

Technology and Hand Skill in Craft and Industry

Robin Wood

Robin Wood is a traditional woodworker specializing in making domestic woodware from locally sourced timber. As Chair of the Heritage Crafts Association he works to preserve and promote traditional hand skills.

Abstract

An insight into the workings of a traditional woodworker using medieval technology in the twenty-first century. The paper looks at a broad range of production, from the author's work using home-forged hand tools to industrial production, with an emphasis on hand skill.

Keywords: Traditional, woodwork, turning, pole lathe, heritage, crafts, skill, industry.

As a craftsman, I am interested in how stuff is made and the effect that has on the maker and consumer. I am also concerned with the heritage of making things in the UK, a place that was once the workshop of the world.

I work at the very simple end of the craft technology spectrum. I turn wooden bowls on a foot-powered lathe (Figure 1). When I started it was important to me to be in control of all aspects of the work, to be as self-sufficient as possible. I burnt my own charcoal to fire the forge in which I forged my turning tools from recycled car springs. This was partly an ethical decision and partly a practical one—I had no money to buy tools. I still love the depth of understanding that can be achieved by breaking down even a seemingly simple craft into all its constituent parts, analyzing, experimenting with, and optimizing each one, then putting it all back together again. I also love to watch craftspeople



Fig 1 Robin Wood at the pole lathe. Photograph: Robin Wood.

at work, especially if they have a great depth of tacit knowledge. The speed and effortlessness of their physical movements controlling potentially difficult materials is as beautiful to me as a ballerina or someone doing Tai Chi.

My own craft was of great importance in medieval times. Nearly everyone in Europe ate from turned wooden bowls, as pottery was only used for jugs and storage/

cooking vessels. Pole-lathe bowl turning went into decline in the eighteenth century with the expansion of industrial pottery manufacture and finally died out when its last practitioner George Lailey died in 1958. I had to learn the craft from studying old lathes, tools, and bowls in museums, though much of the accumulated knowledge passed down through generations of turners is unrecoverable. I learned blacksmithing partly

from books, partly by watching a few smiths working at heritage open days, and partly by asking anyone and everyone that had any knowledge about steel and its properties. This would have been far easier today, with much of the information about different steels and their properties, hardening and tempering techniques, and forging qualities being available on the internet. The theory is there, ready to be internalized through practice. While the early 1990s were not very long ago, this information took a lot of time to collect at the time.

Most craft practices are about using tools and manipulating materials. Making my tools, getting the profiles optimized, and then perfecting the hardening, tempering, and sharpening was one important aspect of my education, but there was as much again to learn about the raw material. Woodworkers today generally work wood in a dry state, and foresters grow large trees that are cut up into small pieces, dried, and sold to woodworkers. There are many middlemen so foresters know nothing of the working qualities of wood and woodworkers know little of trees or their conversion and drying. I wanted to get closer to the raw material and, having worked as a forester for the National Trust and run a sawmill, I had a good start. I was able to buy whole trees and experiment with different drying and working regimes myself. I read old books like George Sturt's *The Wheelwright's Shop* and Walter Rose's "The Village Carpenter" and found that craftsmen used to have many words for timber in different states. It was not just green or dry. It could be frow, mellow, ripe, or any number of other states. After years of experimentation I find that I can get the various hardwoods that grow locally into a

state in which they work particularly well. This tends to involve "mellowing" the whole tree for anything from two to six months depending on its size and species, and the time of year, before cutting the tree up and turning it straight away.

Historically, turners tended to stick to just one wood and this allowed them to really get everything working in the most efficient way possible. Lailey used only elm; Jack Jordan in Shropshire used only sycamore. Interestingly, they would often state that their wood of choice was the only suitable timber for making bowls and give many reasons why the others were unsuitable. Gwyndaff Breeze, the turner at St. Fagans (an open-air museum in Wales), told me that alder was quite unsuitable for bowls, being too soft. Yet I knew that during the Anglo-Scandinavian period over 60 percent of bowls were made from alder. I enjoy using a variety of woods and this means forging different tools for timbers ranging from alder (soft) to beech (harder).

My greatest sources of inspiration have been old bowls found during archaeological excavations. In the world of ceramics, Shoji Hamada and Bernard Leach did the same. The forms that inspired them were English medieval jugs, eighteenth-century slipware, and ancient Chinese and Korean bowls. They found few English ceramic bowls to study because in the medieval period we ate from wood and few survive. I spent ten years traveling to museums across Europe getting into the reserve collections and handling and photographing medieval wooden bowls.

These bowls have exactly the sort of life, vitality, and humble character that Leach and Hamada admired in pottery. They were made at great speed, with great skill, using

simple tools, and were intended for daily use. In form they share a lot with old tea bowls, not surprisingly perhaps as both were made originally to be held in the hand and for eating sloppy food. These old bowls are so different to anything produced by contemporary woodturners. Because they were made from part-dried timber they moved as they dried. The particular way they were cut from small diameter trees caused them to shrink in a predictable manner and they end up rather boat-shaped. The old turners did not use abrasives, as nearly all modern turners do. This means that I can see the mark of every stroke of the foot-powered lathe, how sharp the tool was, and how clean the cut, even how fast the turner had been turning the bowls out. In some cases, like the woodware recovered from the *Mary Rose* shipwreck (dating to the reign of Henry VIII), I have been able to identify the work of individual turners, groups of work that share the fingerprint of a single maker.

This was the work I loved and like many potters before me I set out to make humble, functional ware that people could use and enjoy. Svend Bayer said when he started out, he wanted to make pots that people could afford to break. I wanted to make enough bowls that they would never appreciate in value, so no one would ever feel they had to stop using a bowl because it was too valuable. I started to get letters from customers who had been eating from my bowls and plates every day for a year or two. To me the depth of feeling in those letters and the connection with the people who use them is very important. I also wanted to be as good as the old turners; I could tell from their toolmarks

how fast and clean they cut and I knew I would only get there by repetition. It's often said of craftwork that the first 1,000 pieces are the hardest. This is certainly true of woodturning, but it doesn't really start to flow until you have made 5,000 or maybe 10,000.

In the UK there are thought to be over 10,000 practicing woodturners. Most start by turning a few functional wooden bowls, but as they develop more skills the majority—whether professional or amateur—move on to produce “artistic” pieces. By artistic I mean anything that is non-functional, useless in fact. The main reason they do this is because such work is more highly respected and more highly valued. This is the case in the world of wood but in the world of ceramics wonderful functional works are also highly thought of and valued. We have never had a Shoji Hamada, Bernard Leach, or Michael Cardew in the world of wood. If we had, perhaps things would be viewed differently. In ceramics there is a market for the very best functional ware and it is not perceived as being in any way lower in status than the best artistic pieces.

When I talk to woodturning conferences I always start by asking for a show of hands of who makes functional work. Normally around 30 to 40 percent of hands go up. Then I ask who eats from a wooden bowl or plate and it's rare that more than one hand goes up. “Functional,” to most woodturners, is a term limited to salad bowls. I would love to see the other woodturners go home and turn a simple bowl from which to eat their breakfast or soup. It really is a wonderful experience, and from 600 to 1600 CE, eating from wood rather than pottery was one of the things that defined us as Europeans.

For many years I struggled with the idea of signing my work. In the folk craft world it is recognized that most of the best work ever produced was unsigned. It became apparent to me, however, that in the twentieth century refusing to sign was simply inverted snobbery—especially when the piece was going to be sold for a high price wrapped in an individual, signed box. So I went back to my medieval woodworkers and found that some, particularly coopers, had simple incised marks made with a few strokes of the knife. I developed a simple mark, a W made with three strokes of a cutting tool. It doesn't detract but it is there if anyone asks. Now, after fifteen years with more than 15,000 bowls and plates out there, all being used, I get plenty of repeat business. Folk come to dinner and enjoy eating off a wooden plate and so I am very secure in the ongoing market for my work.

It surprised me that there was no support for rediscovering a traditional craft like this. I later found that in the UK traditional crafts fall between the remit of arts and heritage organizations and so receive no support or promotion. I worked alongside many craftspeople who were the last of a long line practicing a particular skill, and became aware that many crafts were in imminent danger of dying out. A good example would be Owen Jones, the last swill basket maker, based in Cumbria. Owen makes the traditional Lakeland swill out of riven oak strips. They are objects of great beauty that are also a part of the cultural heritage of Cumbria. They are pictured in Beatrix Potter's books. Old ones are in all the museums in Cumbria. There are even swill makers' workshops in museums. It seems the day the last craftsman stops working, the

skill (or at least the associated paraphernalia) becomes recognized as heritage—but not while it is a living, viable business. We need to change this situation so that, like the Japanese, the Koreans, the Czech Republic, and the French, we recognize the living heritage of craft skills.

While the rural crafts I know well could be better supported, another whole category of craft industries is completely below the radar. I first became aware of this when visiting one of the last places making scissors in Sheffield (Figure 2). These makers had all the same issues as the rural craftspeople: aging skilled population; no recognized entry route for apprentices; lack of any government support network. Yet the work was highly skilled and involved a huge amount of knowledge of demanding techniques and materials. Where the rural crafts have been recognized, at least by the media, these skilled town-based trades tend to be regarded as "industry" rather than "craft" and have received very little attention. Many of these craft industries—cutlery in Sheffield, saddle-making in Walsall, hats in Luton, and furniture in High Wycombe, for instance—were the reasons for the growth of our towns and cities. Sheffield is known the world over for quality cutlery, yet the city's current culture plan does not mention the trade. The heritage plan looks after the buildings; the culture plan supports forward-looking arts. Traditional skills fall between.

I have always felt that these craft production processes should be regarded as part of our heritage—not just the machines and buildings, but the living knowledge of how the production processes work. Many countries worldwide now recognize the



Fig 2 Grinding at Wright's scissor works, Sheffield. Photograph: Robin Wood.

importance of living heritage. One hundred and thirty nations signed the UNESCO 2003 convention on intangible living heritage, a key element of which involves recognizing and promoting traditional craft skills.

The difference between craft and industry is difficult to pin down but an interesting area of study. The truth is they are part of a continuum of production; there is no absolute dividing line between the two. I visit many craft industries, particularly the metal trades in Sheffield. There is Trevor

Ablett (one of the last independent penknife makers) and Dave Alison (one of a handful of metal spinners left in the country). Dave was a time-served apprentice to his uncle thirty-five years ago and is one of the youngest spinners practicing today (Figure 3). I met him when looking for someone to make silver rims for some of my wooden "mazer" bowls and "quaichs" (Figure 4). When visiting these workshops I always ask, "How much hand skill is involved at the point of production?" This seems to me to



Fig 3 Dave Alison, metal spinner. Photograph: Robin Wood.



Fig 4 Quaich by Robin Wood. Photograph: Robin Wood.

be the defining difference between craft and industry.

At some other workshops I see a great amount of skill in setting up the machinery and processes by the foreman but at the point of production little skill is involved. David Pye would define “hand skill at the point of production” more precisely as “the workmanship of risk,” and the lack of it as “the workmanship of certainty.” Those workshops where the workers are also responsible for the maintenance and setting up of their machinery seem to be happier places to me, even if we are dealing with the workmanship of certainty. Meaningful, fulfilling work is something people are interested in today. The industrial revolution was a process of breaking down complex operations into small segments that could be done with little training and little knowledge of the whole process. This was famously epitomized by Adam Smith’s pin mill. However, even Smith pointed out that such radical division of labor amounted to the “mental mutilation” of the worker:

In 1999 I was a presenter at a woodturning conference in the Jura region of France. Woodturning was the second largest export industry in the region (after wine) and they were looking at ways to revitalize the industry. As part of the conference we toured various workshops with varying levels of technology. We started in a small, one-man workshop using early twentieth-century lathes to produce a range of boxwood objects. The craftsman maintained all his own machines, sharpened the complex cutters, selected his raw materials, chose what he made and who he worked for, was proud of his work, and seemed very content. The next workshop had around fifteen

employees and a greater differentiation in work tasks. Each task still involved a fairly high level of skill, but training a worker to complete just one individual task would not take so long. This was more like a team sport than an individual enterprise, but each person played their part, was respected for it, and despite the more repetitive nature of the work seemed happy enough. Our final visit was to a modern factory in which computer-controlled machines removed all skill from the production process. They were making wooden manikins for shop windows. The workers feeding the machines with prepared blanks of wood were required to use virtually none of their capacities as human beings and looked little more alive than the wooden manikins they were making.

One way of achieving the increased productivity of the factory while avoiding boredom and “mental mutilation” is seen in some Sheffield cutlery factories today, including Wright’s scissor works and David Mellor’s cutlery works. Each worker is trained to do each part of the process and rotates around the machinery, so they are not doing one thing all the time. They have the feeling of value and self-worth that comes of learning a number of difficult skills and being valued for them. In some ways, as large industries have contracted we see a reversal of the industrial revolution, as a smaller workforce must again learn all the parts of the job.

I feel there has been a hangover from the Arts and Crafts Movement, which unnecessarily demonized all but small-scale workshop production. Many folk in the crafts world, and perhaps society as a whole, look down upon any factory production, often with little knowledge of

what goes on inside. My experience is that within the crafts industries there are many highly skilled artisans that deserve as much attention and recognition as the rural crafts or designer-makers. In many ways they are less tainted by the inevitable intrusion of ego and personality of the current art craft world. Here are the true humble artisans that John Ruskin, William Morris, Yanagi, and Leach admired, yet they are working in the industrial sphere that these great figures apparently disliked.

The worst horrors of Victorian industrialization needed addressing, but while we have made great steps in looking after the health and safety of factory workers we have taken little interest in the question of whether their work is fulfilling and meaningful. It seems to me that meaningful work comes from developing a skill, having responsibility and autonomy in our workplace, and getting recognition for the difficult skills and techniques we master and the good work we do.

In society today people are often defined by their consumer choices: by where they holiday, by their house, their car, their clothes etc. Even among craftspeople most of us wear clothes and fill our homes with objects made by industrial processes in the Far East. One of the dilemmas of the Arts and Crafts Movement was that its products were by and large only accessible to the rich. Morris's utopian vision was never going to provide all the material objects that society had grown used to. Could there be a middle way, an intermediate technology that could give us a reasonable level of production and material objects that people can afford and also provide wholesome, meaningful, fulfilling work?

This may sound like a utopian dream, but thirty years ago locally sourced, artisan-produced food was quirky and alternative and today it is mainstream. There is a strong consumer trend involving ethical decisions, from organic farming and fair trade clothing to ethical banking and sustainable forestry. In some ways the studio crafts have sidelined these once-important questions, though what has been called "the politics of work" was once at the very heart of the crafts. Morris, Ruskin, and the whole Arts and Crafts Movement rebelled against industrialization as dehumanizing, proposing a utopian vision harking back to a perhaps rose-tinted vision of the medieval period. Today many people



Fig 5 Bowls by Robin Wood. Photograph: Robin Wood.

express feelings of disconnection from the real world in their work and everyday lives. E. F. Schumacher argued in his books *Good Work* and *Small is Beautiful* that the level of technology employed is the single most important factor in achieving meaningful work. Perhaps it is time to look again at how we make stuff, and see if there are insights that the crafts have to offer contemporary society.

In February 2009, along with friends and associates, I set up the Heritage

Crafts Association (for which I serve as chair). Our vision is one of recognition for traditional craft skills, which should be sought out in the same way that people today search out quality local food producers. We aim to survey the traditional craft sector to find which crafts are most endangered and which are in good health, to share best practice and work toward a vibrant future. In between times I'll be in the workshop turning out simple wooden bowls (Figure 5).



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