



What is Fufuzela?

FUTURING THE PAN-AFRICAN MUSEUM

by DK Osseo-Asare

Fufuzela do not exist, yet. But they will. Indeed, some say that to encounter fufuzela is to meet an interspecies emissary from Africa's future, here to remind us of the past.

Part I:

“Decolonization is a gift” (1)

In her text “African Space Magicians” for the 2019 Chicago Architecture Biennial—in which she likens the Zulu “umqambi wesino” to something more akin to “space magician” than the English derivative of the Greek “arkhitekton”, or master of works—the author, architect and educator Dr. Lesley Lokko, founding Dean of the Graduate School of Architecture at the University of Johannesburg, tells the story of encountering security guards at an award-winning museum in South Africa. In response to her question, “What is the Xhosa word for museum?”,

they remarked that, “Actually we don’t have a word for that.” Upon further inquiry, when pressed (“So what do you call the building where you go to remember something?”) they clarified: “Madam, we don’t need a building for that.” (2)

Bearing in mind that the etymology of the word architect via the Latin root (tego, tegere, texi, tectus) connects both “to weave together” and “to mask or conceal”, one possible reading of Dr. Lokko’s intricate text is that it is a blanket call to challenge landscape architects, architects, environmental design professionals, both expert and lay practitioners, “producers”, “consumers” and all other beneficiaries of design and the arts to disengage themselves individually and structurally from notions that architecture must be overly large, complicated, heavy, expensive, immobile or anchored in paradigms of African poverty, persecution and incorrigibility.

If African architecture today is to liberate anyone from real

or perceived environmental constraints—and from limitations circumscribed and engendered by geopolitical systems of worldwide economic exploitation and terrestrial extraction—the first step is invariably psychological. Like all past and future calls to decolonise minds, this applies to ‘mind’ at all levels: from the intrapersonal to the supranational, planetary and the galactic. It is necessary to disentangle logics of making and possibility from pre-packaged conceptualisations of what constitutes architecture.

Digital natives today may say the internet is forever, but even they know that electronics are ephemeral. Erstwhile human culture, embedded in evidential experience and having already endured and evolved across eons is a profoundly proven peer-to-peer technology network. Architecture has many forms and meanings in multiple disciplines and communities of praxis. However, in each, it serves to archive access to a catalogue of semblable support structures that

the mind, in turn, can draw on for the construction of imaginaries. Building begins first in the mind, not by memorising a canon per se, but through experiential comprehension of which parameters (particular and perceptible, describable if not quantifiable) define a spatio-temporal scenario that is ensconced in manifold material conditions. Perhaps in order to better advance the decolonisation of our arts and cultural institutions, structures and modalities, we may opt to enter into a sustained project of disambiguation. We may choose to re-route the colonial circuitry of conceptual and epistemological disenfranchisement to instead demarcate renegotiated boundaries of reality.

But how can the Fufuzela bamboo architecture project create new opportunities for democratic culture formation in Ghana?

Part II:

The bamboo building system presented here—Fufuzela—is a preliminary proposal for collaborative research and grassroots co-development toward one broad goal: making bamboo building accessible every day to people in Ghana and worldwide. However, the specific approach to bamboo architecture that this contribution seeks to highlight begins with the recognition that bamboo itself is neither dumb, impassive nor neutral. This relates to the nature and design of any programme of future-oriented arts and cultural activities in Ghana that centre on inclusion and foreground participation.

As has been the case for generations, the primary repository of Ghana's art and culture is the people themselves who, collectively and in

aggregate, embody a living archive of knowledge. We can experience the power of this culture in many ways, but perhaps paramount among these is physical attendance at, and participation in, local or regional festivals. Such mass movements of people concentrated in space render palpable the land and its materiality, while myriad resonances of being are sensually made manifest through sound and rhythm; through the taste of food; through the materiality of textures; through smells; through movement.

Let us consider this web of event spaces—of festivals and durbars, social gatherings, events and celebrations from the level of the household to that of the community and municipality, across districts, homelands and territories under customary rule and communal trusteeship—as a nationwide distributed, asynchronously dispersed “site” for the production, archiving, experience and dissemination of art and knowledge across Ghana and the diaspora.

This site-in-multiple, then, demands forms and formats of architecture that can be affordable, that are not so resource- and energy-intensive as to prohibit temporary use (or make it wasteful). It obliquely precipitates “what-if” questions such as “what if architectures were themselves motile and quasi-conscious, capable to varying degrees of participating in dynamic processes of African culture formation?”

Some contend that our ancestors were well aware that the vital energy fields (referred to alternately as either the “spirit world” or “quantum mechanics”) that emanate forth from nature—the fields and streams, the rivers, lakes and the sea, the wind and

atmosphere, the trees and forests, the land and soil beneath its surface, the sands and the great stones, wildlife and livestock, cultivated crops and their cycles of growth—that all of these commingled with their own individual and collective life forces across a vast but shared terrain of lived experience.

In this sense, the environment becomes not only the ecological fabric that enfolds all reality in a continuum, but also a register of memory and metaphysical meaning, encoded for transmission and regeneration.

Culture is recursive. It exists only when and if it is performed, a process of reinvention that marks renewal by means of manifestation. But while we can think of culture as both the pinnacle and the composite of human creativity, capability and performance then, in actuality, it derives from interaction between species.

Culture begins with microbes, with myriad beings living across a phenomenal range of growing media and processes of fermentation, including scales of time and space outside the realm of what humans are capable of directly experiencing, consciously, by means of our senses. Consequently, not only plant species (e.g. bamboo) but all other lifeforms are design partners and co-participants in the production and propagation of what we frame within the domain of the arts and sciences as “culture”, i.e. the evidence of our existence on earth and the universe.

Bamboo is a globally abundant giant grass that offers, in its naturally occurring state, strengths comparable to steel in tension and concrete in compression. It grows in massively interconnected

interspecies networks (fungi-grass, amongst others) that help the earth metabolise at a planetary scale.

Bamboo timber is thus a naturally available grown material, but it presents certain challenges to building, including the fact that, because bamboo grows freely, each bamboo culm is different, frustrating standardisation. Furthermore, the material workability of bamboo is highly asymmetrical (saws can cross-cut, but blades split culms axially) while it is difficult to nail bamboo poles cleanly together in construction.

The former presents a technical challenge, and the latter a manual one, namely how to assemble structures. We solve the former through a material strategy and engineered joint mechanism. This, in turn, enables us to bypass the latter entirely, in that the resultant structure can be assembled and disassembled repeatedly, at will under reasonable conditions, through simple mechanical means and with limited tools and no special labour requirements. The direct local building precedent for such structures are awnings, tents and “canopy” pavilions, manufactured and deployed as pop-up structures by a moderately-scaled but widely distributed industry producing low-cost mobile buildings across Ghana.

It is entirely possible, and not beyond the limit of our collective imagination, to graft a simple and readily-available method for erecting bamboo scaffolding onto our existing human knowledge, technical capacity and infrastructure network, as an addition or complement to existing repertoire of pop-up architectures.

Part III:

Accra and Tema, conjoined a

half-century post-independence into a twin city, form in tandem the human settlement closest to the origin of Planet Earth’s geo-coordination system: 0° longitude, 0° latitude. Thus Fufuzela, an ongoing research originating out of Tema, is positioned to be endemic to the centre of the world, if not beyond. It has been seeded and is sustained as part of an anticipatory project toward that re-formation of spatial experience wherein architecture can sense and interact with people and its environment.

Fufuzela is an open-source architecture co-designed and co-developed from the bottom up in the form of modular mobile “bambots” (a type of bamboo-based micro-infrastructure with para-structural motility) that interoperate at the scale between furniture and architecture. It is born of a decade-long, community-based, participatory design research into bamboo building systems, co-creating architecture as a form of collective building technology: from Tema’s “communities” to Berekuso and Akuapem in the Eastern Region, even to the eight Anam communities in Anambra, just before the Niger Delta, and back again, from Brazil Lane and Jamestown’s Otublohum Square to Agbogbloshie and the Accra Timber Market.

Fufuzela represent an emerging species of free living architecture, capable of displaying low-level motility, and low-fidelity metabolism (biodigesting and 3D bioprinting). It was conceived in contradistinction to seemingly more advanced high-technology “robots”, which are, etymologically, slaves to their engineer-creators and the authors of their code.

Designed for self-assembly, fufuzela

are, like deer and sheep, irregular plurals that are simultaneously one and many. Fufuzela create scaffolding for shared experience: by embodying material ecologies of symbiosis—serving as a dynamic and reconfigurable green armature for rewilding the city—fufuzela enable new forms of stigmergic interspecies interaction with the city and one another.

The project introduces a novel fabrication technique for building ultra-affordable mobile structural assemblies, featuring a hybrid bamboo-steel-bioresin composite joint method to address dimensional variance of bamboo culms and to enable reconfigurable, cuboctahedral bamboo architectural assemblies.

The other conceptual leap is to recognise that buildings, including lightweight mobile buildings and deployable structures, are more than merely a minimum protective shell against “the elements” of natural environment. They also “afford” many other things, not only to humans but also to other species living their everyday lives. Thus buildings, or structures more generally, operate as an interface between our experience and other worlds. The more that any given architectural scenario can “afford” access to multiple and overlapping worlds of preferable possibility—not only for ornamentation, animation and the imagination, but also with respect to augmentation of utility, making things easier to do better, by means of itself—the more we may consider such spaces to be “useful”.

Part IV:

“As m bi safoa bue as m bi pono.”(3)

Is there a word for “useful” in your language? Can a tree be thought of as useful? The soil or the sunlight

that nurture it? Or the bees that pollinate? How do you describe an object with utility, a field of latent use or animate web of potentiality, or the “space” enmeshed within? And how do we discern useful to, by and with respect to whom or what?

What word or phrase in your language speaks to what a building may become when it is reformulated as a body made up of a skeleton, skin and possibly a few essential organs; a body, or bounded system that may be living now, in the past or in the future? Given that all matter exists as part of a continuous process cycle that circulates life, death and being, how do you talk or listen to a building? How do you dialogue or dance with architecture that is alive, or is at least beginning to possess sentience, motility and a primitive metabolism, if not the ability to reproduce, communicate and exert or propagate influence?

In this regard such a living building, an architectural organism, may elect to enter into symbiosis with humanity and other species, as an extension of itself. Herein we can interoperate with other species: with trees, with fungi, with mineral ores packaged and mined from past planetary and human events. People can co-exist with such buildings, finding “use” in them, and reciprocally them in us. The very para-structure of such forms of living buildings encode the spatial-material “recipe” for their fabrication and (dis)assembly, as well as, ideally, the inspiration and motivation for others to themselves grow and build with bamboo, a form of interspecies collaboration.

Fufuzela encourage us to entertain what can happen if we envision the architecture of Ghana’s future museums not as something heavy and inert, but rather as a distributed

para-structural interface poised for fostering pan-African procreation of art, culture, knowledge, know-how, expertise, awareness, skill and appreciation. Such an architecture is a spatial technology, embodied but diffuse; an environmental overlay for tech-enabled and massively participative processes of culture formation. This museum is not contained within walls. It roams free, can observe and digitally archive the world, share this information in many different forms and formats (some of which are not even invented yet. We will encounter them in our future). Perhaps most importantly, fufuzela can dialogue with people such that the record and cycles of curation remain open and inclusive.

Even in the lineage of the Western tradition, a museum first meant a place of learning before it meant a cabinet-of-curiosities-cum-mausoleum-of-loot, pillaged or “purchased” and displayed with text labels speaking to their “provenance”. Today around the world, many masks, totems, baskets, garments, instruments, stools and other cultural artefacts remain held hostage in foreign museums, far from Ghana, their motherland, interpreted by remote publics as passive, static and inanimate. There they are caged. Here they shall roam free.

As we look to the future, we can assume that artefacts able to achieve repatriation will need time and space to heal. Fufuzela can be that distributed network of accommodation, a body with many skins that is co-designed to reunite culture with land, water and spirit. Fufuzela shelter and support people and things that are in need of communing with the energetics of place.

Both in reality and in a vast array of imaginaries, the “internal organs” of fufuzela are modular and living, but not fixed in place and not truly internal. The artefacts that artists and artisans, musicians, scholars, scientists, designers, engineers and innovators produce across all of Ghana’s regions and diaspora and across time—these are the organs through which fufuzela resound. As a network of lightweight and mobile architectures, fufuzela serve to increase access to arts and culture, as well as participation in its production, curation and dissemination. Such a network should be regionally distributed, with key building complexes anchoring arts and cultural production jointly with heritage documentation and preservation at a national scale. Consider an expansive series of interlinked chambers, showcasing the regional dynamics of Ghana as a fluid space, digitally immersive and interconnected, pulsing with past, present, future.

References

- (1) Professor Lesley Lokko, in conversation with Antonio Pacheco, Archinect.com. (November 25, 2019)
- (2) Lokko, L. (2019). “African Space Magicians” in Chicago Architecture Biennial publication, pp. 63-69.
- (3) Proverb suggested in conversation with Architect Jean Adjei. Translation from the Twi, per Distinguished Professor Dr. Kwadwo Osseo-Asare, “The key to one issue may open (succeed in opening) the door of another”.

