

THE NEW SUSTAINABILITY | PART ONE

What goes around

It's not how little we buy that will save the planet from disaster, but how little we waste

How times change. After the last great economic depression, in the 1930s, governments hatched a plan – to generate economic growth through frenzied consumption. Interrupted by the Second World War, the plan took off again in the 1950s. 'Our enormously productive economy demands that we make consumption our way of life,' wrote 20th-century economist Victor Lebow, 'that we convert the buying and use of goods into rituals, that we seek our spiritual satisfaction, our ego satisfaction, in consumption. We need things consumed, burned up, worn out, replaced and discarded at an ever-increasing pace.'

Designers, manufacturers and advertisers seized the opportunity to drive consumption by means of planned obsolescence. Instead of making things to last, they designed them to fall apart, and be replaced. Raymond Loewy went even further. He deliberately gave all kinds of products an up-to-the-minute appearance that was guaranteed to look old-fashioned after a couple of years; suddenly, people wanted to replace their possessions even before they failed. Asked for his thoughts on product design aesthetics, Loewy drily replied that this consisted of 'a beautiful sales curve shooting upwards'.

How they laughed. But not any more. The emphasis is now on conserving natural resources and reducing emissions associated with climate change. Which means that designers and manufacturers face two completely contradictory requirements: to make products that fail (to sustain the economy) or endure (to save the planet, as it were).

Consumers face the same dilemma. Environmentalists urge us to stop buying, but if we do this there will be problems. The world's economy is based on debt, explains Avner Offer, Oxford professor of economic history. 'It needs to grow in order to generate sufficient surplus to pay the interest on loans, and must keep doing that every year.' Professor Tim Jackson, an adviser to the UK Sustainable Development Commission and author of *Prosperity Without Growth*, concurs. 'If we stop buying, the economy will collapse.'

Is there a middle way? A means to reduce consumption gradually, to provide



an economic soft landing, but avoid planetary disaster? If there is, it's going to involve a significant change in patterns of consumption, and although as consumers we like to think we make our own choices, we will need to be nudged by ingenuity, again, on the part of producers.

It's worth examining just how deeply we have immersed ourselves in the throwaway culture. We've come a long way from the days when products were routinely sold with a lifetime guarantee. Even products that last a fairly long time are rare, certainly compared with a few decades ago. Cars made in the 1950s were simple enough to be kept on the road for a very long time. Manual typewriters lasted for decades, too, as evidenced by the novelist Cormac McCarthy, who last year auctioned the machine on which he had typed millions of words since 1963 – still in perfect working order.

Compare the modern equivalents of those products. Cars today are infinitely more complex than older ones, making maintenance impossible even for the most enthusiastic and competent owners. Matthew Crawford, author of the bestselling *The Case for Working with Your Hands*, points out that some cars are now sold without a dipstick, obliging owners to call in experts even just to check the oil.

As for the equivalent of McCarthy's manual typewriter: personal computers go out of date extremely quickly and, again, upkeep is actively discouraged.

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SHEDDING LIGHT

The cradle-to-cradle approach of constantly reusing old objects and materials to make new products (and sell them again) has the potential to save both the planet and ailing economies

Hardware and software are routinely made incompatible with what went before, and customer support is withdrawn for outmoded models. Our possessions, as Deyan Sudjic, director of London's Design Museum, puts it 'are losing their ability to grow old with us'.

Sudjic and the Design Museum are among the forces of resistance. And they are gathering strength. Or at least talking a good game. An exhibition of sustainable design has just finished a five-month stint at the museum, presenting samples, products and prototypes to support the use of sustainable and ethically sourced materials, with the full life cycle and impact of materials taken into account. These include a wooden radio, a parka made out of old military parachutes, a clock that monitors domestic energy consumption in real time, and an 'edible estate' showing the potential to grow food in even the most urban of settings.

Paul Thompson, rector at the Royal College of Art, reports that young designers are increasingly concerned with sustainability, a trend the college is doing its best to encourage. Every one of the RCA's 20 departments requires students to consider responsible stewardship of resources and energy use.

One key objective is to find ways to make enduring products that can also deliver profit margins companies want. 'Leica cameras did that, and Volvo cars,' says Thompson. 'Many people found the idea of throwaway cameras distasteful. This is about getting back to the old idea of emotional value in products, so we don't want to get rid of them.'

Many creative people were woken up to the sustainable imperative, and the challenge it posed, by the publication in 2002 of *Cradle to Cradle* by German chemist Michael Braungart and American >>



architect William McDonough. 'That was a real landmark,' says Thompson. 'It set a flag in the sand for all of us.'

The pair's big idea was the removal of toxic substances from manufacture, and the division of all other materials into two rigidly distinct cycles: biological and technical. Biological materials in products such as shampoos can then be released without harm into the environment to be captured by the forces of nature and turned into new materials – in effect, composted. Technical materials, such as metals and plastics in cars, can be collected and reused with no loss of quality (at present, recycled materials are often contaminated in the process, as when mixed aluminium alloys in drinks cans are melted together). To make recovery of the materials easy, products must be designed to be disassembled. This generally requires greater simplicity of design than before – a reversal of the trend of the past few decades.

One of Braungart's clients is the carpet manufacturer Desso. The company's CEO Stef Kranendijk emphasises that moving towards cradle-to-cradle products requires not mere tinkering but, 'the creation of entirely new products and technologies'. It also requires the firm to take on new kinds of responsibility – such as actively going out to collect its products from clients when they're no longer wanted, to ensure they remain part of the biological or technical cycle.

Braungart insists that cradle to cradle does not mean an end to obsolescence. On the contrary. 'Right now, planned obsolescence is very primitive. The question is, what kind of obsolescence do you want? Take a simple example. Why not make shoes with an expiry date of two years? We can then take back the materials and use them again, instead of selling someone shoes that make them feel bad when styles change, or they fall apart. Sell people two years of foot

SHOE SHUFFLE

Using a deposit system for shoes, so materials are more likely to be returned to the manufacturer for reuse, should lighten our carbon footprint.

transportation and then you get the customer back and the material, too.'

In business-to-business, something like this trend from sales to rental has been common for years, with offices renting rather than buying photocopiers. But what if consumers, in Braungart's example, don't want to tie themselves into, say, Nike forever? Then they go back to Nike with their trainers, get their deposit back and walk away.'

Either way, the point to stress is that in this model there is no such thing as waste – only new materials, which can become increasingly valuable as virgin materials become scarce. Previously regarded as a problem, waste becomes a solution. And by putting materials into a constant cycle, economic growth can be decoupled from the depletion of resources, so there is no need to stop consuming.

'The rainforest in Brazil only exists because of ants,' says Braungart. 'It's poor soil, but the ants carry things around and enrich it. In their calorie consumption they equal billions of people and they produce a lot. They are not guilty consumers – they celebrate abundance.'

But, as Braungart's footwear example indicates, the problem posed by obsolescence won't be resolved merely by improving individual products. Says Anne Chick, director of the Sustainable Design Research Centre at Kingston University, 'Businesses will also have to change their entire model.' This approach needs support from government, for instance by using the tax system to price externals, such as the environmental cost of virgin materials. 'There are some wonderful

NOTHING GOING ON BUT THE RENT

If the economy is to move towards rental-and-renewal instead of purchase-and-disposal, we're going to need new rental facilities. With public finances under pressure, these are unlikely to be state-funded, but that's not necessarily a problem because, through the internet, businesses and individuals are already making an income by renting out their possessions. Ecomodo.com uses a model like eBay, only the idea is not to sell things but to rent them. Someone with a lawn mower could rent it out to neighbours and recoup a part of the purchase price. When the iPad was first launched, an Ecomodo user offered one for rental, allowing would-be buyers to try it out first. This brought Ecomodo to the attention of British actor Stephen Fry, whose enthusiastic tweeting drew many new users. Ecomodo is still relatively small, but the same could once have been said about eBay.

statistics about the average lifetime of a power drill sold by a superstore – it's about eight minutes,' says Professor Jackson. Pricing externals into drills would require them to be more durable or else nobody would buy them.

Too often the tax system has the opposite effect. Take construction. In Britain and elsewhere, the tax regime currently discourages renovation of old buildings (on which VAT is payable) in favour of demolition (on which it is not). 'We have become obsessed with pulling down buildings we deem unfashionable says Thompson. 'And the embedded energy in them is huge.'

More than a year ago, under pressure from the Royal Institute of British Architects, among others, EU finance ministers gave member states permission to reduce VAT on labour costs relating to renovation to five per cent. This would encourage owners to improve homes to reduce their carbon footprint and perhaps also bring back into use the 940,000 homes that currently stand empty because they need extensive repair. Studies suggest that the extra work generated by the change would, in turn, generate more tax revenue than the lost VAT payments. However, the British government has yet to take advantage of the EU ruling.

Elsewhere, companies do seem to be reinventing traditional business models. One that has done that, Chick says, is Streetcar, set up precisely so people could stop buying cars and rent them instead. Users are given a pin number to access the specially adapted cars, and pay a small membership fee, plus a charge based on how long they use the car. Unlike normal car-hire firms, Streetcars can be found on the roadside near the customer, and offer convenient, 24-hour accessibility.

'You do need different models,' says Chick. 'And this has an impact on the work of designers. Instead of receiving a brief, and passing that on to suppliers, they need to be more collaborative, and reimagine whole industries.' One design company that is doing a lot of work in this area, inevitably, is Ideo. Other design consultancies, such as Think Public and Engine, are looking at ways to shape society as a whole.

How exactly this will work is hard to say, but Chick suggests that one day, for example, all the people living in a street will share a single lawn mower, rather than, as presently happens, each household buying its own one. Bad news for lawn-mower manufacturers you might think. 'Not necessarily,' says Chick brightly. 'There would be fewer sales, but perhaps instead they would make much higher-quality – and more expensive – lawn mowers.' ★