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Down in the dumps

Every year in Britain we produce millions of tons of rubbish; yet we recycle a mere 12.4 per cent of it. Our bin, burn and bury approach to waste means we are now drastically out of step with our European neighbours and environmentalists who practise the three 'R's - reduce, reuse and recycle. So when are we going to clean up our act?

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It's Saturday morning in that strange post-industrial hinterland where Wandsworth fades into the river, a zone that has been colonised by the latest wave in super-size consumer stores. Negotiate your way past McDonald's, B&Q and Homebase and you come to the 'civic amenity site'. It doesn't look much like a municipal dump - there are no psychedelic mounds of cans or glaciers of fridges. In fact, it looks remarkably like a superstore car park. Except that here the Golfs and SUVs are dropping off their excess baggage.

Site manager Steve Barthaud has got to know the public's waste habits over the years. 'Some weekends we have over 2,000 people here. Most items delivered to the site can be recycled if the public choose to make the effort. Some of the people who come here want to recycle, but there are plenty that just don't bother and who throw things away regardless of the facilities available on site.'

A climbing frame and a slide are being crumpled into one container, an office desk system into another. At the end there are skips for recycling and neat rows of cookers and fridges. Modern waste management is like watching the high street in reverse - a vivid reminder that what we devour, we must eventually disgorge.

The rubbish is compacted into containers, hoisted on to barges and shipped to landfill sites downriver. As you drive away, a faded board asks: 'Have you thought of recycling?' A chart shows the metric tonnes of rubbish delivered here so far this year (18,114); and the proportion of waste recycled (20 per cent). It is considerably less strident than the warnings on cigarette packs, and yet our bin, bury and burn culture is profoundly damaging to the nation's health.

'The level of recycling in the UK is very disappointing,' says Claire Wilton, senior waste campaigner at Friends of the Earth. 'Particularly if you look at our European neighbours, like Germany and Austria, who recycle at least 50 per cent of their waste. We are doing around a tenth of that in the UK.'

Hester Hettinga, a Dutch marketing consultant who has lived in London on and off for the past seven years, is amazed at the British attitude. 'There is so little awareness here. You can blame the council and government, but it is also people's attitude. I'm amazed by the litter and by the things people throw out on the street... it's everywhere, from Hackney to Chelsea, and everyone from the businessman to the kid on a council estate. It's as if caring about the environment just stops outside your own front door.'

In utopian visions, rubbish-free existence is an enduring theme. In stinking 16th-century London, Thomas More imagined an ideal state where anything dirty or diseased would be forbidden within the walls. In the cartoon Futurama, The Simpsons

creator Matt Groening wickedly satirises our trashy age. Set in 31st century New York, its characters live in a city that has been rubbish-free ever since the passing of the 'idiotic slob' of the 20th century.

But when New York is threatened by a giant ball of 20th-century garbage, jettisoned in space 1,000 years earlier, the inhabitants are forced to stop recycling. They must return to dirty 20th-century ways, so they can produce an equally enormous litter ball to fight the incoming meteor, or die. 'If not for 20th-century garbage-making skills, we'd all be buried under 20th-century garbage,' observes the mayor. Maybe future historians will look back on our era not as the cyber age but the trash age.

Paradoxically, in our increasingly paperless virtual age, one thing that won't dematerialise is rubbish. Household rubbish in the UK is increasing by about 3 per cent per year, but recycling has increased by a miserable 1 per cent per year since 1999. Although the government claims Britain is no longer the 'dirty man of Europe', we are still behind most developed countries on waste management: in fact, we are one of the slackest recyclers in Europe (12.4 per cent, compared to Austria's 64 per cent, Belgium's 52 per cent, or the Netherlands' 47 per cent); and we bury nearly 80 per cent of our household waste in landfill sites on our small, crowded island. The Swiss, meanwhile, bury just seven per cent of theirs. If we continue down today's track it won't be long before we are literally drowning in rubbish.

Following New Zealand's lead, environmentalists would like to see Britain aim for zero waste by 2020 - meaning that all rubbish would be reused, recycled or composted.

The government's target is that at least 45 per cent of household waste is recycled by 2015. Although our record at meeting recycling targets hasn't been good, a series of EU directives coming into force in the next years should force us to rethink our rubbish habits - they are aimed at reducing landfill; regulating disposal of hazardous and toxic waste; and increasing recycling of electrical and electronic appliances, packaging and biowaste.

Friends of the Earth director Tony Juniper says that these EU laws are likely to mean that every UK household will have to separate out its electronic, kitchen and garden waste. 'Last year the government finally backed a new law to provide every home with doorstep recycling by 2010. But more action is still required. The government must tackle the amount we consume, as well as what we throw away. We use far more than our fair share of the world's natural resources, and the rate at which we are doing so is unsustainable. Unless this issue moves up the government's agenda the war on waste will not be won.'

Thankfully, there are chinks in the eco-gloom. Although we've been slow to embrace sustainable principles, a shift is beginning to occur - at least in Europe. The waste disposal plant at Delft, in Holland, by Dutch architects UN, for example, wonderfully communicates changing attitudes. Rubbish is no longer hidden away, but the value of

waste as a resource is displayed by its movement through the recycling process in and out of the plant, a luminous sculptural form that has echoes of early modernism's heroic factories. American design visionary Richard Buckminster Fuller was on the right track decades ago when he argued that 'Pollution is nothing more than an unharvested resource.'

But recycling waste is only part of the story. We also need to re-educate ourselves towards buying goods that are recycled instead of brand new. In Amsterdam, rubbish guerrillas have set out to tempt consumers to (unknowingly) buy back their own rubbish in the Bijenkorf department store. First they gathered discarded products from household refuse and spruced them up. Then they gave them barcode identities stolen from real products, reintroduced them on to the shelves and watched as many were successfully 'resold'. The emergence of the all-consuming developed-world lifestyle is really quite recent. Although the production of waste has been on the increase since the Industrial Revolution, post-war America has had the biggest impact on today's dangerous levels of consumer trash with the invention, 50 years ago, of a concept called 'planned obsolescence'.

Essentially a marketing strategy designed to limit the lifespan of products, the term was coined in 1954 by industrial designer Brooks Stephens. Up until then, durability and lifelong service were considered desirable in a car, an iron, or a kitchen.

In his book *Industrial Strength*, Stephens describes planned obsolescence as: 'instilling in the buyer the desire to own something a little newer, a little better, a little sooner than is necessary'. What was extraordinary was the extent to which it defined consumerism, priming our throwaway culture for turbo vacuum cleaners; computers that are superseded by new models every 18 months and domestic appliances expected to have a lifespan of around three years.

Planned obsolescence, however, is now beginning to look like a very last century kind of idea. The role of designers in promoting sustainability has already been through several phases: the energy crisis in the early 1970s, which led to the first attempts to analyse the lifecycle of a product, then in the 1980s designers were briefed to take into account efficient use of resources and production methods. Then came design for disassembly: products designed so that they could be broken down into reusable components and materials, then fed back into the consumption cycle. Current preoccupations dig even deeper into our relationships with the goods we buy.

Eternally Yours, a Dutch foundation active since 1995, has embarked on an exploration of our complex relationship with the products we buy, questioning why some lead a short, miserable existence and others assume a significant role in our lives.

It proposes ways to extend longevity and the relationship between manufacturer and consumer, so that a product is seen as a sort of starter kit and the designer's role is to set the stage for a series of future scenarios and possibilities for use and reuse. So

co-founder Ed Van Hinte designed a computer game that, instead of the usual sealed box, is made up of a chain of self-contained components that can be updated or repaired (remember that concept?) without replacing the whole thing. He says industry is beginning to listen: 'They realise they have to do something. A colleague recently witnessed the destruction of a batch of new hard drives that were taken off the shelves unsold because they had already been superseded by a newer model.'

The Long Now Foundation started by West Coast entrepreneurs - including computer pioneer Danny Hillis - aims to make us think more long-term: 'Progress lately is often measured on a faster/cheaper scale. The Long Now Foundation seeks to promote slower/better thinking and to foster creativity in the framework of the next 10,000 years.' Hillis's prototype for a 10,000-year clock, which ticks once a year, has a century hand that advances once every 100 years and cuckoos once every 1,000, is on display at the Science Museum.

Change the way we think about the lifespan of materials and we can begin to change the way we manage rubbish. We treat plastic as disposable, yet plastic bottles can last for 450 years, longer than materials like wood or leather. According to Waste Watch, global annual consumption of plastic materials has increased from around 5m tonnes in the 1950s to approximately 100m tonnes today.

One problem is our perception of plastic. Proud Plastics, an Eternally Yours project by Liesbeth Bonekamp, commissioned a survey into plastic which found that while functional qualities were appreciated, people easily tired of plastic items, and the material itself was disliked for the way it ages. Bonekamp says the next step is to involve designers in redesigning the material itself, to make it more desirable.

At the RCA, Richard Liddle is experimenting with ways to enhance recycled plastic, using moulding and laminating techniques so that it can be bent into curves, and combining HDPE and PET to make recycled plastic with more malleable qualities.

But the real villain in the pack is the plastic bag. Introduced just 25 years ago, we now use well over 500bn a year globally. Once in the environment a bag takes from months to hundreds of years to break down and as it decomposes, toxic particles seep into the soil and water. Biodegradable plastic bags might seem like a good idea, but they still take the same amount of energy for production and transportation, and are difficult to isolate in the waste stream. Meanwhile, the rise in supermarkets and an increased emphasis on presentation and marketing has led to a steep rise in packaging. This, too, has changed the composition of household waste.

But in some countries, consumers are fighting back. In Germany, customers can peel off excess packaging at the checkout and leave it for the supermarket to deal with, while in Ireland, the tax on plastic bags has made it socially unacceptable not to take your own bags with you to the shops. Wherever possible, plastic has been replaced by paper.

Supermarket chains are looking at ways of minimising waste. According to Nick Monger-Godfrey, head of corporate social responsibility at Waitrose, the company's Bag for Life scheme, which it introduced in 1997, has prevented the use of 60m conventional carrier bags. They have also introduced a reusable plastic tray system for the transportation of fruit and veg, which has replaced an annual turnover of 16,000 tonnes of cardboard packaging. Biodegradable packaging is also used for organic produce. 'This is still in the embryonic stages,' admits Monger-Godfrey, 'because we need a national infrastructure to compost materials, otherwise it is simply landfilled.'

According to EU directives, the UK has to recycle at least 55 per cent of packaging by 2008, with specific targets set for glass, aluminium, etc. One solution is biodegradable alternatives. Brand consultancy and trend forecaster the Future Laboratory is exploring the potential of protective artificial skins in the form of Granex, a membrane designed for medical use to replace damaged skin. Such technologies might transfer to packaging, where, for instance, they could protect and preserve foodstuffs, possibly reducing the need for refrigeration. Another contender, from Japan, is a film that dissolves in water and can simply be washed off.

The EU is also targeting electrical and electronic equipment with its WEEE directive (waste electrical and electronic equipment) which comes into force in stages over the next 18 months. This will ban untreated e-waste from landfill, setting recovery and recycling figures and shifting the onus on to consumers and manufacturers responsible for returning and recycling goods. In London's Tower Hamlets, a new scheme was set up before Christmas for local residents to recycle CDs, tapes and DVDs, which are then sent to East Africa for re-use.

In the long term, the EU directive should prove an incentive to manufacturers to design for longevity. In the short term we face other problems. This summer, most of the dumps that deal with toxic waste will close, under new EU rules on hazardous waste disposal. John Prescott's last-minute decision to allow a salt mine in Cheshire to become a huge dump for toxic waste narrowly avoided a repeat of the fridge mountain episode, when thousands of fridges accumulated, waiting for CFC extraction plants that had yet to be built.

Some experts fear there could be a return to exporting e-waste illegally to poorer countries for dirty recycling. A couple of years ago a documentary by BAN (Basel Action Network) showed what happened to excess techno waste sent to the village of Guiya in China, where mountains of wires are burnt to liberate metals from their plastic casings, and circuit boards are melted over coal grills to release valuable chips and toxic vapours, poisoning soil and drinking water. European nations have since signed a ban on toxic waste exports, but the US has not.

An increasingly viable alternative is charitable reuse and recycling schemes that help bridge the digital divide by supplying reconditioned computers and mobile phones to

poorer communities and the developing world. Computer Aid International is leading the way, while Fonebak is a nationwide scheme to recycle mobile phones.

But it is garden and kitchen waste that makes up over a third of all household waste. We are likely to see massive EU-driven change in the next few years in biowaste disposal. 'Waste not Want not', the government's strategy for tackling waste, proposes that 50 per cent of households carry out home composting by 2006. It will be interesting to see how quickly our habits change. After all, we can't just turn the consumer clock back to some golden age when apples were bought loose at the local shop and the thrifty ethos of 'waste not want not' was more familiar than today's 'I shop therefore I am'.

But there is a lot to learn, or rather relearn, from our past - and from the developing world, where a scavenger mentality, grass roots recycling and sheer necessity can lead to imaginative leaps in redeploying 'waste'. When the Taliban was overthrown, one of the first images of Kabul showed how the city had sprouted vast flower-like satellite dishes made from recycled tin cans. In order to meet the soaring demand for television, banned under the Taliban, and undercut expensive imports, enterprising welders and beaters hammered tin cans into giant dishes, decorated with the logos of Lysol antibacterial solution and Fill'n'Sand.

Sometimes, however, the rubbish is simply left to build up and the streets actually disappear beneath it. Several years ago in the Philippines, a rubbish mound collapsed in Manila, burying hundreds of scavengers in an avalanche of filth. And in the Manshiet Nasr slum district in Cairo, zabaleen (rubbish collectors) live by collecting, sorting and recycling the city's waste much like the underclass who eked an existence from rubbish tips in Henry Mayhew's descriptions of Victorian London.

There is nothing new about the business of rubbish collection or recycling used materials. Like many ideas in the West, the Cretans got there first. The first recorded landfill sites were in Knossos. Historically, Britain's waste was dumped in the street or countryside, but as the population grew so did waste problems - led by effluent and excrement. In the Middle Ages, 'rakers' were employed in each London ward to load rubbish into carts and remove it weekly, to be sold as compost or dumped in the Essex Marshes.

But the real escalation in rubbish and pollution came with the Industrial Revolution, and modern waste regulation really began with the Public Health Act of 1848. Garbage was collected by private contractors and sorted into scrap and raw materials for industries such as soap making, road building and paper manufacture. In *Our Mutual Friend*, Mr Boffin, 'the golden dustman' who considers himself 'a pretty fair scholar in dust' and can price the Mounds to a fraction', made a fortune from a malodorous heap at King's Cross.

The first bottle banks were introduced in the 1970s and the Local Authority Recycling Advisory Committee was created in 1985. But recycling has only been a growing theme

in national waste strategy since the early 1990s, when Thatcher blithely proclaimed that 50 per cent of household waste could be recycled. In order to meet new EU landfill targets, doorstep collections are increasing, though many local authorities still have inadequate recycling facilities. 'A lot more is possible,' says Claire Wilton, of Friends of the Earth.

'Sixty per cent by 2010 should be achievable.' Yet today, despite the growing green lobby, recycling has been remarkably slow to take hold, fraught with setbacks and targets that look unlikely to be met. Local authorities have overall targets to recycle around 17 per cent of their waste by 2005. The last verified figures (August 2003) revealed that recycling for 2001/2 was 12.4 per cent.

As Rethink Rubbish, the waste awareness campaign, says, 'recycling has to be made easier for people to understand and do'. It cites disinterest as a problem area: 'Currently, people are neither incentivised to act nor penalised for inaction.' The Waste Not Want Not' strategy includes recommendations 'for a third of collection authorities to have tried incentive-based schemes' by 2005/6.

The Dutch already enforce strict penalties. 'In Holland, you only put out rubbish on rubbish day, not the day before or the day after,' says Hettinga. 'Once I got the day wrong and and put my garbage out too early; the environment police contacted me. Because they found I was freelance I got the business fine, not the residential fine - about 400 euros.'

The truth in this country is revealed in *The Tomorrow People*, where trend forecaster Martin Raymond found that even those who claim to be keen recyclers are in fact only marginally better than the average household. Keen recyclers might bank bottles and paper but still discard large quantities of recyclable materials and foods. Radical action is needed before it's too late. I'd vote for the designer Michael Marriot's bolder tactic: 'If we have a Swede running our football why shouldn't we have a Dutch government running our recycling?' Now that might actually get us out of the waste crisis.

Further information

[Friends of the Earth](#)

www.eternally-yours.org

[The Long Now Foundation](#)

[Waste Watch](#) - for information on reducing, reusing and recycling

www.childrenscrapstore.co.uk (reuse of all sorts of waste for childrens play activities)

[Composting Association](#)

[National Recycling Forum](#) - database of recycled products

[BAN](#) - Basel Action Network

Computer Aid International - refurbishes used computers for schools and community organisations in the developing world

Oxfam - mobile phone recycling scheme

www.recycle-more.co.uk (how to increase recycling rates in home, school or office)

www.rethinkrubbish.com

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