Where do the Twigs Go?
By Faysal Tabbarah

Prologue

There is a narrow and fertile strip of land on the north eastern edge of the Arabian Peninsula, no more than 20 to 30 km wide and 280 km long.[i] Almost 10 times longer than it is wide, this 'continuous fertile strip of garden: Palms, fig-trees, mangoes, mulberry trees, and pomegranates'[ii] is nestled between Al Hajar Mountains, an impenetrable mountain range of striking red, muted yellow and dark brown hues that is dotted with its fair share of shrubs to the west, and the blue waters of the Gulf of Oman to the east.

This geography, along with the cultural interactions and artifacts that it enables, have been described as far back as the year 985 by Arab geographer Al Muqaddasi (or Al Maqdisi). In *The Best Divisions in the Knowledge of the Regions*, Al Muqaddasi describes three towns within Al Hajar Mountains that are still standing in present day Oman: Suhar on the Al Batinah coast, Nazwa within the mountains, and Dhank on the western foothills. More than a millennium ago, Al Muqaddasi wrote that Suhar 'is the gateway to China, the storehouse of the East and of Al Iraq… The open place appointed for prayer is in the midst of date palms.'[iii] In this environment, 'there are wells of middling water, a canal of fresh water, and an abundance of goods of all kinds.'[iv] Within the mountains, Nizwa is also abundant, drinking and irrigating from flood waters, while Dhank on the eastern foothills, much like Hafit (as far as I can tell, the same as present-day Hafit close to Al Ain) 'is in the midst of palms.'[v]

Whoever said that arid landscapes were scarce and unproductive?

Other Environmentalisms

Where do the Twigs Go? was a temporary 300 m^2 spatial construct made of scavenged palm fronds, palm leaves and recycled paper pulp. The project exists within an ongoing research agenda titled Other Environmentalisms.[vi,vii]

This research agenda aims to activate environmental practices from South West Asia and North Africa (SWANA) to drive innovative contemporary building solutions by exploring context-driven modes of production, alternative material systems, and the relationship between environmental and architectural imaginaries in a post-colonial condition.

Focusing on the material and the cultural aspects of SWANA's environment, the agenda deploys environmental history methodologies and material research to generate architectural conditions that exhibit alternative attitudes to making and assembly that challenge mainstream sustainable architectural production. The goal of this agenda is to challenge deterministic ideas about SWANA's natural environment which limit architectural discourse and production and destabilize imported Western notion of environmentalism.

As such, Other Environmentalisms critically examines and reimagines the production of contemporary architecture in the Middle East and North Africa (MENA) by interrogating the relationship between architecture and the environment. This has been developed within two ongoing challenges in the MENA: 1. The erasure of nuanced cultural specificities in the

architectural imaginary due to highly techno-scientific trends operating within mainstream green building practices; and 2. Climate crisis.

Where do the Twigs Go?

Thus, the project emerged by asking a child-like question: Where do the twigs go? The question emerged from an attempt at rethinking the life span of materials used in constructing temporary structures. Thus, the project explores the potential second life that plant matter can have between the time they are harvested, and the time they turn to compost? The answer comes in the form a thickened yet porous structural wall.

The project's brief required five separate yet spatially connected exhibition spaces, each providing approximately 50 m^2 of uninterrupted exhibition space. Moreover, the client required that the exhibition spaces be connected to a unified external public space. Given these requirements and conditions, the overall spatial organization of the project was conceived through the positioning of discrete painterly assembled wall units, all of the same length of 2.1 x 2.7 x 0.6 m, work off of each other spatially to create an interplay between semi-enclosed exhibition space, circulation and public spaces.

The first steps included identifying a type of natural plant material that is abundantly available through ongoing and non-seasonal cutting. This material also needed to exhibit volumetric density once aggregated, so that it can receive sprayed paper pulp, so that it can transform into a painterly material assembly. While previous design projects within the agenda relied heavily on fallen timber members, the square area of wall surfaces required for this project immediately ruled that out. Thus, the choice fell on a finer type of plant material that allows for a higher resolution surface to emerge through its redundancy. Specifically, the choice was for plant material that comes from date palm trees, an abundant tree in the UAE. The branches used typically carry dates, and once the dates are picked, they get cut to allow for a new batch to grow. This condition, along with its inherent density given its filigree nature, made it an ideal candidate

The construction of the wall surfaces was broken down into a series of repeated prefabricated uniform parts, each measuring 2.1 x 2.7 x 0.6 m. Each prefabricated part was made up of 4 parts: 1. Scavenged palm fronds; 2. Paper pulp; 3. White-wood frame; 4. Metal wire mesh. The wire mesh stretched over the wood frame, after which the plant material was entangled into the mesh. No mechanical connections exist between the plants and the metal mesh as the paper pulp acted as the binder.

The overall development of the project relied on a feedback loop between an integrated analogue/digital workflow. This workflow oscillated between scavenging for natural materials that exhibit qualities such as redundancy and density through repetition, circumventing traditional material supply chains; 3D scanning to better understand and deploy the materials chosen; digital simulations to create variable design iterations; 3D printing of digital prototypes for assessment; and physical prototyping to produce a painterly material system that challenges traditional part-to-whole logics.

Where do the Twigs Go? stood for 7 days in Dubai, UAE, before being fully recycled.

[i] John Craven Wilkinson, *Water and Tribal Settlement in South-East Arabia: A Study of the Aflaj of Oman* (Oxford: Oxford University Press, 1977), 12.
[ii] S. M. Zwemer, 'Three Journeys in Northern Oman', *The Geographical Journal* Vol. 19 No. 1 (January 1902): 54-64.
[iii] Al Muqaddasi. *The Best Divisions for Knowledge of the Regions*. Translated by Basil Anthony Collins. Reviewed by Muhammad Hamid Al Tai. Reading: Center for Muslim Contribution to Civilization - Garnet Publishing LTD: 1994. P 86.
[iv] Ibid
[v] Ibid.
[vi] Parts of this text have appeared in "Where do the Twigs Go? Alternative Sustainable Practices" *Proceedings for ACSA 108: OPEN Reinvented Annual Meeting*, San Diego, 2020. Washington D.C: ACSA.
[vii] A discussion about the overall research agenda has appeared elsewhere, such as in in "Other Environmentalisms in Architecture Education." *Proceedings for ACSA 108: OPEN Reinvented Annual Meeting*, San Diego, 2020 Washington D.C: ACSA.