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## The Importance Of Craft and Relevance of Hand Tools

HC - R2

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## To what extent are hand tools still relevant in today's workshop?

This paper will explore and argue whether hand tools are still relevant - and if so, to what extent - in a modern workshop (mostly regarding working with wood). Many woodworkers have different opinions on this subject, it is evident from my own research that very few commercial workshops are without any kind of power tool (powered hand tool or heavy machinery). The case with hobbyist woodworkers is often similar although there is seemingly a heavier emphasis on the use of hand tools and hand skills. I will explore what craft is - in terms of a defining class of object or process; and what it means to be a craftsman (regarding craft in general not just woodworking). I will investigate whether it is commercially viable for a maker (or workshop in general) to not be reliant on power tools, and if so is there any reason to be. I will discuss the reasons for using one over the other for specific processes in terms of efficiency, quality of final product and enjoyment and satisfaction.

### What defines 'Craft' ?

Craft, be it in terms of material, technique or tool is fairly difficult to define. Craft in general terms can be considered the concept of making - any object by any means. This definition becomes slightly vague when a process - for example - mass producing pencils in a factory is offered up to this definition. Yes, there is no arguing this is a process of making, but is it craft? The element of human in a process of making is what makes it craft. Returning to the pencil example, in the 17th century pencils were being produced by cabinet makers in Germany, this was being done on a very small scale using hand tools and simple raw materials. By the mid 19th century, Faber Castell opened a factory in New York after opening factories in Germany mass producing pencils [1]. Machines were developed to make this process faster, Joesph Dixon invented a machine to cut the pencils from planks and insert graphite [1 Pg. 3], at what point does this process move away from craft and become manufacture? I believe at the point where the human element can be removed from the majority of the process is where the line can be drawn. Craft involves techniques, processes, tools and materials that are regarded as 'traditional' - meaning they are surviving from pre industrial revolution [2 Pg. 70, 71]. This does not mean any inclusion of power tools suggests the object gets thrown under the 'manufactured' title, not at all. Any tool and material worked by human hands should not be frowned upon as inferior to any other performing the same task, that being said, for an object to be considered 'crafted' the human element cannot be removed. Michael Thonet, a furniture maker specialising in bent wood, highlighted that the making became 'industrial production' when the factory or workshop no longer had to employ skilled workers [3].

In woodworking, even an object that is sold as 'handmade' or 'hand crafted' can be made with stationary and hand held power tools to an extent [2 Pg. 70] and not be seen as falsely advertised - this now seems to be generally accepted in the trade and making sectors. So if machinery can be used in pieces that are still considered 'handmade', why use hand tools to complete these same processes at all? The fascination with hand tools seems to be ingrained within so many makers and the fact that this cultural heritage should be persevered. We should have enough respect for the reason we are in the position we are today industrially as the traditional craftsman did for new innovations in their time. The cultural heritage of these tools and techniques should be persevered and taught; so future generations can continue to produce these crafts and to ensure knowledge and creativity is not lost, especially among young people [4]. The need to preserve cultural heritage in the form of craft is especially echoed throughout Japanese culture, a traditional carpenter's apprenticeship will take at least 10 years. Tsunekazu Nishioka was born into 5 or 6 generations of master carpenters in early 20th century Japan. He spent one year growing rice before he was even allowed to handle a hand tool under the supervision of his grandfather; he then continued for 10 years to train until he could be an assistant carpenter [5 Pg 30, 31].

1. H.T. Morris, The Pencil, Technical File, April 2018
2. P. Dormer, The Culture Of Craft Status and future, 1997
3. 'The Koritschan factory opened in 1857, and with it Thonet's production of furniture moved completely out of the realm of craft into industrial production. For the first time no craftsman or cabinet makers were employed' C. Wilk, Thonet: 150 Years Of Furniture, 1980, Pg 23
4. United Nations Educational, Scientific and Cultural Organisation, Traditional Craftsman Ship, 'Intangible cultural heritage' [Online Article] Available from <https://ich.unesco.org/en/traditional-craftsmanship-00057> [Accessed May 16 2018]
5. A. Brown, The Genius of Japanese Carpentry Secrets Of An Ancient Craft, 1989, 2013 edition

This type of apprenticeship is clearly not always viable in today's world (especially in the western world) but is a fantastic way to preserve the techniques that have proved themselves over and over for hundreds of years.

"Society today measures people by their educational credentials, with the lamentable result that other equally valid ways of learning are being forgotten, even though they're backed by 1,300 years of experimental observation...knowledge has been allowed to leak out of our culture" [5 Pg 32, -]

## Comparisons, one or the other?

There is no doubt that most woodworking workshops include both power tools and hand tools, the extent in which the output of the workshop relies on one or the other varies from shop to shop; but is there any reason to intentionally use one type of tool over the other? Both types have their advantages and disadvantages:

### Efficiency of work

Machinery and power tools definitely have the upper hand when it comes to speed, for the most part anyway. The whole reason of their invention is to improve efficiency, for example the progression from 2 men and a saw pit to steam or wind powered saw mills. The job in hand is the same but due to new technologies, the latter is faster - this is a good comparison for tools like the bit and brace and the electric pillar drill, or hand plane and electric planer. When a cabinet maker in the early 19th century first heard about the new foot powered bandsaw he would have been excited to get one in his workshop - and begin ripping wood down with this machine rather than the long and labour intensive process of doing it with a hand saw. There would have been little consideration for the 'traditional' or even 'right' way of doing things when changing method. From then onwards thin stock and veneers could be produced on larger scales, a process not viable with hand tools due to the immense amount of highly skilled labour [6]. The same would have happened when this machine was powered by water or steam later. At what point did the use of power tools become 'not traditional', possibly with the introduction of electricity, but why is this any different to the introduction of steam power? Maybe there was the same debate during those periods of change, and definitely during the industrial revolution, non the less, now more than ever there tends to be some sort of stigma attached to the use of machinery or non 'traditional' methods.

Having mentioned the efficiency of power tools and machinery, the efficiency of hand tools in a skilled worker's hands should not be disregarded, nor should the skill which is required to operate machinery. In most tasks, hand tools can be equally, if not more efficient if looked after and used properly. Owning and using hand tools is much like having a piece of timber in the workshop for a piece of furniture. The stock must be looked after and kept in the right conditions before use. Prior to it being used in a piece of furniture it must be shaped, cut and polished - in the same way a tool is tuned and sharpen before use. When in use the tool demands respect to function correctly and well, as does wood - mistreated, it will never act in a predictable manner. Once proficient at setting, tuning, sharpening and using hand tools (most of these are transferable for edged tools) a craftsman will be able to do the majority of work in a timely manner, comparable to a wood worker producing similar with machinery (in terms of time, not necessarily quality). To reach this point of hand skills will take many years - this is perfected only through physical practise, the benefit of reading books on practical techniques is limited. In contrast, the amount of time to be proficient with wood working machinery is significantly shorter.

The efficiency of a tool depends entirely on the hands in which it lies, the purpose of the process and the craftsman's mind set in terms of what they want back from carrying out the process.

### Quality of work

Of course the quality of the final product is down to the skill of the craftsman, but disregarding that for the moment and assuming fair scientific conditions, which methods would yield a better result. What makes a piece of furniture of 'better quality' than another is completely dependent on the target market of said piece. For example, a piece of furniture mass produced

5. A. Brown, The Genius of Japanese Carpentry Secrets Of An Ancient Craft, 1989, 2013 edition

6. WoodWorking History [Online Article] Available from [http://www.woodworkinghistory.com/glossary\\_bandsaw.htm](http://www.woodworkinghistory.com/glossary_bandsaw.htm), [Accessed May 17 2018]

at the lower end of the market would be expected to be consistent and functional, but not necessarily a 100 year piece of furniture. In contrast a piece of 'hand made', high end furniture will be expected to be well designed, well built and with a very long life. The term 'hand made' is instantly associated with 'high quality' as a consumer. As discussed earlier, 'hand made' has an increasingly loose definition - consumers of these products are becoming more wary of 'fake' or 'mass produced' hand made furniture with access to internet. This increased scepticism of what is genuine (not regarding credited makers) will hopefully have the affect of stronger competition at the high end of the genuinely hand made furniture making sector, this will lead to clearer differences between the mass produced and the truly hand made.

In terms of specific processes there is something to be said on both sides. A machine will produce repeatable and precise results, in contrast the same process preformed by a skilled craftsman by hand will see room for human error. Furniture made without the use of hand tools generally has a very dead appearance, it is clear no human hand has crafted that piece of wood. Hand tools and hand skills of a skilled craftsman will create furniture with evidence of touch, the wood feels nurtured into shape. There is a market for furniture that is evidently handcrafted - of course every furniture maker aims for perfection, but it is the tiny inconsistencies (often not even noticeable at first glance) that make a piece feel warmer and made by a craftsman with a passion for what they do. Whether the process of making the piece with hand tools adds enough value to justify the extra time it takes (in some cases), rather than using machinery, depends on whether that concept is appreciated by the customer. With the right customer base there is no doubt a market for an 'unplugged' workshop if thats what the craftsman desires.

Some work is not possible with hand tools, some work is not possible with machinery, with a huge emphasis on the target mark, both are necessary and can coexist. A choice does not have to be made.

## Satisfaction

There is a certain amount of satisfaction in getting a job done quickly, the feeling of power when using a tool to shape a piece of wood in a matter of seconds. Especially to a relatively inexperienced wood worker, the thought of being able to re-saw a 300mm board in a few minutes to a good standard (for example) with minimal effort is attractive. In contrast, to reach a point where satisfying and efficient work can be done with only hand tools can take many years - depending on the individual of course.

A task performed with a power tool or machine is not a one to be savoured. All manner of protective equipment must be worn and put into place before the tool is even switched on, this is one of the main reasons for some that they are avoided. The hassle before hand and the mess afterwards is not worth the potentially increased speed. In contrast a hand tool (plane for example), if well looked after, can be picked up and put to work. The experience between the two types of tools is not comparable, with hand tools the craftsman becomes part of the timber, every inch of the timber is contacted by hands; the experience is a lot more personal. There is a certain level of romanticism that is talked about when woodworking with hand tools, weather you buy into that or not there is no debate the process of even taking one shaving is immensely satisfying and rewarding.

Craftsmanship, someone who had developed a skill to a high degree and applies this to craft [7 Pg 20]. There is a place in every workshop for both types of tool; the style of work and potentially the style of final product may be different, but this does not mean a choice has to be made [8]. The debate of power tools vs hand tools is often portrayed as very black and white, as if a new woodworker must make a choice; this is not a positive message to be conveying. Craft, and making is fantastic and something everyone should be involved in in some way; making anything for raw materials is a pleasure. It should be said that teaching only the use of machinery and power tools to young or new woodworkers will no doubt restrict them to the machines limitations [9]. Learning hand skills is not a fast process but the rewards when done well are incomparable.

7. R. Sennet, *The Craftsman*, 2008, Penguin Books

8. John, Power Tools VS. Hand Tools, 'Woodworking Web' [Online blog], January 2016, Available from <https://woodworkingweb.com/entries/920-power-tools-vs-hand-tools> [Accessed May 16 2018]

9. S. Graham, Hand Tools vs Power Tools for Beginners, 'Popular Woodworking Magazine' [Online Blog], May 18 2015, Available from <https://www.popularwoodworking.com/woodworking-blogs/editors-blog/hand-tools-vs-power-tools-for-beginners> [Accessed May 16 2018]

The rewards of good craftsmanship lie in not only the satisfaction of the process or even the final piece, but in being able to truly think and feel when working with this natural material - a craftsmen will be able to take pride in their work and appreciate the emotional reward. Taking pride in work is seen as somewhat of a luxury in today's society, only the finest of work should be proud of, this is far from reality. The learning process can be laborious, in the early stages the thought of learning by repetition seems tedious, as skills progress, these tasks become less frustrating, repetitive processes can be preformed for longer; once the initial struggle is completed any job is possible and rewarding. Some hand tools can be much more difficult to become proficient with, especially those with multiple purposes; it may be difficult to find its most effective application [7 Pg 21 - 38, 198, 199].

Machinery and the development of technology is exciting and crucial to the progress of the human race, it's the misuse of machinery that ruins craftsmanship. For example, in the designing process now CAD (computer aided design) is often used, before CAD when craftsmen used only pencil drawings there was a circle of design. The initial idea leads to initial sketches - then materials and environment are considered, then back to drawings, back to the making process and back to the drawings; until a plan is in place. A plan made in this way will lead to much more informed design (lacking that 'dead' feel). By closing this circle with CAD, by going from idea to 'perfect' and precise digital plan, to manufacture; the feeling of true, good craftsmanship is lost.

It's not about 'traditionalists' or 'purists' resisting change, it's about the comparison of man and machine, and what both of those mean for craft [7 Pg 40,83,84]. In the 19th century 'traditional' craftsmen were becoming the enemy of machine and manufacture. It wasn't the resistance of change, but the resistance against the "rigorous perfection of machine" [7 Pg 84]. The task of the 'traditional' craftsmen is to add value in the flaws, variations, individuality and irregularities in their work and in the eyes of their consumer [7 Pg 84]. Continuing to make beautiful and functional pieces is critical, knowledge should not be let to leak out of our society.

7. R. Sennet, *The Craftsman*, 2008, Penguin Books

8. John, *Power Tools VS. Hand Tools*, 'Woodworking Web' [Online blog], January 2016, Available from <https://woodworkingweb.com/entries/920-power-tools-vs-hand-tools> [Accessed May 16 2018]

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