

POLYTECHNIC OF TORINO
FACULTY OF ARCHITECTURE 2
Degree in Architecture
Honors theses

To discover and to recover raw earth architectures – The case of Sya at Bobo Dioulasso in Burkina Faso

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In this last few years the researchers of traditional architectures and designers involved in international cooperation programs have recovered the main material in constructions: raw earth, used all over the world and in all age. The patrimony of raw earth is enormous and it is an expression of self-construction and representation of collective event of great social value. In the last few years this interest for the earth architectures has also involved the restoration operators. The restoration of earth architectures is confronted with all the contrasts and difficulties of the intervention for the protection of the world patrimony. The appropriateness is the fundamental component for evaluating of the correctness of the interventions and is connected to the cultural characteristics of the context, to the technical peculiarities of earth as a building material, to the social implication of its use and to the single qualities of the manufactured article.

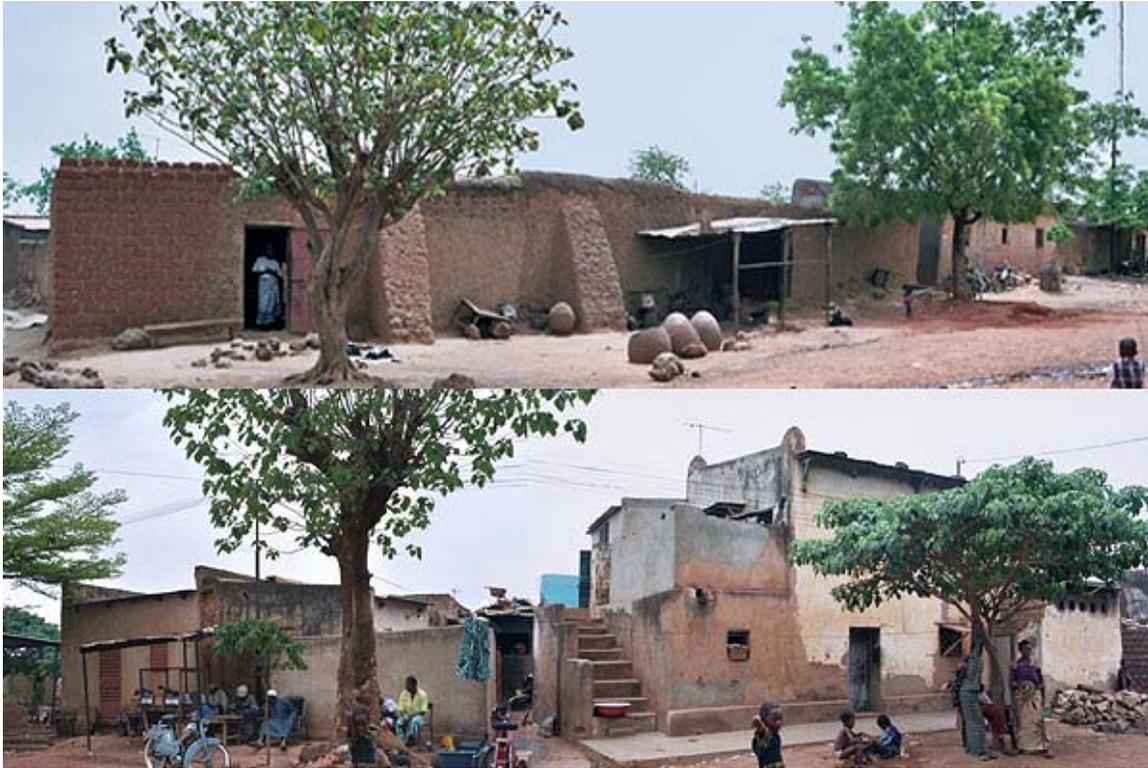


Ours degree thesis begins with an analysis of raw earth characteristics and from the historical-technical knowledge of the construction methods. Through the study of the raw earth phenomenon and the research at a national and international level, it is possible to individualize the preservation problems.

The presentation of Burkina Faso, with a thorough analysis of the construction systems for each ethnic group, is necessary for the understanding the context of where the Bobo Dioulasso city is inserted. (image1.jpg – The Bobo Dioulasso city: the ancient mosque, the provincial museum, the station and a new mosque) The attention goes to the Sya quarter, historic centre of the city, (image2.jpg – The Sya quarter) with an analysis of its actual states, of the techniques, of the construction elements and their degradation level useful for the formulation of an intervention program-plan. (image3.jpg - The plasters: analysis of degradation level)

The program-plan can be summarized in the following points:

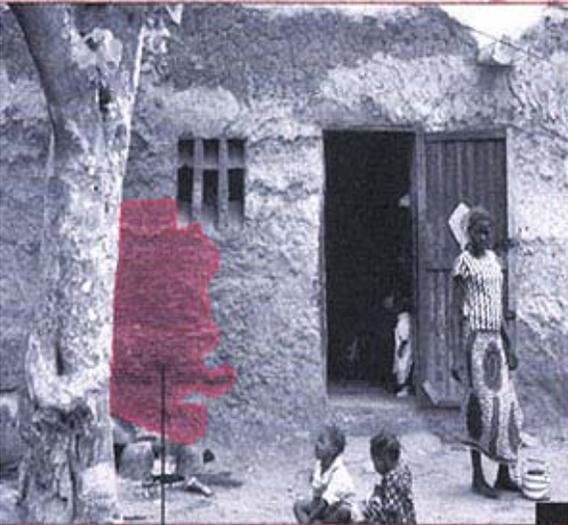
- definition of the legislative and urbanistic plan;
- definition of a formation program based on the experience and on the respect of the practices and the traditional techniques;
- projects for the valorisation of the public-spaces;
- realization of collectives services and of a cultural centre as an answer to the lack of services at home and of spaces for the young.



In the formulation of this program-plan attention was given to the concept of safeguard of the architectonic patrimony, that, in a contest of underdevelopment as is in Occidental Africa, could have an ambiguous dimension.

The conservation of the historic patrimony should not be a luxury; the African countries are in a condition to safeguard their own patrimony and own traditions, but it is necessary that the population is involved. The main objective is to replace to the binding restoration programs with a permanent program of maintenance and valorisation administered at local level.

Central element of the theoretic-methodological approach of this thesis is the indispensability of a long term process of transformation, carried on, when possible, by local self-management, in accordance with the principles of the sustainable development; resulting in an adhesion to methods and techniques of intervention strictly connected with the specificity of the context.



INTONACI

L'intonaco può essere considerato una vera e propria superficie di sacrificio che necessita di manutenzione continua.

La sostituzione di quelli in calce si può eseguire in due modi:

1. più strati di intonaco disposti in modo da avere una curva di durezza decrescente dallo strato a contatto con il muro a quello a contatto con l'aria. Il primo strato è una malta di fango e paglia, il secondo di calce, sabbia, terra e peli di animale; il terzo di calce e sabbia. Lo strato finale riceve una tinteggiatura a base di calce e pigmenti terrosi.
2. intonaco a base di terra, calce e sabbia (3:1:4,5). Questo presenta un buon comportamento nelle prove di abrasione, una buona aderenza alla muratura e soprattutto risulta più valido di un intonaco a base solo di calce e sabbia sotto il profilo della percezione materica della costruzione.

Per gli intonaci in terra si potrebbe procedere con il metodo tradizionale: il *banco*, un impasto di terra, acqua e sterco bovino, steso in due strati realizzati a distanza di uno o due giorni uno dall'altro e liscio a pietra. Alle pareti così intonacate viene applicata una soluzione risultante dalla macerazione in acqua delle bucce dei frutti del *nére* (*Parkia Biglobosa*).

ANALISI DEGRADO

deposito

INTERVENTI

pulitura

Hence it is important to constantly recall the identity of the single place, to the historic memory that connects at different levels this place at its own inhabitants: the construction methods and live style, the work cultures, the operative and managerial capacities; these elements begin delicate to seize and, consequently, to be respected. Therefore, our efforts were orientated in the individuation of appropriate methodologies and principles for the recovery, that do not want to transform the quarter in a museum or in a tourist attraction, but want to conserve, strictly correlated to the well-being of the city centre, the atmosphere of the place more than the matter.

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