The resistant virtues of the structures that we are searching for depend on their form. It is because of their form that they are stable, not because of an awkward accumulation of matter.

In his essay, Architecture and Construction, Uruguayan engineer Eladio Dieste recalls a conversation in which a former colleague dismissed the work of Catalan architect Antoni Gaudí stating that “his (Gaudí) work has nothing to do with us — in fact, I wouldn’t know how to draw one of Gaudí’s buildings”. This statement highlights, says Dieste, the “tyranny of the drawing board” and the resulting technological dominance of planar geometries in most modern and contemporary architecture. This domination has had an effect on both the separation between material knowledge and the conditions that shape the relationship among geometry, material, and labor.

Serious reflection on labor must entail a recognition that buildings begin in both embodied and disembodied — material and immaterial — production; not in architect’s designs but in bodies on the construction site.

Innovative tools and digital fabrication workflows give architects the ability to manipulate form and generate new ways of operationalizing diverse geometries. In many cases, these tools are instrumental in the production of the structures that they represent. Matter of Material Labor considers how the politics of labor and the structural implications of materiality are fundamental to the authorship of a collaborative process. The project is part of an ongoing exploratory collaboration with 15 undergraduate architecture students that the first part of this collaboration focused on designing the construction of a ruled surface brick wall.

Ruled Surface Geometry

Ruled surfaces are one of the four structural masonry innovations developed by Eladio Dieste and used in buildings such as the Iglesia del Cristo Obrero in Atlántida, Uruguay. Matter of Material Labor is part of ongoing research that explores the relationship between architectural workflows and the historical role of collaborative labor. The broader agenda of this work is to position brick masonry and the work of Eladio Dieste at the intersection of design and construction workflows.