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Neo-Industrialism

A New Age of Architectural Craft

Ramona Albert

We live in a world where speed precedes everything we do. From our forms of socializing, to communication, to building buildings, we are constantly surrounded by the need for faster processes.

The human brain has its limits, but machines enable us to think faster, do faster, and to create concepts that were impossible before.

In architecture, we use digital technologies to facilitate imagination, to create new forms, and we then need the same technologies to build them.

One thing is for sure, we cannot do it alone. We have a system, a network of people, skills and processes, that work together sinuously to produce, with the newly needed speed, the ideas that we create. Many are worried that the beauty of craft has disappeared, but it has evolved and simply taken a new, more complex form.

Craft in the Every Day

We often understand the notion of good craft in the context of hand-made objects.

In the case of clock making the quality of manufacturing was always considered a key driver for the industry. But it took centuries from the invention of the watch to be worn on the wrist, and only a few decades for it to be a wearable object that syncs our digital world with reality.

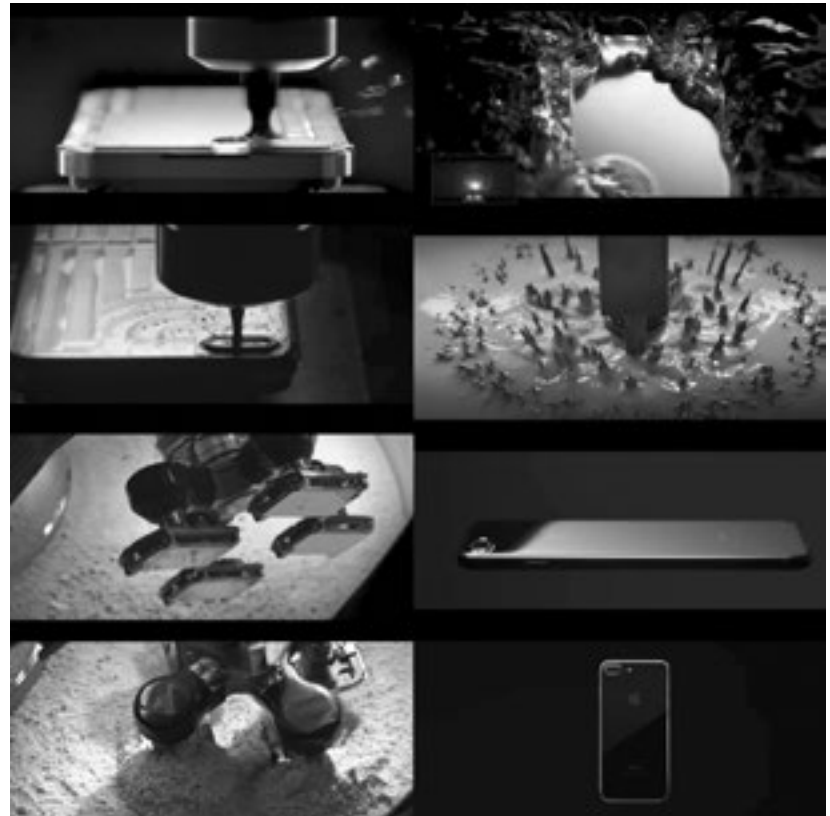
The first wrist watch is believed to have been designed by Patek Phil-

ipe, as a piece of Jewelry in 1868.¹ By 2015, the intricate mechanism that was so greatly designed for the purpose of telling time, was replaced by a digital object, more powerful than a computer, no longer just a piece a jewelry.

Does the new wearable watch exhibit less craft than the former intricately designed fashion objects? Can we certainly say that the attention to detail and workmanship was less developed in the wearable objects of today, that those that were so intricately toiled on by “craftsmen”? We cannot. One craftsman then, today, is simply replaced by a larger team, each with a specific skill that ultimately creates the final product.

If we further look at Apple, the company, it is very much a design-oriented agency. The products that we so widely love and use every day, take great pride in their intricate design process. The introductory video to the new iPhone 7, goes beyond showing us the finished product. In their quest to continuously “simplify and improve,” the Apple designs are intricate, and they aim at a new “seamlessness between materials, and producing a pristine, mirror like surface.”²

The great effort of collaboration between the initial idea and its implementation is summarized in each product. From inception, to design, manufacturing, packaging, and ultimate use, the products are carefully crafted not by a single person, but





by a large team with a wide variety of skills and varied knowledge base.

From Singular to Collaborative Craft

At the end of the nineteenth century, a very important technique, of mass production entered the furniture industry. The Thonet chairs created by an extremely skilled craftsman, Michael Thonet, uniquely engaged the technical limitations of the flexibility of wood, and became a creative line of bentwood furniture.³

The Model No. 14 bentwood chair, created in 1850, is to this day one of the most popular chairs manufactured. It took the notion of singular craft into factory production, being an ingenious object not only from the standpoint of design, but that of mass production.

In design, the understanding of craft was further changed by the Bauhaus School at the beginning of the twentieth century when Walter Gropius developed the notion that all crafts

(architecture, graphic design, art) could be brought together and mass produced, and should be adapted to the machine. The Bauhaus introduced a great deal of simplicity, with a focus on mass production and understanding of economics. It influenced the architectural world as much as development of furniture, utilizing what was then new technology that allowed mass production.

Today, technology has evolved to a highly-sophisticated level, and

has expanded into more than just manufacturing processes, as it has been overtaken by the digital realm.

The understanding of economics presented by the Bauhaus group, is highly prevalent in our understanding of architecture today.

As digital technologies are widely used both in design and in the construction processes, architecture is inherently adapted to the economics



of each condition, especially in its manufacturing stage.

The notion of craft therefore, evolves from that of a singular entity having an extraordinary skill set, to that of a collaborative effort that produces a highly complex product.

Building Processes: Collaborative Craft

In the context of contemporary architecture, consider the speed at which construction occurs. The idea, that a single person can be responsible for the innovation and quality exhibited by each project is almost impossible in today's realm.

I would argue, that because of the evolution of technology, we have achieved the highest levels of specialization seen so far.

Both in design and in construction, we utilize a large number of consultants, each with their own particular skill set, in order to research and produce the final building product.

For example, in the design process, we engage a multitude of engineers and consultants (structural, mechanical, façade, systems, code, wind, snow, energy, etc.) each with a specific skill set required in this highly sophisticated process.

In the construction phase, we engage a team of contractors and in turn a large number of specialized trades for each trade discipline involved in the process. We require many different skill sets to be brought to the table.

The variation of building components requires each separate trade specialist to be involved in the team. In all, from design to construction, the teams involved in the building process are larger than ever. Buildings become products of an immense effort of coordination.

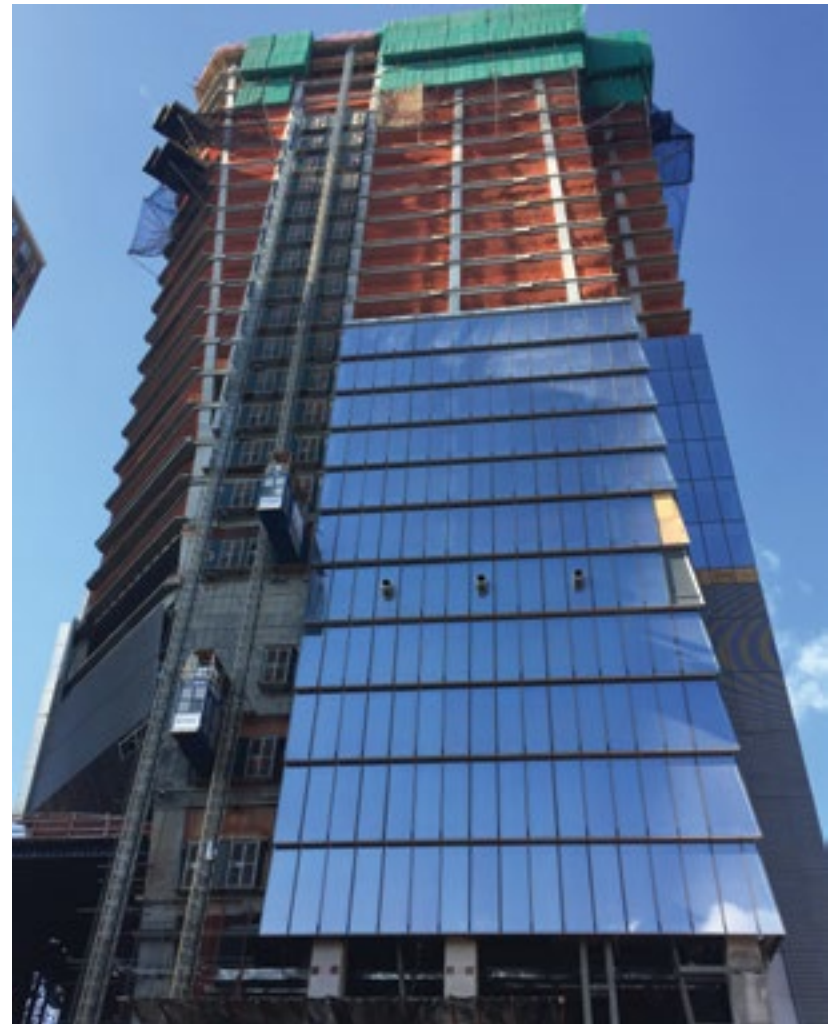
The specialization of trade, is due largely to the development of new

technologies in design. These technologies trigger more complex manufacturing processes, and these, in turn, necessitate each a specific skill set.

The ultimate quality of craft, becomes then the potential of collaboration and coordination of this complex process, in the same way that the director of an orchestra directs all instrumentalists.

This important role, in architecture is represented by the architect.

Because at such large scales, fabrication is left mainly to robotics, with almost no manual labor involved, we



are now in an era of mass customization, where most parts, even if mass produced, can be customized on a project basis.

In complex structures and complex geometries, the building components are all customized to follow the desired design intent. Collaborative craft comes into play when all components are seamlessly coordinated and adapted to one another.

The quality of craft, then, lies with this exact capacity of coordination.

In this new era of industrialism where we rely mostly on a wide digital in-

frastructure to produce buildings. Architects will be required to take on a role beyond only design.

Notes

1. Watchmaking: <https://www.hautehorlogerie.org/en/encyclopaedia/history-of-watchmaking/>
2. Apple: iPhone 7 introductory video: <https://www.youtube.com/watch?v=sbios0u2Px8>
3. Thonet: http://www.thonet.com.au/type_products/no-18-thonet-4/