



From *spolia* to recycling. The reuse of traditional construction material facing sustainability: a review

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The reuse is the witness of the long-term value of traditional construction material. As a matter of fact, the reuse evidenced and evidences the deeply rooted valence of traditional raw materials and their products in facing sustainability, in the broad sense of preserving resources - material and immaterial - for future generations.

In the history of construction, the symbolic valence of *spolia* practice (i.e. the use of ancient architectural elements in new buildings) joined the re-cycling habit, highlighting, at different levels, the inbred awareness of reuse as a tool for minimising the waste of material and energy.

If, nowadays, sustainability is hardly looked for, in a long term perspective, mainly referring to a broad theoretical background, it was, in the past, a common element of the management of the building process, when wasting was a forbidden luxury.

The paper is aimed in introducing a review of reuse of material, crossing the history of construction, pointing out major examples- assumed as memorable references - as well as diffused practices, from antiquity to modernity, ending with the description of the actual state of the art of the topic, based on very recent valuable examples.

Starting from antiquity, passing through Middle age and Renaissance, up to modernity, reuse involved different scales, from the architectural element to part of a building, in a countless series of interventions, which preserved material, technological and cultural evidences, we still benefit from.

Present best practices of recycling give, moreover, a new dimension to reuse, outlining an original way of facing the perception of useless waste, in the direction of a deep consciousness of the worst feedback of senseless consumptions.

The persistence of reused construction materials in a building and their co-habitation with more recent materials define, as a matter of fact, the important valence of witness of passed cultures. They may indicate abandoned quarrying areas, carving techniques, handcraft capabilities, long term weathering features, varied cultural meanings, which should be considered, as well, a further aspect of sustainability, in the broader sense of preservation of cultural values and identity, precious immaterial resources, so endangered at the present.

The reuse becomes, therefore, a paradigm of sustainability features referred to construction materials in modernity, a basic cultural reference that cannot be omitted in defining a complete frame of their role toward the definition of a shared sensitivity for the environment, built and unbuilt, to which the paper is aimed in giving the due emphasis, in a timeless declination of sustainability issues.