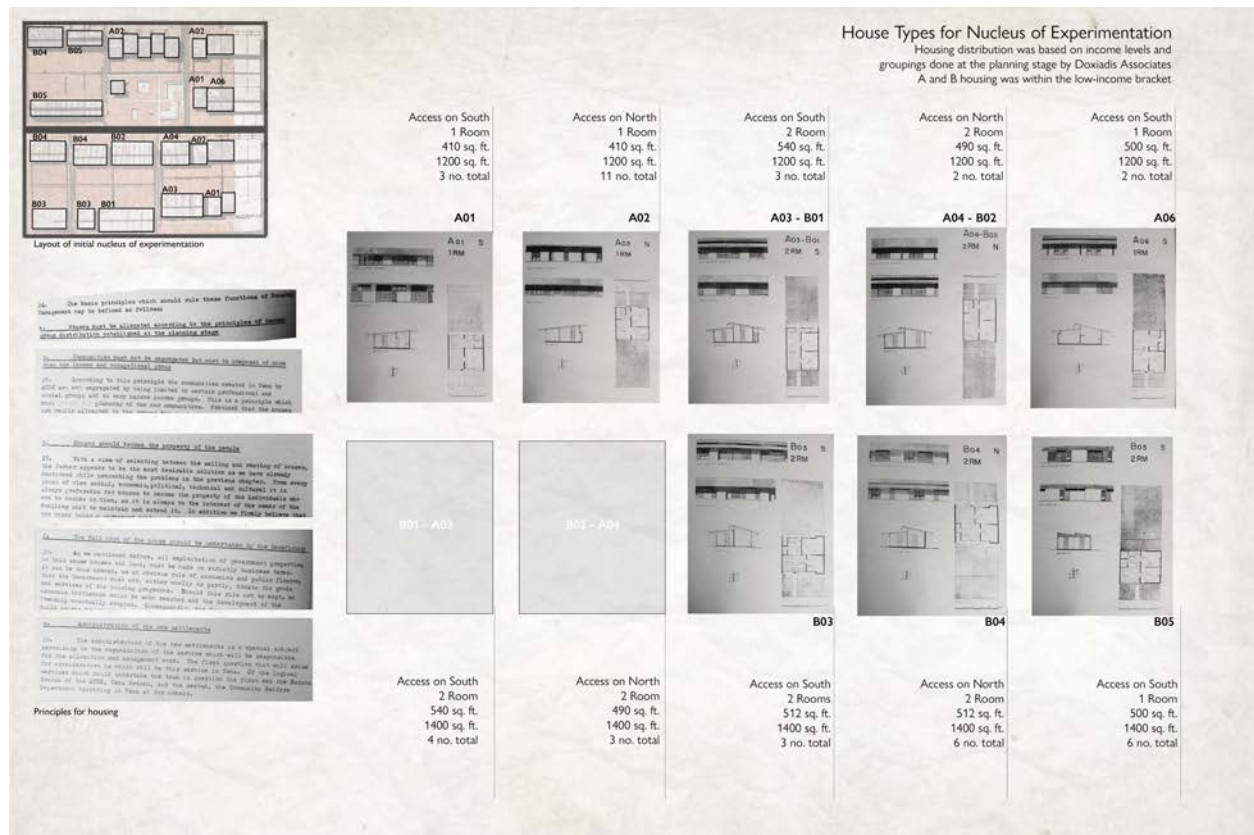
¹⁷ "The Role of Doxiadis in the Development of Tema" (2022), p. 8.

¹⁸ Doxiadis Associates. "The Town of Tema Ghana: Plans for Two Communities." *Ekistics* 13, no. 77 (1962), p. 161.

¹⁹ "The Role of Doxiadis in the Development of Tema" (2022), p. 12-13.

In the experimentation of the housing units, Doxiadis advocated that the Tema Development project must not be a burden to the government of Ghana, and that at some point, Tema must start to operate like a profitable business venture.²⁰ Along the lines of this general proposal of economy, Doxiadis proposed a series of planning principles that the building housing project management should follow:

- Houses should be distributed according income group distribution defined at the initial planning stage.
- Communities should not be segregated but must comprise more than one professional or income group.
- That the built housing units should be owned by the occupants as that would make the owner have a responsibility of maintaining their property.
- The cost of the house should be borne by the occupant in a strictly-business sense following that basic economic rule.
- The selection of an appropriate body for the administration of the new settlements. Amongst the potential bodies that could distribute the new houses were the Estate Branch of Tema and the Community Welfare Department.²¹



Drawing 5: House Types for the Initial Nucleus of Experimentation in Community 4. Source: Author's drawing. Component images and text excerpts © Accra Tema Development Corporation. All rights reserved. This content is excluded from our Creative Commons license. For more information, see <https://ocw.mit.edu/help/faq-fair-use/>.

²⁰ Doxiadis Associates, "Document DOX-GHA 83", Prepared for the Government of Ghana, Accra Tema Development Corporation, (August 1963), p. 4.

²¹ Doxiadis Associates, "Document DOX-GHA 83", (1963), p. 6-9.

Changes in Tema Community 4

As the population of Community 4 grew and had more occupants, the need for more distributed commercial nodes apart from the civic/commercial core and the need for extended living quarters to accommodate a growing population led to the creation of stores and kiosks along the pedestrian paths designed by Doxiadis. Here is where the idea of the subaltern as Gramsci describes is examined. The extensions to the original structures of Doxiadis are imagined as the subaltern expressions that happen in relation to the larger “heroes” of the original Doxiadis-built fabric.

The frontages of the buildings facing the pedestrian paths originally had lawns that transitioned occupants from the buildings’ interior spaces to the pedestrian paths. The areas for the lawns have been built up leaving the 4-meter-wide pedestrian footpath as drawn by Doxiadis.²² The extensions to the original built residential footprint also were a result of the familial living culture of the workers that occupied them. As immigrants that largely came from rural Ghana in search of better economic opportunities, the residents were more accustomed to an extended family way of living. Over time, their family would join them in Tema for access to the economic opportunities and this necessitated the extension of their residential quarters. With a gradual shift to a more nuclear way of living, the extended residential quarters are currently rented out, as a way to make a passive income. The extensions to the original buildings are built in styles, colors and tastes selected by occupants themselves and add a layer of expression that is markedly different from the visions of Doxiadis. This is visible when photographs of present conditions are juxtaposed with early as-built images or even the street perspective sketches of Doxiadis.



Drawing 6: Existing and envisioned streetscapes of Tema Community 4. Source: Author’s drawing.

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²² The Role of Doxiadis in the Development of the Master Plan of Tema, p. 11.

Urban Artifact 2: The concrete silos

Heading east on Third Avenue in Community 4, one cannot miss the two 96-cylinder concrete grain silos that stand over the Harbour Road horizon. They two masses form an L-shape on google earth top view. These concrete silos are one of the many silos that were commissioned by President Nkrumah to be built in the various regional capitals of the country. They were meant to store cocoa beans that would be harvested from rural farming areas and brought to the regional capitals for processing and export.

According to legend, Tetteh Quarshie, a blacksmith from Mampong in present-day Ghana traveled to the former Spanish colony Fernando-Po (now Bioko in Equatorial Guinea) and returned to Mampong with cocoa beans which he planted in 1876.²³ From that point of introduction, the period between 1911 and 1976 saw Ghana as the world's largest producer of cocoa²⁴ reaching peak production periods in the mid-60s during the reign of Kwame Nkrumah and then almost crashing in the 80s²⁵ during the political upheavals. Ghana is today the world's second largest exporter of cocoa, after Ivory Coast, its neighboring country in the west.²⁶

As large machines that were designed to store and preserve cocoa beans over long periods of time, the concrete grain silos were a financial engineering tool capable of withholding cocoa beans from the global market hence inducing worldwide shortages, and regulating global prices for the benefit of the Ghanaian economy. Nkrumah thus enlisted the services of investor, Noe Drevici who would become Nkrumah's close confidant and would secure several significant industrial projects around a total value of £ 60-70 million between 1962 – 1965. Amongst these first contracts awarded to Drevici were the silos in regional capitals including the 96-cylinder one near Tema Community 4 that had been almost finished but never saw its first cocoa beans. After the overthrow of Kwame Nkrumah in 1966, Drevici kept conducting business in Ghana until President Kofi Busia in 1970 terminated his contracts amidst corruption scandals in what would become known as the "Drevici Affair". By then he had been paid about £9 million for projects that were not finished.²⁷

To manage the soaring suppliers' credit debt (which was at a staggering 80% of the total foreign debt) that Ghana had accumulated by 1960-1965 for the building of industrial projects – the International Monetary Fund which had been invited in 1965 for loan assistance, suggested that construction work on the system of cocoa silos around the country should be halted. The minister of finance reacted, by criticizing the World Bank and referencing a similar loan that was in the process of being approved for the construction of similar silos in Pakistan. A critique on the industrialization plan of Nkrumah, was that there was a heavy reliance on the input of foreign capital (in the form of loans and investments), which

²³ Mildred Europa Taylor, "Tetteh Quarshie: The Man Credited with Bringing Cocoa to Ghana from Fernando Po in 1876," Face2Face Africa, August 22, 2018, <https://face2faceafrica.com/article/tetteh-quarshie-the-man-credited-with-bringing-cocoa-to-ghana-from-fernando-po-in-1876>.

²⁴ Divine Chocolate, "Cocoa and Ghana," Divine Chocolate, September 10, 2021, <https://www.divinechocolate.com/divine-world/cocoa-and-ghana-2/#:~:text=Cocoa%20cultivation%20began%20in%20Ghana,there%20was%20already%20intensive%20plantation.>

²⁵ Kolavalli, Shashi & Vigneri, Marcella, "Cocoa in Ghana: Shaping the success of an economy", *Yes Africa can: Success stories from a dynamic continent*, (2011), p. 202.

²⁶ Knudsen, Michael & Agergaard, Jytte., "Ghana's cocoa frontier in transition: The role of migration and livelihood diversification", *Geografiska Annaler: Series B, Human Geography*, (2015), p. 329.

²⁷ Bianca Murillo, "Postcolonial Cons, Scandals, and Fraud," Africa Is a Country, October 14, 2022, <https://africasacountry.com/2022/10/postcolonial-cons-scandals-and-fraud>.

was coupled with a lack of experience in the building, financing, and operation of industrial projects. The local industrial projects even after they were operational would take a long time to break even and generate enough foreign capital equivalent to pay off its debts.²⁸ Amongst the critiques of the World Bank delegation on the construction of the concrete silos, was that it was impractical, that the mechanisms for the flow of grain was uneconomic, that cocoa beans tended to split when dropped from a height so great, and that the silos would be poor at regulating temperature and humidity. It has been noted years after, that the design of the silo included the control and regulation of temperature and humidity.²⁹

The mummification the silos

Drevici fled the country after his contracts were terminated and his assets frozen, by the new President Kofi Busia. He took with him the architectural construction drawings for the construction of the cocoa silos. The silos were thus effectively “frozen” in time, becoming too expensive and impractical to demolish and at the same time virtually impossible to reactivate due to the unavailable drawings. According to Mr. Emmanuel Asiedu, a retired official of the cocoa board, any potential reactivation plans for the silos would require large-scale excavation and cutting to correctly identify where service transmission lines and pipes were located.³⁰ In 1975, Drevici tried to return to finish the silo project with the Busia-led government, albeit unsuccessfully.³¹

The history of the grain elevator begins from the United States in Buffalo, Upstate New York and signals a changing and emerging economic paradigm of large industrial production. In an architectural sense, they also visually signify those bold markers of a new school of thought – one of functionalism and sheer austerity in materiality and form. Le Corbusier would call them “the first fruits of the New Age” recognizing them as forebears to the international architectural style³² – meaning they could exist anywhere in the world. The grain elevators in Buffalo would make Buffalo at one point the largest grain exporter in the world. However different economic and political factors would mean that the international grain silo which was replicated in Tema would have a different future. Due to its monumentality and permanence in material, the concrete silos in Tema have resisted change to their built form, even though they have not been used since their inception. The economic and political situation of a concrete silo that was riddled with large amounts of foreign debts, corruption allegations and a coup d’état, meant that the story of the concrete silo was quite specific to its region and the forces present in that region – it was not an international experience as Le Corbusier might have advocated.

²⁸ Grayson, Leslie E., “The Role of Suppliers’ Credits in the Industrialization of Ghana”, *Economic Development and Cultural Change* 21, no. 3 (1973), p. 479-499.

²⁹ George Sydney Abugri, “The Story behind the Giant Silos Kwame Nkrumah Built,” Graphic Online, March 10, 2016, <https://www.graphic.com.gh/features/opinion/the-story-behind-the-giant-silos-kwame-nkrumah-built.html>.

³⁰ George Sydney Abugri, “The Story behind the Giant Silos Kwame Nkrumah Built,” Graphic Online, 2016.

³¹ Bianca Murillo, “Postcolonial Cons, Scandals, and Fraud,” 2022.

³² Jennifer Kabat, “What Modernism Learned from the World’s First Grain Elevator,” Frieze, October 23, 2019, <https://www.frieze.com/article/what-modernism-learned-worlds-first-grain-elevator#:~:text=In%20Vers%20une%20architecture%2C%20Le,imposed%20anywhere%20in%20the%20world.>



Drawing 7: Concrete grain silos in Tema, collaged with the historic figure of the Ghana cocoa porter and the cocoa seeds that never saw the insides of the silos. Source: Authors' drawing.

Silos © NewsGhana; man with sack © Harrison Forman; left text excerpt © Chatham House; right text excerpt © University of Chicago Press. All rights reserved. This content is excluded from our Creative Commons license. For more information, see <https://ocw.mit.edu/help/faq-fair-use/>.

CONCLUSION

The failure of the ideal

As in the stories of several unsuccessful social housing projects the world over, a common denominator that is present is an economic condition that sits at odds with the built environment. The failure of the ideal here is thus understood as the inability to fully materialize and maintain the ideal vision conceived of by the architect-planner, due to largely economic factors. This is not to postulate that other social and cultural forces that exist in the built environment have no effect on attainment or non-attainment of the ideal, as we clearly see in the case of the subaltern, shaping their space in Tema's Community 4.

However, from our experience in cities around the world (including Tema itself), cultural and social lifestyles change as the economic condition changes. We witness for example, increasingly smaller family sizes in Ghana's main cities, and correspondingly more nucleated built urban form.

The silos in Tema are foregrounded in this conversation because of their large physical monumentality and what that monumentality meant in an economic sense in its past life. They represent in very physical terms a certain economic ideal where Ghana, the world's largest producer of cocoa at the time, would be able to manipulate global prices for the benefit of her people, including her direct workers living in Tema. The ever-shifting political and economic forces across time would render these silos inactive but their physicality and materiality would ensure their continued physical presence in today's age. The silo has become that thing which is and which isn't – by virtue of its dual nature of inactiveness and yet continued presence.

The "failure" of the ideal community envisioned by Nkrumah and Doxiadis in Tema is thus a result of the failure of the silo-symbol and economic ideal it represented.



Drawing 8: The failure of the Ideal. Collage of early as-built photograph of street in Tema Community 4, young boy resident, and pilings of cocoa pods. Source: Author's drawing.

Tema street, young boy resident © Athens Journal of Architecture; cacao pods © source unknown. All rights reserved. This content is excluded from our Creative Commons license. For more information, see <https://ocw.mit.edu/help/faq-fair-use/> .

A note for the future

The very continued presence through time of the monumental silo artifact means that it creates affordance for the possibility of other envisioned futures. Its continued existence means that the right political, economic and social forces could create a new future for it. The concrete silo in Tamale which is also part of the network of silos Nkrumah built, has been converted to an art space called Nkrumah Volini by the Ghanaian artist Ibrahim Mahama. This is enabled by and comes at a time when there is an increasing awareness of the role of art in shaping the urban condition. Importantly, it also comes at a time when the practice of art is seeing an increased level of capital investment that makes it possible to envision other futures for these ever-present monuments. As these other futures for these larger monuments are envisioned, they in the very same strand affect and change the conditions of the communities around, continuing the conversation that I have tried to describe in this paper, of seeming fixity and the potential change that comes with it.

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