# THE INTELLIGENT HAND

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By David Savage







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### **FOREWORD**

inety-five percent of the woodworking books out there deal with 5 percent of the things that happen in a workshop. Woodworking books – even great ones – are biased toward providing information for beginners.

This makes good business sense because there will always be more white belts than black belts. But it also creates a body of literature that is boring for anyone who already knows how to cut a dovetail, sharpen a handplane or use a router.

Plus, it is my belief that the dearth of advanced and challenging reading material prevents many of us from progressing past the well-documented basics. There simply isn't a beaten path between learning to flatten a board and becoming Sam Maloof.

Maybe David Savage can help.

When I first saw David's work – years before I met him – my reactions were typical.

- How in the holy hell did he build that?
- How did a human being come up with those furniture forms?
  - Do they really look that good in person?

Whether you like David's designs or not (and I do), his work is polarizing, uncompromising and surprisingly humane. "Humane" is a weird word for objects that sometimes look like a space throne from a Kilgore Trout science-fiction novel. But it's the right word, so hear me out.

David is a socialist. A former socialist. A failed socialist. It depends on the day you are talking to him. Despite the high-wire, high-money aspects of his professional work, David started life on one of the lower rungs of the socioeconomic ladder. (I'm not English, so I don't have the proper adjectives to offer. In America we would say he came from middle-class roots.)

Thanks to some surprising and impressive scholarships, he ended up with an excellent art-school education. And after a wild series of twists and turns (including bankruptcy – it's all here in this book), David ended up where he is today, as a top-tier woodworker who drives a Morgan to work but lives an otherwise humble and low-key life.

David hasn't forgotten what it's like to be hungry and somewhat desperate. His furniture might look fanciful or extreme. But the chairs are designed for comfort. His desks are designed for hard use. His cabinets are carefully engineered to be a joy to use. In other words, humane.

There's more. He treats his employees, customers and students well. And he's surprisingly uninterested in promoting himself as a personality. During the planning for this book, David tried valiantly to have an African student as the primary maker. This was for two reasons. He is an excellent woodworker. And it would rattle the cages of the middle-aged white men who buy woodworking books. But the timing (and his cancer) wouldn't cooperate.

So instead you have this book, which is almost as radical.

"The Intelligent Hand" is a peek into a woodworking life that's at a level that most can barely imagine.



The customers are wealthy and eccentric. The designs have to leap off the page. And the craftsmanship has to be utterly, utterly flawless.

How does one get to this point? And how do you stay there?

One answer to these questions is in this book. Yes, there is some difficult furniture in here. And David shows you the techniques used in his Devon workshop to bring his designs to life. Actually making the furniture – even the most challenging stuff – is only a small part of the process.

A lot of the hard work involves some unexpected skills. Listening. Seeing. Drawing. And looking into the mirror and practicing the expression: "And that will cost 20,000 pounds."

As you will see, it's a huge personal struggle – just

like the production of this book. On the day he received a cancer diagnosis with a grim prognosis, he began work on this book. He wasn't sure what the book was going to be about (I had told David that I would print whatever he wrote). But David knew it would work out, and he attacked the work with the fervor of a much younger, healthier man.

I consider this book, like his furniture, an almost-impossible gift. It is unexpected, challenging and – if you will let it into your heart – rewarding. All of us at Lost Art Press are honored to have worked with David and the staff at Rowden on this remarkable project. And now, we are happy to share it with you.

Christopher Schwarz August 2018

### PEOPLE IN THIS BOOK

ne of the many unusual aspects of "The Intelligent Hand" is that it is not entirely about the author and his work. While it would be easy for David Savage to take all of the credit for the work that comes from his workshop, that's about the last thing he would ever do.

When you first meet him, he is quick to point out (and praise) the people who work alongside him at Rowden. The only other woodworker I've ever heard do this is Sam Maloof.

Because these characters are integral to the story, we thought we'd give you a brief introduction to some of the important players.

#### Carol Binnington Savage

Carol was born in London and raised in the city of Southampton, but considers herself a converted country girl at heart. With little thought of what she wanted to do in life, she says, Carol fell into finance in the City of London (the historic and modern financial dis-



trict), where she worked for high-powered individuals from some of the best-known U.S. investment banks.

At 28, she chucked a successful job with Goldman Sachs to study economics, then met her polar opposite in David Savage, who, she says, "whizzed me off to the country to raise children, dogs and cats." (The children are Jenny and Alex, who, as this book goes to press, are 23 and 21.)

Carol traded in the trading floor for contentment in growing fruit and veg, cooking, yoga, hiking and beekeeping.

#### Daren Millman

Daren began wood-working at 13, restoring a shed full of rusted tools left by his late father. With little else to do in rural Devon, he says, he began to play with any timber offcuts he could find. At 15, a week spent at a local shop to make a



small cabinet confirmed his love of the craft, and upon leaving school at 16, he joined that same shop as an apprentice.

There, he worked with many skilled craftsmen, one of whom, Jeff Smith (who had trained with David Savage) inspired him to work at the highest levels. Daren later joined Smith's business, then another top-notch shop, Graeme Scott Furniture, which employed many Savage-trained craftsmen. During his five years there, he made pieces for the likes of David Bowie and Saudi royalty.

When Savage advertised for a new hand, Daren applied. Fifteen years on at Rowden, Daren is the senior maker and is responsible for the day-to-day running of the shop. He's working now with David and others to secure the future of the school and workshop.

#### Stephen Hickman

Stephen earned a Bachelor of Science degree in product design at Porstmouth University before graduate study led him to 10 years as a primary school teacher. But his love of design never left him. So in 2015, he began the year-long Designer-Maker



course at Rowden, in which he learned not only excellent hand-tool and machine woodworking skills, but how to draw (an important component of the Rowden education) and design furniture. After completing his course, Stephen stayed on as a post-graduate "bench renter," making pieces for clients and exhibition, then worked directly with David Savage for eight months, helping to turn his designs into reality.

In early 2018, he and his wife moved from Devon to Suffolk, where Stephen is setting up shop as an independent studio furniture maker (www.stephenhickman.co.uk).

#### Ed Wild

Ed is an awardwinning furniture designer and maker, a member of the Devon Guild of Craftsmen and has work exhibited throughout the U.K.

Ed developed his woodworking skills and a love for the craft in his grandfather's furniture



workshop, making his first substantial pieces in his early teens. He then embarked on a career as an organic chemist before returning to his furniture-making roots. He trained at Rowden more than a decade ago, and now works at the school part time, passing on his woodworking skills and knowledge to a new generation of students, and teaching weekly art classes.

Ed's own workshop, www.ewcf.co.uk, is in North Devon, and is one of a cluster of furniture workshops that have sprung up around Rowden during the last 25 years. He produces commission work, and has a following as far afield as Finland and California.

#### Jonathan Greenwood

Jon trained at Rowden before securing a rarely available job with the top-class workshop of Graeme Scott Furniture.

Now, he works with Rowden students during their first six months at the school and serves as "the Guardian" of technical quality



when it comes to handwork – he is responsible for gently (but firmly) encouraging students down a path toward future hand-skill perfection.

"It is not the critic who counts; not the man who points out how the strong man stumbles, or where the doer of deeds could have done them better. The credit belongs to the man who is actually in the arena, whose face is marred by dust and sweat and blood; who strives valiantly; who errs, who comes short again and again, because there is no effort without error and shortcoming; but who does actually strive to do the deeds; who knows great enthusiasms, the great devotions; who spends himself in a worthy cause; who at the best knows in the end the triumph of high achievement, and who at the worst, if he fails, at least fails while daring greatly, so that his place shall never be with those cold and timid souls who neither know victory nor defeat."

— Theodore Roosevelt from "Citizenship in a Republic," delivered at the Sorbonne, Paris, April 23, 1910. With apologies for the sexist language.





**Fig. 1.1.** Cherry nightstands. The slightly larger one is to the right of our bed, on my wife, Carol's, side.

## INTRODUCTION

ell Mr. Savage, I am sorry to tell you the results of your tests are not good. If you play your cards right you may have two years, three at best. Play them badly and we are looking at months not years."

So, I begin this book with the hope and intention to reach the conclusion before you do.

I wasn't always going to be a furniture maker; that journey is for later. For now, I want to share with you a pair of cabinets that have just been finished. They will help tell a little about who I am. They are made in American cherry, highly figured and among my more successful pieces. However, both the selection of the species and the wonderful figuring are complete mistakes for which I can claim no credit. I wanted these pieces to be made in English cherry. It has a greenish-golden heather honey colour that has an elegance very suitable for bedroom furniture. I am pretty sure I said "English" to Daren, who ordered the wood, and I was sullen and grumpy for a while when the American cherry arrived.

"I can't get English in these thicknesses," he said.

"This is all I can find, and we are lucky to have that."

So, we carried on – no point doing anything else – and didn't things turn out well! I could easily say how hard we looked for this highly figured stuff and how important it was to the concept, but that would be hogwash.

For most of my life I have made furniture for other people. Like the cobbler with poorly shod children, we have furniture in our home that has gone to exhibition but did not sell. What we don't have is a handmade dining table and chairs or a pair of bedside cabinets. Storage in our bedroom is a moronic piece of furniture design from Habitat that closes two large drawers together and catches them in the centre. Push, just there, and maybe the catch will hold. Push anywhere else, and this aircraft carrier of a drawer springs out toward you, whacking you in the shins. But now we have these made-to-measure cherry lovelies.

They were largely made by Daren Millman, who is the senior cabinetmaker at Rowden. Rowden is our workshop in Devon, where we have been for nearly 20 years. Rowden is also a teaching school where we cover hand-tool techniques, machine techniques, drawing, design and business skills. Rowden is a farm owned by Ted Lott, who has retired and let out the farm buildings to us. During those 20 years, we have built up a workshop with an international reputation for making fine modern furniture to order. Before Rowden, I was in a workshop in Bideford for about eight years where I did much the same, but not quite as well. The end of that, and the beginning of this, is also a story for later. (Juicy one, that is.)

Not made fast, these cabinets. When asked how long these took, Daren would give his standard answer for any serious piece: "Oh, about 400 hours." Whether it is a dining table set, or a cabinet with secret drawers, 400 hours seems to do it. Estimating times for making jobs is at the very guts of making a living in this biz, and Daren is spookily accurate.

We do price estimates in two ways. I have an arm-waving, general feeling gathered after 40-odd years of making mistakes. "Oh, it's about three months," as I visualise the piece being made from timber arrival to polishing. And I do the estimating in days or parts of days. Cutting those rails will be about half a day. I know this, for I have cut similar rails and seen others doing similar rails, and that's how long it took!

But Daren is much more meticulous. He will settle down with paper and pen to plot the progress of components and processes through the workshop. Like me, he will begin at the beginning with timber ordering, visiting timberyards, making a cutting list right through to polishing, packing and delivery. Each will have a time allocation. That time allocation, again, will be based on nearly 30 years' experience. He will be better than me, but I will have got there faster. So, if I need a quick price, I will use the arm-waving method and I may even ask Daren to wave his arms about. A serious job enquiry needs pen and paper, a nice comfy stool and a tidy bench. And about half of an expensive day.

But this wasn't being made for a customer so none of that mattered; we won't be getting paid for the time spent. I was once accused of being very concerned about money by one of those gutless anonymous internet trolls. This stunned me because all of our work has been for pay, but that was always secondary to making something that was special. If we could survive doing it, I would always want to make it as best we can – but to do that you need to know your numbers.

Way back in the early 1980s, I read books by James Krenov that inspired me to take up working with wood, making furniture. He inspired a generation to hug trees and to love wood, and to make as beautifully as one could, but from the position of a skilled amateur. Jim never sought, I believe, to make a living from this. That was my madness. What Jim did do, however, was touch upon the reason that is at the core of this book. Why do we go that extra mile? Why do we break ourselves on that last 10 percent? This is the 10 percent that most people would not even recognise, or care about, even if it bit them on the leg. This is the bit that really hurts to get right, both physically and mentally.

But get it right and deliver the piece and she says, "Wow, David, I knew it would be good, but not this good." Get this right, over deliver and soon you don't need too many more new clients, for she will want this experience again and again. We have been making for the same clients now for most of my working life. They get it, they like it and they have the means to pay for it. Your job is to do it well enough to get the "Wow, David," have the satisfaction of doing it right, get the figures right and feed your children. Not easy I grant you,



Fig. 1.2. Drawer detail.

but for some of you it will become a life well lived.

This is the quality thing at the centre of our lives. This is the issue that brings people to Rowden from all over the world, each with what Perry Marshall would call "a bleeding neck" (something is wrong, or they wouldn't be here). Each knowing they can do more with their lives. They come with damage that they feel can be fixed with a combination of physical work and intelligent solutions. Both are essential.

Physical labour is unfashionably sweaty. We generally now sit at terminals in cool offices. We are bound by contracts of employment that would make some 18th-century slave owners seem benign. The only exercise we get is the twitching of our fingers and the occasional trip to the coffee machine. Our bodies, these wonderful pieces of equipment, are allowed to become indolent and obese. We feed up with cornstarched fast food and wait for retirement. Exercise, if we take it, has no meaning; we don't exercise to do anything. We run or jog, but we go nowhere. We work out in the gym and get the buzz, the satisfaction of the

body's response to exercise, but we don't do anything. We don't use the energy constructively to engage our minds and our hands to make stuff.

White collar work has become what we do, almost all of us in the Western world. It pays the bills and keeps us fed, we get a holiday and our children are kind of OK. And that is fine for most of us. But there are some of you who know that something is missing. Something creative, some way to spend your day working physically while exercising your body and your mind. Thinking and revising what you are making, as consequence of the quality of your thoughts. This is Intelligent making, this is The Intelligent Hand.

This, then, is written for you. This is to help, encourage and support a decision to leave the world where thought and work are separated. Where they no longer exist together. This is for the brave souls who need to plough a contrarian furrow, where intelligence and making exist together and you are in control of your life. Don't be scared, but don't expect it to be dull or easy. A life well lived never is dull or easy.

# FOR THE UNBALANCED AMONG US

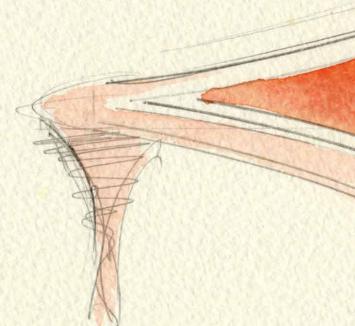
his is notionally a woodworking book, but this is not just for woodies. This is for anyone who wants to break out. This is for any one of you who feel you are living a life that does not quite fit. A life devised by someone else. I hope in these pages to help put maybe one or two of the pieces into your personal puzzle.

People of all ages and backgrounds come to Rowden seeking to make a change in their lives. They may not know it when they come, but they soon find out that the piece they are making – that chair or table – also makes them. You don't just make the piece, the piece makes you!

They come to us with that "bleeding neck" I mentioned earlier. It might be a lousy boss or a job that pays well but leaves them unfulfilled. It might be boredom or a feeling of lopsidedness. Something is missing, something that should be there. I have had a senior executive from a multi-national media company tell me of a psychopathic aggression from his old boss, an aggression that drove him to a toxic mixture of alcohol and fast cars. A scene that would soon have killed him if he had not acted to remove himself.

Techies from software companies have told me, "I can't do another 20 years looking at a screen. I love the money but my body is a mess, and I am doing the same thing I did 15 years ago. I can't work all my life to create reports that are just shredded by the next guy in."

A common thread is, "I want to make something. I want to be able to say I did that, and that, and that." Without her effort, his work, their skill and knowledge, this object would not exist. A cabinet or a dining table is harder to delete and deny than a 500-page report that can hit the shredder in seconds. It's something physical to point at and kick.



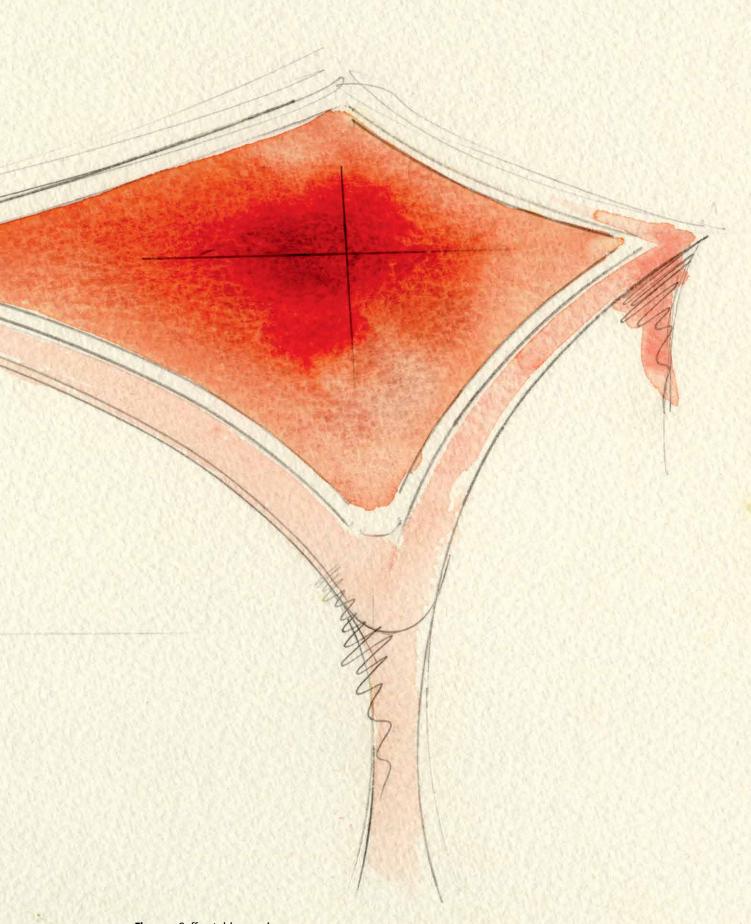


Fig. 2.1. Coffee table, version 2.



Try shredding that sucker.

Like our students, there was a time in my life when I was pretty stressed with the work I was doing. The Sunday Night Blues were a feature of that period, the fear of what lay before me from Monday morning for another week. The Blues would start about 5 p.m. on Sunday and go on all evening and into the night. If you get the blues, this may be for you.

Or maybe not. This is not for everyone. I know that you have to feed the family, and you have my respect. I can relate to that, and you cannot take risks. That job, well, it's not great but it does it for you. It may be like a prison sentence, I know, but it will end, you will get to your pension and there are always the holidays to look forward to. I genuinely take my hat off to you. But you are probably not reading this book.

A side of this is physical work – sweaty, health-giving physical work. A doing that makes you feel good. This is real, useful work. Work that sees something done, that you can step back from and smile.

And then there is the thinking. After all, this is The Intelligent Hand. You are not a mindless operative doing this. Again, we are talking specifically about wood, but it could be something else. I know self-employed welding fabricators, small specialist timber merchants, garden designers and green keepers who all run their own show, work physically and mentally, and are engaged in displaying skill and knowledge to serve their niche market.

The essence of this is taking back control. If you are not running your life, then someone else probably has plans on how to use your time. I once asked my son, Alex, to pack some DVDs for me during his holiday. He worked diligently, labeling and packing. At the end of the morning he asked, "Dad how much will these sell for?" I answered, "Oh I guess about \$500." "And how much are you paying me to do this?" he said. "Oh, I think \$15 an hour for four hours," I said. "But that's not fair!" said Alex.

Both of my children have had the benefit of an expensive education. But even there, there was no attempt to teach goal setting and life planning. Nothing was taught beyond which university to go to, and how

to get the grades needed. The entrepreneurial spirit and the means to get to a distant goal are skills deemed unnecessary by most educational establishments.

To make your own life, you need dreams, goals and efforts that are out of the ordinary.

There is no shame in dreaming, but that is just what it is - dreaming. What is needed is to turn a dream into reality. To dream with a plan that can be worked.

You have the same 24 hours as everyone else. Some of you will gain traction and move, others will spin your wheels and go nowhere. Be a mover; use every minute. Plan each day. Let no person take your attention away from the important and urgent tasks of the day. Have a goal and see it clearly. Visualise it in your head in Technicolor. See it so clearly that you can smell and taste the air. See yourself in the image. This is what imagination is for. Then think about the obstacles between you and the goal. Break them down to smaller bite-size parts. Eat an elephant a bite at a time.

Have a plan for a week, a month, three months, six months. What are the steps you can take now? Put dates on the plan to achieve this by your dates. I have job lists for each day that refer to weekly lists that lead to goals set months or years ahead. Writing it down then revising it weekly keeps you focused. Celebrate your success and work out where you didn't succeed, then carefully work out why. Then revise your list. Then work it, baby. Nobody else will do it for you.

One of the goals of this book is to discuss The Why: the reasons some of us go to such extreme lengths to achieve Quality at a time when there appears little social demand for it. To do that I need to go back to the beginning of the 20th century to set a social context, to help us understand how thought and work have become separated in our culture.

Whilst we go back I will be telling you my story, as I hope it helps explain some of my decisions and shows some of the juicy failures.

But most important, I want us to visit Rowden as soon as possible, not 20 years down the road. So be aware of time warps and non-sequential chapters. Keep on your toes and stay with me. This is a journey of Doing and Thinking.



# 'OH, YOU'RE ALRIGHT'



makers who were not quick and accurate. We were good at what we did and showed a decent living, but David Savage Furniture Makers felt like a huge monster that I had to feed with work.

Then "the big job" arrived. The commercially minded among you will see this coming. I am just an ordinary furniture maker trying to do a good job and turn a penny. Mr. M saw my work at a London home and garden exhibition. I am a great one for selling direct and meeting the customer. He was American, a master of the universe, a big swinging dick in the city and they had just moved to a smart address in North London. They were looking for furniture. NOW. And a lot of it. My tongue was hanging out, and I was dribbling.

I was really up for this job. I did all the stuff I talk about in this book. I went and listened carefully. I looked at the house. I prepared a brief. I let it cook and did the drawings. I could not avoid thinking, "This job could sort all my problems" — which it did, but not in the way I had expected. They wanted several pieces; could I do them all? Well, not without pushing all my other work to one side, spreading Mr. M's work over maybe four or six benches. Madness — but that's what I did.

The work was in three phases, with three deliveries. The first was done and paid for; it was the second delivery that went wrong. Phone calls and letters went unanswered (it was the age before websites and mobile phones). When I arrived at the house it was empty. Why was that not a surprise? His company would not talk to me, suggesting only that Mr. M had returned to America.

Bankruptcy is about cash. You can have work and stock. And you can have machines. But if you have no cash then you have no business. Cash is the lifeblood of a business.

Everything in the shop had to be sold to pay the debts of my company. I did everything I could to use the little cash left to pay my staff. The group of students we had in the workshop were the worst affected. Their courses stopped, and they, quite reasonably, were pretty cross. Table saws were loaded into vans at dead of night; cramps, power tools, stones and bench lights were removed. It was like being in a maelstrom of tools and thinly concealed anger.

It was a while before I got back to furniture making,



but I had a young family to support. Wonderful clients such as Maggie Rose got hold of me and dragged me back to it.

"That table you were making for me. Can we buy the parts that are being sold at auction and have the table made up?" she asked.

"Well yes." Other clients found me at home and wanted chairs, desks, dining tables and sets of



chairs. They didn't seem phased by my bankruptcy. I love them all.

My daughter, Jenny, was just 18 months old and my wife, Carol, was working at a local company, bringing in our only regular money. I was able to sell designs and have them made locally by craftsmen that I had either trained or worked with during the previous 10 or so years. I had a nice, profitable setup in the spare

Fig. 3.2. The entrances to the bench rooms at Rowden. PHOTO: WR PHOTOGRAPHY



bedroom until Carol told me, "We need that bedroom as I am pregnant and you need a workshop."

Yes. Great. But Nooooooo....

Bankruptcy is one of those few occasions when you are forced to step off the moving escalator of life. You can observe and see the workshop clearly; the moment you put your foot back on the escalator everything is moving and your image is distorted. So, I tapped the escalator with my foot. If I did this again, would I do this or that? Would I buy that table saw or buy this... again?

I had a beat-up old car, a bench, a bag of tools, my books and my portfolio. They let me keep those; everything else was sold. I had commissions to make and some cash, but not a lot.

My advert in the paper, asking for a workshop space in a local farm building, brought me to Rowden Farm, not far from home. Ted and Sheila Lott were retiring from farming and had a row of brick buildings that would make a great workshop. The buildings overlooked meadows and a lake instead of a lorry car park.

I felt that I couldn't be in a better place. My first meeting with Ted brought a quick look from him.

"Oh, you're alright," Ted said. For a man who thought he had "Bankrupt" tattooed on his forehead, that was all I wanted to hear.

Since then, for 20 years Ted and Sheila, and more recently their son, Edward, and daughter, Rachel, have closely supported the idea. And, I think, they have some pride in having Rowden Workshops on their property. I certainly could not have done this without their warm encouragement and friendship.

Feeling that you are in the right place, and knowing that this is where you should be, is a great part of contentment. Rowden does this for me. I could much more easily be working on a grimy, miserable trading estate in a London suburb and be much nearer to clients. But this is better. Way better. It was an instinctive move to get out of London all those years ago (before Bideford). I was laughed at and criticised by nearly everyone we knew. My bank manager called me a fool to move away from all my customers and the centre



Fig. 3.3. The machine room (left). Fig. 3.4. The school's drawing studio (above).

of all my potential income. But I was right. It wasn't until much later, however, that I understood why I was right.

It's all about the contact with nature and the effect this has upon one's work - being open to the influence, on a daily basis, of the shapes and textures of the natural world about us. The seasons get me. I walk my dogs around the lanes to see it, each year, again and again. Ah, the snowdrops are out, then a few weeks later the little purple flowers, then something else.

I have always been influenced by the Arts & Crafts movement (more of this to come). The influence of William Morris was not so much the wallpaper and the fabrics, but the way he looked at the English garden and natural forms and adapted those forms and shapes to his work - the natural forms and structures that are the essence of growth and regeneration, the bones of nature in all her beautiful ways.

And the thinking and the doing. Morris was always thinking and inventing, but alongside this he was always "doing" something. Almost on a daily basis

he was playing about with weaving looms or some historical technique he sought to revive and employ in his current designs. If it wasn't that, it was special printing methods to get his wallpapers to the intensity of colour he required. He must have been a pain to work with, but his working practice lives with me to this day.

PHOTOS: WR PHOTOGRAPHY

The essences of nature and the structures of the natural world, learnt from Morris, bring us to the proportional systems that underpin all Rowden designs. Classical proportions and the development of skills to make design look "right" are paramount. Euclid, Pythagoras and Fibonacci have all contributed to our understanding of growth in nature, why leaves and trees and bushes look the way they do.

The other thing was the political ideology of how we work together. I have never been comfortable as a



**Fig. 3.5.** One of the top-floor bench rooms at Rowden, usually occupied by the more senior students.

PHOTO: WR PHOTOGRAPHY

boss. Having been a socialist, it seemed a wrong thing to  $do-but\ I$  was never going to do this alone. The Bideford workshop taught me how to go about this. But it also told me that I had come close to a system of exploitation and oppression that I did not feel totally happy with.

I was providing work and paying decent money. I hope I was giving some satisfaction in the work simply by asking for the work to be done to high standards. Where we could, one or two makers saw the job



through from start to finish. That seemed important. But too often we found ourselves doing a batch of successful chairs that got too big. Sure, it paid well - very well – but the repetition was not what I wanted. It dulled the edge too much.

I had come to see the raw intelligence of the wonderful makers I worked with. This became visible when resolving designs and construction issues, or improving an older method. They brought ideas to the job in surprising and valuable ways.

"Why don't we do it this way?" "If we laminated this but cut that from solid we could save half a day."

This raw intelligence, this force of nature owned by the maker. She has the kind of brain that runs a mainframe CAD programme between her ears. A conversation with her about a making issue would be like a tennis match. We are discussing a solution in three dimensions.

"What are we going to do at this junction?"

"No idea; what do you suggest?"

"Well, we need some kind of fixing."

"I need these two components to be slim and slender."

"There will be some stress on that joint."

"What do you want to do to give it the strength?"

"Well, if we can get two Parnham fittings, about 5mm, into each spaced 20 mill apart..."

"Can we cut that back to 4mm and keep the dimensions?"

"Yes, we need it to flex."

And so it goes on. Making on the edge of material structure. I have been blessed to work with makers of considerable intelligence who throw that care and knowledge into the work they do. This, for me, is what the Arts & Crafts ideology was all about. This is something that we cherish at Rowden.

I have very occasionally seen young makers developing high-value art furniture in workshops that could be compared to the most exploitative sweat shops in India. I have sent Rowden graduates to them and heard their reports. It's not a happy experience. This is always the designer misusing the skill and trust of his workshop in pursuit of his own ambition. It is hateful.

"A hand" used to be in industrial terms a unit of labour.

"He's the charge hand."

"We need an extra hand to do that."

This is a different notation. This is the Intelligent Hand. This is a person working physically and giving all – head, hand and heart – to the making of a piece. To the making of a piece worth making well.





# AND THEN THERE IS LUMBER

his is the killer. This is the element that gets you. It could have been metals – hard, cold and nasty – or plastics. No – never plastics. A house full of brightly coloured children's plastic toys leaves me feeling very ill. Or glass, maybe leather, or even mud.

But it's wood. Lovely, warm, intractable and cursed wood. Ed Wild, who works with us, says that, for the right person, if she can do a week working wood properly with good sharp tools, she'll be sunk. She will never be the same again.

Which is why we begin with hand tools. Stuffing boards of oak or ash through a machine will get you a nice surface, but it will tell you nothing about oak or

> ash, or the difference between them. A speculation sheet will tell you notional differences. But hands responding to the material, feeling the action of a blade on fibres – that tells you a lot. A handplane will begin to inform you with the first shave you take.

As you see more timbers, you learn there is more and more to know. Each species has its own characteristics. Each log can be different: top of the log, quartersawn, late wood, early wood. It's literally a moving target.



**Fig. 4.1.** Mistreat your lumber and it will literally disappear (left).

Fig. 4.2. Weathered and wild (above).

The damn stuff is expanding and contracting with the weather as I type.

And it has the benefit of being relatively inexpensive to set up as a woodie. You don't need a massive factory with expensive machines. Many small workshops I know of that operate at the top of the market are small and highly skilled, but they buy time on expensive machines. What they have is the knowledge to form this material in all its complexity, to add shagreen inlays and exotic polishes to create perfect surfaces for expensive products.

We work now mostly with native hardwoods: elm, ash, oak, cherry, yew. What we hope is to find that special log you see once a lifetime. The log that should never, ever go anywhere near a factory.

Imagine this: You have a board of pear. It's 2" thick, rare English-grown and air-dried. Swiss pear is wonderful, but lumberyards steam the timber to remove wood borers, and this changes the colour. Unsteamed pear is rare and best, as the pinky flesh colour is maintained. There are hints of a dark purple-red figuring toward the end of the board.

You take this board to the band saw to resaw it. That is, to stand it on edge and cut it into two 1"-thick boards. This is slow, difficult, noisy work that needs patience and a delicate touch. The band saw slowly chomps down the edge of your board CHA CHA CHA CHA Cha. As it reaches the end, you can at last open the board. There is a purplered flame of colour flickering over the two surfaces. You are the first to see this; no other eyes have been here before you. Timber contains joy and heartache, almost in equal measures. Some boards open and are as dull as the England football team.

I have a mate, Stephen Bedford, whom I met nearly 40 years ago. At the time, he was a joiner with a passion for oak. With that passion, he set up a small one-man timber-supply business in the disused railway yard at Bishops Nympton railway station.

He had little stock but he liked his timber, and as a joiner he knew what good timber was. I kept going back year after year. Soon he would put stuff back for me.

"I've got a nice stick of yew," he'd say. I rarely had the money to buy it "on spec," but I knew where it might be when a job came up.

Through the years, Stephen's business flourished with his hard work. He moved his stock to a yard in front of his home. When I visited, one of Stephen's many tow-headed children would come out and shout "Daddy! Daddy! It's a customer!!" They developed a business supplying natural oak floorboards, and one of Stephen's tow-headed brood now runs the yard.

To show his engagement with this process, Stephen bought land and planted saplings, walnut, for another generation.

When I was with my mentor, Alan Peters, I saw great stacks of air-dried timber around his workshops. Alan invested a great deal of time and effort into these supplies. But if you don't know what you will be making, it's difficult to plan like this. We could be doing cathedral doors in oak or tiny boxes in yew. I didn't follow Alan's example. I didn't have great stacks. I brought in (usually kiln-dried) material as we needed it. This, on reflection, was another mistake. Kiln-dries stuff works differently to air-dried. Air-dried timber is a nuisance; you need to plan months ahead. I remember Alan cutting air-dried stuff and bringing it into the warm summer bench room to dry down to 15 percent moisture or less. This was stuff for a job that wouldn't be started until the autumn.

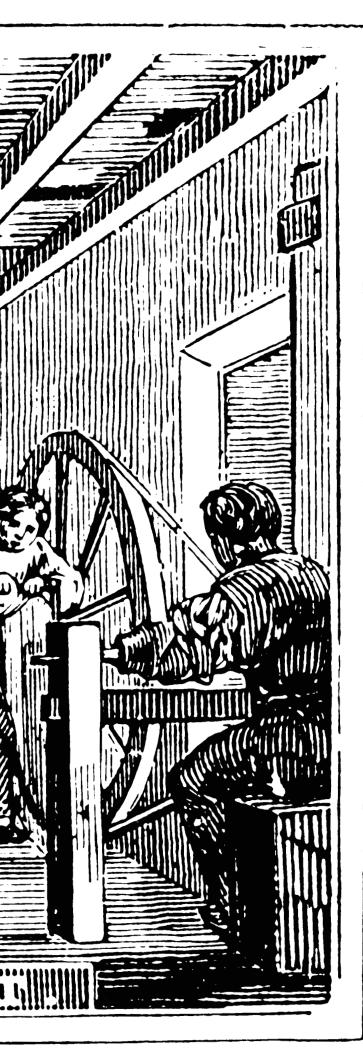
Although handling it requires the entire workshop to trip over the stuff for most of a summer, working it is considerably easier than working the kilned stuff. Air-dried oak comes off the blade like a paring of hard cheese. It's lovely to work. Kiln the same board and you have to fight to get that finishing shaving.

It is this variance of material, the truth that even with nearly 40 years playing around, that proves you don't know everything about it. Each log is different – warm, responsive, bloody-minded and difficult. Oh yes – work this carefully for a while and you are sunk; completely sunk.



Fig. 4.3. Walnut slabs waiting in the Devon sun.







# **ALL HAIL THE 863**

need to take you back in time to the beginning of the 20th century. I need to do this in order to explain what I think has happened to us, and why. As Henry Ford set up his first production line in America in 1913, the Arts & Crafts Movement was being established in the sunny fields of England. Ford developed an existing (brilliant) idea to "bring the work to the worker." In truth, it was more complex and more revolutionary than that. What Ford did was to create a system of activities.

Until then, vehicle manufacture occurred in small workshops and factories with relatively skilled engineers doing varied and various work — the stuff we celebrate. What Ford did was analyse that work and break it down into a series of steps. Each step could then be carried out by a relatively unskilled person. The steps were put in sequence, and the partially complete vehicle was brought to the worker.

This is one of the most famous examples of what

**Fig. 5.1.** Before. A 19th-century wheelwright shop from Edward Hazen's "Panorama" (1846).

was to become a major management process in 20thcentury industry, not only in the factory but also the office. The "Knowledge Engineer" systematised skills and created processes that became the management's property. All that was left after their passing was the

script and the process.

To fill 100 jobs on his new production line, Ford was forced to hire 963 skilled workmen and women (863 did not stay on). And he had to double his wages to achieve his goals. Rather than hissing and spitting, Ford described this as one of his best business decisions. The extra cost for wages was recouped straight away by increasing the speed of the production line, instantly doubling, and later trebling, production. This was new.

Fig. 5.2. After. Henry Ford's assembly line in 1913. Before this, paying extra for piecework didn't increase production and may in fact have decreased it. Ford had workers working at a speed he could choose. This could not have been achieved just by paying people more money.

The 863 who could not stomach Ford's new factory are, for me, the interesting ones. Where did they go? History consigned them to the rubbish dump of the past. Like buggy whip makers in the age of the automobile, they were no longer needed. But my hat is removed in honour to their instincts. I would have been amongst them. For they knew that their skills and knowledge were part of a balanced and well-lived life.

This was called "scientific management" and was outlined in the monograph "Principles of Scientific Management" (1911) by Frederick Winslow Taylor. Taylor writes:

"The managers assume the burden of gathering together all the traditional knowledge which in the past has been possessed by workmen and then of classifying, tabulating and reducing this knowledge to rules, laws and formulae.... All possible brain work should be removed from the shop and centred in the planning and layout department."

In this way, Taylor, whose work was hugely influ-

ential in the early 20th century, was able to encourage the concentration of scattered craft knowledge into the hands of "the process managers." The "time and motion analysis" was born. The objective was to create a process that, once designed, needed no further

> thought or tinkering. In that situation, skilled workers could be replaced at machines by unskilled ones. Labour and cost were thus reduced as production increased. Skill once observed and analysed was no longer needed.

of consumer spending was upon us. Thrift and avoidance of debt - a mark of prudence and good management – was to become a thing of the past. Consumption engineers such as Claude Hopkins, one of

Soon after this, the age

the early leaders of marketing, sought to bring consumption under the hand of scientific management. Now we could earn money building cars, and maybe, if we paid over 10 years on the "Never Never" (aka an installment plan), we could drive one as well! Aren't we smart all of a sudden! All we needed to do was to give up the personal skill we earned over 10,000 hours. Plus, the personal pride in the achievement of making, of doing something complex and difficult, and doing it well. For there was no real skill required on Ford's line - just hard manual work, day after day, after day, after day. The 863 who could not take up Ford's offer could not do that. All hail the daft old 863!

Who can deny the enormous prosperity and economic comfort that this scientific management has brought us? We work, we earn money, we have holidays and we pay taxes. Then we get a pension and die. And don't think that being a smarty in an office will save you. The same "expert systems" are coming your way. In the book "The Electronic Sweatshop: How Computers are Transforming the Office of the Future in the Factory of the Past" (1989, Penguin), Barbara Garson writes:

"The modern knowledge engineer performs similar detailed studies, only he anatomizes decision making

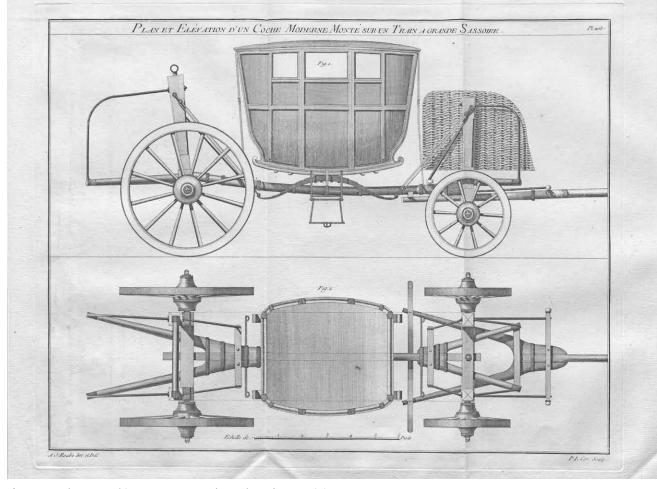


Fig. 5.3. Early automaking. From A.J. Roubo's "l'Art du menuisier."

rather than bricklaying. So, time and motion study has become a time and thought study.... To build expert systems, a living expert is debriefed and then cloned by a knowledge engineer. That is to say, an expert is interviewed, typically for weeks or months. The knowledge engineer watches the expert work on sample problems and asks exactly what factors the expert considers is making his apparently intuitive decisions.

"Eventually, hundreds or thousands of rules of thumb are fed into the computer. The result is a program that can 'make decisions' or 'draw conclusions' heuristically instead of merely calculating with equations. Like a real expert, an expert system should be able to draw inferences from 'iffy' or incomplete data that seems to suggest or tends to rule out. In other words it uses (or replaces) judgment."

My wife, Carol, worked recently in an office in Bideford. She spent her day on the telephone reading prepared scripts to prospective clients, who were owners of holiday cottages. Carol has a degree in economics; she has worked on the trading floors of some of the world's most famous investment banks. Carol

could sell ice to Eskimos. But their scripts were what the company wanted spoken; Carol was only a mouthpiece. Her ideas of what they were doing wrong and how it could be improved were of no interest to the company. She was cheap local female labour that came and went while the system controlled by the company remained intact. Its image as a small family company remained unchallenged, but the truth is very different.

I do not suggest that this is bad. I cannot argue that this systemisation, this splitting of thinking and doing, has not resulted in huge economic benefit. We are all vastly more wealthy and more secure than previous generations. This is good; nobody can argue with that. But there is a type of person – and I see them coming to Rowden year after year – who does not quite fit this pattern. Someone who wants a bit more from life than a job, money, holidays and a pension. She wants something else; she wants to use her head and have responsibility for what she makes. She wants to make a thing about which she can say, "That's mine; I made that." And she wants to sell it for money, decent money.

All hail the 863.