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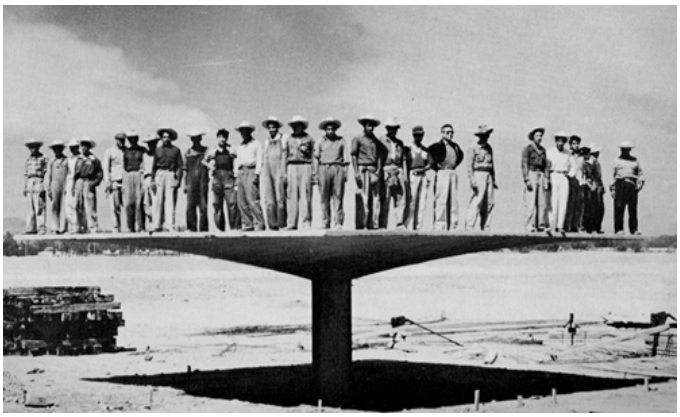
LONG SPAN, SHORT SPAN



Even as heavy tomes shrink toward the infinitesimal, the library -- the great shrine to the written word, and perhaps the last bastion of truly *public* space -- remains culturally critical. Just as quickly as the physical components of what it stores are evolving, so too is the typology of the library. This tension between its longstanding stature and its potential to be digitally disrupted raises questions of the library's identity. On one hand, such a transformative program calls for a building that provides ultimate flexibility and adaptability, yet on the other hand, architecture must have the power to project, rather than react to, spaces that can *generate* new types of experiences.

This studio posits that the integration of structure, space and natural light, through the nuanced composition of long-span and short-span spaces, can create both specificity and flexibility. Through the organization of the library's multi-faceted and evolving program, we will create structural systems that provide for change while maintaining human-scale spaces that catalyze real interactions between people and the material world.

As the very modes of learning are changing, how can a library provide both long-term flexibility and accommodate a diverse array of users and spaces for various types of learning? If not vertical partitions or standardized column grids to define internal space, then how can structure be used to organize program?

LONG SPAN IS FREE. SHORT SPAN IS SPECIFIC.

Long-span structures have traditionally been associated with buildings that require programmatic flexibility and must accommodate large influxes of people. Their internal organization of space is often independent the from its vast spans and material enclosure. Although the free plan seems open with possibilities, the generic quality of indeterminate space can be devoid of specificity.

Short-span structures provide a counterpoint where space and structure correspond one-to-one or in modules thereof. They can be simple post-and-beam spatial bays

defined by lineal members, or form-active where the flexibility of material responds to form, as in Bedouin tents, igloos and yurts. While specific and intimate in scale, short spans can become congested with redundancy and self-similarity.

LONG SPAN IS LIGHT. SHORT SPAN IS LIGHT.

The integration of structure, light and building systems can result in true innovation in infrastructure. Labrouste's Bibliotheque National and Bibliotheque Sainte-Genevieve was a technical achievement in terms of material ingenuity, structure and natural light with the invention of his integrated double-glass canopies and iron arches that spanned the great reading rooms. The very existence of the skylights enabled the arches and vice versa. Together, the proportions of space and the majestic quality of the top-lit room revealed a lightness and delicacy to the enormous vaults.

In our library designs, the control of natural light -- for the sake of books, archival materials, and screen-based activities -- will define programmatic spaces. The depth of structure can be employed to sculpt and control indirect light -- where structure is solid and light is void.

LONG SPAN IS COMMUNAL. SHORT SPAN IS INDIVIDUAL.

Long-span structural members are often custom-designed for material efficiency, yet they have the potential to create space in their depth, between members and in the hollow spaces of their cross sections. Short-span structures create space through efficiency of size and position of structural members and therefore preserve or define open space quite differently. How can a single system marry these types to invent spatial organizations that foster new programmatic possibilities for the library?

The earliest and greatest long-span buildings -- the Hagia Sofia, St. Peter's and the Pantheon -- were both welcoming to the public and awe-inspiring in their monumentality and technical prowess. The contemporary library is, at its best, no different. The power of Kahn's Phillips Exeter Library derives from the syncopation of mass, which was a question of structure for Kahn, and space, which was more ephemerally defined by natural light. "Structure, I believe, is the giver of light," he said. The great atrium space he designed was inspired by monastic libraries and manages to both evoke a sense of community, through the grandeur of the atrium space, and the individual pilgrim, nestled in the reading nooks within the structural walls. "A man with a book goes to the light. A library begins that way," Kahn said.

Our studio will study precedent libraries, contemporary spaces of learning as well as long-span structural typologies: space frames, trusses, arches and domes, cable structures and folded plates. We will design systems to house the current library program that includes books, data hubs and opportunities for deliberate and unexpected interactions between people and learning. These structures will consider growth and change, but they will also make specific connections to their communities and neighborhoods. Long-span/short-span buildings are both communal and individual, now and then.