

# Mutual Knowledge in Comparative Case Study of Indigenous Craft Practices in Las Loceras de Pilén, and Bát Tràng.

**HOJUNG KIM**

University of Tennessee, Knoxville

**GERMAN VALENZUELA**

University of Talca, Chile



Figure 1. The preparation mixture of silt, clay, straw, and water for the construction of the “Techno-Quincha.” The materials are mixed using mares to ensure a homogeneous mixture. The Authors

**Keywords:** Participatory design build, craftsmanship, pottery making, mutual knowledge, Quincha.

“The self is not something ready-made, but something in continuous formation through choice of action.”

—Anthony Giddens

## INTRODUCTION

The collaborative design-build project by the university students, in partnership with the intergenerational transmission of material expertise and artisanal skills within the Las Loceras de

Pilén community in Cauquenes, Chile, provides an opportunity to contemplate prevailing consumption patterns observed in economically developed regions of the Western world. This initiative sheds light on the growing awareness of finite resources, a realization that not only poses a threat to our environment but also erodes the rich tapestry of indigenous cultures. This resource depletion extends its influence into the realm of local craftsmanship<sup>1</sup>, as evidenced in the coastal mountain regions of Maule, Chile, where persistent drought conditions have intensified the challenges of sustaining traditional livelihoods.

In response to this multifaceted challenge, our project embodies a hybrid methodology to emphasize the significance of mutual knowledge exchange as a mechanism for cross-pollination.<sup>2</sup>





Figure 2. A new workshop and meeting place in Pílen. The plinth is constructed with fired clay bricks, while the metal structure and the workshop room are made using the “Techno-Quincha.” Ivy plants will replace the mesh at the base of the pillars to provide shade. The Authors

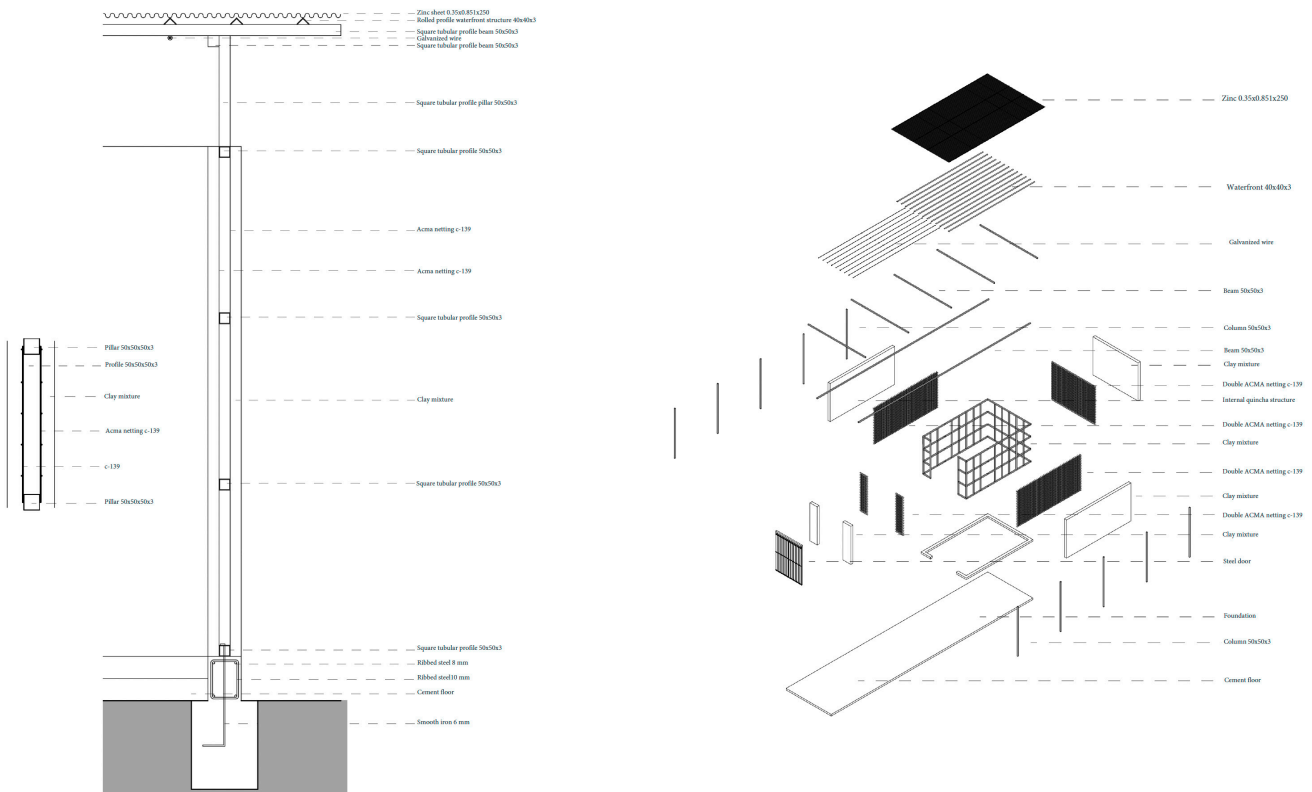


Figure 3. A wall section of the “Techno-Quincha”, and an exploded axonometric diagram illustrating the parts and assembly of the construction. The Students



Figure 4. The photo collage displays the landscapes, colors, and textures of the surroundings in the town of Pilén. The Authors.

We underscore the pivotal role of architecture as a converging nexus, one that amalgamates the transformative potential of design abstraction with the craftsmanship knowledge intrinsic to pottery-making. The culmination of this effort results in the creation of a multifunctional workshop, intended to serve as a workspace, classroom, warehouse, and sales outlet for artisanal creations. We have adapted the traditional “quincha” construction into the Techno Quincha system by integrating a flexible steel structure with the ancestral tradition of baked clay. (Fig.3) This fusion of materials and design embodies what Giorgio Agamben defines as “contemporaneity”:<sup>3</sup>a dynamic interplay between the past, present, and future within the realm of design practice.

## MAIN OBJECTIVES

**Empowering Local Artisans and Students:** We aimed to foster the creation of a versatile design that could be replicated, with an emphasis on the integration of local techniques, materials, and specialized pottery construction, all achieved with limited tools. The intention was to cultivate a mutually beneficial relationship between the students and artisans, serving as a living testament to the historical significance of this craft.

**Exploring Alternative Architectural Applications of Pottery-Making Techniques:** The students and instructors provided design guidelines and drawings to explore the integration of clay material into construction materials and the design of the workshop. The project’s goal was not mere replication but the creation of an alternative that combined the knowledge and skills to bridge the gap between pottery craftsmanship and the field of architectural pedagogy.<sup>4</sup>

**Transforming Adaptable Spaces into Planned Workspaces:** An examination of current living and working arrangements revealed a series of spaces that were disconnected from pottery craftsmanship and domestic spaces. While the final ceramic



Figure 5. Aerial capture of clay veins in Pilén. The Authors.

artifacts displayed meticulous details, the shelters used during the crafting process were improvised from scrap wood and other commercial materials. (Fig.9) Seasonal variations, dictated by ambient temperature and the need for slow drying, impacted productivity. Dry seasons led to increased production but complicated the possibility of inhabiting these improvised spaces, which were ill-suited for work.

## COLLABORATION PROCESS

**Site Research:** The initial phase involved collecting data related to the environmental and contextual factors specific to the Maule region.<sup>5</sup> (Fig.4) Factors such as the region’s arid climate, community dynamics, mining red clay, prevailing climatic conditions, and economic considerations were examined. (Fig.5)

**Community Dialogue:** Negotiation played a pivotal role during the conceptual phase, facilitating dialogues between the clay artisans, local skilled welders who prefabricated components, and the students who integrated technical research into the development of design within time and organizational constraints. (Fig.7) These variables were dynamic and required continuous negotiation to propel the project forward.

**Balancing the Concrete and Abstract:** During the schematic phase, the project team explored technical aspects and material considerations. The students generated a range of prototypes in both drawings and mockups to represent tangible and intangible elements. (Fig.6) This phase emphasized achieving a delicate balance between objective and subjective considerations related to functionality, form, and purpose. Material conditions not only influenced the physical form of the building but also guided the drawing method.

**Active Construction Process:** Both the students and the Pilén community began with land preparation, including leveling and reimagining the layout based on artisans’ input. Foundations were excavated, utilizing river stones with diameters of 30 to



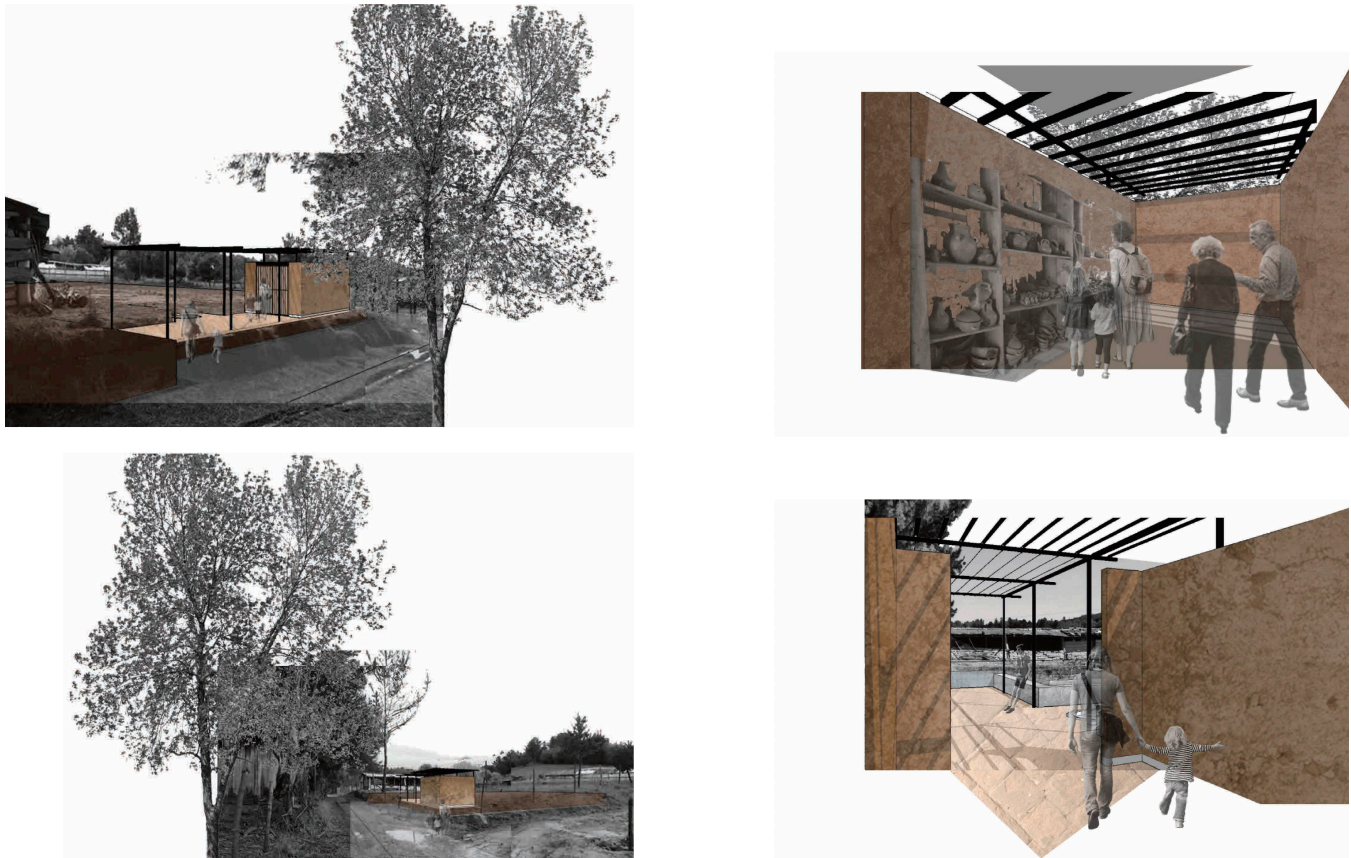


Figure 6. Photo collage renderings by the students, depicting the completion of the design stage in which the final site and form were defined. The Students.

40 cm. (Fig.1) A steel structure was erected to support the hand-applied clay mixture on both sides of the metal mesh simultaneously, replicating traditional techniques used in crafting vessels. The entire assembly process, including the installation of the metal cover, was completed in three days, with 12-hour shifts.

The prefabricated steel structure serves as an interior flexible framework, allowing a reduction in the thickness of the clay wall from an initial 35 cm to 12 cm. This reduction was possible due to the unique soil mixture, which included a substantial proportion of clay, wheat straw, and water. The mixture was ready when it achieved a soft, moist, and dry consistency, facilitating ease of manipulation and providing robust adhesion. The plinth functions as a communal gathering and workspace, offering a social space for the community to host product sales events and festivities. Notably, the plinth was predominantly constructed using fired clay bricks exemplifying the project's commitment to sustainability and cultural integration. (Fig. 2)

**INTELLIGENT EFFORT IN ARCHITECTURAL INTEGRATION**

In alignment with Polanyi's concept of "intelligent effort", a compelling imperative arises to bridge the gap between theoretical principles and the coherent execution of an activity.<sup>6</sup> This imperative is particularly salient within the domain of architecture, where the intricate interplay between the built environment, cultural practices, and their impact on the natural world is increasingly gaining prominence. Consequently, there is a growing need to comprehensively understand the concealed repercussions of architectural design and its associated cultural paradigms. In this context, the symbiotic relationship between architecture and craftsmanship emerges as a conduit for revitalizing traditional production methodologies within the realm of architecture. Our ongoing research efforts,<sup>7</sup> paralleling those in Bat Trang, Vietnam (Fig. 10), exhibit noteworthy similarities, particularly in the face of environmental challenges (Fig. 8). Which also underscores the latent potential to harness craft expertise and integrate it into architectural practices. We envision participatory research as a globally transcendent phenomenon, capable of transcending geographic boundaries and yielding sustainable solutions on a broader, more inclusive scale.





Figure 7. On the opening day, a group photo of Las Loceras de Pilén with the finished workshop. The Authors



Figure 8. Artisans in Vietnam using red and white clay from the Mekong River Delta in their pottery workshop. The Authors



Figure 9. An artisan from Pilén is seen in her pottery workshop. The Authors





Figure 10. A semi-industrial workspace in Bát Trãng. In the foreground, the baking process in the vessel next to the gas kiln.

#### ENDNOTES

1. Richard Sennett, *The Craftsman* (New Haven: Yale University Press, 2008), 20-21.
2. Anthony Giddens, *The Constitution of Society: Outline of the Theory of Structuration: Elements of the Theory of Structuration*. In *Practicing History* (New York: Routledge, 2004), 121-142.
3. Giorgio Agamben, *Che cos'è il contemporaneo?* (Rome: Nottotempo, 2008), 23.
4. Nishat Awan, Tatjana Schneider, and Jeremy Till, *Spatial Agency: Other Ways of Doing Architecture* (New York: Routledge, 2011), 48-50.
5. "Loceras de Pilen Comuna de Cauquenes, Region Del Maule," Universidad Catolica de Temuco, accessed September 20, 2023, [https://www.sigpa.cl/media/upload/docs/Loceras\\_de\\_Pilen\\_IP2018\\_UCT\\_Resumen.pdf](https://www.sigpa.cl/media/upload/docs/Loceras_de_Pilen_IP2018_UCT_Resumen.pdf).
6. Lara Schrijver, "Introduction: Tacit Knowledge, Architecture and Its Underpinnings." In *The Tacit Dimension: Architecture Knowledge and Scientific Research* (Leuven University Press, 2021), 7-22.
7. MIn Wu, "Bat Trang Commune People's Committee" (2008) Report on the Ceramic Industry in the Bat Trang Commune. Vietnam Ministry of Trade: Hanoi, [https://www.academia.edu/8142437/Bat\\_Trang\\_Ceramic\\_Producers\\_Compliance\\_with\\_Environmental\\_Regulations](https://www.academia.edu/8142437/Bat_Trang_Ceramic_Producers_Compliance_with_Environmental_Regulations).