The horizon of technical knowledge in Architecture

The present issue is mainly focused on the outline of a thematic horizon of the scientific research in the field of Architectural Engineering which is in accordance with the transformations induced by the current renewal processes of the contemporary society. This purpose highlights a dual instance: on one side, the possibility to preserve a technical culture consolidating through the construction practices; on the other side, the bearing of an advancement of knowledge, with specific attention to the development dynamics associated to technical innovation. Both of these points of view lead to investigate which are the characteristics maintaining a persistent value through the time and those of new constitution, i.e. those that arise as updated answer to the demands of the contemporary world.

In this context, nowadays the actions of development planned by the EU have special importance. The European Union is in fact living an important transformation phase. On one side the financial crisis of 2008 has challenged the social and economic progresses achieved by EU countries over the last decades, on the other critical elements are emerging, such as globalization processes, climate change and aging of the population. From this has arisen the urgent need to activate measures aimed either at supporting employment and productivity, or useful to social cohesion, in order to ensure a sustainable development of the EU in the next decade.

Following this line, a specific feature assigned to this field of knowledge is primarily the expression of technical competence profiles related to problem solving, as well as of figures capable of coordinating processes and guiding the formulation of design solutions. In addition to that, or in conjunction with that, the need to feed the innovation reasons is becoming more urgent, including an updated response to the needs of contemporary society. Many themes have
to be taken into account: the building environmental sustainability as well as the sustainability of all internal processes of the new Circular Economy vision, the quality of life styles, that includes the issues of safety and health of individuals, the industry 4.0 connecting the expertise of manufacturing processes with the new frontiers of adaptive technologies, of the “intelligence of things” and of the “big data”.

This is an open challenge which leads us to face unexplored territories, which certainly are not lacking of pitfalls and uncertainties. At the same time, it seems the only effective way to be part of a better future.

Riccardo Gulli

Editor