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Evaluation of the efficacy of tradizional recovery interventions in historical buildings. A new selection methodology

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The interaction between material, energy and cultural resources and between the functional, structural and linguistic organization of the architecture are the basis of the concept of "environmental culture". In the vernacular architecture, with this term it's meant the set of knowledge and techniques that form the symbiosis between architecture and nature, able to ensure conditions of comfort and building safety, to contrast the vulnerability resulting from Geo-environmental adversity. The traditional Mediterranean architecture is configured to be so a system in which the forms and the construction techniques come together in an original unit. This represents the result of the balance between nature and human activities, whose conservation cannot in any way ignore the local materials and the low and traditional recovery technologies. Any energy, functional and structural intervention cannot ignore the understanding of the building as a whole, which is indispensable for a correct design and construction "process" in any renovation interventions in architectural heritage, even if it's a minor construction. In this way the intervention that emerges is certainly appropriate because it isn't a distortion of the "own logic" (formal-spatial-material) of the pre-existent and in continuity with the "modal logic" (IE procedural) that it requires. The need for conservation isn't an obstacle but rather a guide to the restoration design of really effective recovery interventions, by avoiding heavy distortions and by favoring the criterion of minimum intervention. You want to try to give shape to what can only be carried out in full compliance with the historical nature on which one works and excluding the rest. We try to embody only to what that can be realized in full respect of the historical nature on which one works and excluding the rest.
Research has found a complete systematization starting from the identification of housing types representative of historical local construction characters, both these tufa and stone block, present in Puglia and Basilicata regions. You are assessed consequently energy and static vulnerability of the pre-consolidation state and identified qualitatively and verified quantitatively traditional recovery solutions, exportable on constructive units morphologically similar present in other environments. Specific simulations experimental energy, based on traditional techniques of passive cooling systems have been activated in particular environments, in the Basilicata Region, in particular in the Sassi of Matera, just for the purposes of exploitation and the adaptation plant engineering and technology for a living comfort and environmental "sustainable". The non-linear dynamic analysis, carried out in the historical centers of Trani and Molfetta in Puglia, have finally shown that a combination of traditional interventions, based on their own solutions of the rules of the local art, they are able to ensure improvements in terms of static vulnerability of 31.65 % in the state ex-post if compared to techniques of modern recovery and strong invasiveness, for which there is a value of 3.70 %. It's interventions selected qualitatively in order to ensure reversibility, reduced invasiveness and the integrity of the construction, respecting its structural design and the transformations that took place in the course of history.