



Protopian African Futures: Demas Nwoko's Tropical Architecture, Natural Synthesis—and Solarpunk

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Abstract

Pioneering Nigerian artist, architect, and master builder Demas Nwoko's post-independence practice embodies a synthesis of knowledge systems that transcend the 'Western' versus Indigenous knowledge dichotomy typically attached to decolonial readings of African creative and cultural output. This paper argues that Nwoko's cultural philosophy and metadesign approach, by virtue of the evidence displayed in his tropical African architecture and cultural and intellectual output over seven decades, prefigured solarpunk ideals in very concrete ways, thereby providing a profound case for how the 'Natural Synthesis' approach, which his 'New Culture' ideology evolved with, finds relevance outside the African context from which it emerged. By referencing key projects and the foundational philosophy, design, and construction methods Nwoko adopted and evolved in responding to architectural needs for a climate-responsive and culturally sensitive approach to architectural problem-solving in the African tropical region in his country of birth—Nigeria, the paper draws parallels between the ecological and sustainability-based concerns that drive the synergistic worldview behind his creative vision with the emerging solarpunk protopian ethos.

Keywords: Demas Nwoko, tropical African architecture, solarpunk, natural synthesis, Indigenous futures, protopian African futures

Natural Synthesis to New Culture

In a bid to meet with the country's needs for skilled labour, especially in the decade before Nigeria's independence from colonial rule in 1960, the Nigerian College of Arts, Science and Technology was founded in 1952, with three branches established in the Northern, Western, and Eastern regions. The branch in the Northern region, located in the city of Zaria, would subsequently become absorbed into Ahmadu Bello University which was founded in 1962, adding to the University's heritage a rich and vibrant art faculty whose history has proven to be quite pivotal in Nigeria's modern art movement. It was to this College of Arts, Science and Technology that Demas Nwoko and illustrious peers including, Uche Okeke, were granted admission c.1957 as part of the second wave of art students. Together with other students (see below), they founded the Zaria Art Society, a 'rebel' art movement whose major intervention was called 'Natural Synthesis'—an artistic ideology that favoured the fusion of Indigenous Nigerian art traditions and cultures with modern artistic techniques, thus breaking with the wholly western artistic traditions then taught.

In a comparative study of Demas Nwoko's and Uche Okeke's approaches to Natural Synthesis, art historian Professor Chika Okeke-Agulu identifies two distinct trajectories each artist takes in exploring the common objective of Natural Synthesis. In Uche Okeke's work, he finds a regional imperative being expressed, with the artist's Igbo origins given primacy of expression, while in Nwoko's work, he finds a more nationalistic imperative expressed (Okeke-Agulu & Picton, 2006). However, in my own reading of Nwoko's work, I do not see a diminishing of Nwoko's Igbo origins in favour of a nationalistic imperative; rather, I see an affirmation of the nationalistic imperative through how Nwoko synthesises embodied knowledge from his Igbo cultural roots in creating art and architecture. In keeping with the ethos of Natural Synthesis, he prioritises the infusion of embodied cultural and environmental knowledge while co-opting modern scientific and technological tools and methods, but he does this in aid of a national and pan-African political vision, which he has encapsulated in a notion called 'New Culture,' the name he adopted for his architectural practice and other cultural projects.

What stands out in Nwoko's New Culture movement is not just the political impetus for liberating and empowering African nation states through intentional cultural production, which no doubt underpins his approach, but the adherence to thinking from first principles¹ alongside more far-reaching holistic systems thinking typical of a

¹ Thinking from first principles is a problem-solving approach that starts by breaking down issues to their fundamental components so that root causes can be identified and addressed appropriately and with clarity, thereby arriving at more holistic and effective solutions.

metadesign² approach in which the empowering of communities and nation states becomes a desirable side effect when done right. He affirms that New Culture does not necessarily speak to African art/artistic cultural production alone but rather represents a way of approaching cultural production that prioritises the local cultural and environmental context in which a particular artistic output is intended to be situated, experienced, or utilised. Thus, if Nwoko were to produce a design for a building to be situated outside Nigeria, his primary focus would be to ensure the building best fits the social, technological, economic, climatological, cultural and environmental context within which it is intended to exist—just as he has achieved for his buildings in Nigeria. This simple assertion, which does not run counter to what classical architectural training professes, might seem trite, but in light of the actual practice of architecture, where the dictates of international fads, financial engineering, and other socio-political considerations weigh heavily on how projects get conceived and implemented, it requires constant re-affirmation.

This first-principles approach combines with the political impetus for strengthening regions and their communities and cultures through intentional ‘nation building’ in a mutually reinforcing matrix. While yet to be tested at scale (Nwoko’s attempt at trying to achieve this by attempting to run for President under the banner of the Social Democratic Party in the run-up to the presidential election race in Nigeria in 1993 failed), it has been robustly prefigured in his creative and professional output and in his fervent attempts to platform his philosophies at every opportunity, demonstrating his conviction that true sustainable development lies at the heart of such an approach.

The heady mix of creative architectural design, art history, cultural advocacy, techno-optimism, economics, ‘glocal’ politics, and activism prefigures the Solarpunk movement. And it does so in an uncanny way.

Towards Solarpunk and Protopian Futures

Rhys Williams describes Solarpunk as:

...an emerging sub-genre of fantasy and science fiction broadly characterised by imagining sustainable futures after energy transition.... As the genre has grown, it has developed a strong utopian, activist streak, with stories much more likely to be optimistic and with the imagined worlds as clear figures of a desire for a socially just and ecologically harmonious social organisation. (Williams, 2019)

² Metadesign is a collaborative paradigm that integrates micro-level user involvement and macro-level societal perspectives to co-create adaptable systems, driving the design process toward emergent solutions that transcend basic problem definitions.

Birthered on the hallowed corridors and labyrinths of the internet, the origination of the term solarpunk has been attributed to a blog post made in 2008 (john-robert, 2008). Though the time stamp on the post attributes it to john-robert, who appears to be the author of the blog, there is no further background information or reference to the identity of the blog's author, despite numerous posts after the one titled Solarpunk, which was only the second on the blog. This has led to references to the blog's author being anonymous, an interesting situation akin to the anonymous state of the identity of the creator of the Bitcoin protocol, otherwise known as Satoshi Nakamoto, further adding lore and mythos to a technophilic movement with utopian ideals—traits shared with solarpunk. This 'named anonymity' leaves ample room for mystery and speculation, especially for a burgeoning science fiction genre that is potentially contributing to how human civilisation evolves in the next few decades.

[J]ohn-robert's suggestion of a new literary genre called solarpunk has aged well. Similar to his original proposal, solarpunk as it exists today derives from steampunk which precedes it, while at the same time contrasting steampunk's 'utopian dystopia' ethos by generally favouring a utopian outlook that is premised on social action and prefiguration, while favouring solar energy (and other renewable energies) rather than steam, as the prime energy source as inspiration for the solarpunk ethos. Like steampunk, though to a lesser degree, solarpunk exhibits an anachronistic disposition towards technology, engendering a pragmatic fusion of old and new technologies in achieving the utopian world envisaged. Solarpunk currently serves as a counterfoil to the cyberpunk roots of steampunk, specifically countering its dystopian readings of the future in response to the excesses of techno-capitalism. Its more positive outlook offers world builders, their audiences, and humanity in general a future imaginary where things work out due to the choices we make—and normalising this worldview.

It should be acknowledged at this point the extent to which the science fiction/speculative fiction 'punk' genres have more or less coalesced around the idea of energy/technology paradigms, societal unrest, and old-fashioned rebellion (hence all the punks) as central themes, represented in several sub-genres with the 'punk' suffix, such as cyberpunk, steampunk, dieselpunk, biopunk, nanopunk, desertpunk, and many more.

Of all these punk genres, solarpunk stands out as the sub-genre that distinctly favours a utopian outlook and goes on to not only idealise how this may be achieved through political consciousness and activism but also transcends the confines of fiction and the fantasy world and fandom traditions to inspire and co-opt prefigurative endeavours in the real world. Such world-making attempts to seed solarpunk ideas at different scales and levels of implementation, including through residential communities (Agartha_Map, n.d.), activist groups, and even courses on Solarpunk ideology (Solarpunk Societies Courses, n.d.).

This prefigurative outlook is interpreted by some thinkers to transcend the utopian worldview into a protopian one, where “a destination is always in the process of being created...a dynamic and constantly evolving state” (Shi, 2023). John Kelly, founding editor of *WIRED* magazine who is credited with coining the term “protopia”, described the concept as one of incremental change in a positive direction, making a case for how sustained gradual change of 1% improvement every year (as a hypothetical example) might not seem like much, but would ultimately add up to an improved future state (‘Stop Chasing Utopia. Create “Protopia” Instead.’, n.d.).

Similarly, from a design thinking perspective, John Wood advocates in *Design for Micro-Utopias* for the staging of transformative change in small achievable prototypical experiments and networking these into a meaningful whole, rather than attempting to enact the broad sweeping monolithic visions that utopian visions are typically known for (Wood, 2007). Solarpunk’s protopian approach is the finest demonstration of how speculative fiction and science fiction can serve as a vehicle for thought experiments and rapid prototyping of multi-sectoral change.

There are two more distinctions about solarpunk worth mentioning. One is the strong anti-capitalist outlook held within solarpunk circles. While there is no monolithic economic model espoused for solarpunk, given the incompatibility of the extractive and profit-oriented disposition of run-away capitalism with the more benign sustainable and regenerative visions of solarpunk (including wind, tidal etc.), it is no surprise that most solarpunk advocates would favour an anti-capitalist or post-capitalist worldview. The second distinctive feature of solarpunk is the unique aesthetic the movement has come to be associated with, typified, ironically, by an animated advertisement for a yoghurt brand.

The “Dear Alice” commercial commissioned by Chobani Greek Yoghurt in 2021 proved iconic for the evocative way it captured the imagination by giving visual, aesthetic and emotional expression to solarpunk futures where technology exists in harmony with nature in lush, green landscapes interwoven with renewable energy, and humans existing in this milieu in cooperative and mutually supportive clusters.

Figure 1. Still from 'Dear Alice' animated video by *THE LINE*



Source: <https://youtu.be/z-Ng5ZvrDm4?si=RN0Jbt8zJqIDW-nm>

The Studio Ghibli-esque styling of the aesthetic proved a great fit for conveying the desired messaging and imagery. The contradiction in having such an agreeable aesthetic being deployed in blatant service of a capitalist objective (selling yoghurt) was subsequently fixed by a solarpunk enthusiast who re-uploaded an edited version of the Dear Alice video to YouTube after scrubbing out all the branding from both the visuals and sound design (Waffle To The Left, 2021). Corporate branding and advertising notwithstanding, the original version had attracted over 850,000 views at the time of writing and effusive comments such as: “This is the solarpunk future I want” (THE LINE, 2021).

With this background in mind, we may now consider what the core principles of solarpunk are. While there is no monolithic definition for the category, the following common core ideas can be aggregated from the various notions of solarpunk that exist:

- Sustainability through renewable energy use and harmonious integration of technology with nature
- Community building based on mutual aid, inclusiveness, and social justice,
- Radical hope for overcoming challenges
- Creative problem-solving channelled through a do-it-yourself (DIY) approach
- Enthusiasm for technology predicated on responsible use of technology (technophilism)
- Ecological restoration
- Sustainable economics devoid of the deleterious effects of extractivist capitalist systems.

Nigeria's Zaria Art Rebellion and 'Punk' Art Rebellion

In pre-independence Nigeria, however, the priorities were different for the students at the art school in Zaria. Faced with the effects of an educational system controlled by a colonial government on its way out, some of the students made a bold move to shape their destiny and, by extension, that of future art education in Nigeria by protesting against a curriculum and pedagogical approach that centred the European heritage and artistic practices of the colonial staff that still ran the affairs of the Nigerian College of Arts, Science and Technology.

The objection raised by the students was particularly poignant and ironic given that traditional African art forms and practices had in many ways influenced the unfolding of European modernism in the late 19th and early 20th centuries. Their protest was channelled through the activities of a student group called the Zaria Art Society, who rebelled against the colonial strictures woven around their art education and demanded instead a curriculum that centred their own cultural heritage and Indigenous artistic traditions in a movement that has since become known as the Zaria Rebellion.

Okeke-Agulu traces the founding of the Zaria Art Society to a discussion held between Uche Okeke, Simon Okeke, and Demas Nwoko in October 1958 on the need to champion "a national identity for the work of contemporary Nigerian artists" (Okeke-Agulu & Picton, 2006, p. 26). As the Natural Synthesis (coined by Uche Okeke) paradigm they evolved together with Bruce Onabrakpeya, Yusuf Grillo, and Oseloka Osadebe matured, this national identity was deemed to be attainable by sourcing inspiration from studying the Indigenous artistic practices and traditions local to the region each student artist came from and shaping a pedagogy that centred that knowledge for application in a modern context.

Okeke-Agulu problematises the monolithic notion of a 'national identity' that the Natural Synthesis paradigm the group promoted seems to engender in subsequent references to the impact of the group in the literature of arts history. Nevertheless, he acknowledges that the results of Natural Synthesis in fostering a balance between tradition and modernity in Nigerian contemporary art practice remains incontrovertible.

With reference to the 'punk' heritage behind the popular science fiction sub-genres and artistic expressions previously discussed, the revolutionary impetus behind the Zaria rebellion is not an exact match for a 'punk' moment in Nigeria's art history. For one thing, the Zaria Rebellion sought to reform the fledgling modern art establishment in Nigeria from within and was therefore created from inside its framework, rather than punk art's emphatic anti-establishment and anarchic approach as a result of disillusionment with societal norms. The Zaria Rebellion also sought a synthesis of modern and Indigenous art techniques and philosophies, while punk art emphasises aggressive shock tactics and aesthetics as strategies for subverting the societal norms

the artist rails against. However, both rebellions achieve similar impact, with the Zaria Art Society helping define a modernist art trajectory for Nigeria that connects the country's traditional art heritage to its contemporary art practice, while punk art influences design and popular culture through its counterculture aesthetic.

Like avant-garde movements such as Dadaism that prefigured the punk era by expressing discontent with societal realities through provocative and newfangled literary and artistic expressions, Natural Synthesis (albeit with more subdued, yet no less impactful, tactics) prefigured the flowering of different vibrant art trajectories in Nigeria's contemporary art scene, which, to date, continue to unearth new ways of fusing Indigenous art traditions with modern expressions. It is therefore not an anomaly to draw parallels between Demas Nwoko's creative works and solarpunk aspirations.

An Alternate Reading to the Decolonisation Imperative

The never-ending call to arms against colonial frameworks, which perpetually seeks active dismantling of such frames, presents an unintended consequence—a problematic position which requires a perpetual reactionary stance, counter-intuitively giving oxygen to the oppressive tendencies of said colonial frameworks on an ongoing basis, while robbing those who seek to build outside of colonial frameworks of the energy, resources, and mental clarity to do so. This dynamic thus re-establishes the primacy of a colonial frame in any consideration of the existence of the historically oppressed, resulting in a problematic state of being doubly oppressed.

Demas Nwoko's architecture presents us with a vital tier of activism that is based on an Indigenous-modern synthesis that actually works. This practice advances the discourse around postcolonial futures in a firm and concrete direction.

In *Against Decolonisation*, Olufemi Táíwò bemoans how the modern decolonisation movement—after the tangible objectives of the transfer of economic and political control of African nation states to the hands of an African political class had been achieved—has since strayed into a performative and impractical phase that is largely harmful to African scholarship and agency in contemporary times. In his analysis, the indiscriminate application of the notion of decolonisation beyond the initial tangible political and economic imperative into more generic spheres like science, culture, philosophy, literature, and medicine has been problematic and untenable because, in his words, “decolonisers too easily conflate modernity and Westernisation” and thus ignore and deny how the Indigenous is likewise modern (Táíwò, 2022).

Through his creative work, Demas Nwoko, being of the generation that was handed a country to shape, after Nigeria attained independence from British rule, presents a more robust response to the issues decolonisers try to address, and he does this

through a synergistic approach that efficiently synthesises multiple influences, orchestrated by the power of his own ability to assert his agency. His architecture takes the best from modernity—most conspicuously characterised perhaps by the structural durability of reinforced concrete—as a scaffold of sorts for reinterpreting, lifting up, and emphasising the best of African aesthetic, philosophical, and building traditions to create an amalgam appropriate to the cultural, technological, economic, and social needs and realities of Africans living in a modern age.

Nwoko does not relinquish the agency that the virulent demands of decolonisation would have denied him: the agency to be able to mix and match his influences and sources of knowledge and to be able to engage in the syntheses and synergies that most creative pursuits demand. He achieves this through a rigorous adherence to a first principles approach to his creative and intellectual practice and the will, discipline, and creative genius to will into existence the syntheses and synergies that bring his creative visions to fruition. His roots in the Natural Synthesis movement of the Zaria Rebels testify to this creative emergence through critical reflection from first principles, synthesis between old and new forms of knowledge, and a rigorous and unrelenting capacity to carry a vision forward.

Interestingly, in his writing, Demas Nwoko is as energetic and resolute in his condemnation of the ruinous and lingering effects of colonisation as any contemporary advocate of decolonisation, the difference, however, is that his work and lifelong practice take more of a metamodern approach. Going beyond both the lingering cultural and economically disabling effects of colonialism that remain manifest in an out-sized reliance on foreign technologies and processes and the equally undesirable outcomes of self-rule as displayed in the kleptocratic political class that has emerged over the post-independence decades, leading to watered-down educational standards and the perennial dearth of quality craftsmanship in the building trades, to synthesise solutions that work by finding meaningful pathways out of these complex challenges.

In a 2024 paper, Łukasz Stanek considers the hegemonic tendencies of technology transfer between nations by focusing specifically on the experience in Ghana's construction industry in the post-independence era, when competing British and Soviet interests collided with the pragmatic needs of technical professionals and government administrators to define a national pathway for the growth of the industry. Stanek demonstrates how "controversies pertaining to the construction industry both reflected and informed competing visions of Ghana's economic development and social modernisation in the context of decolonisation and the Cold War" (Stanek, 2024, n.p.). The tenuous prospect of adapting foreign technology to local needs as a means of fast-tracking growth and development in a modern world was and remains a Trojan horse that many African nation states have to contend with.

Nwoko has had to navigate similar dynamics throughout his career. His buildings are engineered with the British technical standards he adopted early on in his practice, but adapted to the realities of building construction in Nigeria. To date, he ships in components and machines that are not locally available, but he also fabricates components, manufactures furniture, makes jigs and accessories to improve the levels of precision in his practice, and also makes machines to help make other machines. As an autodidact, the do-it-yourself ethos espoused by solarpunk comes naturally to him, giving him greater leverage when having to adapt imported components or machinery.

The agency to mix and match technologies as expedient is an essential condition for creating viable protopias (acting with agency) beyond the call for decolonisation (asking for agency). Nwoko's architecture demonstrates this eloquently.

Nwoko's Architecture and the Making of an African Utopian Ideal

Demas Nwoko's original intent was to study architecture; however, he found the training programme available at that time to be rigid and unimaginative, and he therefore opted instead to study the plastic arts. Nevertheless, his interest in architecture ran deep. Born into the royal family in Idumuje-Ugboko in Southern Nigeria, he had grown up as a prince, seeing his father, who was king at the time, laying out parts of the town and designing and supervising the construction of different buildings.

His relationship with architecture therefore grew from an embodied experience borne out of close observation of how the culture and traditions of the people influenced the construction of their architecture. Following his training in fine arts in Zaria, from 1961 to 1962 he proceeded to study scenography at the Centre Français Du Théâtre and also fresco painting and architectural decoration at the École des Beaux-Arts, both in Paris, France. This was followed by a Rockefeller Travel Grant in 1964 to study theatres across the world, by which time he had already joined the pioneer staff of the School of Drama at the University of Ibadan, in Oyo State, teaching "Design, Directing and Applied Aesthetics."

This broad-based creative foundation soon provided a channel for him to express his passion for architecture when, out of necessity, he ventured to design and build a studio and residence for himself on a site he had acquired atop the Oremeji Hill in Ibadan. This basic requirement eventually grew into the complex now known as New Culture Studios as he took advantage of the opportunity proffered by the site and carved an amphitheatre into the hill, stepping up into back stage and rehearsal spaces. This construction provided a test bed for the early ideas he had been developing for an ideal African theatre design, drawing from his experience studying theatre facilities around the world on the Rockefeller grant—ideas which eventually found full

expression at a larger scale at the Oba Akenzua Cultural Center which he later got to build in Benin.

Figure 2. New Culture Studios, Ibadan, amphitheatre



Performance of *The Big Tree*, a short play written by Ese Brume, produced and directed by Rufus Nwoko in honour of Demas Nwoko, February 2020. Photo: Ayodele Arigbabu

New Culture Studios at Oremeji Hill, moreover, proved to be a test site for design aspects of what would later become his signature architectural style. Sculpted columns, exquisitely detailed balustrades, hand rails and burglar bars, the impluvium roof system adopted from traditional building systems he grew up with in Idumuje-Ugboko which worked to bring natural light and passive cooling into building interiors, his intentional approach to designing fenestration which brought in cool air at lower levels and released warm air at upper levels while leaving the middle level (where most designers would default to introducing windows for views) blank in the belief that when indoors people should be encouraged to tune out from the outside world, but also because of an awareness that the more glazed surfaces that are provided in warm humid regions, the more solar heat gain would be introduced to the building. Interventions such as these ensured the building maintained decent comfort levels without requiring artificial cooling.

Figure 3. View of residential wing of New Culture Studios, Ibadan.



Photo: Ayodele Arigbabu

A particularly unique and innovative discovery that resulted from the New Culture Studios project was the development of Latcrete, again, as a child of necessity. A bye-law existed that outlawed the construction of earth structures ostensibly for safety reasons, though ironically, mud buildings happened to stay standing for over a century and tended to cave in only when not well protected. A desire to have cities look more ‘modern’ would have been part of the motive behind the bye-law. At Oremeggi, however, the hilly site and the cut-and-fill construction process it necessitated brought to Nwokos’ attention the quality of the local laterite soil, also containing some fine aggregate. Following a hunch, he experimented with making cement-stabilised earth blocks out of the laterite soil and found it even more durable than cement blocks made with smooth sand thanks to the fine aggregate.³

³ Laterite has traditionally been used in construction across many regions of the tropics and its durable properties and risks are documented in heritage (see Kandolkar, 2021). Various composite materials bounded with lime or cement as construction blocks has an ancient history across the tropics (see Hodges, 2022).

Figure 4. Stylized columns at residential wing, New Culture Studios, Ibadan.



Photo: Ayodele Arigbabu

The cement stabilisation enabled them escape the bye-law that prohibited ‘mud’ walls and the fact that the main material component—the laterite soil used in forming the blocks was mined on the site, earned him some cost savings. Further cost saving was to be accrued in the long term due to the elimination of both the need for rendering the walls and the need for periodic painting. The walls thus built for his projects decades ago still stand firm, devoid of paint, and continue to shine bright in the sun.

He called these blocks “latcrete” and applied a high level of attention to detail in the construction process, ensuring that the latcrete blocks were laid with great precision, thus achieving a unique aesthetic. The red earth blocks also proved great for thermal regulation and were adopted in almost all his subsequent architectural projects, becoming a prominent feature in his design palette, reminiscent of the earth walls he grew up with but reinterpreted in a modern context.

Cement stabilised earth blocks have long been acknowledged for their excellent compressive strength, high durability and weather resistance, excellent thermal and sound insulation properties, and low maintenance profile, yet very few examples of projects utilising this composite material have been observed in Nigeria, certainly none with the consistency and aesthetic maturity demonstrated in Demas Nwoko’s body of

work. The stigma attributed to ‘mud walls’ in the minds of most patrons looking to commission building projects could be partly attributed for this absence, a stigma Nwoko surmounts by the sheer force of creative genius with which his designs transmit his vision.

In *The Architecture of Demas Nwoko* by John Godwin and Gillian Hopwood (2007), Nwoko affirms that a house should not be treated like a wind tunnel, in reference to the science-driven trend of deriving climatological design solutions for the tropics from the results of wind tunnel tests. Instead, Nwoko’s architecture favours a gentle transfer of air through the building. His approach to air circulation and passive cooling works at multiple levels through the use of impluviums (inverted pyramid-shaped vents positioned below the roof apex); the provision of low-level windows to bring in cool air and high-level windows for extracting warm air; limiting or totally eliminating direct exterior fenestration to cut out solar heat gain from windows; and the materiality of the latcrete walls, which provide the thermal mass needed to better regulate the temperature difference between the interior and the exterior. This combination helps his buildings achieve the elimination of high air conditioning costs that most buildings require in the tropical Nigerian climate to maintain internal comfort levels, a sustainable alternative to mechanical cooling, and a reduction in the risk of airborne diseases due to constant but gentle air exchange.

With these gains established in his built projects, Nwoko’s architecture had achieved the requirements of sustainable design long before the term became a talking point. Most of the strategies he deployed were gleaned from close observation of the traditional building and living patterns of people living in the African tropics, as passed down through centuries of adaptation to the climate, information that was available in plain sight but required a keen mind to interpret and integrate effectively into a modern context.

His approach to tropical architecture benefits from the nuance of embodied knowledge he accumulated from his deep connection to his cultural roots growing up in and around the palace at Idumuje-Ugboko. Having observed first-hand how the building design and construction traditions of the people connect pragmatically with the way they live, affords him an Indigenous insight that he combines with modern practice.

His buildings therefore are climatologically adaptive, while not necessarily following the more quantitative approaches that might have informed the works of the early proponents of modern Tropical Architecture in West Africa, like the extremely influential expatriate architects Maxwell Fry and Jane Drew—and of course, without the massive funding from the Colonial Development Welfare Fund and the political imperative to add an indigenised sheen to British colonial influence that came with it.

Conversely, Nwoko's politics strove to showcase genuinely African design solutions that were not unduly influenced by colonial interests.

It is telling that his first commercial commission after using his personal project at New Culture Studios, Ibadan as a sandbox for experimenting with ideas turned out an instant masterpiece. Approached by Dominican priests in Ibadan to build an altar adorned with African aesthetics, he asked them if they had a chapel and on learning that they lacked one, proposed, instead, to design and build one for them and sent a loose sketch with notes to demonstrate what he had in mind. To his surprise, the response received from the order's headquarters in Chicago was that he should go ahead and thus was the design for the iconic Dominican priori in Ibadan born.

Figure 5. Aerial shot of the Dominican Chapel, Ibadan.



Photo: Adeyemo Shokunbi

Packed with symbology, and the African aesthetics the order sought, the project was commissioned in 1970 and featured prominent use of massive hard wood columns fitted in metal shoes, latcrete block walls (as previously developed at the New Culture Studios project), rain water collection which channelled water from the roof into a pond surrounding the building, deft use of natural lighting to add to the spiritual ambience without the solar heat gain that usually accompany such attempts, carefully incorporated artistic motifs and forms embedded into the entire structure framing the

building and its cladding and other components, custom designed furniture embedded in the building as permanent fixtures, and more.

The chapel is remarkable for becoming an instant classic. Despite being his first professional commission, it draws comparisons to the works of Antoni Gaudí and Frank Lloyd Wright and earned acknowledgement as one of the buildings listed in the compendium edited by Mark Irving: *1001 Buildings You Must See Before You Die* (Irving & St John, 2008).

Nwoko would proceed to deliver other exceptional projects, such as the Oba Akenzua Cultural Center in Benin, where he demonstrated his ideas for an ideal African Theatre; his residence and studio at Idumuje-Ugboko; the Miss Pearce Chapel at Issele-Uku; and the St. Benedict Monastery in Ewu (for which he is currently building a newly designed chapel), among others. Each project demonstrates the consistency in his thinking and the totality of his vision.

Figure 6. Approach view of Demas Nwoko's residence and studio at Idumuje-Ugboko



Photo: Ayodele Arigbabu

His hands-on approach, which ties in well with the do-it-yourself ethos of solarpunk, led to the founding of the African Designs Development Center—a company he set up with an aspiration to add industrial capacity to the talents of local artists, technologists,

and craftsmen whom he tried to attract, retrain, and engage profitably in the production of culturally and industrially viable goods and equipment on the strength of the construction projects to which his architectural practice had been commissioned. An expansive factory was established at Idumuje-Ugboko for this purpose, which facilitated the manufacture of furniture, architectural components, and fixtures. It still remains in use today despite weathering various economic storms and the harsh business climate in Nigeria, further demonstrating his belief that Africans have to take up the responsibility of building their own future, of which the establishment of an industrial base is a key necessity.

As Rupert Bickersteth puts it in a 2023 article for Dezeen,

Nwoko's criticism of the current architectural context in Africa is leavened by an inspiring vision of the future and a call for the next generations of African architects to design the built environment for the people who live there. (Bickersteth, 2023)

In recognition of the strength of his vision, Demas Nwoko was awarded the Golden Lion for Lifetime Achievement at the 18th Venice Architectural Biennale in 2023, earning him yet another affirmation of the relevance of his contributions to the evolution of viable and appropriate ecological design concepts for the tropics that work well with nature, buoyed by innovative use of locally available materials and human power, sustainable construction practices, ingenious fusion of Indigenous and modern technologies, prominent and contextually relevant applications of cultural nuance and aesthetics in a prefigurative protopian demonstration of architecture as future-making.

In the words of Lesley Lokko, the curator of the 18th International Architecture Exhibition of La Biennale di Venezia,

One of the central themes of the 18th International Architecture Exhibition is an approach to architecture as an 'expanded' field of endeavours, encompassing both the material and immaterial worlds; a space in which ideas are as important as artefacts, particularly in the service of what is yet to come. With all of its emphasis on the future, however, it seems entirely fitting that the Golden Lion for Lifetime Achievement should be awarded to someone whose material works span the past 70 years, but whose immaterial legacy—approach, ideas, ethos—is still in the process of being evaluated, understood and celebrated....

Although relatively few, Nwoko's buildings in Nigeria fulfil two critical roles. They are forerunners of the sustainable, resource-

mindful, and culturally authentic forms of expression now sweeping across the African continent—and the globe—and they point towards the future, no mean achievement for someone whose work is still largely unknown, even at home. (La Biennale di Venezia, 2023)

Narratives in Service of Prefigured African Futures

Solarpunk started as an ideology in search of narratives that then realised there was no need to wait for the narratives and jumped straight to real-life experimentation through different protopian enactments. The narratives would eventually catch up with real-life. In a similar way, Nwoko's New Culture movement moved straight to protopian enactments funnelled through his architectural and cultural productions.

Solarpunk, as a result of having been articulated as a genre only relatively recently, has had to adopt or co-opt many pre-existing compatible creative and intellectual expressions after the fact, in order to shore up its import and provide tangible examples of the ideas being seeded by the literary genre and ideology. Demas Nwoko's New Culture movement thus presents a compelling African example that fits that mould albeit that the narratives that assert this are yet to exist in noticeable volume.

Ever the interventionist, Demas Nwoko himself attempted to seed intellectual discourse on the concerns that precipitated the emergence of Natural Synthesis and his New Culture ideology when he published *New Culture* magazine between 1978 and 1979, of which Iheanyi Onwuegbucha identifies the magazine's focus on the aesthetics of African art and culture, together with its quest for a return to the study of traditional art, as the key element of the review. Though short-lived, with only eleven issues published, the magazine served in documenting contemporary African arts and critical cultural thinking of the era. (Onwuegbucha, n.d.)

In "The Architecture of Demas Nwoko," an article for *Farafina Magazine* (Arigbabu, 2006), which heralded the book of the same title by John Godwin and Gillian Hopwood also by the same publishers, I dwelt a little on Nwoko's production of "Children of Paradise", a play he wrote, choreographed and directed as an epic specifically produced for the second Festival of African Arts and Culture (FESTAC) in 1977. "Children of Paradise" is perhaps his most prominent fictional rendition of the philosophies underpinning New Culture. The play, is an allegory on the effects of colonialism on "the land of the Blacks", a land of: "Lush green vegetation, a land flowing with milk and honey, a land of song, of music and of dance" (Nwoko, 1976).

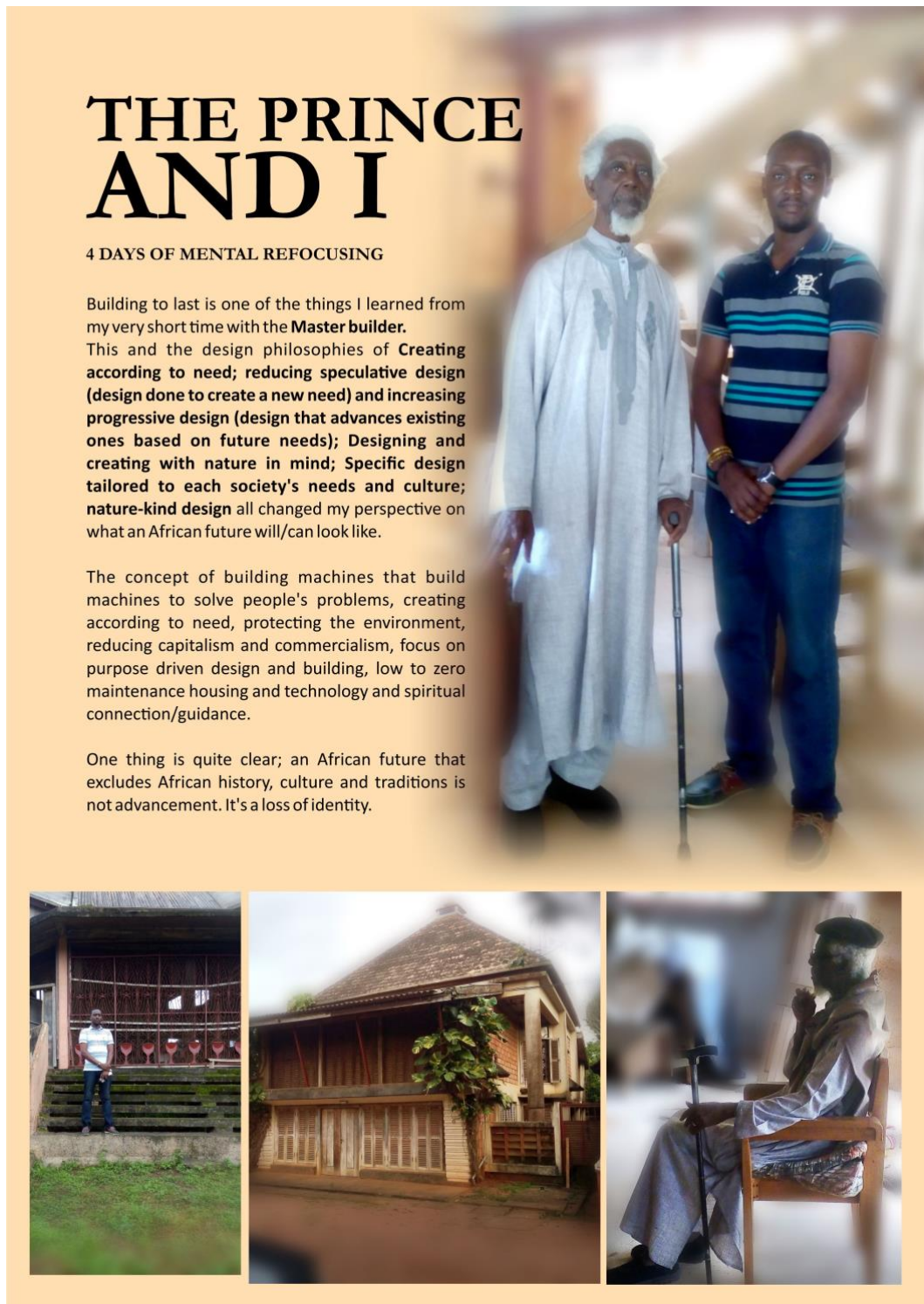
Blessed with precious metals and the end-products of all these natural and mineral resources—"all hanging from the great trees of Paradise..." (Nwoko, 1976), it is imperative for the people to redefine their own destiny, asserts Nwoko's cultural philosophy. The play was strategically put forward as one of the prime performances at FESTAC, to seed those thoughts into national and continental consciousness. Part of the festival's intended role in galvanising people of African descent for an African renaissance in artistic, cultural and political dimensions.

The default to utopian rhetoric in describing the land of his birth is not altogether unexpected. The play, as a forward remembrance of a future that once was, in a sense mourns the trajectory truncated by the arrival of the 'adventurous albinos', who, through interaction and seduction of the leaders of the people, succeed in upsetting the balance in paradise. Nwoko's entire oeuvre is a multi-decade exercise in prefiguring a desirable future for Africa.

Four decades after "Children of Paradise" was produced, another opportunity to have literary narratives catch up with the prefiguration Nwoko's work had been staging arose when, in 2015, while curating the African Futures exhibition for the Goethe Institut in Lagos (About African Futures, n.d.), I invited graphic artist and comic book illustrator Ibrahim Ganiyu to engage with Demas Nwoko at his studio in Idumuje-Ugboko for several days. The aim was to afterwards create art based on their interaction.

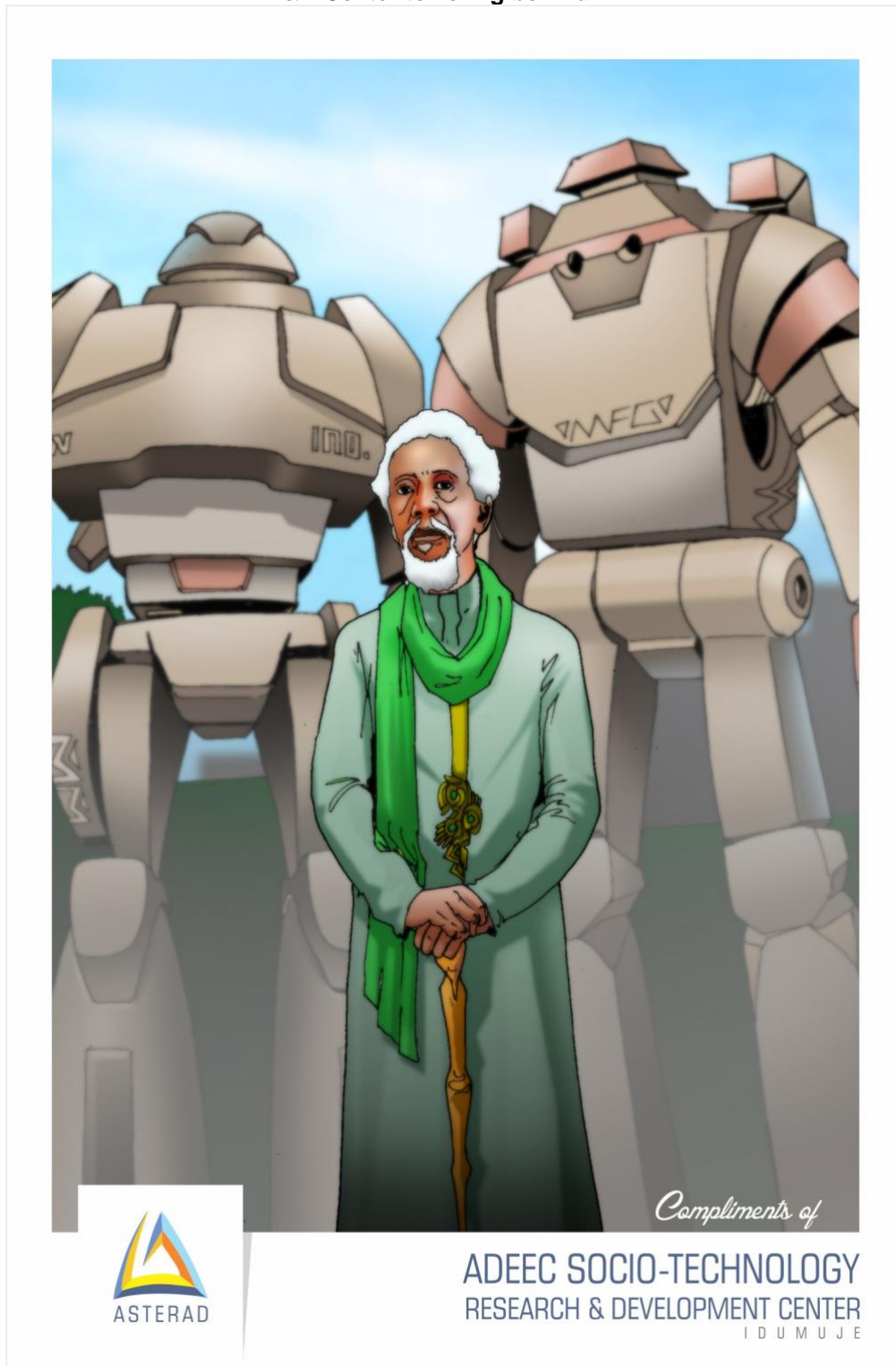
It was not surprising that Ganiyu chose to make a mini comic book, speculative posters, postcards, and newspaper mock-ups based on world-building and future-making. Ganiyu's creative works produced a future scenario, set in 2076, in which Demas Nwoko's cultural philosophy and design thinking had gained momentum and mainstream acceptance in an alternate reality for Nigeria. The speculative material depicted different aspects of this utopian alternate version of Nigeria called "Naijaria."

Figure 7. Introductory notes and photographs



From Ibrahim Ganiyu's exhibition at African Futures: Lagos (2015).

Figure 8. Demas Nwoko with two industrial humanoid robots designed and built in his ADEEC R&D Center towering behind him.



Speculative postcard by Ibrahim Ganiyu for African Futures: Lagos.

In the future Naijaria, a creative industrial company called ICS had created water powered vehicles, the Sola Alamutu Foundation was saving cities by making them green, security updates ran with headlines saying “We are safe”, ‘Ifablet’ devices that ran on the Ifa divination system were commonplace digital assistants, robots existed to help on the farms and with bringing goods home from the market, the last cancer patient got cured, all achieved with: “Technology designed with culture and tradition.” In the comic book, the global situation where: “Even as the world sank further into commercialism, creating innovation purely for profit and creating solutions that only created new problems and hence, more money” was decried, with Demas Nwoko’s character affirming that “No nation can develop if it loses its culture....Technology, design and creativity exist to solve problems and not to damage the people and the environment.” (Ganiyu, 2015)

Figure 9. An industrial humanoid robot carrying goods home from the market



Designed and built at Demas Nwoko's ADEEC R&D Center. Illustration by Ibrahim Ganiyu for African Futures: Lagos

The comic book inspired by Demas Nwoko’s thoughts and designs opened with a quote from the protean artist:

When a people lose their culture, fail to look at their past, ignore their traditions and design technology purely for profit, they have not advanced, they have gone lost. Individuals and society will

progress truly only when everyone seeks, knows and fulfil their specific role in their society. That is the essence of work. The key to true advancement of society. (Ganiyu, 2015)

Figure 10. Page from the mini comic titled Nwadie: Built to Last



Created by Ibrahim Ganiyu for African Futures: Lagos

Without either of us being conscious at the time of Solarpunk, despite being both science fiction enthusiasts and creatives, Ibrahim Ganiyu's offering at African Futures Lagos affirmed through his narrative what had already been expressed in the physical manifestation of Demas Nwoko's work—that his thoughts and creative output was

Solarpunk—long before the word solar got conjoined with punk to describe a literary and ideological technophilic movement that speaks to a positive outcome for humanity.

This paper is only catching up with that interesting protopian notion nine years after it was first unknowingly implied at the African Futures exhibition. In writing this history, it is hoped that more creative spirits get to engage with Nwoko's work with the understanding of the wealth of material encoded there-in for articulating and seeding uniquely positive and viable African and tropical futures through forward remembrance, and the power of storytelling.

Epilogue: A Conversation with Demas Nwoko

While this article was in production, I engaged Demas Nwoko in conversation on the subject, and his insight provides us with a fitting epilogue. The following represents a paraphrased account of his interventions, with direct quotes included where applicable.

On Technology, Complexity, and Progress

Nwoko began by addressing the high complexity and cost of contemporary technology. He observed that this makes it difficult for Africans to participate meaningfully in global technological progress due to the cost. As a result, Africans are often left relying on foreign technologies—a situation he considers unsustainable: *"You can't maintain what you don't have the resources to sustain."*

He elaborated that technology at every stage is inherently simple and progresses incrementally. This incremental development has allowed the West to build on previous advancements over time. However, Africa missed this natural progression due to its colonial experience, leaving it dependent on foreign technologies that are often ill-suited to local needs. He insisted that Africa should instead pursue progress step by step, based on actual needs: *"We don't need to try to invent what is not needed."*

On Natural Synthesis and Cultural Evolution

Building on this idea of incremental progress, Nwoko turned to the concept of Natural Synthesis—the art ideology developed in Zaria in the 1960s. He cautioned that while many latch onto the term "Natural Synthesis," they often lose sight of its deeper meaning. The "natural" in Natural Synthesis, he explained, refers to a natural process of evolution: *"Culture evolves according to the needs of the people, implying that there has to be a bona fide people/community managing their own affairs for there to be a*

culture." This emphasis on cultural evolution led him to reflect on his own work and its relationship with tradition.

On Materiality and Architecture

Discussing materiality in architecture, Nwoko reflected on his earlier experience building with latcrete (a mixture of mud and cement), and concluded that the best solution is a return to 100% earth construction—the traditional method used for building walls in pre-modern West African architecture. He argued that this approach is essential for achieving both the aesthetic and comfort qualities inherent in African traditional buildings: *"Pre-modern buildings built with 100% earth walls are still standing today."*

He acknowledged that it is often difficult for people to accept simplicity because simplicity can appear unsophisticated: *"It is difficult for people to accept that what is simple is sufficient because that which is simple looks too unsophisticated to be valid."* To illustrate this point, he cited honey as an example of a natural product with immense health benefits yet simple provenance. He framed simplicity as not being primitive but rather as foundational: *"A pure line without adulteration may be viewed as the best aesthetic."*

On Architecture being Context Specific

Nwoko emphasised that architecture is about geography, about responding to the environment and community it serves. He argued against importing architectural styles from one zone into another, insisting that architecture must remain context-specific: *"The architecture of one zone cannot be imported into another zone because architecture is only valid within the context of a community."*

At the same time, he framed every place on earth as central—underscoring how localised actions can have global implications: *"Every spot on earth is the centre of the earth because what is done in each corner has the potential to reverberate across the whole world."* To reinforce this idea, he cited an indigenous saying: *"If a person urinates in one spot, the evidence will be obvious; but if they spread it all over the place, then they might as well have done nothing."*

Reflecting on his own practice, he said: *"I was just working for my own community. And anywhere you are, if you accept it, is your community—so work for that place. But don't expect what works for you there to work for others elsewhere; what you do works for where you are, and in that way it will work for humanity."*

On Colonial Influence

Turning to Africa's colonial experience, Nwoko opined that true independence requires visible self-reliance: *"If you say you are independent, then you need to be seen to be independent."*

He acknowledged that Africa's encounter with colonisation was brief—just 150 years—but disruptive nonetheless. While Natural Synthesis recognises colonial influence as unavoidable, he argued that this influence is primarily technological rather than cultural or aesthetic: *"Technology is nobody's preserve; it is universal. Iron smelting occurred in Africa before Europe—even if Europe became experts in exporting smelted iron."*

He pointed out how technological advancements elsewhere (e.g., smelting iron in America) led to environmental devastation such as deforestation in the Amazon. Nwoko concluded this thought by emphasising the role of creatives in addressing these challenges: *"There is a lot that is not being said, but it is the creative ones who need to right these wrongs because they are best equipped to grapple with culture and technology—though they have become victims rather than leaders."*

On Natural Synthesis in Practice

Reflecting on his association with Natural Synthesis, Nwoko clarified his position: *"I did not practice 'Natural Synthesis' because I did not have a need to. My work was already rooted in the aesthetic essence of my culture; I only used technology to express it."* He suggested that those interested in his work would find its principles embedded within it: *"People might have to go into my work to see it. The principles are there."*

Finally, he reiterated his belief that cultural change should remain organic and community-driven: *"We don't have to say we are amending our culture because of its technological content. The essence of culture as the aesthetics of living should not change."* He reinforced this by explaining that while culture changes all the time, no culture is static, so New Culture (the name he gave to the paradigm that guides his practice) comes into being, but it does not change the aesthetic philosophy of the culture.

He warned against "false acculturation," which he sees as a global issue caused by uncritical adoption of external influences. *"Majority of advanced technology is more of a commercial imperative than actual advancement of human needs. Culture keeps changing but it should be engineered by the people themselves."*

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