Anton Alvarez's thread-wrapping machine in action; a finished piece of furniture

HENRIETTA THOMPSON

PREDICTS FIVE KEY DESIGN DEVELOPMENTS FOR THE FUTURE

THE EVOLUTION OF SCANDINAVIAN DESIGN
"Form used to follow function; now form follows fun."

LIGHTING TECHNOLOGIES
"From LEDs to holograms, lighting is ever more sophisticated."

RECONNECTING WITH NATURE
"From green walls to harnessing the weather, designers like Daniel Rybakken and Simon Heijdens are bringing the outside in."

COLLABORATIVE CONSUMPTION
"Sharing and swapping design, rather than owning it, will let us access things we've never had."

CRAFTSMANSHIP REACHES THE NEXT LEVEL
"The high street is changing and craftsmanship is going back to community level with new aesthetics opening up."

With advances in technology breathing new life into traditional techniques, Henrietta Thompson finds the craft world enjoying a stimulating and lucrative renaissance

Think of the word "craft" and the image that springs to mind is usually an olde worlde one. A workshop crowded with freshly hewn wood, metals or leather, scraps on the floor and sunlight streaming through dusty windows. Or maybe it's a remote village, complete with tourists buying up handiwork learned over generations.

Oddly enough, there's nothing in the definition of the word "craft" that says it has to be steeped in tradition and handed down through generations. It simply means "an occupation or trade requiring manual dexterity or skilled artistry", or "to make by hand". What's more, contemporary designers and makers are returning to the workshop to revive ancient skills with radical new technologies and forward-thinking ideas. Often they are inventing entirely new processes as they go.

MATERIAL DIFFERENCES

Take Anton Alvarez. A recent graduate from the Royal College of Arts (RCA), the London-based Swede invented the art of thread-wrapping for his final MA project. Using his extraordinary thread-wrapping machine (which looks like a butch kind of spinning wheel), he binds small pieces of wood, plastic, steel or any other material available into sculptural pieces of furniture by wrapping them tightly in gluey thread. His studio is an otherworldly landscape of cocooned forms.

Alvarez originally trained as a cabinet-maker and is now refining his new technique daily. "You could say I developed this process as an alternative to more traditional joinery, a new way of holding parts together," he says. "I definitely see it as a new craft, and I'm now experimenting with different materials, sizes and ideas. I'm still waiting to see where it will go."

Julia Lohmann, a designer based between London and Hamburg, is looking for ways to use seaweed as a structural and decorative material. Her projects include jewellery, sculptures, lighting and even furniture. On the Laminarium, a beautiful sea-green bench, the veneer is kelp. "Seaweed veneer is a material we developed with [furniture manufacturer] Deutsche Werkstätten Hellerau," she explains. "The blade of seaweed replaces the wood veneer. I'm now interested in using seaweed in marquetry too. It's such a perfect application for this material."

FIRST-HAND EXPERIENCE

The Power of Making, the V&A's summer 2011 exhibition, attracted 265,000 visitors, all eager to see creative people in action. We now have more opportunity than ever to witness craft like this, with everyone from global fashion brands (Mulberry, Hermès, Fendi, Louis Vuitton) to microbreweries doing their utmost to emphasise their craft roots. During the recent London Design Festival, visitors to furniture shop SCP in Shoreditch, east London, could watch basketmaking in action, thanks to a collaboration with Makers & Brothers while old-school purveyors of handmade luxury Linley, near Sloane Square, hosted live marquetry.

The alchemy comes in the mix, however. Craft implies an attention to detail, regardless of the cost. In a world where globalisation has rendered everything homogeneous, the prospect of an object with provenance and heritage, created by an actual person, using unique skills, is rare. And yet industrial designers, with their mass-production sensibilities, inquisitive minds and fearlessness of new technology, have much to offer.

Last year the Crafts Council celebrated its 40-year anniversary with some insightful reports. Although the majority of the 23,000 craft businesses in the UK are sole traders, their combined income is £457m – compared with £512m for London's West End theatres and £316m for music downloads in 2010.

Craft is becoming increasingly accessible too, as the industry embraces new technologies. Makers today collaborate with scientists, technologists and

> IT'S THE PROOF OF HUMAN INTERVENTION THAT PEOPLE SEEM TO LOVE

engineers to find unexpected new directions. When the world's first tissue-engineered synthetic organ transplant took place in July 2011, saving the life of a throat cancer patient, the success of the procedure was down to an unlikely fusion of biotechnology and craft.

Working alongside surgical research fellows at the Royal Free Hospital, glassmaker Matt Durran helped develop moulds for the tissue that could withstand the fierce heat of a bioreactor. Durran's moulds are now being used to develop tissue-engineered noses and other organs. It works both ways too. When he's not making noses, Durran's installations are inspired by bell jars and x-rays.

In general, the lines between creative disciplines are getting very blurred. London-based Simon Hasan describes his work as sitting in the territory between ancient crafts and industrial design. His *cuir bouilli* (or boiled leather) limited-edition vases, stools and chairs, have attracted collectors from all over the world. But the recent RCA graduate's new collection of leather accessories will be much more accessible, thanks to a radical tweak in technique. This time, the leather will be baked, not boiled. "Boiling the leather is truer to how a lot of medieval objects were probably made, but much more brutal," says Hasan. "It's not suitable for volume production, as it degrades the material. Baking the leather is gentler."

New York-based Doug Johnson is rethinking ceramics, using an old crafting technique in which rope or cord is coiled and stitched to form bowls and baskets. "The method explores ways of transforming a linear material into three-dimensional objects," he says. "I see it as a form of analogue 3D printing performed by a sewing machine and with much less precision. The '3D file' is in my head as I begin each piece and its formation happens by making certain adjustments to the work while sewing." The hi/low-tech process has its limitations, determined by the sewing machine, but it's the proof of human intervention that people seem to love.

AGAINST THE GRAIN?

Carpentry is also evolving at a rate of knots, thanks to modern machinery and innovative new practitioners. Australia-based Tate Anson's Solaris clock and Tryst stool are produced by machining and steam-bending a single piece of solid timber to stunning effect.

Craft can bring back physicality and texture to design, and add context and rootedness that will always enrich the results. But new technologies, experimental ideas, and surprising material choices suggest that craftspeople are wholeheartedly embracing a new mission. If craft is the future of design, then design is also the future of craft. Together they are exploring strange new worlds, boldly going where no man has gone before.

MARTA THOMEK. ILLUSTRATION: BRETT RYDER

THE BEST DESIGNS OF MICE AND MEN

FORM AND FUNCTION

By the second half of the 19th century, Britain was the centre of a global empire, importing extraordinary silks, spices and arts. Synthetic colour was discovered in 1856, and the industrial revolution meant that fabrics once for the rich were suddenly affordable to all.

For centuries, everything had been handmade. Now, machines were producing furniture, clothes, industrial glass and building fabrics. But moving from centuries of handcrafted work to a machine aesthetic was never going to be simple.

The Victorian polymath William Morris first framed the problem, arguing that art should not be severed from its surroundings – that furniture, books and wallpaper could all be objects of beauty, accessible to everyone. His ideas prompted some of the key design debates of the 20th century.

At one end, the art nouveau school wanted furniture, jewellery and buildings to be highly ornate and decorative. They covered every inch of space with highly stylised interpretations of nature, to create what Salvador Dali would later describe as "the terrifying and edible beauty of art nouveau architecture."

At the other end of the argument, the modernists, in particular the Bauhaus

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school in Germany, preached functionalism – stripped-down design where form followed function. And in the 1930s the Scandinavians began to find a way to create a functionalism that was rooted in natural forms and materials; Arne Jacobsen and Alvar Aalto were among the designers creating simple, pure designs that almost immediately became classics and remain in production today.

Although art nouveau works remain highly prized, it is the functionalists who have dominated the 20th century, their ideas enshrined in Dieter Rams' Ten Principles of Good Design: "Good design: is innovative; makes a product useful; is aesthetic; makes a product understandable; is unobtrusive; is honest; is long-lasting; is thorough down to the last detail; is environmentally friendly; is as little design as possible."

Rams made Braun famous with his simple, functional items, from pocket record players to electric razors. A lifetime spent refining and purifying was distilled into these 10 principles, which still guide today's designers.

Today, you need only read the Ikea founder's mission statement ("We have decided once and for all to side with the many") or the Google philosophy ("We take great care to ensure that [our designs] will ultimately serve you") to see that these principles are alive and well.

It seems that design is at its best when it serves us. As Steve Jobs, for years the guiding light at Apple, put it: "Design is not just what it looks like and feels like. Design is how it works."

The world is increasingly complex. We will be lucky if designers continue to see themselves as our map-makers, our guides.

Bibi van der Zee