

DENSITY & LIGHT

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L: Ice cave, Iceland; R: Immeubles Villas, Le Corbusier, 1925

“Whatever is not stone is light.”

Native Stone, Octavio Paz

Our section will consider an unlikely pair of terms for inspiration in the design of contemporary housing: *density* and *light*. The one conjures metrics and efficiency— the concerns of urbanism, but also mass, matter, intensity, interiority, and potentially - darkness. The other similarly conjures up metrics and health, but also absence, openness and the outdoors. Can we reframe relationships between *density* and *light* to create new models for housing?

The history of innovation in housing might be viewed as an ongoing contest between these apparent opposites. Encompassing many of the preoccupations of 20th C modernism, this contest was enacted across many frameworks. These have ranged from zoning, health and public policy, to organizational models and typologies, to experiential qualities of housing. In 1916 the world’s first zoning resolution was implemented in New York City, establishing regulations limiting density to protect the light and air of urban dwellers both inside and outside buildings. A few years later, Le Corbusier famously enshrined light as a central tenet of Modern Architecture in terms that spanned from the rational to the (quasi) spiritual. How do we understand these terms today? As if in a chess game, increasing density seemingly requires a counter-move to increase light. Could the terms *density* and *light* be reconsidered and thought of together?

For planners and urbanists, the concept of density either descriptively measures, or prescriptively legislates, the relation between entities such as people or dwellings, and area. But as an ultimately abstract and too elastic a concept for our purposes, this notion of density poorly reflects spatial properties. In a basic and often quoted example, the same population density or FAR (floor area ratio) can be achieved

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with different building types, whether point tower, slab, or tightly packed houses. And one could offer the same critique of the way light in housing design is often understood: measured primarily in a quantitative way, often tied to real estate criteria of views, and rarely considered in relation to evolving cultural criteria. Could we reconsider the way we experience light in housing; when must it be unobstructed; when can it be filtered, diffuse, reflected?

As designers of contemporary housing, you will be challenged to develop your own approach to these terms throughout the semester, from concepts to organizational strategies, and from experience to representation. In the interest of seeing these as an inspiration for design, we will therefore approach the concepts of density and light more broadly, beyond the metrics of efficiency to less quantitative aspects, and in relation to each other. Our broad frameworks will include:

- Intensity: can we design for density of social interaction, or intensity?
- Organization: can we conceive of housing as a variably dense accumulation of architectural elements or systems - for example windows, skylights, balconies, courtyards, structure, furniture, stairs – or of voids?
- Materials: How can we use materials – whether heavy (eg concrete) or delicate - to modulate the way we experience density and light?
- Techniques: whether carving, perforating, aggregating, layering, reflecting, atomizing, filtering or diffusing, we will consider design techniques that reframe relations between density and light.
- Representation: as a studio section we will investigate drawings and models that explore and communicate notions of density and light.

In summary, our studio section will challenge students to design housing that reframes issues of density and light in ways that are interesting to each group, and that can have the capacity to develop radical proposals for contemporary housing. During our trip to Mexico City, we will visit a variety of examples of housing that have dealt with the issues of light in ways made possible by cultural practices, climate, and use of materials. In addition to canonical and contemporary housing, we will also look closely at works of architecture in line with our section's focus, including Luis Barragan's houses, and the concrete churches and other buildings by Felix Candela.