ORGANIC INORGANISM

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FIRST ECOLOGICAL TYPOLOGY - INORGANIC ORGANICISM

ECOLOGICAL ARCHITECTURE in TRANSITION-Building is not an organism; it is an inorganic artifact, constructed for human use. The conventional building materials, steel and glass, are inorganic materials. Those inorganic materials do not bring any ecological benefits to the environment. There are architects such as Shigeru Ban and Kengo Kuma who have been experimenting with materials that have certain amount of ecological value. For example, in the paper dome in Hannover, Germany, Shigeru Ban used a combination of paper, wood and steel as structural materials, in which recycled paper tubes are organic materials.

PHYSICAL ORGANIC INORGANICISM-There could be a new trend in ecological design that the inorganic nature of a building can be totally integrated with organic elements, an Organic - Inorganic Fusion by introducing physical form of natural things, biological ecosystems and organic-inorganic composite building materials to Architecture. Such ecological typology could be referred as Organic - Inorganicism.

In my competition design Paper Egg, a finalist in an 8 million US dollars Chicago Environmental Centre Open Competition, the Inorganic-organism fusion is demonstrated. As a symbol of revitalizing a marshland that used to the homes of various kind of birds, a bird's egg is used as the physical form of the architecture - a Physical Organic-Inorganism.It is a symbol of rebirth of the once flourished marshland. Natural evolution has given us the inherently strong shape of the egg, easily resisting the elements through its aerodynamic shape.

CHEMICAL ORGANIC INORGANICISM-Regarding the chemistry of a new building materials "Kenaf Glass", the goal is to combine the benefit of organic and inorganic materials. Sick Buildings occur when there are enormous accumulation of allergens in the building interior, which grow with high humidity and insufficient sunlight. The new environmentally friendly composite material, with the synthesis of kenaf fibres and water glass, would be able to absorb moisture from the interior of a building, facilitates indoor/outdoor air flow and eliminates allergens/toxins. Kenaf is recognized as an environmentally friendly plant, since it absorbs the most CO2 and releases O2 among all plants. Its fibres are strong, the porous nature facilitates interior/exterior air flow and resolve toxins. The new research of water glass resulted in the rigid, light, incombustible, transparent solid, while its inherent ability to absorb moisture is enhanced.

BIOLOGICAL ORGANIC INORGANICISM-Can architecture design for all species: humans, plants and animals? Ecological Box, Ruang Kapal (2004), suggests the integration of human space and green/bird breeding spaces in one building. Architecture should mean more than just taking resources, land, water from nature, but giving back to the environment. Ecological Architecture should have positive impact on the land, improving the bio-diversity of the surrounding. In my project Ecological Boxes, a unit housing for single person, two boxes are piled up together. The concept is that these boxes are self-sufficient as the wastewater reuse systems are proposed. Wastewater will be purified to become drinking water, and natural lighting would be collected by solar panels to generate electricity needed for everyday use. Consequently, any electric, water or sewer pipelines are unnecessary. The exterior outdoor space is for planters and animal species. The planters would spread their seeds onto the neighboring land, enhancing the bio-diversity of the area. Although the original idea of the project was not realized due to the minimal budget, this housing serves as a prototype for future ecological architecture.

PLACIDO DOMINGO CITY

CASAS GEO
LA VENTA, ACAPULCO, GUERRERO, MEXICO. 2002

The Placido Domingo's Village was donated to the affected people for Pauline's hurricane, developing 650 housing units, a church, a kinder-garden, a primary and junior high school, cistern and elevate water tank and a hospital.

For the project, regional materials were used and the architectural houses were designed depending of the hand-made and popular jobs of the people affected of those communities, that means, each housing unit was designed based on the resident's use, and, even the housing prototype deals with several interior variations, in essence it is a typical house of the coast of the Guerrero State.

The main objectives for this development were:

-a sustainable community for poor people that lost their homes due to the hurricane
-services of drinking water for the surrounded communities
-sanitary drainage, streets, schools and other urban facilities
-the design was based on the tradition of the region
-the use of elements integrated into the natural environment and local context
-start a new node of urban projects in Acapulco city
-generation of different services that can be used for the entire population of the zone

Regarding to architectonic issues we used different kind of housing solutions to satisfy the needs of the inhabitants.

Due to this project was given to the affected people of the Pauline's hurricane, people without financial resources, the national and state's government gave the land, where the Anahuac University and some private corporations gave the money for the development and strategies. Casas GEO donated the design and the world famous tenor Placido Domingo pursue a series of concerts to donate the total ammount of the construction of 150 houses.

The principal obstacle was to make agreed the private corporations and the govermental entities, thing difficult to solve and kind of first time to really succeed in Mexico, where this project was very unusual combination for the economics as well for the organization.

Even the community is located in a very hot an humid place, the vernacular knowledge were used to provide a comfortable house with any use of expensive technological equipements, only using the local materials, the nature, the environment and the human intelligence and experience to create a sustainable country community.

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