The Craftsman:

Of the Hand and the Heart
“Give a man a fish, he will eat for a day. Teach a man to fish, he will feed himself for a lifetime.”

- Author Unknown
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Abstract
To gain the title of master is not an easy feat. Learning a particular craft takes time, attention and dedication. Recently, this type of commitment has become old fashioned, even burdensome. New commitments to production and efficiency have forced the American craftsmen and builders to change theirs as well. This shift has in many ways removed the thinking from making. It has removed the joy of labor and craft, in effect removing the dignity and pride of work. Current architectural discourse has emphasized and promoted personal value and self-worth through the buildings we build. However, the promotion of this ethical stance has gone largely unnoticed towards the builders of the American built environment.

By placing the tool back into the craftsman’s hands and teaching him how to think he begins to more fully know himself and know his work. He becomes dignified through his craft. The employment of these skilled craftsmen raises the standards of building. The architect can be more reliant on the skill of the craftsman while the craftsman can be more assured of employment. One ceases to be above the other but both, with complementary skills, are able to achieve the full realization of their work through the other.

Thesis Statement
The role of craft in contemporary American architecture has largely disappeared. This thesis revives and refocuses the tectonic essence of architecture - that of poetic making - through the skills of the human mind and hand.

1. It is said that 10,000 hours are necessary to gain the title of "master" in any skill. Sennett, Richard. The Craftsman. New Haven: Yale University Press. 2008
2. Dalibor Vesely argues that architecture and culture have become disjoined because of the hyper-division of labor. This division has hampered the creative process, cut us off from deep embodied knowledge of our environment, and made architecture merely representational.
Introduction

Defined in many ways, craft and the craftsman have always been an essential part to architecture and the built environment. The craftsman, throughout time, has taken on different roles and status within society and the field of architecture. Although defining the craftsman varies in relation to era and location, one thing has always remained true: craft is made primarily by hand\(^1\). The world in which we live, eat, sleep, move, work and play is and always will be a physical one. This physical world has always been constructed by people.

In much more recent times, especially since the Industrial Revolution, the clarity of who the craftsman is and what his role is has been blurred. While not the exclusive factor of this haziness, technology has played a part in the separation of work from the workman. Technological progress shows how developed and intricate the social human mind can be. Learning from the past and applying it to current issues many engineers, scientists and thinkers have solved their contemporary local and global issues. For the architect this has come in the form of architectural styles, structural ingenuity and aesthetic movements. Recently, however, the pace of change and progress has not given the field quality time in examining itself or how it has arrived at its current state.

Dalibor Vesely, a prominent architecture critic, pointed out recently that society has placed an unwavering yet undefined faith in technology\(^2\). His argument lies in the fact that technology has pushed us to new limits but has left gaps and holes in contemporary architecture and culture. For him, this disjointed society has divided the professions and labor force, in turn inhibiting creativity in architecture and related design fields. Vesely points to the fact that we are physical beings with embodied knowledge and certain skills unattainable by non-humans. This unwavering faith has prohibited us from properly addressing what the new technological advancements mean. One of the issues that this does bring about is the dislocation of the craftsman from his work. So much so that the laborer and craftsman have lost the sense of pride their work gives them. The intensity of the market and progress itself have forced the craftsman to shift his values. Yet, it is in the intimate making and product that the laborer and craftsman finds his

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inherent dignity and worth.

The response of architecture, as Vesely notes, has not been sufficient. As a profession that seeks to improve as many lives as possible, architecture is in the perfect position to take a stance and increase its scope in promoting dignity and self-esteem in individuals. One of the ways which this can be done is through the education and renewal of the craftsman and his craft in architecture. Pallasmaa states in The Thinking Hand that “the duty of education is to cultivate and support human abilities of imagination and empathy, but the prevailing values of culture today tend to discourage fantasy, suppress the senses, and petrify the boundary between the world and the self”. This education, applied to individual makers of architecture, allows for the emancipation of the individual bringing him freedom and dignity.

While there is no good reason to return to previous eras in history, it is good, however, to learn from the past to better inform the future. Although there has been great and good progress society, including America, has in many ways replaced the craftsmen and laborers of the built environment with technology and given them either less dignified work or no work at all. Through the questioning of craftsmanship in contemporary architecture, this thesis aims at emphasizing the tectonic nature of architecture, by way of the hands and mind of its makers, to promote a more holistic and built environment and society.

Art and Labor

Since this thesis is about the promotion of dignity in labor, it would be good to define the term. A simple dictionary definition of dignity is this: the quality of being worthy of honor or respect. While this definition can be sufficient, there have been many writings, teachings and activists of human dignity from the Catholic Church. In the past (120 years) the Church has written against the injustices of the working and laboring classes. They have sought fair treatment of these groups in terms of pay, opportunity and exposure. The way the Church describes dignity is this: dignity is intrinsic


to each person and is the respect and value of that person, not for what they can do, but for who they are as a human being regardless of status.

It is also good to understand the relation of the laborer to his work. Ever since man began his work there was always a connection to it. He was forced to use his physical strength and mental capacities to complete his duties. However, at the onset of the Industrial Revolution much of this changed. With the machine able to produce more in quantity and quality the laborer was soon replaced. “The machine became the man, and the man the machine”. The subject and object of work had switched roles.

What is meant by the “subject” and “object” of work? In the context of a sentence, the subject is the primary entity, what or who the sentence is for. The object, on the other hand, is what is acted upon by the subject. Here, the subject retains the primary status and, in effect, controls object. Take this back into the realm of work and labor, this shows that man has ceased to become the subject, or primary position, of work and is made the object, or secondary position, of work.

The issue arises in the fact that man is not made for work but the work is made for man. Man should always be the subject of his work. This occurs when he is seen as human with unique skills and embodied knowledge who can apply this to his creations, thereby exposing his inherent dignity. The danger of this switch lies in the true economy of society. When man, who can use his talent to create, loses that ability, the incentives to ingenuity, creativity and ultimately work, are diminished.

This is important to the field of architecture because if the desire to create something well is missing then architecture, as a physical manifestation of thought and theory, will become good only in theory but poor in practice. Yet “in architecture, there is no such thing as a good idea. There is only expression”. David Pye is one of the foremost writers on craft, workmanship, and its vital importance. He states that good workmanship can make better anything, but bad workmanship can ruin even gold. This statement only further emphasizes the important nature of craftsmanship in relation to architecture and making. By giving that incentive, through


respect of craft, the craftsman only increases the thoughts and theories of architecture.

Although not at the forefront in contemporary architectural discourse, dignity and value of the human person is recognized and praised by some. One of the most well-known firms is MASS Design Group in Boston. Their mission is to “research, build, and advocate for architecture that promotes justice and human dignity”. As part of their Butaro Hospital one of their goals was to involve the local community in its construction. A specific example within this project, as it relates to dignity in craftsmanship, is the story of the stone wall construction. Using local stones, ones that farmers see as a nuisance, the team was able to train locals in stone masonry. As the masons went around the complex putting up these stone walls they gained a deep understanding of their new skills. So much so that they looked back at their first wall and asked if they could replace it free of charge. It is this sort of example that shows how recognizing another’s value can lead to better architecture and better people. While MASS Design Group is one example there are others around the world, including Project Tacloban, Workshop, and TYIN Tegnestue to name a few. These groups, however, are not the first to address these problems.

In the late 19th and early 20th centuries, John Ruskin began a movement that sought to “reunite art and labor, mental effort and manual achievement, work and play[…]”. The Arts and Crafts Movement was primarily concerned with the laborer, his dignity first and his work second. While Ruskin was the initial mover of these thoughts and much of the brains behind it, William Morris applied these theories directly to his work. Both of these men saw a way to enhance the life and dignity of someone. For to them “the worker, as much as the work, was the product.” This way was through craft and the manual arts.

As a counter argument to the Industrial Revolution, The Arts and Crafts Movement sought to put the worker back as the subject of work. In a time where the machine was new and untested by time many workers eventually lost their jobs or skills. The many followers of Ruskin and Morris did not see the divide of “work and play.” Rather, they understood that man was meant to work. To them, work was the place of play, freedom and enjoyment; art

10. ibid.
12. ibid.
and labor were different sides of the same coin. However, if work was not a place of play, freedom and enjoyment then it was not work worth doing as Morris saw it\textsuperscript{13}. They fought for the dignity and rights of each worker through educating them and employing their skills to create a society they thought worth living.

This movement also took roots in America through many different avenues. Some architects saw the European movements as stylistic and began to imitate them on this basis. The most famous of American architects were the Greene brothers, Greene and Greene. Though they did not follow Ruskin’s teachings of honesty and primary emphasis on labor they did bring the Arts and Crafts Movement to the minds of Americans. Other groups were more honest to Ruskin’s teachings and applied them to their own needs and context. Different schools throughout America began arising, the Manual Arts Movement and the Roycroft Community to name two, sought to keep the essence of the Arts and Crafts Movement’s reform of labor and rights.

These types of movements occurred throughout Europe and America in the early 20th century. Initially flourishing quickly they soon converted to the efficiency and productivity model they fought against, were transformed into new styles or fell apart all together. Their goals, however, remain important even to today’s standards. They aimed at showing how the craftsman and his craft were and always should be together. They sought dignity within their field and believed that this was where society was at its best. They desired to reconnect the once held beliefs that art and craft, thinking and making, these inherently human acts, were good and should be viewed as such.

The History of Craft

According to Vitruvius, architecture is at the same time a technical, or practical, field and aesthetic, or theoretical, exercise\textsuperscript{14}. In writing this he and other ancient architects and philosophers believed that architecture was something thought up and then ultimately made. Scarpa, quoted earlier, was merely reflecting this long held belief. Architecture had to have the building or making component in order to be considered architecture. While the same idea is true for contemporary architecture, there has been a


misunderstanding of what building and construction actually mean.

The word *techne* is the Greek word for craft, craftsmanship or art. While this might be an accurate translation our understanding and application of this word is misunderstood. To the Greeks this word was much more than making something. It was a form of knowledge. Socrates, Plato and Aristotle, just a few amongst many ancients, wrote about this term. When they wrote about techne they also wrote about other words such as episteme, phronesis, Sophia, and nous, which comprise of the five virtues in these five words all have some sort of root in wisdom or knowledge. The one that was constantly discussed with techne was episteme, meaning knowledge or understanding through science or experience. When these two are understood together they can more fully give us understanding to our contemporary words of techne, technical and technology.

The Greek philosophers did not see knowing and making as two separate actions. To them these were interchangeable. When someone created they did it from knowledge of previous experiences. Dalibor Vesely writes about this and explains it as embodied knowledge. This sort of knowledge can only occur through experience and the learning from those experiences. As well, Aristotle was so attuned to this way of seeing that he believed we are only able to understand the First Cause through the experiences we have. But these experiences must build upon one another if they are to be considered a part of techne and episteme. Vesely points out that “techne supersedes spontaneous knowledge and intuitive skills”. Through this accumulation of knowledge a craftsman is then able to live fully through the rules he was raised on so as to expand them. It also makes the process of making more worthwhile and meaningful to the maker.

The Germans have a word that is not directly translatable to English that encompasses making and art Baukunst is German for architecture or, more directly the art of construction. Yet even when broken down, bauer meaning to build and kunst meaning art, this word does not fully satisfy the German’s understanding and usage.

The word takes on a greater meaning that is able to elevate the object to a higher status and give a higher purpose. An example of this would be

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17. ibid.
19. ibid.
20. ibid.
the construction of a Gothic cathedral. York Minster Cathedral in northern England is one of the best Gothic cathedrals in Europe. Standing at just over 200 feet this cathedral is a living testament to the dedication of the craftsmen to their craft. Even at the highest points craft and precision are employed. The gargoyles and crowns of the spires are cared for in each detail from the eyelids and teeth to the floral designs and patterns. Although difficult to see properly even through binoculars the craftsmen did not skip on their details because they ultimately knew who it was for. The craft and product took on a higher purpose. This type of construction gets at the essence of baukunst in that the art of the construction are elevated to much more than a stone carving or finished piece.

When one is able to understand more fully these words their contemporary application takes on a deeper meaning. Kenneth Frampton discusses the tectonic nature of architecture extensively. He states that architecture is first ontological, meaning being or becoming into existence, before it is scenographic. The most basic unit of architecture, for him, is the structural unit. The argument that Frampton makes is that the tectonic nature of architecture, the physical making of ideas, is how humans are able to relate to the building and others. This, taken with the understanding of the Greek’s emphasis of making and knowing, point to the necessity of humans, using their hands and minds, to create architecture. Without this, Frampton states, the “practice of architecture is impoverished”.

The Craftsman

Work is something of necessity, and yet, can be something of pleasure. For man to survive he must work. He must work the ground, market his goods, and take care of himself. If he does not then living will be difficult, if not impossible. At the same time, there is a sense of pride and satisfaction in doing well any work however hard it may be. Since man is made to work it is essential that he finds work worth doing. It must be something that brings him satisfaction and pleasure, for then his life has meaning and life outside of the work is greater because of it. Here man becomes the master of his work, he is the subject.

22. ibid.
23. ibid.
24. ibid.
There are two views of man in relation to his labor and work. The 20th century philosopher, Hannah Arendt, who survived the Holocaust wrote about these two categories. The first, animal laborans, means “beast of burden.” Hannah writes that under this view man must do work out of necessity, but that this takes away a certain level of freedom. In some ways he becomes a slave to his work. This sort of work can easily degrade the laborer as he becomes merely an animal. Yet, we are not mere creatures, as she explains in her analysis of the next category. Homo faber, literally translates to “man as maker.” Man here becomes something, he is in contrast to an animal of burden and as a maker of things he begins to have ownership of his craft and the crafted objects.

Richard Sennett in his book, The Craftsman, discusses these contrasting ideologies. He does not sell out for either one but takes the middle ground. Having to do things out of necessity but also for pleasure allows “people [to] learn about themselves through the things they make.” This middle ground is where the natural attitudes we have as creates merge with our human instincts to create. Sennett points out how Ruskin believed that manual labor leads to a better, higher quality of life and institutions.

So what is it then that architecture should do to respond? Who are the people this affects and what is the proper way to address them? Using the homo faber as a starting point we must first recognize the man as a maker. The craftsman, laborer and construction worker are the ones who build our buildings. It is therefore these groups who demand our attention.

As expanded upon earlier making is something that is inherently knowledge-based. It is accomplished because of understanding through experimentation, or embodied knowledge. The maker, or craftsman, must experiment and experience. Without this he cannot be called a maker. How is it that he experiences and makes? It is through the senses. It is the only way we can truly experience the fullness of the world. Therefore, the maker must use his senses when he builds or creates. The senses, namely sight, touch and to some extent hearing, are the way we must approach the maker.

Bruce Metcalf, a lecturer, instructor and artist, focus heavily on the idea and application of craftsmanship. In one of his articles, The Hand: at the Heart

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26. ibid.
of Craft, he states that it is the makes hand that creates. This is where the life of the craftsman imprints itself upon the crafted object. Bruce argues for the hand because it is the hand that is connected to the heart. This way of working offers “purpose, community and avenues for growth” and throughout the centuries it is the hands that pass down skills, traditions and meaning.

The extension of the craftsman’s hand is his tool. Juhani Pallasmaa goes into depth on this idea by stating that tools are merely arbitrary until they are wielded by the hand. A tools is what allows the maker to cut, hammer, join and sculpt. Newly developed techniques of 2D and 3D modelling in the digital world can also serve the maker. Tools should always praise the maker throughout the process. If abused they can become destructive and degrade the man as maker. As long as the craftsman retains the status of master over his tools and work, the one manipulating the objects, he remains the Maker and craftsman.

Craft and its makers have always been essential parts to architecture, for without them there would be no architecture. The hands of the makers were made known through the details and ornamentation of their buildings. This came from a long education and continued throughout his practice. When the Industrial Revolution took hold, many people stepped up to keep the hand at the heart of craft.

John Ruskin, discussed earlier, sought the dignity of the craftsman through the craftsman’s education and practice. Dignity sprung forth from proper education and the education was enhanced by the increased dignity. Along with others like C.R. Ashbee and Philip Webb, the Arts and Crafts Movement was concerned with the “freedom and responsibility” of the worker and his education. Yet, this educational style, freedom through the thinking hands, was not limited to England. Other movements include the Bauhaus Movement and Deutscher Werkbund Movement in Germany, which sought to interwine Modernism, craft and the new industrialization. While in America, the Manual Arts Movement “emphasized the intellectual and social development associated with the practical training of the hand and the eye,” and later became what we know as the vocational program in

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28. ibid.

29. ibid.

30. ibid.


America. These programs focused primarily on the craftsman, their hand and by extent, their well-being.

These movements were counterpoints, to varying degrees, of the industrialization of design, building and craft. They believed that craft and design should not be taken from the craftsman which began in the classroom. Though some promoted Modernism, the inherent “always and ever-new” philosophy of Modernism is, at times, at odds with craftmanship. Vesely argues against this Modernist notion through the explanation of mimesis. Mimesis is the ritualistic reproduction of something. It is that time in the woodworker’s training that he must sit and whittle spindles for months before he is allowed to place them in a finished chair. He must be able to replicate the first spindle each time. This mimesis, or the English word mimickery, precedes episteme techne, knowledge through craft. But it is this that allows the craftsman to progress as an individual and for the clients he serves.

Juhani Pallasmaa states that the “duty of education is to cultivate and support human abilities of imagination and empathy.” He goes on to say that “the prevailing culture today tends to discourage fantasy, suppress the sens and petrify the boundary between the world and the self.” What he is getting at is the way we interact with the world. He is, in part, questioning the education of architects and builders. It harkens back to the fact that craft is an inherently physical and hand-oriented process. Through the physical and hands-on education true understanding can be found. When the builders of our buildings can understand, think and be, then the built world around us, a world we increasingly live inside of, will be greater for it, which will change the way we view ourselves and society.

35. ibid.
37. ibid.
The Detail of Architecture

“God is in the details,” Mies van der Rohe held. His belief that the details of architecture were where the essence and beauty of architecture could be found is not a new phenomenon. Throughout time the details of architecture are where the masters have spent their efforts. Where two pieces of material meet there is where the ingenuity, creativity and magic of architecture happen. These joints are the “irreducible essence of architectural form,” (Rappel A L’Ordre), and it is these joints that allow architecture to express itself, to speak.

Throughout the years detail has been an important, if not vital, aspect of architecture. In the 15th century, Leon Battista Alberti asserted that detail was the beginning of beauty. For him and his contemporaries nothing could be added, subtracted or altered. John Soane in the late 18th and early 19th centuries noted that detail is what gives a building its character. It either helps the building or hurts it; it is the way in which it speak. Most recently, Louis Kahn, in the 20th century, claimed that the joint is the beginning of ornament, which looks at the detail as expression. To be without detail is to be without character; to be without joinery is to miss out on expression. It is in these details, the marriage of two materials, which push architecture forward and hold the wisdom of the past.

Architecture is a particular practice unlike any other. Deeply rooted in the past yet ever striving forward it is the place of innovation and invention. Innovation, however, is not for its own sake. There is purpose and meaning behind it. It is properly ordered when invention is made for man: when it looks to the past to find answers for the future.

Kengo Kuma considers himself a purist. He is not interested in facades or “fake” construction. This attitude naturally led him to using certain materials and avoiding others. However, when an owner of a stone quarry asked him to design a museum he took the challenge. Not wanting to disrespect the structural capabilities of stone, Kuma knew he wanted to use it as the

42. ibid.
43. ibid.
44. ibid.
buildings structure, but this is where he met another dilemma: Kuma didn’t work with stone. He didn’t work with stone because it blocked the occupants of a building from the connection to nature. He needed to find a solution. It would come from living at the quarry to develop a new building technique. The masons and Kuma worked to develop a system of stacking that would allow for light to penetrate while also being structurally stable. This new system challenged held beliefs, pushed the boundaries of the material and brought a team of designers and builders together. Kengo Kuma shows here that innovation affects all involved and praises each member.

While Modernity has produced more inventions than any other time it has lost direction in detailing. This is partially due to a lack of grounding and meaning of expression. This happens because there is a lack of expression and significance in culture. The lack of expression, self-expression as communal and social beings, has rubbed off onto architecture by way of detailing. When one is able to express themselves through making then significance in architecture, and by extension culture, abounds. When this expression is lacking, however, architecture and culture suffer.

It is in these details that architecture can begin to once again express itself and its culture. A movement that held this belief, the Arts and Crafts Movement, sought to redeem the craftsman and the details. When one was praised the other naturally followed. It is this attitude towards detailing that will not only push architecture forward but also its craftsmen.

The Current State

A question now arises: where are we now and where shall we go? The Monthly Labor Review from 2006 found that laborers, those who build our buildings, had suffered the greatest loss in job count from 1910 to 2000. This statistic does not come at much shock yet still leaves a gap in the labor force. The current state of affairs in America has brought us great success through innovation, invention and economic growth. Progress of this sort, however, has stifled our creativity and hindered those who make.

45. Kengo Kuma

In this current state many question the mode and means of craft. It is true that innovation has done a great deal to help mankind in the past 100 years. Uninhibited, however, it has shown its darker side. The dialogue of the process of craft must be examined in light of what has come before us.

The foremost issue with contemporary ability to craft is that it dehumanizes the craftsman. Quoted earlier, the craftsman’s skill can be replicated by a machine which makes the creator a machine and the machine the creator. The dehumanization comes, in part, from this emphasis of machine and productivity, discarding human skill. It can be an easy solution to say no machines and to go back in time, but this is retrograde and contrary to human nature and natural law. Machines are good, but “when it deprives workers of their previous employment, or when through the exalting of the machine, it reduces the man to status of slave”. Machines are made for man, not man for machines.

One of the greatest inventions in productivity was the assembly line. Henry Ford paved the way for industry in America. Fordism, as it later became known, was not well received by its workers at first, however. Many either quit or went on strike because of the lack of connection to their work. The issue they had arose from their superior’s greater concern for efficiency and the end product rather than their good, honest work. The process of making ceased to belong to them reducing the pleasurable aspects of labor, therefor eliminating their connection and eagerness to their work.

More recent developments in fabrication have given way to new modes of building. Even though the water bucket was a new invention at one time, it is wise to be aware of the consequences of all new technologies. Machines like CNCs, laser cutters, 3D printers, SMART construction systems show us how to live within our own social and economic constraints. Yet when put into practice its consequences are readily apparent.

In Amsterdam, an architecture firm is working at printing the first 3D house. The team developed a system of blocks to serve needs such as


50. SMART construction systems are fully controlled by computer from the manufacturing to the installation.

structure, electrical and plumbing. These designs are then sent to a large scale 3D printer which then physically produces the building. The issue with this house is that there are only a few designers and assemblers of the house while the maker is a machine. The root of the problem is that many craftsmen and tradesmen are being displaced by this system. To say here that no machinery should be used is to miss opportunity. It is simply a misuse of machines.

To call for pre-Industrial eras, or to be a Luddite, is to miss the opportunities of progress. We are bound by time that only moves forward. It is a tough balance. Ruskin believed that the rigors of a machine inhibit a mean from freedom of though and experiment, ultimately possible failure and personal success. This attitude taps into the heart of this issue: how machines are used and to what extent has direct impact on humans.

When it is distilled it becomes a matter of degree. Simply because one has the capabilities does not force them to use it. Where they are most alive is the extent machines should be used, but they should never replace any man’s job for the sake of another man’s prosperity. In The Craftsman, Richard Sennett proposes that good use of machines is “to judge its powers, fashion its uses in light of our own limits rather than the machines potential.”

**Conclusion**

Building is an intrinsically human and physical act. It is not only a means of survival but is also a display of human thriving, which comes to fruition in the realm of art, and architecture being intimately linked with art. “One of the primary tasks of art is to safeguard the authenticity and independence of human experience.” The way in which this occurs in architecture, the art of joining materials together, is through the builders and craftsmen of our built environment. If this is so then it must safeguard all moments of human experience, not excluding the builders and craftsmen. More so, though man is able to use his brain in contemporary construction, if he is unable to use his hands he becomes less of a worker, for building is at once a physical act and a mental effort.

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53. ibid.

It is not the surroundings themselves that produce meaning, but it is the connection that humans have to their surroundings that makes meaning real. Hephaestus, the Greek god of craft, was the god who brought people out of isolation and into community\textsuperscript{55}. Though he was physically deformed at birth, “the club-footed Hephaestus, proud of his work if not of himself, is the most dignified person we can become\textsuperscript{56}.”


\textsuperscript{56} ibid.

This Papal encyclical, written in 1981, is an extension of almost 100 years of Catholic Social Teaching on the Working Class. What began in 1891 with Rerum Novarum: The Condition of the Working Class is continued by Pope John Paul II through a deeper understanding of what work is and who it is for. The Pope begins by defining what work is and who it is for. He gives a thorough explanation of the relationship between man and work citing previous practices, new technologies and current conditions, and how work should be practiced by all involved. This encyclical and social teaching makes clear how a moral society should function in regards to work and is where I will root my view on work and dignity.


Marco Frascari goes in depth to explain how the detailing of architecture is what gives the whole significance. This essay explains how careful detail avoids ethical and aesthetic failure. He goes through history to explain how architecture has treated the detail, with high praise, and shows how respected architects have followed suit. The architects he cites, Alberti, Scarpa and Kahn, all express the same theme that detail is where the harmony and fullness of architecture comes from.


This essay expands on and reifies the way in which handicrafts are necessary to humanity. Bruce starts out by explaining the hand’s importance in contemporary society. He first explains that craft is done primarily through handwork then goes on to introduce the hand from a historical context. He stresses at length the importance of skill, technique and training the human and hand must go through to preform even the most basic of tasks. In the last part of the essay he cites the importance of craft as more than just making but communicating. This communication involves
humanity and brings about something no machine can do. Metcalf’s essay stresses the importance of meaning behind the handicrafts.


This book focuses exclusively on the hand, its relation to the body and mind, and shows how the hand is what makes architecture whole. Pallasmaa goes beyond the act of making to explain the hand in depth. He goes into different aspects of handicrafts including the connection to the mind and soul, the processes of making and its tools, and how collaboration through craft is what connects people to one another. In the end he calls for architecture to defend against dehumanization. This book serves my thesis well by way of showing how the process of architecture, making by people, is what truly brings life to society.


Richard Sennett attempts to tackle what it means to be a craftsman in contemporary society and tries to place proper light on how the craftsman should practice and be treated. In the prologue he forms his thoughts around the animal laborens v. homo faber thoughts; either man as beast of burden or man as maker, respectively. While not chronological, Sennett combs through history to give examples of how the craftsman has practiced and the way he practices now. He examines historical views of the craftsman, the morality and motivation of skilled work and labor, the structure of the craftsman’s skills, workshop and business. In the end he finishes with the way in which work should never be the means to the end. It is through this lens he writes his book.


Vesely takes on the age old question of technology, art and science. It has been a question asked for centuries and he argues that our current society is not asking the questions. His issue lies by way of a lack of distinction between invention, creativity and production. This work clarifies the issue of technology and its limits in relation to the human person.
Peter Zumthor’s Bruder Klaus Chapel is quickly perceived as a handmade object. Constructed by the owners, friends and Zumthor himself this chapel goes beyond the process of making to incorporate it into the final product. The burning the formwork the ashes and smell contribute to the highly phenomenal and mystic space. Even the lines of the exterior, in plane with the landscape, and the interior, leading ones eyes up to the heavens, shows a deep understanding of how the material works to further move the occupant. Many local craftsmen were involved as well, from the formwork to the benches and to the sacred vessels, including the owners who hand poured the recycled tin-lead floor.

This project shows a deep intimacy of relations between contractors, owners, craftsmen and architect. These
Craftsmanship of Social Outreach

**Project:** Butaro Hospital  
**Architect:** MASS Design Group  
**Location:** Burera Region, Rwanda

From the outset of the project, one of the goals MASS Design Group had was to use this as a way to employ and empower the local community through construction. By giving opportunity to be involved holistically, the community was able to become more aware of the hospital’s presence thereby encouraging more villagers to seek assistance.

A significant story from this project comes from the construction of the walls. MASS took a local material, a volcanic stone, which is considered a nuisance, to use as an opportunity to recycle and also teach. After a series of workshops and mock-ups the new masons began putting up the walls. When they had finished the final wall, out of a sense of pride in their work, they asked if they could replace the first wall. These masons are now sought after throughout the country.
Craftsmanship of Innovation

**Project:** Ashino Stone Museum  
**Architect:** Kengo Kuma  
**Location:** Nasu, Tochigi, Japan

Designed for a stone quarry owner, Kuma sought to take what is normally a heavy material and bring out an inherent quality not normally perceived. The project called for a certain stone, Ashino stone, to be used to create spaces and pathways that would connect an existing series of buildings. He believed that solid walls, stone or concrete, separate the user from nature. Taking on this project, however, he sought to retain the material honesty but innovate a new system.

The way that Kuma achieved this was by visiting the owner’s quarry to test the limits of stone. These mockups with skilled craftsmen allowed Kuma to arrive at a thorough understanding of the limits of this particular stone. Through the stacking of these stone “particles”, as he calls them, two outcomes...
Craftsmanship of Religion

*Project:* York Minster Cathedral  
*Architect:* Unknown  
*Location:* York, England

Begun in 1230 and finished in 1472, York Minster is one of Northern Europe’s best Gothic cathedrals. This cathedral is a living testament to craftsmanship. Employing numerous masons and stained glass artisans, the cathedral is in a constant state of repair. While it may be in perpetual construction, the stoneyard is using this opportunity to educate the public in their craft and teach new apprentices traditional skills.

The importance of this 550 year old cathedral lies in the desire for a nation to preserve it. The continuation of these traditional crafts keeps the cathedral tied to its historic roots.
Craftsmanship of Poetry

Project: Querini Stampalia  
Architect: Carlo Scarpa  
Location: Venice, Italy  

Carlo Scarpa is well known for his detailing and the Querini Stampalia is a showcase of the many trades he employed. Experienced in a sequence, one starts from the bridge, enters to the main hall, walks through the exhibition spaces and ends in the garden. Throughout the project he pairs the traditional Italian and Venetian crafts and materials to the more contemporary ones. This pairing brings about a rich poetry between the traditional and the contemporary.

Scarpa’s attention to detail and levelled collaboration are easily apparent in his work. He had a desire for honesty of material that was, for him, found in the craftwork. It has been said by his craftsmen that they were fond of working for him and would work through the night to find the solutions he wanted. This commitment came from instilling a worth and
Project: Furniture  
Designer: George Nakashima  
Location: New Hope, Pennsylvania

The furniture of George Nakashima is as unique in its appearance as it is in its philosophy. Nakashima’s vision for his furniture would be one of direct experience. Each piece would emerge from the inner core of the craftsman to create a non-stylistic outward appearance. This approach mimicked the development of a tree. The craftsmanship would not be personal but universal. Nakashima believed in simple beauty that sprung forth from the soul and gave the craftsman a particular pride from strict dedication.

The dedication of Nakashima and his craftsmen shows how the human hand, craftsmanship, can produce something much more than a piece of art, but a piece of life. His desire was to keep these age old traditions alive because he knew, first-hand, how
Craftsmanship of Renewal

**Project:** Ise Shrine  
**Architect:** Unknown  
**Location:** Ise, Japan

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“Blessed is he who has found his work; let him ask no other blessedness.”

- Thomas Carlyle, 1834
In times past, trade guilds were the formal way of finding secured employment into a particular craft. One would enter into a guild as an apprentice dedicating his life to his craft. This is where he would work, reside and have his social life. Guilds were places of education and practice involving the training of apprentices and continued education of the journeymen headed under one master craftsman. The intent of these guilds were to protect the profession’s standards and quality of craft while also providing community and security for the individual craftsmen.

The proposed program is a renewal of this education and work type through the of practice in the L’Art du Trait school of thought. A language in its own right, l’art du trait is a drawing technique that allows carpenters to envision complex wood and timber geometries for building. Taking inspiration from the ancient guilds this contemporary guild will be a place of education, practice and living all with the intent of renewing and protected the woodworking trade. The users are then twofold: first, the apprentices under the master, and second, the practicing craftsmen.
Taliesin West

**Architect:** Frank Lloyd Wright  
**Location:** Scottsdale, Arizona  
**Programming:** Workroom, Apprentice Rooms, Bedroom, Dining Room, Auditorium, Cabaret Theater, Sitting Room, Garden Room, Kiva

Taliesin West is the desert campus and studio of Frank Lloyd Wright. Somewhat reminiscent of historical guilds, the idea behind the design and planning would be that the draftsmen and Wright would live in common to work, play and rest. Here Wright would be able to be master of the studio and could control all aspects of life.

The proposed program will draw on these aspects of craftsmen coming together under a master, similar to the historical guilds. I am drawing on both the Frank Lloyd Wright studio and the newer Taliesin School for precedence in that now the campus is a school of training moreso than a place of continued practice. The proposal will be the combination of the two.

**Sources:**
Nest We Grow

**Architect:** Co.E.D. UC Berkley & Kengo Kuma  
**Location:** Hokkaido, Japan  
**Programming:** Kitchen, Compost, Soil Bin, Work Bench Areas, Hanging and Drying Storage, Tea Rouse

Open to the public, Nest We Grow is a place for bringing a farming community together. It houses needs from composting to final harvesting and eating. At its most central space hangs a tea room. For the Japanese the act of drinking tea is ritualistic and communal. Placing this at the building’s core signifies the most important act of life, community.

Proposing an attitude similar to this, there will be an inner area which is fundamental to the apprentice’s and public’s lives. The act of surrounding ritualistic activities with work allows the rituals to emanate from within to affect all other aspects.

**Sources:**  
Program:
Communal
- Kitchen
- Gather
Grow
- Plants
- Workspace
Sacred
- Tea Room
Fontenay Abbey

**Location:** Burgundy, France  
**Programming:** Abbey Church, Cloister, Refectory, Great Hall, Dormitories, Chapter House, Kitchen, Forge, Farmland

Fontenay Abbey is one of the oldest and best preserved Cistercian monasteries. Similar to other Cistercian monasteries, Fontenay was located well outside of the city of Burgundy. Not intending to shun outside pilgrimage it was meant to keep the monks to themselves and under St. Benedict’s motto *ora et labora*, pray and work. This attitude of work and worship translated into deep devotion for their ultimate goal, Heaven.

The integrated lifestyle of the monks at Fontenay portrays an attitude of conviction and dedication. Applying this to the proposed program hones in on the intensity and high level of dedication of the apprentices and journeymen towards their craft. By placing all guild members under one roof it allows for this attitude to imbue itself in each individual.

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A Brief History of Carpentry

Carpentry is one of the oldest building trades. Going back to the Prehistoric Ages, carpentry consisted of rudimentary tools, knives and saws that would enable these people to build reliable shelter. As time passed the skills and techniques became more advanced. The Egyptians and Greeks began perfecting the building arts through math and geometry, metallurgy and tools, and new techniques and organization. Through these improvements the Romans were then able to develop new architectural forms, most notably the arch and dome. Carpentry was not just the final building material but also the framework for the final product. The fall of the Roman Empire also led to the disappearance of many of the carpentry skills and techniques. Throughout the Middle Ages carpentry had to take on new life. This life came in the form of guilds and high professionalism.

American carpentry has ebbed and flowed throughout the past few centuries. Notable styles and movements include the Shakers, the Craftsman style and rural log cabin styles. Although America has had surges of carpentry there is currently a lack of high skill within the profession. Most of the buildings constructed with wood are balloon frame and tilt up frames which are not high skill jobs.

The Guild Ages

A guild is an association of a particular group of artisans or tradesmen to help protect and promote their trade or craft. The earliest mention of these workshops and associations dates back to the Egyptians. Throughout time, especially during the Middle Ages, guilds were places of secure work and high levels of skill. Many great achievements in the building arts and architecture have come by way of guilds, either promoting high professionalism or the organization required for many of the architectural masterpieces throughout the world.

The intent of these guilds were two fold. First, guilds were meant to protect the public from unskilled and unlicensed tradesmen. To have the stamp of a guild meant the tradesman had gone through an apprenticeship and was approved to practice. Second, they were to protect the trade itself. This kept the quality of the trade high and in turn the consumer satisfaction high. The communal aspect of a guild also meant the sharing of techniques, ideas and quality. An apprentice could enter a guild, knowing he would be cared for and trained, after which he would potentially be able to start a guild of his own.

L’Art du Trait

European carpentry found arguably the highest skill in the L’Art du Trait technique. Begun in France through the Compagnonnage, Le Trait is a form of applied geometry by drawing and graphic techniques. A mastery of spatial depth, volume and geometry all come together into one technique. The beauty of Le Trait is that a joint of complex geometry can be drawn on a single sheet of drafting paper. A language in and of itself, the compagnons are able to read this two dimensional drawing, project the lines, angles and wood sizes, and build evermore complex architecture.

With the advent of machinery and ever increasing productivity in building, the master carpenters were set aside for more efficient and simple building techniques. There is, however, a small group of carpenters around the world who consider themselves the keepers of the Le Trait flame. These men and women continue on the beauty of Le Trait reintroducing it to the 21st century building world.

The education of the compagnon did not begin at the carpenters bench. Rather, the apprentices were introduced to the managerial side of wood and forestry. They were taught about the different kinds of wood, health management and how to properly prepare a piece of wood for the first saw cut. This in depth knowledge shows how highly skilled and professional these carpenters were.

“We of the United States area amazingly rich in the elements from which we weave a culture. We have the best of man’s past on which to draw, brought to us by our native folk and folk from all parts of the world. In binding these elements into a national fabric of beauty and strength, let us keep the original fibers so intact that the fineness of each will show in the completed handiwork.”

- Franklin D. Roosevelt, at UNC Folk Craft Convention
Site Selection

With the arrival of the Europeans in America came with it centuries old building techniques and traditions. They adapted their European lifestyle to their new surroundings. They needed architecture and they needed to adapt. Taking what they knew from the Old World they applied it to the virgin landscapes of the New World. Many of these building forms had roots in Europe but became distinctly American.

Progress and efficiency soon set in and craft took a back seat to Old World techniques. Craft and the craftsman lost his education and his status. Forgetting the past the heart of the vernacular died with it. Not only did the vernacular die but also the crafts that made it. Place ceased to matter displacing a rich heritage of vernacular architecture.

Looking back at our heritage, our techniques and trades, a new and more full identity of American vernacular architecture can once again begin. It is this looking at the past, borrowing and adapting, that communities can more fully become. Architecturally, this would necessitate the way buildings are built. Old world techniques and trades were protected through the guild system. These places promoted craft, were high regarded, and the craftsmen highly skilled. Through this lens of highly skilled individuals they can influence the culture around them and can once again bring a deep vernacular identity into the future.
The Southern Highlands

The Southern Highlands region of America, comprising of the lower states in the Appalachian Mountains, is home to a rich craft tradition. The earliest years of settlement saw a very rural attitude and way of life. Everything that was used in daily life was made by hand from the surrounding resources. This attitude has lasted throughout the years.

Many different schools of art and crafts have found home here. Not only were schools of art and craft started here but also revivals of craft. During the early 20th century the Craft Revival Movement took place in Western North Carolina. Siting the revival of a craft and implementation of a new craft technique here is appropriate given its history. This region will once again be part of a revival of craft and handiwork for the whole country to experience.
Site Criteria

1. heritage of a craft or traditional-local industry, particularly woodcrafts

2. desire for employment and education, receptive of new methods

3. open space for workshop, school and outdoor work area

4. ease of access to forest and timber
Asheville, North Carolina

Asheville, North Carolina is home to George Vanderbilt’s home, Biltmore Estates. Mr. Vanderbilt paid homage to the European craft traditions by importing not only their style, techniques and artistry but also the craftsmen who would build his estate. His eye and passion for a heritage and lineage of craft presents a prime opportunity to once again tap into this way of thinking.

Placing the site in the heart of this rich craft tradition enforces the lineage of the region’s craft heritage while also grounding craft for the future. The diverse nature of this city will allow the program to find many avenues of experimentation.
The Biltmore Estate

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The Cradle of Forestry in America

What America understands as forestry management and preservation began with the construction of the Biltmore Estate. The 8,000 plus acre plot of land was developed by the landscape architect Frederick Law Olmsted and taken care of by Gifford Pinchot. Olmsted insisted that the whole grounds be taken care of with the surrounding grounds to the house as manicured gardens while the rest of the forest placed under watchful management.

The introduction of this forestry management was the first of its kind in America and soon became the first school of forestry. Located about 30 miles away from downtown Asheville this secondary site will serve as the forestry managing arm of the program, which is an essential part to L'Art du Trait carpentry technique.


56. ibid.
The proposed site sits in between multiple key locations of Asheville. The closest of these sites is the new River Arts District. This district is the new home of the up and coming arts scene in the city. Host to various artists and craftsmen it is becoming the center for art and craft in the region. Just south along the river is George Vanderbilt’s estate. Part of a larger history of craftsmanship the sites connection is both physical and theoretical. Finally, being that the site is close to the highways that connect Asheville to the region it allows for easy travel to and from the proposed forestry school.

The South Slope District
The secondary location is in the South Slope District. This district, also seeing revitalization efforts, is home to many of Asheville’s breweries. These sites will be more of renovation and preservation than new construction but will allow the detail of carpentry to take precedence.
239 Clingman Avenue

**Lot Type:** Urban Place  
**District:** River Arts District  
**Acreage:** 2.24 acres

This lot is located on the border of the northern end of the River Arts District. An abandoned lot, it is intended to be developed into residential lofts, but the past few years have not produced anything and the whole project is still in question. What makes this site ideal for the guild program is that it is close to the revitalization efforts of the city, and more so, to the revitalization of the craft traditions in the River Arts District. This site sits just above the flood plain which ensures the safety and longevity of the building and guild.

Some of the challenges that come with this site include the large acreage relative to the program proposed. With a large site there will need to be programming for each square foot which can be an advantage to the guild depending on how the parti is set up. Also, that there is not an existing building in place the details of design will take longer to get to during the testing of this site.
192 Coxe Avenue

Lot Type: Row Retail
District: South Slope
Acreage: 5,227 sq. ft. lot; 15,150 sq. ft. floor space

Built in 1933, this lot is located in another revitalization district, the South Slope, otherwise known as the Brewery District. In the middle of several of Asheville’s most popular breweries this site allows for a preservation finishout for the guild. Smaller than the first site, this site changes parts of the program to fit only what is necessary for the guild. The forestry arm of the guild will become more important if this site is chosen.

The attractions to this site are that there is no need for the design of an exterior, little risk of environmental hazards and it sits in the middle of the brewery capital of America. Some of the drawbacks are the small size of the lot which will confine the design to a small footprint and a crime index that is relatively high.
68 Haywood Street

*Lot Type:* Row Retail  
*District:* Downtown  
*Acreage:* 16,850 sq. ft. lot

Sharing a corner with three other major community centers, a major Asheville church, the Asheville Convention Center and a public library, this spot is ideal for attracting an outside community. Downtown Asheville houses many different community and craft centers. This particular site sits just along the major highway that goes through Asheville and connects quickly to the River Arts District and the Biltmore Estates.
‘The general public must be educated to an admiration of craftsmanship rather than “lifeless trappings.”

- Mary Ware Dennett, Boston Arts and Crafts Leader, late 19th Century
Throughout time thinking and making has always been of the same vein. The ability of craftsmanship depended upon this union. However, starting in the mid-19th century up until now, the craftsman’s ability has since decreased in part because of this separation. Thoughts and theories of architecture were never put into practice, techniques and skills were divorced from the theories that they came from. This divorce began to tear the true nature of the profession apart, in turn alienating mental effort and manual achievement.

To reunite the thinking and making is to reunite the craftsman to his craft. It is to bring back the skill of the mind and dexterity of the hand. As Mary Ware Dennett points out however, the most effective way for this to occur is for the general public to be educated. Not only is a guild of woodcraft necessary for the revival of skilled craftsmanship but the inclusion of the public is vital for its continuation and spread.
At the Intersection of Craft and Community

The guilds of old had always been places of secrecy, and for good reason. They were protecting not only their craft but their craftsmen. The trade secrets that they held allowed them to continue working and gave them the leg up on everyone outside of the guild. However, as time went on these sorts of secrets led to their demise.

To bring back a guild, a place of community and protection, there must be a change. That change occurs at the intersection of the public. This allow both the craftsman and the public they serve to meet and grow. This is how the re-education of a bereft public occurs, exposition of highly skilled craft.
Structure

With the emphasis of wood so prevalent the structure employs both traditional ways of building and modern techniques with wood. A combination of heavy timber and glulam each joint is treated as a way to educate the students and expose the vast and varied techniques of wood framed joinery.

Education

Without the past the future would not exist. Without an understanding of traditional craft modern techniques could not be fully explored. Starting on the first level the school teaches strictly hand tools and old techniques. Rising up to the second floor modern machinery is used, and finally, the third floor houses the newly emerging CNC technologies. This rise from base up is the same progress that the school employs in its pedagogy.

Circulation

Though this is a school it is meant to be inherently about the public. Separation of these groups can be a challenge but having a central hub for a guild hall, where all can gather, is something that allows any one group to circulate to where they need to be.
Screen Perspective
Screen Detail
Stair Tread Perspective
Stair Tread Detail
Timber Joint Perspective
Timber Joint Detail
Handrail Detail