**THE MEANING OF CRAFTING IN ARCHITECTURE DESIGN**

Craft involves the nature of the connection a building constituents and spaces creates both internally and externally which can be physical, spiritual or temporal.

This thesis proposes a solution to the disconnect between today’s designers and makers. Specifically geared towards the profession of architecture, these discussions should be applied in any process of making. After providing a historical reading of the crafted object and the people involved in making it, the paper proposes a new way to perceive craft in today’s world. When defined as an indexical quality, both in the mathematical and in the pointing sense described by Charles S. Pierce, the craft of an object becomes an accessible and efficient tool for the analysis and comparison of artifice.

The term “craft” is a broad sweep across many disciplines. Everything from a state dinner to a wooden door has a degree of craft. The word defines both an action and a quality: “The carpenter delicately details the table legs” and “That table is intricately carved”. In a way, the word “craft” cannot express fully the concept it represents: so many actions of thought, design, and execution involve a craft, often unique to that specific action. Though architects seldom discuss craft, they perceive it as a binary, linear concept: high or low, and executed by a single person – a craftsman – probably by hand. To a degree, an architect talking about craft imagines only the non-architectural applications of the word. When the scope of craft does include possible contemporary applications, craft stands as a mere quality, similar to texture or transparency.

This thesis argues that craft should be read as a matrix-like index, a highly descriptive backbone to any human-made object. Inspired by technological and philosophical advances present in congruent topics, this refreshed view of craft will help architects engage with an ever-changing concept of craft. The current assumed components of craft – the product, the craftsperson, and the aesthetic qualifiers – result in a limited reading. This is dangerous in any field, professional or casual. The discipline of architecture seems, at times, at risk of rendering the word obsolete in its slowly building distaste towards anything “craft”. Yet it is not just the ornamentation so vehemently criticized by Adolf Loos. It includes the Meisian joint and the Corbusian concrete, and all descendants of the modernist philosophy that pushed architecture away from a “crafted” world. Since this thesis is of an architectural nature, most of its defense and application will be within that field. That said, the topic of “craft” is broad, and the craft index should be applicable in any other design- and product-oriented fields. Therefore, many applications will be considered for examples and tests. It aims to amend architects’ perception of craft by finding a fresh contemporary definition and creating a setting for its discovery and sharing. Though our reading of craft was originally limited to architecture, we realized that such a scope contradicts the purpose of the thesis. Studying local craft and talking with local craftspeople has helped us broaden our concept of what craft can be and do. We thus discuss many different types of craft and imagine various applications of non-architectural craft within architecture.

We define several words and concepts for the following discussion. An “object” will be any human-made artifact, tangible or intangible, permanent or temporary. This ensures that “objects” include both cakes and songs. Member and element are interchangeable terms that define characteristics of an object. Maker, craftsperson, and human refer to the person who has made the object. An audience, viewer, or user then encounters, observes, or uses the object. An “index”, as used in this thesis, has two definitions. Charles S. Pierce describes the first in good detail in his “Theory of Signs”, a treatise that breaks down representative logic into icons, indices, and symbols. Icons and symbols denote an object by either representing it or taking its place – a stick figure is an icon for a man and a ro-chi (PX) is a symbol for a religious system. The icon looks like the object it represents, while the symbol does not. Pierce writes that the index is a special type of icon, one that is “not the mere resemblance of its Object… but [an] actual modification of it by the Object”. While the icon represents a thing, the index both represents and points at the thing.

The second definition is mathematical. An index is a matrix for layers of information. If imagined as an ever-changing stack of papers, the index can receive papers; someone can look through and sort the papers, or add or remove papers. A similar concept in programming is called an array. An index has any number of definitive qualities – elements that define its number or stature or width – and per formative qualities – elements that define its application. Both definitions of the index allow it to have multiple members. A member belongs to a Pierce index if it is either representative of the object or part of the object. A member belongs in a mathematical index if it is assigned to that index, as in the above paper example. Between the Pierce definition of the “pointing index” and the mathematical “sorting index”, an index can point at a concept through a varying number of its members’ qualities. Instead of limiting craft to a singular decorative quality in specific “crafty” projects, as denounced by architects, we define craft as a multi-member index that points to its maker. Now, it can serve as both a representation of and a reference to its maker. Similarly, a catalogue is a simplified diagram of a library and, simultaneously, a map for its books.

Exploring certain index members allows for comparisons across disciplines. Of course, this list changes from object to object. We highlight below members that we find to be omnipresent. These can change slightly in their definitions from object to object, but paint a general picture of what components of craft there can be.

* ***Quality***: Through talent, skill, and prior experience, a human imbues an object with some level of craft. The quality of a finished object is itself a smaller index of the human, one that points to that human’s characteristics that have been cultivated over time. We say a dancer is talented when the dance is exquisite.
* ***Quantity***: Through iteration, research, and commitment, a human imbues an object with some level of craft. That maker’s effort can be minimal or extensive. It might take years to write a book or paint a painting; it might take multiple drafts to craft an essay.
* ***Success:*** A maker intends an object to have some purpose. Even when simple or passive, a purpose gives meaning to an object. A statuette might do nothing more than delight passer-bys, but catching the attention of a viewer still counts as a purpose.

***History of craft***

The craftspeople at the center of Ruskin’s lament have been the core of human-made artifact since the earliest of projects. A traditional relationship between craftspeople and designers has thus only recently disappeared, otherwise dominating much of human history. Some archaeologists agree that the plumb and bob methodology is the most logical approach to building the Great Pyramid at Giza. John Romer suggests that the central Chimney of the pyramid, while also serving as a metaphysical connection to the afterlife, provided a sheltered space for the plumb and bob to create a reference point for the rest of the edifice.8 While no true “architects” were present in the construction of the edifice, an engineering team would be in charge of this sheltered plumb and bob and its readings. Much of the labor, then, was delegated to the large temporary population at Giza. The relationship, then, between designer and maker was direct – the designers provided measurements and confirmations on work executed by the builders, but had to trust the craft of the project to builders and masons. The same relationship was still true during the Renaissance. Ross King describes Brunelleschi’s relationship with his workers as key to understanding the building of the Duomo of Santa Maria del Fiori. Filippo Brunelleschi’s exclusive knowledge of the physics required to build scaffolding-less structure crowned him the chief of the builder team. However, the sheer scale of the project and the available conceptual materials of the time prevented separating design and build work. Although Brunelleschi could draft some pieces of his work, much of his design he applied first hand, working in tow with his team. Specifications for machinery, masonry, and finishes were dictated almost exclusively by the various craftspeople on site.

Brunelleschi burned all his designs, but the surviving written evidence suggests that, though he envisioned the pieces required, he allowed his builders to craft all final forms. Craft has thus remained in the hands of the craftsperson for much of human history. After industrialization, it became the intellectual property of the designer. But in our ever-changing world, that can no longer be the case. We argue for the return of a craftsperson-driven craft, a craft that we can learn to perceive as a human index.

***Reference***

* Google chrome
* Magazine
* Text book