

Questioning innovation in Bioclimatic Architecture

Cinzia Abbate
AeV Architetti Studio Associato
Temple University Rome

Questioning innovation in the field of bioclimatic architectures today means, in my opinion, having the ability and the courage to take a step back from the research methods used until now in this sector.

The rapid technological development of components and building materials has recently reached such levels of success as to render almost obsolete the attention towards the principles necessary for the creation of useful and appropriate bioclimatic architecture.

The high energy performance of new building materials, and the possibility of integrating solar technologies into architecture, have distracted us from the careful analysis of the building's shape and its congruence with the surrounding environment. We often judge the new, fascinating contemporary buildings on their aesthetic values, while forgetting to verify if their distribution configuration is consistent with the solar exposure, if the size and position of the openings is able to guarantee the proper degree of illumination and the natural ventilation necessary for health and comfort.

At the end, does this architecture instill a sense of beauty while reassuring us that we are not inexorably exploiting natural resources?

For about ten years we have been publishing and talking less and less about bioclimatic architecture, that is, of that sustainable architecture which is achieved by adopting the astute criteria of passive design strategies.

Rather we are talking more and more often about green buildings, zero-energy buildings, energy management, where increasingly efficient technological solutions later resolve the gaps of the building design.

For this reason, I believe that true innovation in bioclimatic architecture must be found by introducing a new physiognomy to traditional types of architecture, such as greenhouses, loggias, courtyards, roofing systems, that these spatial resolutions, together with innovative materials and solar technologies can fully contribute to the realization of sustainable buildings par excellence.

I will start with Rome as the case study of a sustainable city, raising the urgent question posed by our architectural world heritage regarding the renovation and adaptation of the energy consumption of historic buildings, to arrive at examples of typological innovations that open new horizons on the future heritage of bioclimatic buildings.