NEW MACHINE VERNACULAR:
REMOTE BUILDING TECHNOLOGIES, CULTURAL ACCOMMODATION, AND ARCHITECTURE'S RENEWED HUMANITARIAN AGENDA

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Contemporary advancements in mobile technologies and computer-aided fabrication systems have signaled the plausibility of remote construction devices in our near future. Semi-autonomous building-making machines capable of quickly (and continuously) erecting housing, architecturally dependent micro economies, and emergency urbanisms, represent our enormous technological potential to better the lives of an estimated 33 million people currently living in I.D.P. status around the world. In addition to homes and livelihoods, Tectonic Machines, as digital-mechanical extensions of our human sensibilities with regards to building, might also address the cultural and communal alienation of camp-bound I.D.P.s through extreme accommodation in producing vernacular forms and building types. In fact, the success of these humanitarian-centric machines will not be measured through an accounting of their industrial efficiency, but by their variable capabilities towards recreating aesthetically relevant replacement communities to carry functioning cultural systems and temporary economies, rather than mere logistics-based holding camps.

These new machine's sensing, "informed", communicative, and freed from subjugation to the assembly line, must be devised to communally design and deliver a great variety of architectural forms that are environmentally fit, culturally accommodatirfg, and spontaneously familiar (not necessarily new), in their appropriateness. In this scenario of techno-environmental mediation, a whole range of future vernaculars might evolve and develop as a comingling of old traditions and state-of-the-art machineries, local materials and global technologies, community-generated instinct and experienced formal practices.

In addition to these topics, this paper will report on the development of a specific Tectonic Machine currently being designed for use in humanitarian relief situations and of the -^sential role vernacular accommodation plays in that development. This project has evolved from a digitally controlled casting system into something with the character and capabilities of a robotic collaborator or construction probe that learns, informs, and evolves design and construction in dialogue/partnership' with architects and displaced communities.

Keywords:

Tectonic Machines, Technology transfer, Remote construction devices, Mechanical vernacular