FINANCIAL TIMES

christmas unwrapped

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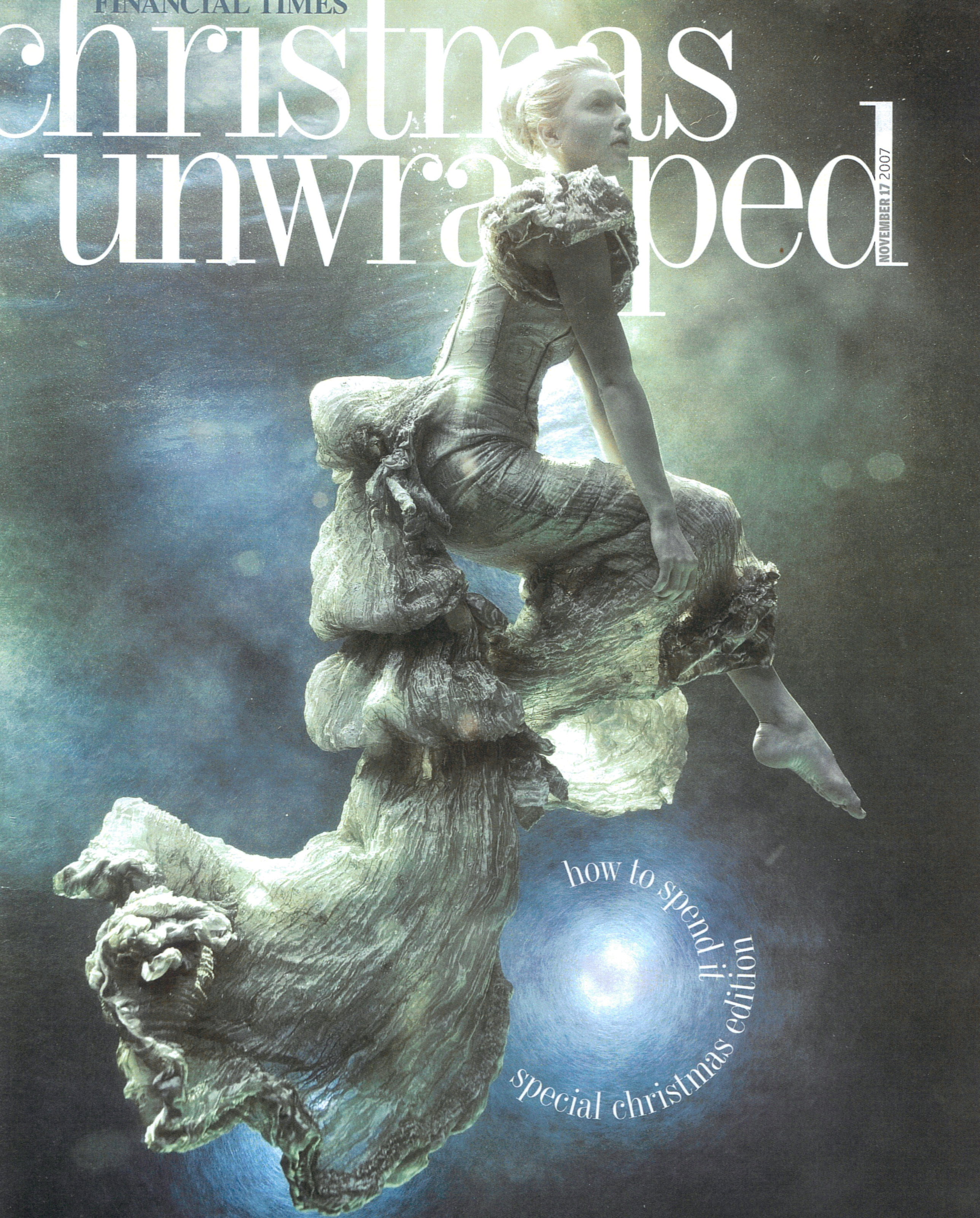
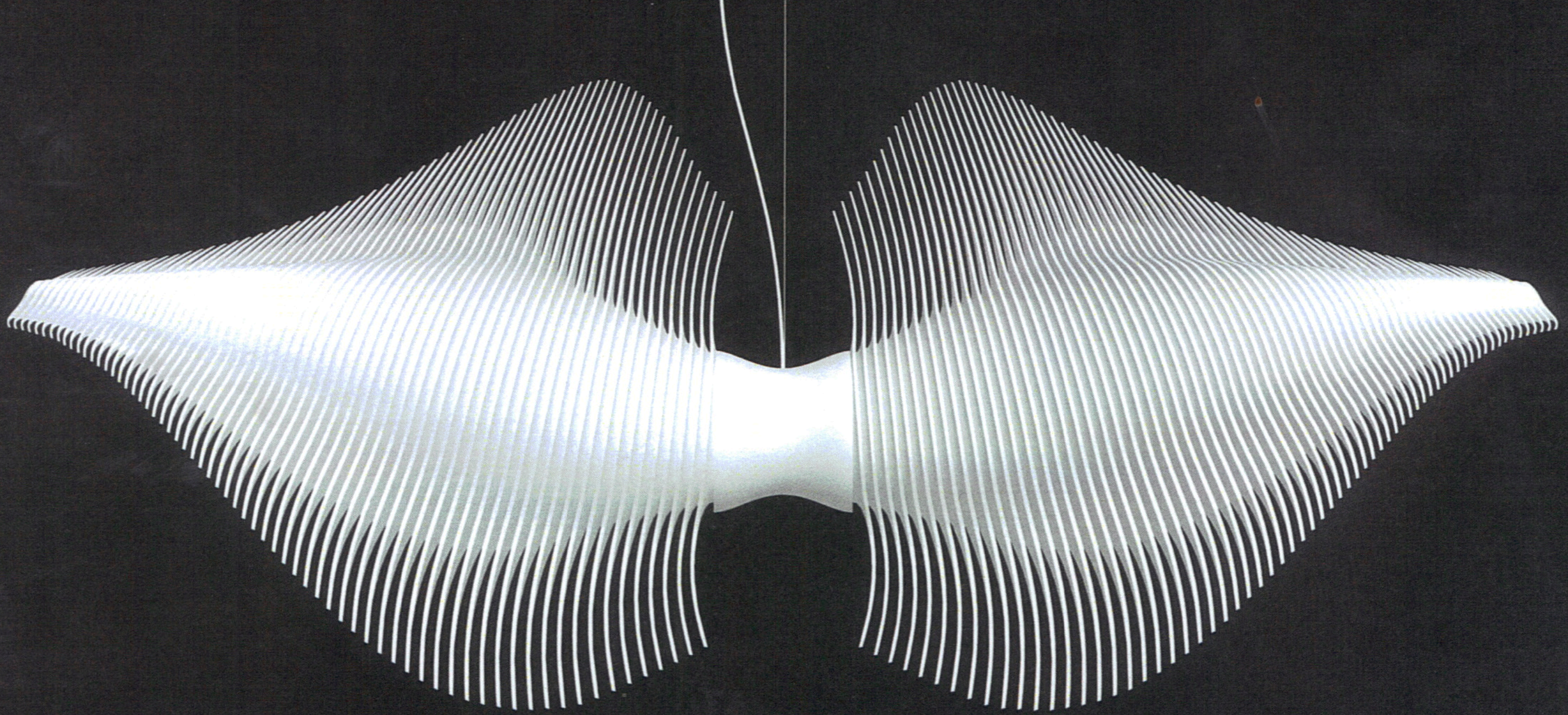


how to spend it

special christmas edition



DON'T TREAT ME LIKE A PIECE OF THE FURNITURE

A light that changes shape when you wave at it, a chair that becomes the colour of your outfit... Who says furniture doesn't have feelings, asks Nicole Swengley.

Top: Assa Ashuach's AI light, £27,000, morphs into different shapes at a wave. Above right: Loop.pH's Digital Dawn blind, £1,200, glows brighter in the dark. Left: the cocktail cabinet in Mark Humphrey's Dining Table + Cocktail, £21,500, rises up through the onyx base.

Technology and home furnishings have never been the easiest of bedfellows, but now they are converging in the most glorious of ways. Like some fabulous Venn diagram, each is encroaching on the other's territory to the benefit of both.

Witness a window blind that glows or darkens in response to light levels, tiles that light your way as you touch them or wallpaper whose changing colours indicate how much energy your home is consuming. Some designs – such as a mirror that reflects your outfit from all angles – are highly practical. Others, like the chandelier that mimics outdoor weather conditions, are more exploratory. And some, like a digital dining-cum-roulette table, are just huge fun.

"As people become more familiar with interactive technology in their daily lives they'll expect their domestic environment to be just as responsive," says Chris Bird, technical director of United Visual Artists, a London-based design technology company. "Interactive technologies have been used in store environments or public spaces up to now but, as costs come down, we'll see more in the home." Lauren Parker, head of the V&A's contemporary programmes, agrees: "We're seeing a shift from concepts into products that are commercially available as expectations about the nature and use of furnishings change."

This shift is accompanied by a significant mood swing. "Technology is becoming more humanised," says Kate Franklin, head of trend forecasting and brand strategy at The Future Laboratory. "Until recently, it was seen as hard-faced – just a way to make life easier. Now it's no longer about a black box in your living room or a clever kitchen appliance. Designers are introducing poetry and emotion so technology is being used in a softer way to add decoration or fun."

She cites By Royal Appointment, an illuminated dining chair designed by Moritz Waldemeyer (pictured overleaf, from £9,988 to order from Gallery Libby Sellers) that responds to the colour of a user's outfit, projecting an aura of matching coloured light around the chair. Waldemeyer is typical of a new breed of designers who view furnishings as interactive fun. So if you're searching for an intriguing Christmas present for a City boyfriend, check out the

Pong or Roulette dining tables (to order from Rabih Hage Gallery at £12,000 and £18,500 respectively). Pong has a digital video game, operated by touch, within the table's DuPont Corian surface. "A City banker bought one for his central London house because he considered it a collectable design as well as a fun piece of furniture," says Hage. An entrepreneur with a passion for gambling, meanwhile, bought the Roulette table (pictured overleaf). "He thought it was very playful and would animate dinner parties."

Equally impish is the TV Predator, an ironic picture frame made to order (price on request) by Troika, a London-based multidisciplinary art and design practice whose book about interactive designs, *Bytes & Pieces*, will be published by Thames & Hudson in 2008. "The picture frame is utterly jealous of the TV set, which has deprived it of all attention," explains Troika designer Eva Rucki. "A remote control is embedded in the back panel of the frame while a device on the front sends UV signals to any TV in the room to prevent it working properly. It randomly switches channels, mutes the volume, turns it on unexpectedly and changes the screen colour to black and white."

Mirrors, meanwhile, are elevated to digitally interactive art forms by Daniel Rozin, resident artist and associate art professor at New York University's Interactive Telecommunications Program (ITP). His latest mirror, Peg ($85,000, about £42,500, from Bitforms Gallery), comprises 650 cylindrical wooden pieces which cast shadows by twisting and rotating in unison. They are set in concentric circles around a small video camera and the mirrored image is activated by software that processes video signals to

create an impression of the onlooker in wood. More practical is the bespoke "intelligent" mirror that homeowners employing Candy & Candy's interior design service can commission (price on request). The hidden camera and movement sensor in the 50in plasma screen combine with delayed playback so an outfit can be shown from all angles, including the rear. When not in use as a mirror, text – Reuters news flashes perhaps – can be displayed on the screen via an internet link. Data can also be personalised, for example with an entire wardrobe list designed to make selecting outfits easier.

Just as ingenious is a motorised dining table by Mark Humphrey. The 10-seater DT003 Dining Table + Cocktail (pictured on previous page, £21,150) has a circular crystal glass top sitting on a polished white Carrera marble drum. A thick slab of honey onyx above the table top doubles as giant lamp, while spinning like a futuristic Lazy Susan. The cocktail cabinet, made of caramandel veneer and ostrich skin, rises up through the onyx slab when required. The lighting and rise-and-fall mechanism are both controlled via a hand-held PDA. "The design maximises space and usage but clients want it because they know that unusual and surprising furnishings impress their friends," says Humphrey.

And some furnishings really are behaving unconventionally. Take the Trace Tiles (shown left, from £1,900 per sq m from SCIN) developed by Royal College of Art graduates Natalie Woolf and Stijn Oosevoort. Trail your fingers over the tiles and a gentle light radiates across the surface owing to a clever combination of electronics, sensors and LEDs. Or check out Digital Dawn, a light-reactive window blind (to order at around £1,200) developed by Rachel Wingfield, a research fellow and senior lecturer on the MA Design for Textile Futures course at Central Saint Martins, with multidisciplinary artist Mathias Gmachi for their company Loop.pH. Printed electroluminescent technology and light sensors make the blind glow brighter or grow darker in response to changing light levels.

Lighting itself is becoming increasingly interactive. FredricksonStallard's Pandora chandelier for Swarovski Crystal Palace (available in a limited edition, price on request) boasts four electronic servomotors, each programmed in different ways. These sit on an aluminium disc from which 1,990 crystals dangle. Specially designed software means the crystals respond to 40 different types of movement generated by the motors so they appear to move individually and at random. "We wanted to reinterpret the chandelier by 'exploding' it and creating a form that's never permanent," explains Ian Stallard. "The reflective facets of the crystals are shown off brilliantly by the constantly changing movement."

Simon Heijdens' Rising Slowly chandelier, also designed as a limited edition for Swarovski Crystal Palace (price on request), is similarly built like a traditional chandelier with threaded crystals. But the thread is a "smart" material that contracts slightly when activated by a sensor. Outdoor wind conditions are measured and translated via a computer, causing the crystals to ripple with varying intensity and direction in mimicry of the wind outside. "The fact that its character is more intense in autumn and more serene in spring is a key point," says Heijdens. Each crystal in Ron Arad's Miss Haze chandelier (price on request from Swarovski Crystal Palace) contains an LED light. These are activated, via a Bluetooth connection, from a hand-held PDA replicating the pattern drawn on the PDA screen.

The purpose of all this electronic wizardry is to generate an emotional reaction, argue the designers. "It's evident that a number of disparate technologies are converging and combining in a way that creates a very personal, emotional response," says Bird. "You're not aware of the technological nuts and bolts – just how it makes you feel."

"Digital technology is becoming a tool – part of the design itself – and I think it works best when you're attracted by the beauty of a shape or material and don't think about how the design works," agrees Hage. "At its most effective, you are not aware of the technology at all." He cites

"It creates an emotional response. You're not aware of the technological nuts and bolts - just how it makes you feel."

Main picture: Moritz Waldemeyer's By Royal Appointment chairs, from £9,998, project coloured light to match the user's outfit. Top: Trace Tiles by Natalie Woolf and Stijn Oosevoort, from £1,900sq m, respond to touch by emitting gentle light.

Moritz Waldemeyer's Roulette Table, £18,500 from Rabih Hage Gallery.

Assa Ashuach's sculptural, bird-like AI light (pictured on opening page, limited edition of eight, £27,000 each including installation from Rabih Hage Gallery), whose artificial intelligence can be "trained" to respond to changes in movement, sound and light levels. Waving at the light alters the diffusion as it morphs into different shapes. "It's animated by inbuilt software so it's a pure product of technology, yet it's also very beautiful," says Hage.

This interaction between homeowners and their furnishings is keenly encouraged by Dutch designer Simon Heijdens. "The connection between us and the products that surround us would be more intense if they were less static and more open to the specific factors of our personal surroundings," he says. "If a product is able to grow and change, like its user, it will develop a quality that's the opposite of a disposable product. During the time it is in the user's life it will tell and show an evolving story."

Heijdens' Lightweeds (price on request), an indoor lighting installation shown at the Frieze Art Fair in October, aims to connect homeowners with natural elements beyond their walls by projecting plant silhouettes over several walls. Each part of the "plant" is connected to an outdoor wind sensor and reacts to its live measurements. So the plants move with the wind, shiver through raindrops and point their heads at the sun, following its track from east to west. The plants bend as people pass and eventually lose their "seeds" which travel to another wall and generate a new plant. This technological pollination runs in the same direction as traffic routes, revealing how the space is used during the day. "The interaction is very direct and literal," says Heijdens.

Just as animated is his bespoke Moving Wallpaper (price on request). Paper is printed on both sides with two "reactive" inks that cause the images to change and develop. Instead of being static, they can be "dimmed" or changed to another design.

Levels of interactivity are greatly increased by incorporating electrical circuitry within wallpaper, as Loop.pH's Wingfield and Gmachi discovered when they created Blumen (to order at around £2,000 per roll). Sensors combine with electroluminescent technology to cause the wallpaper's pattern to emerge and develop in response to its environment, including the energy consumption of the building. As appliances are switched on and used around the house, colour and pattern change accordingly.

Designer Christopher Pearson pushes the concept further by animating wallpapers with motion graphics technology. He takes William Morris's classic Willow Boughs design and makes the boughs blow in the wind with leaves spiralling through them. A home edition of this artwork, which can be integrated into an existing home cinema, is available in a limited edition of 10 costing between £3,000 and £7,000 (not including installation). Similarly, Pearson's Glasgow Toile wallpaper, a bespoke installation designed in collaboration with Timorous Beasties and costing from £4,000, appears at first glance to be an early 19th century toile de Jouy print but on closer inspection reveals an animated, nightmarish vision of contemporary city life.

To those of us with our noses pressed up against this high-tech window, these hybrids of technology and interiors seem incredible and fantastic. But one thing is for sure – we ain't seen nothing yet. ✦

INTERACTION, MAN

Assa Ashuach, 020-7558 8810; www.assaashuach.com and see Rabih Hage. **Bitforms Gallery,** 529 West 20th Street, New York 10001 (001212-366 6939; www.bitforms.com). **Candy & Candy,** 100 Brompton Road, London SW3 (020-7594 4300; www.candyandcandy.com). **Christopher Pearson,** 020-7405 4511; www.christopherpearson.com. **Daniel Rozin,** www.itp.nyu.edu/danny and see Bitforms Gallery. **FredricksonStallard,** 020-7254 9933; www.fredriksonstallard.com). **Gallery Libby Sellers,** exhibitions in various locations, 07774-113 813; www.libbysellers.com. **Loop.pH,** 8 Springfield House, 5 Tyssen Street, London E8 (020-7812 9188; www.loop.ph). **Mark Humphrey,** 0870-240 5867; www.markhumphrey.co.uk. **Moritz Waldemeyer,** 020-7736 7780; www.waldemeyer.com and see Gallery Libby Sellers and Rabih Hage. **Rabih Hage Gallery,** 69 Sloane Avenue, London SW3 (020-7823 8288; www.rabih-hage.com). **SCIN Studio,** 130 Bermondsey Street, London SE1 (020-7357 7574; www.scin.co.uk). **Simon Heijdens,** 07853-464 303; www.simonheijdens.com. **Swarovski Crystal Palace,** 020-7016 6783; www.swarovskicrystalpalace.com. **Troika,** Unit 1, 88a Acre Lane, London SW2 (020-7737 2244; www.troika.uk.com). **United Visual Artists,** 1 Chapel Court, London SE1 (020-7378 0303; www.uva.co.uk).

WALDEMEYER BY ROYAL APPOINTMENT CHAIRS, COURTESY OF GALLERY LIBBY SELLERS/LUKE HAYES PHOTOGRAPHY, COURTESY OF RABIH HAGE GALLERY