

Mimesis and symbiosis in the built environment



Under the binomial **Sustainable architecture** a great number of projects can today be found in literature. These projects often differ as regards language, concept, and design approach.

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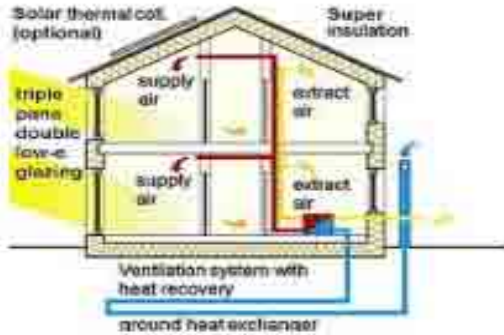
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Søk

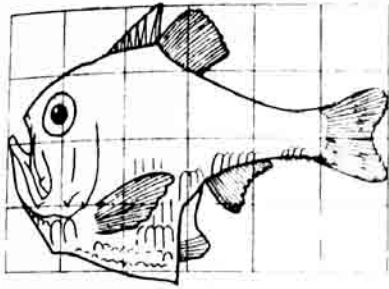
Omtrent 11 700 000 resultater (0,08 sekunder)

Filtrering med moderat sikkert søk

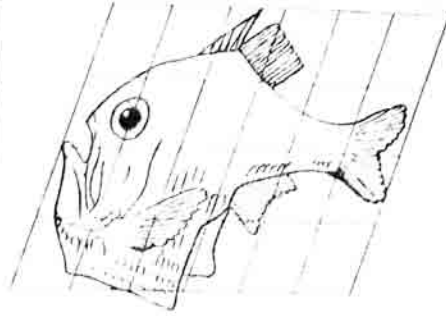


“It seems today hardly essential that a sustainable architecture look naturalistic. It seems that a building that looks like a natural organism, or it generally softened in appearance, it is apt to be considered more environmentally responsible - or responsive - than a conventional tower or box”^[ii].

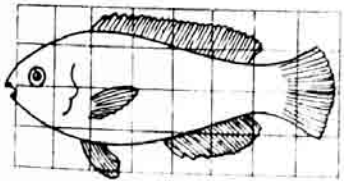
[ii] Hugh A Williams. Zoomorphic, new animal architecture. (London: Laurence King publishing, 2003), 20



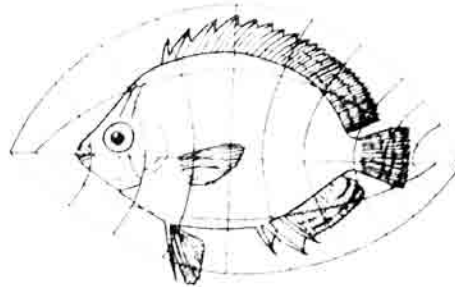
Argyropelecus olfersi.



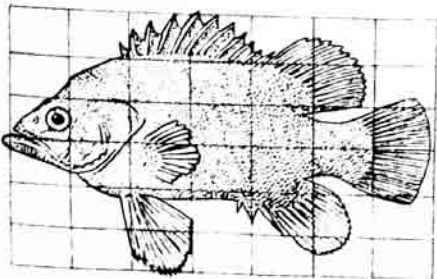
Sternoptys diaphana.



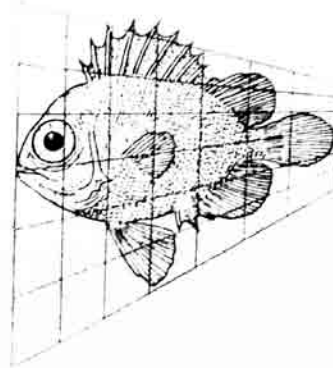
Scarus sp.



Pomacanthus.



Polyprion.



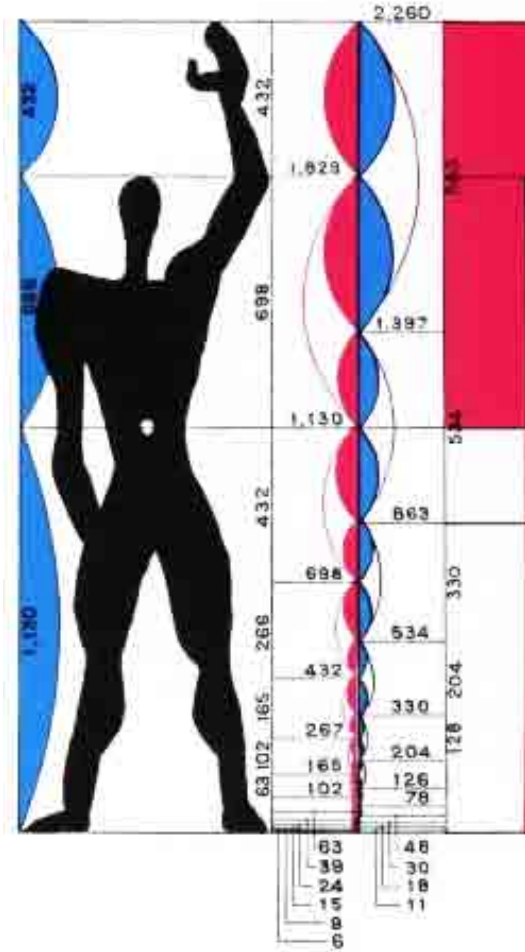
Pseudopriacanthus altus.

The aesthetics of nature is the physical manifestation of an evolutionary process that forced living organisms towards maximum efficiency creating, according to different genetic codes, the most astonishing forms.

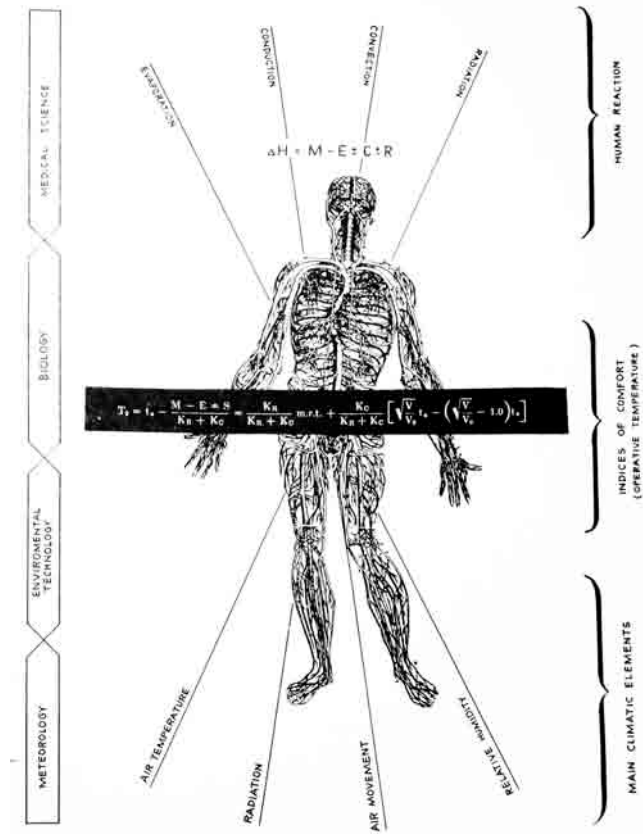
Form is a balance of forces.

Robert Venturi also, in "Complexity and contradiction in architecture", quoting the Scottish biologist, associates architectural design to the growth of a vegetable, influenced by external forces and internal genetic code.

D'Arcy Thomson. *On growth and form.*



VS

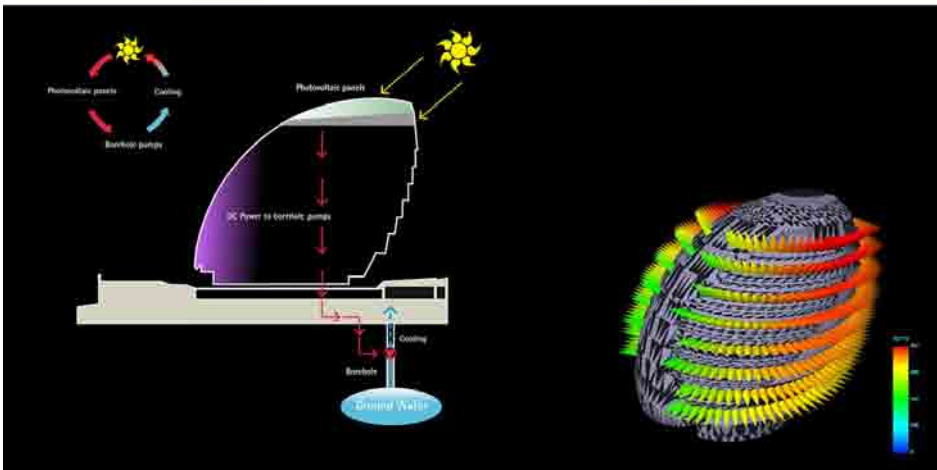


Sustainable design presumes a deeper comprehension of the human body that goes beyond its physical dimensions. Sustainable design requires “a change in our approach toward *materiality*, away from an understanding of material as exclusively physical and tangible, to include both the *physical and the non physical* – climate, sound or economics as well, as wood, steel or glass. [...]” (Farshid Moussavi).



Sustainability is a call to include environmental concerns in the production of built forms. It is **a call for symbiosis with nature** based on the objective laws of physics that govern the physical environment.

Architectural forms are called for to enter and adapt to **ecosystems**, in a manner analogous to a new species.



Norman Foster

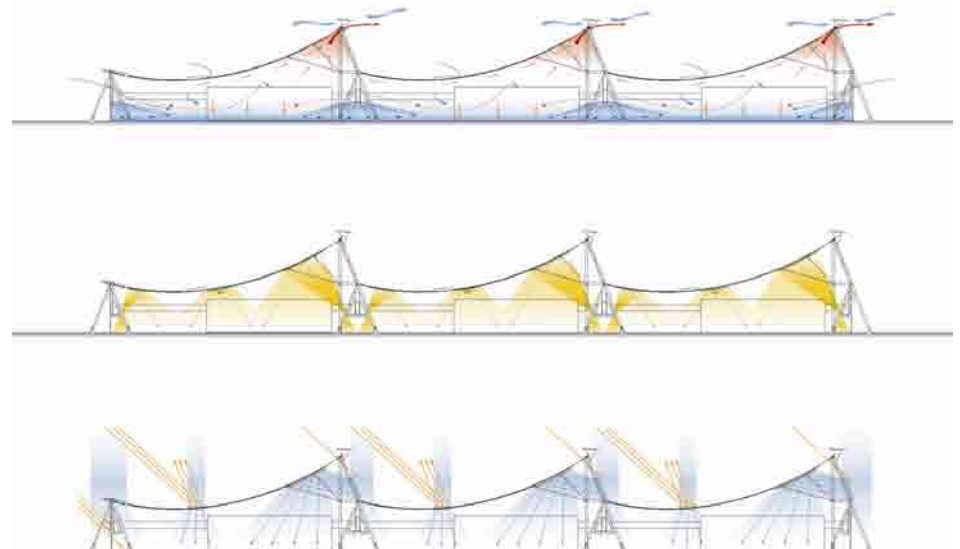


Mimesis and symbiosis in the built environment

In the total **environmental functionalism** of form the built environment gets close to the organic one. Also the canons on which its aesthetics is based are getting closer and closer to nature.



The recurrent analogy of sustainable architecture with living organisms does not come from a romantic idea of peaceful reconciliation with nature. It is imposed instead by the **necessary subservience of architecture to the physical dimensions of the environment**. It is the call for symbiosis with nature's laws that gets the built environment close to the organic one.



Thomas Herzog

That affects not only the way built forms are produced but also their aesthetics, the way they are perceived.

Biomimetic architecture, for instance, is based on the abstraction of the principles of nature suitable to be applied to the built environment. Forms of nature are studied as **aesthetical manifestations of specific needs**; their mimesis or imitation aims at establishing a symbiotic relation, functional or even structural, with the exterior environment.

Mimesis becomes thereby a tool for symbiosis, an instrument to overcome limits and constraints in the production of sustainable forms.



Dennis Dollens

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Mimesis and symbiosis in the built environment

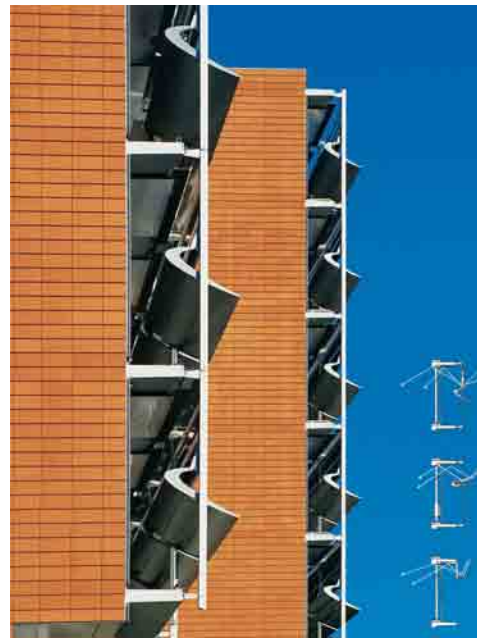
But when those same equations are used for the only aim of pleasing the eye, without the necessary understanding of their essence and scope, **the process of mimesis of the forms of nature does not necessarily result in symbiosis.** Once again the sustainability of form is unequivocally compromised and the support of the artificial equipment an essential requirement.

Mimesis is reduced to an **unmotivated appropriation of the aesthetic manifestations of nature** sometimes even blurring cause and effect at the basis of natural phenomena.

Architecture represents the other reality, the synthetic parallel world conceived and controlled by human mind through the *techné*. The built environment is characterized by a completely **different genetic code** constituted of man-made components and materials often unknown to nature. This therefore implies **different answers**.



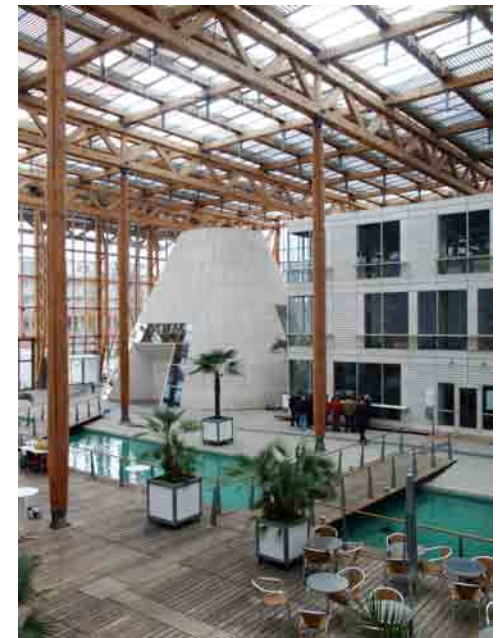
Norman Foster,



Thomas Herzog,



Renzo Piano,



Jourda & Perraudin

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Mimesis and symbiosis in the built environment

In the reconciliation with nature, sustainable architecture is a subsidence to the physical dimensions of the environment that implies a strict rationality in the production of form.

Mimesis does not necessarily imply symbiosis. Symbiosis with nature does not necessarily suppose mimesis. Those two concepts, however intimately related in the organic world, are not necessarily connected in the built environment.

But the aesthetics of sustainable design is an evolving process intimately related to the technological development of new architectural components and materials. Research such as on biomimetic processes, aiming at the coherent evolution of both form and its components, might in the near future open up for new unknown architectural scenarios.