

Shipping Containers, A Precedent to Eco-Design

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The idea of precedence, examined through the morphing use of shipping containers, becomes apparent as an elemental definition of architecture. Architectural ideas and innovation can be described as an evolving weave: complex in nature, constantly resurfacing and reintegrated, only to fade again, cycling into patterns that materialize throughout history. The notion arises that every building, every design, every competition proposal, is linked somehow to all else, and thus, precedence, the past, is fundamental in creation named architecture. The endlessly evolving ambition of contemporary architecture is connected to the precedents of past architecture, and to future architecture, which in turn, it inspires.

A vast resource, stranded in fields of waste, waits patiently for the cyclic nature of time, to render it useful again. This resource is integral to the transportation and supply of goods worldwide. Although its value may go unnoticed to society, present day economy could not function without it. A global infrastructure, executed through sea, rail and road, has been constructed, based on its standard dimensions. The steel structure of the shipping container is an image of dependability and strength. Their usefulness, realized as an architectural medium, has been continuously explored over the past two decades. The innovators and architects that envisioned the future, where others remember the past, have investigated the potential benefits of containers; and in doing so, laid the groundwork for a highly efficient building resource. Jones Partners, Sean Godsell and Lo-tek launch early design ideas and begin to address a diverse range of essential building elements. Through these luminaries, the necessity to focus on mobility, impact of building footprint, flexibility, shelter and embodied energy becomes apparent. Their work encourages others to continue searching for architectural solutions that will be both conscious of the environment and adaptive reuse. Consequently, design work with containers in the future will progress in a wake of their influence.

A project that both reaches into the past for inspiration, while simultaneously establishing immense precedent, is the innovative High Sierras Cabins, by Jones Partners. The

housing project addresses mobility in an extreme sense and unfolding assemblage, while also achieving a lightness of building footprint. The use of shipping containers as a dwelling or building element, is a distinct transformation from their original purpose: a forty or twenty foot long 8 by 8 standard dimension steel structure that transporting a particular volume of goods. Mobile homes evolved out of the need for shelter while in journey, and have long



since played an integral role in many cultures. This precedent is evident in the work of Jones Partners. The unique use of building materials propels the project into further development of mobile architecture. These elements, embedded in the design, become the “roots” of the project, and anchor it to its site, rather than a typical foundation, immersed in the ground, disruptive to an existing site. Execution of mindful site work, to minimize site disruption and transportation of the container components became a focus:

“Due to the remoteness and difficult topography of the propped building sites, they {were} delivered to the property by truck and then air lifted into place by Sky Crane helicopter ... the mobility of the containers allows the construction standards for the units to be raised considerably, since the entire assembly can be shop fabricated ... ” (68, AD).

The compact nature of the containers allowed the architect to focus on assemblage. The project had a distinct language in the unfolding character of each container: connect, retract, expand to provide additional features. The project was recognized for the influential precedence that it set, “There is much talk these days about using shipping containers as housing, but this project is the rare case where that technology has been made into

architecture.” (38, PA). The High Sierras Cabins project is an embodiment of the past, in its mobile nature, while also a channel of influence into future projects. As a precedent, Jones Partners has established a powerful use of shipping containers as environmentally conscious dwelling.

If mobility best describes High Sierras Cabins, then versatility would be assigned to The Bohlen Foundation, a project by LOT/EK, in New York City. Similarly, the project also revolves around the reuse of shipping containers, as an interior gallery, rather than dwellings rested in the wilderness. The shipping containers contain the permanent gallery program, while the studios and actual gallery space are defined between containers, which serve as a moveable boundary condition. The versatility of the design emerges in the actual set up of the containers. The containers, set up in four rows, sit on sliders, enabling them to move and create different variations of gallery space. For the framework of the design, the architects “... inserted a modular and inherently changeable system within the existing oak beams and columns-satisfying the demand from artists and curators for flexibility and neutrality, without relying on a tried-and-true, white-box parti.” (131, AR). Versatility and modularity transcend the project from a typical gallery space to set precedent with an influential shipping container design. Versatility is unmistakable throughout history in the intuitive thoughts of humans: an innate part of design from the smallest tool to the largest sea vessel. It is evident, through the precedent of versatility and reuse of shipping containers, that “the project signals a milestone in the evolution of the gallery...” (135, AR). The reuse of the building material invokes a connection to precedent, while the implementation of unique concept, consciously signals to those of the future.

Shelter, bonded to the beginnings of humanity, is a necessity to survival. Sean Godsell addresses the issue of shelter, under the focus of modern-day dilemma. The design intent is mass-producing inexpensive, universal, mobile emergency units that can fulfill fundamental human necessity. His focus is clear, purposeful and exemplary:

"As architects in stable democracies our responsibilities are reasonably clear cut. Our role in those societies where freedom has been ripped away by force, or where nature has devastated whole cities, or when generations of minority groups have been forced into a life of poverty because of a political philosophy, is hazy by comparison. The need 'to house' ... offers architects the opportunity to provide shelter for fellow human beings in need." (AA)



The Future Shack, as he calls the project, addresses a variety of possible scenarios: emergency housing, temporary situations, third world countries and remote locations, with one solution. A single, recycled 20-foot shipping container. Godsell works within the existing infrastructure as realistic parameter for distribution, focusing on adaptation and community, precedence apparent throughout human history. He equips the shipping container with the essentials, altering it so that it can be erected on and adapted to any surrounding landscape. Godsell's focus on quintessence of human survival and social condition is clearly connected to the roots of human nature in its conception and deliverance of the strong message of human interdependency.

The programme within shipping containers, and the experience of the varying spatial conditions, governed by the collective arrangement and treatment of the containers surfaces, induces a unique feel to the architecture. The nature of a movable, flexible space, meshed with a strength and durability speaks to a history of worldwide linkage. The adaptability achieved through the plentiful resource communicates the necessity of architecture to bind past-present-future together. With resource consumption becoming increasingly devastating on the earth's vibrant ecosystem - such that humans are posed to exhaust it - the search for solutions has us looking to precedents as stepping-stones into the future. What is the next move? What will be the next innovation emerging out of the continuous narrative that is architecture? What do we need to be the next move? The answers lie in the ability to mesh precedent with contemporary predicament. Already obvious, but tentatively embraced, the 21st century calls for environmental design shift to the forefront, as a critical concern in the

delicate shaping of society here on earth. Ideas of the past will be integral to the continued existence of generations still to come.

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