Rome Motorbike Checkpoint

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Abstract
The Rome motorbike checkpoint is one of the infrastructural buildings designed to create a modern motorbike-parking network for Rome. It houses a mixed use program of Motorbike and bicycle parking combined with several other public facilities. It is totally self-sufficient and is used and managed by its neighbours. The human and technological expressions of energy will be performed in an unique architectural scenario designed to consequently respond to the challenges presented by the dualism “Energy-Form”.

Keywords: Form, Energy, Hybridization, Motorbike-parking,

1. Introduction
The project addresses the problem of Lack of Parking spaces for Motorbikes within Rome. The proposed Building is the main component of a complex network designed to give an integral infrastructural solution to the city and provide public facilities for its inhabitants. The Rome Motorbike Checkpoint sets the construction and design guidelines for the future Park&Ride structures that will emerge gradually across the city and shows the importance of a proper architectural approach of the binomial form-energy.

2. Methodology
We will differentiate two types of energy understanding to identify their influence in the architectural morphology. The first understanding of Energy refers to its human dimension: All the motorized and not motorized humans in constant circular flow. They represent the living units of the ecosystem and make of it a dynamic environment, They constitute the only reason of its existence. The second understanding of energy is allocated to its technological dimension: All the means of energy production and transformation forming the “motor” of the living machine and allowing its proper self-sufficient performance. These two conceptual levels of energy overlap and interact giving shape to the architectural solution.
3. The human dimension
These living units turn concentrically around the center like in a gravitational system. The heavier motorized humans turn with their motorbikes closer to the center, while the non-motorized ones walk in a peripherical pedestrian ring. They gravitate around the heaviest component of the system, the control point or building “eye”, located in the center and controlling all the human movements.
4. The Technological dimension
The means of energy production and transformation are concentrated in the top floor, forming an “Energy park”. We differentiate here three strategies: food production through artificial climatic skin (greenhouse), Rainwater supply through gravity system (collection, storage and distribution) and electricity production (through conventional photovoltaic panels).
All these elements which make possible the functioning of the mentioned “ecosystem” are placed radially around the center, strategically occupied by another “heavy” and vital piece: The “Rainwater Tank”, which represents the very first source of life.

5. Results
Both technological and human dimensions of energy interact and complement each other in an architectural scenario that responds consequently to its multiple performance variations.
6. Conclusions
The round-shaped morphology of the building and its inner distribution following a hierarchical radial pattern seem to perfectly meet the architectural requirements that allow an intimate dialogue between form and energy. These radial configuration allows the two above described understandings of energy to be metaphorically compared with a planetary gravitational system, connecting the issue of hybridization between form and energy with the cosmic or universal level. The architectural form can evolve to fulfill the changing needs of the humanity, it can be complex and can be simple, it can be round or triangular-shaped, but it has to always follow a “natural order” to allow the energy creation, flow and transformation processes to take part of it, to become an essential actor in its creation.

7. References
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