

The Making of a Place – the Courtyard: An Architectural Typology that Simultaneously Enables Safe Social Aggregation and Reconnection to Nature

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I. EXTENDED ABSTRACT

The courtyard, an architectural space and outdoor place, enables the human desire for social aggregation in a protected environment as well as facilitates our biophilic* call to be in nature.

The courtyard brings a sliver of nature within the confines of a building or home. It is a protected quarter, thus safe, exposed to the elements and serves many functions. The perimeter walls of the building guard social gatherings, while allowing nature to filter through it seamlessly, and the outdoors to penetrate effortlessly, sustaining and enhancing our biophilic reconnection to nature.

In our work the inclusion in the design of courtyards - be it a single-family house with an open area (fig. 3), a condominium with a communal patio (fig. 2), or a city block such as the one we see in Barcelona's plan Cerda' (fig. 4) - provide significant architectural cues on how to articulate, distribute, and organize the enclosed spaces surrounding them. We design the framing of nature and enhance the connection with nature and its biodiversity by means of volumetric articulation and the use of apertures - i.e. windows and openings. Southern California's modern tradition of architecture in contact with the outdoors (fig. 5) provides a fertile ground for case studies and speculative conversations about contemporary architecture and its quest for sustainability.

By presenting case studies of courtyards from our work, as well as historical and contemporary projects by others (fig. 1-6), we will extrapolate degrees of successful architectural connection with the outdoors, as places for aggregation and connection with multiple life forms.

The aim is to ignite a conversation and spark possible future collaborative research with regards to the neurological response to the social aggregation and biophilic reconnection with nature in an eco-logic vision in which humankind is part of all living organisms (fig. 7). By strengthening buildings' relationship between the indoors and outdoors spaces in our cities, the aim is to improve: human comfort, our coexistence with nature, and to amplify our awareness of the environmental crisis induced by human kind; thus prompting a shift towards its resolution. This goal is best achieved with an understanding of the neurological factors that attend this state of the mind in its relationship with the built and unbuilt environment.

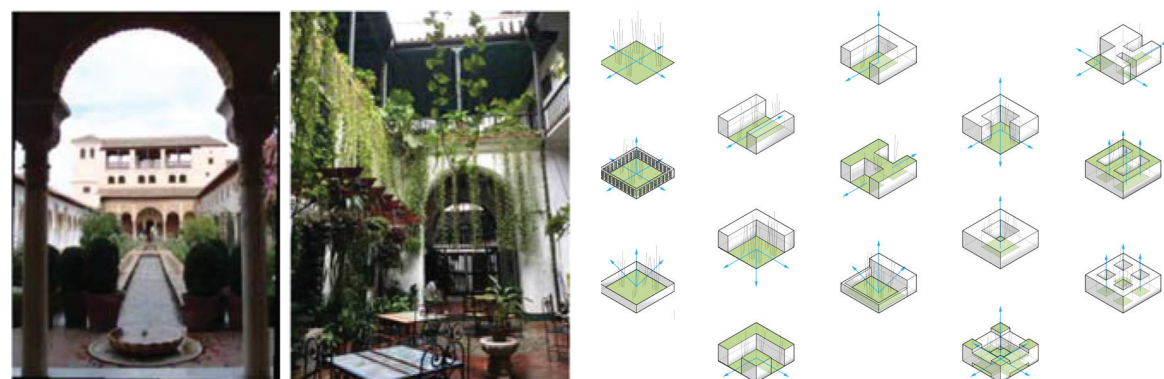


FIG. 1 - COURT OF LA ACEQUIA. PALACIO DE GENERALIFE, ALHAMBRA, GRANADA, 1309. HISTORIC EXAMPLE OF ARABIC COURTYARD HOUSE WHERE THE WATER IS USED AS A MECHANISM FOR EVAPORATIVE COOLING, AND IT FACILITATES CROSS VENTILATION. (PHOTOGRAPH COURTESY OF L. PRETORIUS)

FIG. 2 - COURTYARD IN COLONIAL HOUSE, LA HABANA CUBA. NATURE'S PRESENCE HARMONICALLY COEXISTS WITH THE PUBLIC FUNCTION OF THIS BUILDING NOW RESTAURANT. ITS PRESENCE PROVIDES A BIOPHILIC SENSE OF PLACE WITHIN THE CITY CENTER.

FIG. 3 - STUDY OF COURTYARD TYPOLOGY FOR PUBLIC SPACES: FROM ENCLOSED TO FULLY OPEN AND CONNECTED W/ OUTDOORS. LEVELS OF SAFETY: PERCEIVED OR REAL VARY. (IM STUDIO MI/LA)

FIG. 4 - PLAN CERDA' - A&B. ORIGINAL SCHEME - OPEN SPACES WITHIN THE BLOCK. C. LATER OCCUPIED BY DIFFERENT FUNCTIONS, LIMITING OR ELIMINATING THE CONNECTION WITH NATURE.

B - [HTTP://WWW.FAILEDARCHITECTURE.COM/BEHIND-FOUR-WALLS-BARCELONAS-LOST-UTOPIA/](http://www.failedarchitecture.com/behind-four-walls-barcelonas-lost-utopia/)

C - [HTTP://WWW.LEMAITREDELOLYMPE.COM/PHPBB3/VIEWTOPIC.PHP?F=1&T=3734](http://www.lemaitredelolymp.com/phpBB3/viewtopic.php?f=1&t=3734)

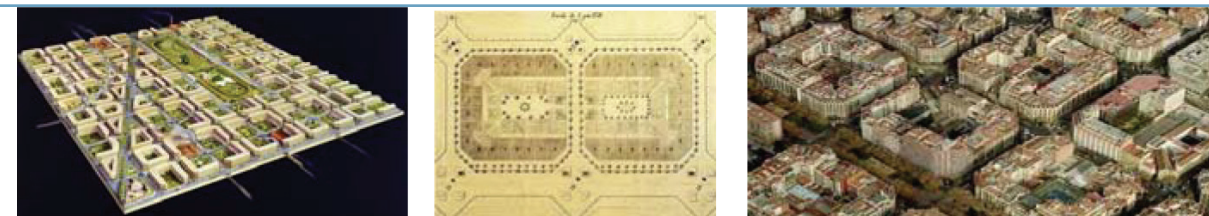


FIG. 5 - AGPS HOUSE - THE INDOOR-OUTDOOR-INDOOR CONNECTION WITH NATURE USING LARGE GLASS OPENINGS. HOLLYWOOD HILLS, LOS ANGELES. THE MODERN TRADITION IN SoCAL ARCHITECTURE, ALSO A MECHANISM TO FRAME NATURE.

FIG. 6 - MODERN COURTYARD HOUSE IN THE HOLLYWOOD HILLS WITH LUSH VEGETATION AND THE TYPICAL BLUE SKY OF SoCAL.

FIG. 7 - EGO-ECO, SOCIAL-ECOLOGICAL (ROBUST) SYSTEM. HUMANS AND NATURE ARE STRONGLY COUPLED - NOT IN A PYRAMIDAL STRUCTURE BUT IN AN ECOSYSTEM-LIKE ONE.



2. REFERENCES

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3. AUTHOR BIO

Ilaria Mazzoleni, Architetto, LEED AP

Mazzoleni is the founder of IM Studio Milano/Los Angeles (www.imstudio.us) and has taught at SCI-Arc for over ten years. Her conceptual work has been published internationally, and built work can be found in Italy, California, and Ghana. Ilaria has gained professional and academic recognition in the fields of sustainable architecture on all scales of design with research focused on biomimicry, where innovation in architecture and design is inspired by the processes and functions of nature. In 2015 she founded Nature, Art & Habitat, a multidisciplinary residency summer program in Italy that aims to unfold a sensitive type of culture that relates to nature as a source of creative inspiration. Her book Architecture Follows Nature - Biomimetic Principles for Innovative Design has been published by CRC Press.

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Since 2009, Richard has been collaborating with IM Studio Milano/Los Angeles - experimenting on the fringe of biomimicry, biology, and computation to investigate its implementations and operations within the architectural discourse - in order to deploy contemporary design strategies. Richard received his Master of Architecture degree from the SCI-Arc in 2010, and a Bachelor of Interior Architecture degree from SJSU in 2007.

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