The Usefulness of Use: Four Prototypes

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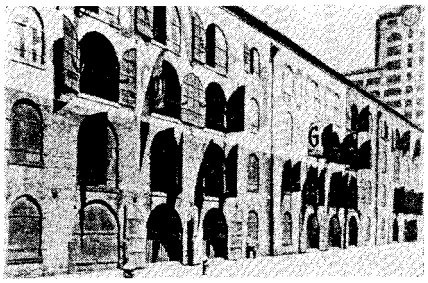
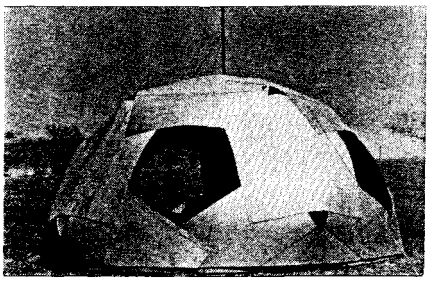
Fig. 1. Brooklyn waterfront warehouses.
Fig. 2. North American barn.
Fig. 3. Tobacco shed.
Fig. 4. Plydome, Des Moine, Iowa 1957 by R. Buckminster Fuller.





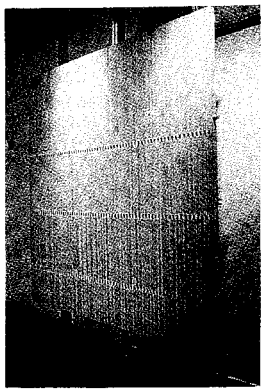
Can something functional be useful and give pleasure at the same time? The following projects are attempts to allow the use of a building, the habits, nuances and whims of the occupant to be registered daily upon their architecture. The variation of a surface, its ability to change, to evolve according to external (climatic) or internal (occupant desire) are investigated in these four prototypical studies:

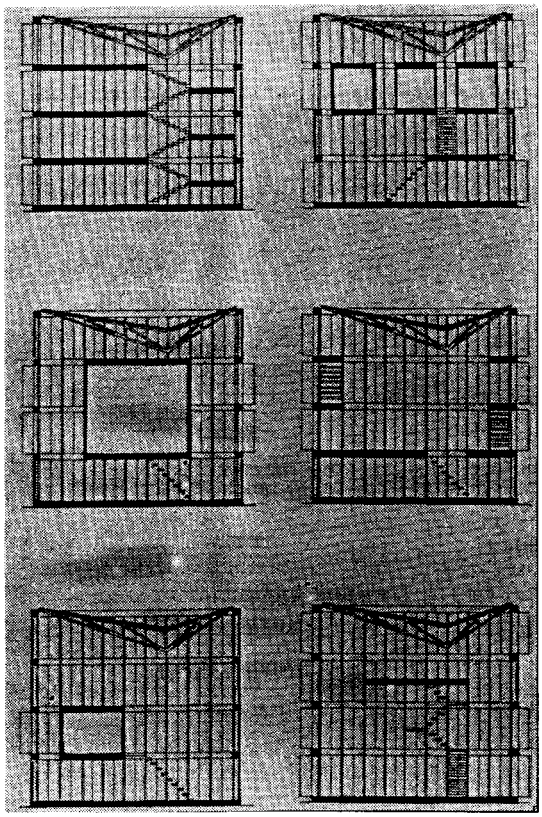
PROTOTYPE ONE: PLYplane Folding Exhibition Surface, 1992-4. (commissioned by Susana Torre, Chair, Parsons School of Design, Department of Architecture and Environmental Design).
PLYplane is a simple vertical surface constructed of 314" birch plywood cut into 1-1/2" slats, assembled on end to present the edge of the material as the face of the plane. Alternating slats are operational, folding down 90 degrees to create horizontal surface of bench, shelf, or individual support bracket. These horizontal "fold downs" can be of any length and held in any intermediate position of "fold down." This creates multiple open/closed possibilities. PLYplane is a neutral surface, a mute plane, which requires the activation of the exhibitor for its variation and use.

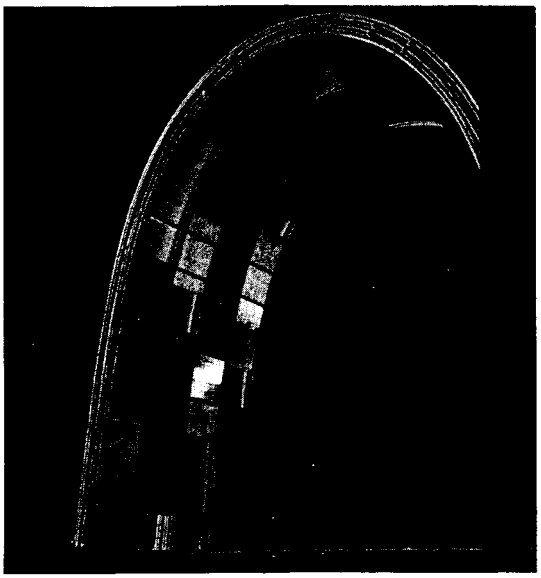
PROTOTYPE TWO: F **R** E E volume house, Prototype 1992.
Envisioned as a house whose exterior is constructed once, while the interior is free to change during the lifetime of the house. New lifestyles, empty-nesters, home occupation, etc. are all accommodated within. Within a designated kit, the owner can reconfigure their interior layout in multiple ways. All components (trusses, panels, etc.) are to be wood composite "off-the-shelf' members, pre-engineered for homeowner (re)construction. The exterior shell is composed of a window/wall of insulating shutters which allow the "window" to be "made" rather than fixed.

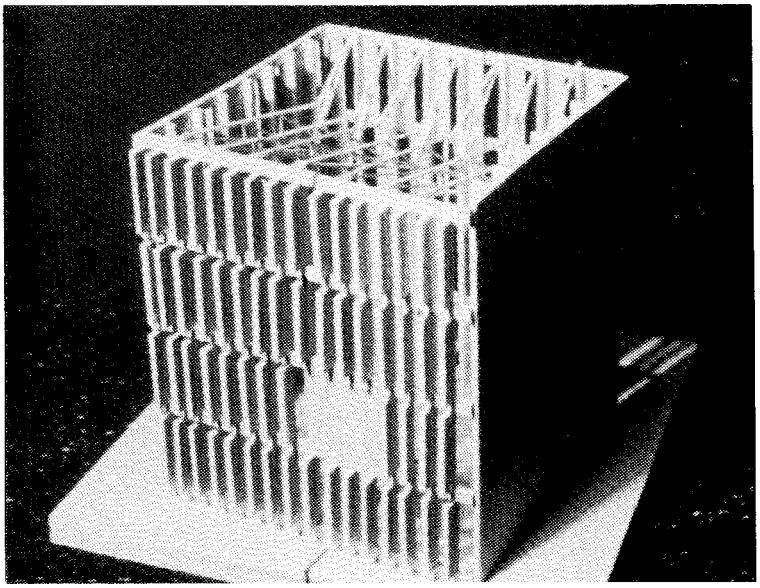
PROTOTYPE THREE: Tropical House (a box of jalousies), Lambasa, Vanua Levu, FIJI ISLANDS, 1993.
The living quarters are wrapped in a wood slat jalousied box. The roof is held above, its oversize to shade and collect cistemed water. Bath, toilet, and cooking shed are treated as attached outbuildings, to remove moisture and heat from the main body of the house. Not unlike a tobacco shed, exterior wall is composed of a series of stacked wooden louvers which can be controlled internally by the occupant for cross ventilated comfort. The surface of the jalousied box will change continuously through an infinite variety of configurations from closed to open.

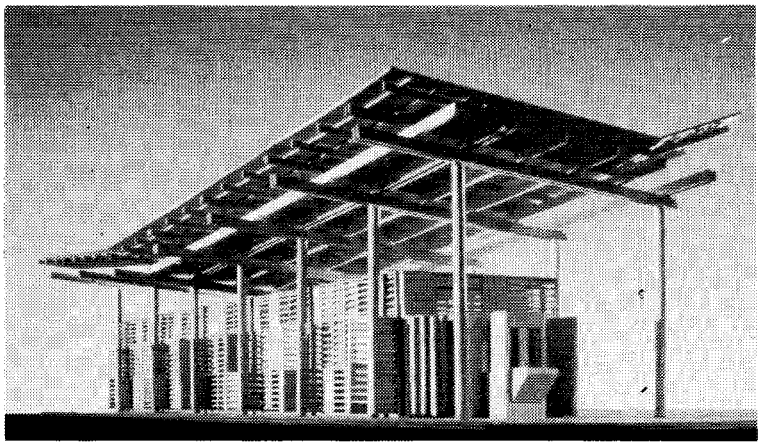
PROTOTYPE FOUR: The SIMPLEX House, Preliminary Scheme 1995. Long Island New York.
This design is a homage to the experimental nature of R. Buckminster Fuller's work. The proposal is for a simple parabolic shell consisting of three layers: wooden shutters, translucent green plexiglas, and copper screening. These would be operable segments mounted on individual aluminum tracks utilizing ordinary garage door technology. Interior light and exterior view are at the discretion of the occupant, controlled through the ongoing maneuvering of each of the three layers.











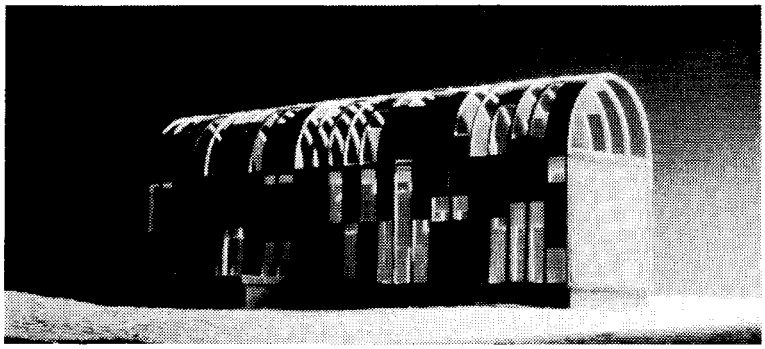


Fig. 5. (top left) PLYplane closed.
Fig. 6. (top center) PLYplane open.
Fig. 7. (top right) F R E E volume house, model view.
Fig. 8. (center left) F R E E volume house, sectional possibilities.
Fig. 9. (center right)Tropical House (a box of jalousies), model view.
Fig. 10. (above) The SIMPLEX House, model view.
Fig. 11. (left) The SIMPLEX House, sectional model.