



**LOVED
CLOTHES
LAST**

FASHION REVOLUTION

ISSUE #2

the past

02 why waste?

the present

10 waste is a design flaw

18 think differently

26 buy less, choose well

36 broken is beautiful

42 care, repair, rewear

70 darn it

78 recycle clothes responsibly

the future

102 fashion should become wasteless

118 time to shift

FRONT COVER:

Upcycling kidswear label
New Kids in the Hood source
their fabrics from a textile
recycling factory in Germany
www.nkith.com

Photo by Maria Bayer
www.mariabayer.de

Over the past few decades, we have been witnessing (and participating in) an accelerated growth in the production and consumption of clothing that is putting undue strain on our resources. We extract, process and discard too fast, unsustainably. Considering we are just beginning to understand the implications of our addiction to buying, and only starting to look at methods, mindsets and technologies to change this (such as recycling, upcycling and circularity), we must sadly assume that almost everything we have been throwing away over the past few decades still exists somewhere on this planet, likely to be buried in landfill or polluting our oceans. The lack of transparency in the fashion value chain prevents us from seeing exactly how much waste is created, where this waste is produced and the impact it has on our environment. Improving the way we buy, care for and dispose of our clothes is everyone's responsibility. It requires a change of our own personal habits, which is good news because it means that we can all take immediate and effective action. But our local governments and fashion brands have a big responsibility too, and we can encourage them to do more. This fanzine will take you on a journey from the past, to the present and towards the future of fashion's huge waste problem — from identifying and understanding the issues (like the fact that clothing production has more than doubled since 2000 and yet we do not use 40% of the clothes we buy¹), to exploring the myriad ways we can shop more thoughtfully, take better care of our clothes and recycle them more responsibly, to discovering the designers and innovators helping the industry move towards zero-waste. Hopefully, when you finish reading this fanzine, you will be inspired to be more creative with the clothes you own and mindful of their future. Clothes can have a long history, if we let them. As Joan Crawford said “Care for your clothes, like the good friends they are” because, **#lovedclotheslast**.

WHY

WASTE

?

**ONCE UPON A TIME, IN A LAND
CLOSE TO EVERYBODY'S HOME,
CLOTHES LIVED FOREVER. OK,
MAYBE NOT FOREVER. LIFE IS
NOT A FAIRY TALE, BUT MUCH,
MUCH LONGER. THE ART OF
RECYCLING, UPCYCLING AND
TRANSFORMING TO PROLONG
OUR BELONGINGS' LONGEVITY
IS AS OLD AS WE ARE. IT
INFORMS OUR LIFESTYLE,
FOOD, DESIGN, ART, AND
FASHION. WHEN THINGS HAD
VALUE, WE KEPT THEM, WE
CONSUMED THEM. NOW, WE
FREQUENTLY DON'T. IT'S TIME
TO LOOK BACK AND MOVE
FORWARD. TAKE A DEEP
BREATH, SLOW DOWN.**

from rags to riches

It is no secret that the fashion industry is one of the dirtiest in the world. Our rivers are polluted with toxic chemicals used to process and dye clothes, low paid mainly female garment workers routinely face human rights abuses, and tonnes of unwanted fashion materials are dumped into landfills worldwide, where they can sit for hundreds of years.

Consumers are part of this problem; in privileged Western countries, we deem clothing to be disposable due to its low cost. We buy, we wear, we rip, we throw away. Many of us no longer feel motivated to value the things we buy, even less so to repair them when they start to fall apart. We rely heavily on the often exploitative ready-made garment industry, but when did we become so dependent? More importantly, where do we go from here?

In the United Kingdom, trash used to be literal treasure. One folkloric figure in textile history is that of the rag-and-bone man, known for scouring the streets of European cities in the hopes of finding something, anything of value.

Reported on by anthropologists as early as the 1840's,² these mythical men became a source of fascination for writers; Henry Mayhew offered a glimpse into their daily routine with 'London Labour and the London Poor', a comprehensive series of interviews which painted them as misunderstood minds making the most of situations often characterised by poverty and hardship. "The bone-picker and rag-gatherer may be known at once by the greasy bag which he carries on his back," Mayhew wrote, before detailing the spiked sticks these pragmatists would use to rifle through heaps of dirt for hidden gems.

Although marginalised and hindered by constantly-increasing government legislation, these rag-and-bone men made significant contributions to the rag trade, which offered early sustainable solutions to the countless heaps of clothing otherwise laid to rest in landfill.

When Britain experienced a yarn shortage during the Napoleonic wars, weaver Benjamin Law devised a solution in the form of 'shoddy', a fabric hybrid of rags and virgin wool. Built on the labour of street-scourers and discarded scraps of fabric, the rag trade went on to boom throughout the 19th century, attracting international buyers. In 'Waste and Want', Susan Strasser describes the unprecedented demand as such: "The dollar value of American rag imports increased on average 26% per year between 1837 and 1872. By 1875 the United States imported more than 123 million pounds of rags, about half of which came from the United Kingdom and British possessions."³



Craftspeople in other countries across the world have sought to minimise textile waste in other ways, creating one-piece garments whose manufacturing processes generate little or no waste whatsoever. The kimono is one key example. Cut from a single bolt of fabric, the garment is made of several component pieces, all of which can be disassembled and re-sewn by hand.

Better still, the lack of fabric interference means it can be easily re-tailored to fit another wearer. Similar is the sari, which translates roughly as 'strip of cloth'; while Western countries have shifted relentlessly to fast fashion over the last few decades (as well as plenty of wealthy Eastern countries, Japan included), other communities have stuck to collecting and wearing these garments of cultural importance.

In other countries finding pragmatic ways to rework textile waste is ingrained in the cultural DNA. Victoria L. Rovine wrote a book specifically about the importance of second-hand clothing in various parts of Africa, entitled 'African Fashion, Global Style'.⁴

Although heavily rooted in 21st century examples, there are countless historical examples which underscore the importance of recycling in various African cultures: designer Lamine Kouyaté explains, "It's an African...philosophy to use things up. You don't waste anything, but create new from old." Often, waste textiles were transformed into clothing which replicated luxury; in Senegal, for example, women would replicate the expensive Manjak cloth by unravelling sweaters made from yarn and muslin, using embroidering techniques to transform them from throwaways into covetable new pieces.

Elsewhere, in newly industrialising countries in particular, the advent of the sewing machine revolutionised domestic approaches to textile waste in the late 19th century. Patented in the USA in 1846 and later exhibited at London's Great Exhibition in 1851, the innovative device found enormous success; by 1877, there were said to be half a million machines used in American households and plenty more in Britain. The new tool facilitated a shift towards a 'make do and mend' attitude throughout the early 20th century; wealthy households employed dressmakers, whereas working-class women were encouraged to repair and customise their own clothes when possible.

Although a product of necessity during a period of history fraught with international war, the sewing machine caused a cultural shift: clothes were hand-repaired, up-cycled and revamped as opposed to discarded at the first signs of wear and tear.

This mentality may have shifted as the ready-made garment industry has rapidly become the industry's most profitable model, but this change is not irreversible. Not only are clothing swaps, craft workshops and the reviving rag trade looking back in order to look forward, there's a new, more accessible conversation showing us all that small shifts towards sustainability are easier to make than we think. The context may have changed, but the 'make do and mend' mentality is once again becoming increasingly prevalent not necessarily out of necessity, but because clothing customisation is one of the easiest and most enjoyable ways to truly put your own stamp on your wardrobe.

We may have come a long way since the rag-and-bone men of the Elizabethan era, but there's a lot to be said for minimising waste and recognising what we, as a society, have always known: that **#lovedclotheslast**.

WRITTEN BY:
Jake Hall
twitter.com/jake2103

ILLUSTRATION:
Georgia Keeling





Used clothing sent for recycling in India is hand-sorted by colour © Tim Mitchell & Lucy Norris

HOW FASHION IS WASTED

ALDEN WICKER

TODAY, IT'S BECOME CLEAR THAT THE PUBLIC HOLDS TWO OPPOSING VIEWPOINTS SIMULTANEOUSLY: THE OLD VIEW THAT CLOTHING IS VALUABLE AND THAT SOMEONE WILL APPRECIATE IT EVEN WHEN WE ARE DONE WITH IT, AND THE NEW VIEW THAT IT'S CHEAP AND DISPOSABLE. WHICH VIEW IS MOST POPULAR? INCREASINGLY, THE LATTER, AND IT'S A PROBLEM FOR THE ENVIRONMENT.

Consumers in the United Kingdom now only hang on to clothing for an average of 3.3 years,⁵ according to Waste & Resources Action Programme (WRAP). That's a lot longer than a disposable water bottle, but as clothing consumption increases and fashion trends speed up so fast that what's in this week could be out the next, fashion waste is piling up.

According to Copenhagen Fashion Summit's 'Pulse of the Industry' report,⁶ fashion is responsible for 92 million tons of solid waste per year globally, representing 4 percent of the 2.12 billion tons of waste we dump globally each year. It is also responsible for the emission of 1,715 million tons of CO₂ in 2015, about 5.4 percent of the 32.1 billion tons of global carbon emissions in 2015.⁹ The actual emissions associated with shipping and disposing of clothing is actually tiny compared with the emission from its production. But disposing of clothing after just a few wears is indirectly responsible for more emissions and pollution — it necessitates buying more new clothing, which has to be produced.

AS CLOTHING CONSUMPTION INCREASES AND FASHION TRENDS SPEED UP SO FAST THAT WHAT'S IN THIS WEEK COULD BE OUT THE NEXT, FASHION WASTE IS PILING UP

According to a report by Value Village, 10.5 million tons of clothing is sent to landfill every year in North America alone.⁷ Post-consumer (after the consumer has used it) textile waste is but a small fraction of total textile waste. In New York City, which has a dwindling fashion manufacturing district, manufacturing scraps add up to 40 times more than what we consumers throw out.⁷ Just imagine what that figure is like in the Asian countries that make almost all of our clothes!

Why are we throwing out all this clothing? In the UK, consumers reported to WRAP that for the last item of clothing they threw away, about 18% of them did so due to the garment wearing out or being damaged in some way. (And that doesn't include stains.) 26% of the time it was because the consumer didn't like it anymore.⁹

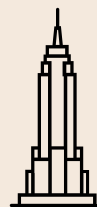
It's not a stretch to pin this dislike on the quickly moving trends propagated by fast fashion. What's in style right now? Skinny jeans or wide leg? Embellished or graphic sweatshirts? Out-of-date and worn-and-torn clothes are not typically re-sellable in secondhand shops.

26% OF CLOTHING WAS DISPOSED OF BECAUSE THE CONSUMER DIDN'T LIKE IT ANYMORE

Only 9 percent of discarded textiles were recovered from the waste stream in the U.S.¹⁰ because, unfortunately, no one has developed a solution to collect clothing and accessories as efficiently as we collect disposable paper, glass, metal, and plastic. Curbside fashion collection programs have largely fallen flat after initial fanfare, a victim of the complexity and expense of collecting items that can be easily ruined and rendered valueless by rain, stains, or a small tear. So consumers fall back on the old paradigm that clothing, even fast fashion that cost them \$5 to buy in the first place, is a valuable charitable donation, and dispose of it by dumping a bag at a charity shop and taking a tax deduction. But is that even good citizenship?

Some advocates say that you should donate your torn and worn clothing, because it can be recycled. But Goodwill has advocated for putting torn, worn, and unfashionable clothing that a friend or relative wouldn't be caught dead in right in the trash, since it costs the charity money to dispose of unsellable items — California Goodwill alone spends \$7 million a year on dumping costs.¹¹

In New South Wales, Australia, an estimated 40 percent of what is dropped off at charities is unusable,¹² because it's low quality, or because it's left out in the elements and ruined. The NSW EPA tested some solutions, and the most successful program involved surveillance cameras and signage saying that if bins were full or the charity was closed, to come back later, and that dumping is illegal. But this draconian approach doesn't seem like a good long-term strategy, as we as a society seek out more convenient and quick options for offloading our burgeoning waste. How much of that clothing that was brought after hours was then shoved in the nearest garbage bin?



In North America, 10.5 million tons of clothing is sent to landfill every year.¹³

That's about 30 times as heavy as The Empire State Building.



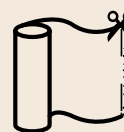
By doubling the useful life of clothing from one year to two years, emissions can reduce over the year by 24%.¹⁴



Globally 20% of textiles are recycled, meaning the other 80% are lost to landfill or incineration. (see p81)



Less than 1% of collected clothing is truly recycled into fresh textiles.¹⁵



It is estimated that we make 400 billion m² of textiles annually. 60 billion m² is cutting room floor waste.¹⁷



UK consumers now only hang on to clothing for an average of 3.3 years.¹⁸



20% of global industrial water pollution comes from the treatment and dyeing of textiles.¹⁹



Clothing production doubled from 2000 to 2014, exceeding 100 billion garments in 2014.²⁰



70% of clothes we throw away have irreversible damage such as colour fading, stubborn stains or shrinking.²¹

Charities and relief workers don't even want free clothing donations. Shelters need functional outerwear and new undergarments, but not cheap clothes. Relief workers in disaster zones spend valuable time and money warehousing influxes of useless clothing donations before also sending it to the dump.

H&M, Levi's and some other fashion companies now have donation bins in their stores that will accept any quality used clothing from any brand. It remains to be seen how effective these programs will be at dealing with the enormous amounts of textile waste generated each year. Since 2013, H&M has collected 40,000 tons of clothing globally.²² That is less than 1% percent of the total textile waste sent to the landfill or incinerated in the same time — in the U.S. only.²³

And "recycling" might not mean what you think it does. When we speak about recycling a plastic water bottle, paper, or tin, it means that it is broken down completely and used to reconstitute new products. But in the U.S., the definition of textile "recycling" includes the 20-40 percent of donated clothing that is resold by charity, the 25-40 percent that is downcycled into insulation and rags, and the 20-30 percent that is shipped for reselling in the Global South and Eastern Europe.²⁴ Less than 1 percent of collected clothing is truly recycled into fresh textiles.²⁵

LESS THAN 1% OF
COLLECTED CLOTHING
IS TRULY RECYCLED
INTO FRESH TEXTILES

One textile recycler I spoke to in New Jersey admitted that it costs him more money to collect and process torn and worn textiles than he earns by selling it to downcyclers. Once clothing is collected, it's difficult to sort it efficiently.

Clothing is still sorted by hand, run down conveyer belts where workers have to make a split-second decision on where it should go. They don't have time to examine labels for content, if it's still attached to the clothing at all.

THE TECHNOLOGY IS
NOT THERE YET TO TRULY
RECYCLE CLOTHING

The technology is not there yet to truly to recycle clothing anyway. Only 100 percent natural fibers could theoretically be composted, but they would need to be separated from the metal and plastic trimmings. Plus, many natural fibers are dyed and finished with toxic chemicals, making them unsuitable for compost.

When natural fibres are landfilled, they decompose but also emit methane, a more potent greenhouse gas than carbon. Plus, manually chopping up natural fibers for recycling degrades and weakens them. For example, jeans can be chopped up by machines, but only about 20 percent of the cotton in a new pair of jeans can be constituted recycled cotton,²⁶ the rest has to be virgin, long-staple fibers. More often, cotton clothing - such as jeans - are made into insulation, which will be landfilled once it has served its purpose.

Synthetic fibers such as polyester, nylon, and acrylic are essentially plastic filaments that will take an estimated 500 to 1,000 years or longer to fully degrade,²⁷ in the meantime being eaten by maritime life and us. Only high-quality, pure polyester (à la Patagonia) can be melted down and recycled, and there's only one company in Japan who can do so. Their factory is currently maxed out on capacity.

And just like with disposable packaging, mixed fibre clothing (polyester and cotton, for example) poses a serious problem for recyclers.

How to separate plastic threads from cotton ones? You can't... yet. Not at scale.

There are some interesting startups and technologies focused on reducing fashion waste that are being funded by foundations connected to H&M, Kering, C&A, and the coalition of fashion brands in the Sustainable Apparel Coalition. These include microbes that digest polyester, technology for breaking down cotton completely to be reconstituted into new fibers, an online marketplace for leftover textiles, a digital thread that can facilitate easy sorting of textile waste, upcycling old denim into new denim, plus a variety of biological materials (mushrooms, food waste) that could replace synthetic and semi-synthetic materials. However, they are all in nascent stages and won't be ready for mass application for many years yet.

There are signs of hope, however. In the UK, according to WRAP, post-consumer clothing waste going to landfills has dropped by 14 percent from 2012 to 2015, representing 50,000 tonnes not sent to the landfill — a huge success.²⁸ It started with a consumer education campaign urging consumers to "Love Your Clothes," with advice on how to purchase, care, repair, and dispose of clothing more responsibly, plus tips and advice on up-cycling and maintaining your clothes.

This is great news, since buying secondhand clothing is triple sustainable. It means that fewer new clothes are sold and hence produced. It keeps clothing out of the landfill and from being shipped around the world to secondhand markets. And your money is going to a local small business or charity.

BUYING SECONDHAND
CLOTHING IS
TRIPLE SUSTAINABLE

But until clothing production becomes completely sustainable, technology finally makes clothing recyclable on a mass scale, and we figure out how to efficiently collect unwanted, worn out clothing, the best thing we can do is to buy fewer, better things. Let's foster a culture of valuing quality clothing that lasts for a long time and support companies who make clothes that can be loved and worn for many years, passed on to other wearers who will also love it, until the clothing is finally composted or recycled responsibly. That's the dream, anyway. Are you in?

THE BEST THING WE CAN DO IS TO BUY FEWER, BETTER THINGS



We take and we take but we do not give back,
Leading our world down a devastating track,
We watch as our natural resources deplete,
While we shop till we drop for things we don't really need,
Putting pressure on supply chains and making them sweat,
While we cuddle up on our sofas surfing the net,
Demanding more and more and wanting it faster,
We are driving our world into a mass consumption disaster.

ROSANNA HOPKINS

[@rzhopkins](#)

WASTE

IS A

DESIGN

FLAW

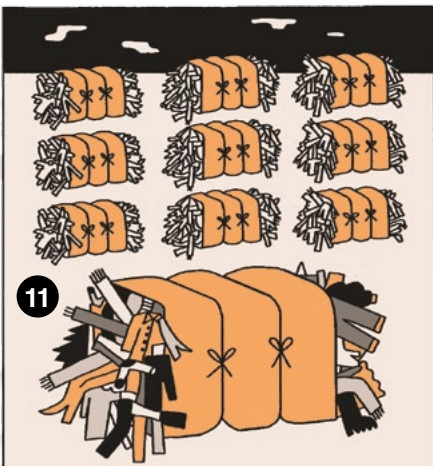
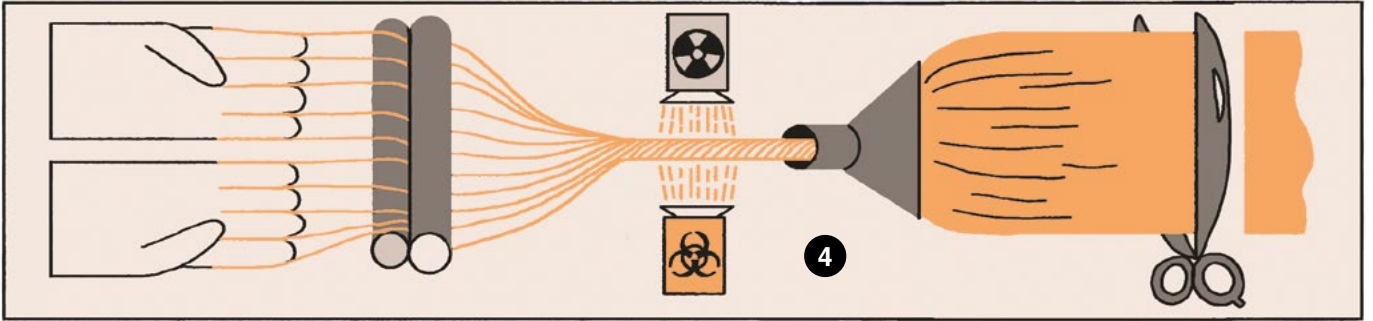
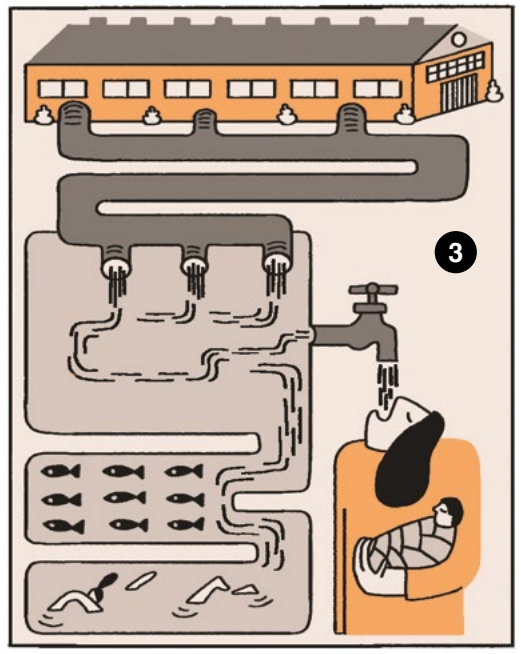
**MATERIALS ARE REGULARLY
WASTED DURING THE
PRODUCTION PROCESS.
WASTE CAN BE A RESOURCE
BUT DESIGNERS MUST BE
TAUGHT HOW TO MAKE USE OF
DISCARDED MATERIALS. WHILE
POST-CONSUMER WASTE IS
ACCELERATED BY POOR DESIGN
AND QUALITY, PRE-CONSUMER
WASTE CAN BE MINIMISED
THROUGH CREATIVE DESIGN
AND QUALITY CONSTRUCTION.
WE NEED A 360° DESIGN VISION
WHERE EVERY BIT OF EVERYTHING
MADE IS REUSABLE, ADAPTABLE,
OR BIODEGRADABLE —
A CLOSED LOOP VISION FOR
AN OPEN MINDED FUTURE.**

Fashion is one of the biggest polluting industries in the world, and in 2016, supply chain waste was estimated at over 800,000 tons.²⁸ Waste occurs at every stage of the fashion supply chain, and therefore each stage needs unique solutions for reducing waste.²⁹

- 1) Growing conventional cotton involves a large amount of fertilizers and pesticides, which can contaminate freshwater sources, harm ecosystems and affect the health of farmers.
- 2) It takes about 70 million barrels of oil — nearly the amount of all crude oil produced globally each day — just to produce the virgin polyester used in fabrics each year. And the industry aims to double its use of polyester by 2030.
- 3) Up to 8,000 synthetic chemicals are used to turn raw materials into textiles, some so toxic that scraps must be handled as hazardous waste. 20% of global freshwater pollution comes from textile treatment and dyeing.³⁰
- 4) The majority of supply chain waste, around 440,000 tons, arises during preparation of fibres to make yarn and garments, most notably in China and India.³¹ Plus, rolls of unwanted or damaged fabrics with recognisable branding can be slashed, landfilled and incinerated.
- 5) Once the fabrics have been created, they are cut up into pieces ready to be sewn together as garments. Each year during this production phase, an estimated 60 billion m² of textiles ends up as cutting room floor waste

- that's 15% of all textiles going to waste when fabric is cut.³²
- 6) Just one garment can be sent to multiple countries for different stages of production before reaching stores. A single cargo ship can produce as much cancer and asthma-causing pollutants as 50 million cars in just one year.³³
 - 7) The average person buys 60% more items of clothing and keeps them for half as long as they did 15 years ago.³⁴
 - 8) Yet 40% of clothes in our wardrobes are rarely or never worn. There are 3.6 billion clothes left unworn in the wardrobes of American citizens, a whopping 57 items per person.³⁵
 - 9) Washing, drying and ironing your clothes accounts for 36% of the total environmental impact of the average garment during its lifetime. In a recent study 83% of tap water samples around the world were contaminated with plastic micro-fibres.³⁶
 - 10) Roughly £140 million worth (350,000 tonnes) of clothing goes to landfill in the UK every year.³⁷ Meanwhile North Americans send 10.5 million tons of clothing to the landfill each year.³⁸
 - 11) More than 70% of the clothes donated globally end up in Africa, which can be damaging to the economy of local tailors.³⁹
 - 12) As much as 95% of the clothes thrown in the trash could potentially be re-worn, reused or recycled but currently only 12% is re-sold locally. 56% goes to landfill and 24% goes to incineration, where they release further hazardous chemicals and greenhouse gases.⁴⁰





ALMOST ANY HISTORY
OF FASHION IS A HISTORY
OF WASTE-MAKING.

We are, however, at an opportune juncture to make a permanent break with fashion's seeming inseparability from waste. Just as fashion design has historically been a waste-making activity – creating waste with a brief first existence as clothing – it now calls to be recognised for its powerful new role in designing out waste.

There are two broad categories of textile waste: pre-consumer waste and post-consumer waste.

Pre-consumer waste is created in the cultivation and production of fibres, and manufacture of garments, although most waste is created at the garment production stage. On average, clothes that are created by cutting and sewing fabric use approximately 85 percent of the fabric produced to make them, meaning that 15 per cent of it is wasted.⁴¹

Zero-waste fashion design refers to fashion design that integrates pattern cutting in a way that no fabric is wasted in the making of a garment. The entire life cycle of a garment ought to be considered at the design stage, providing opportunities for newly enriched fashion design practice.

Good ideas do not date and yet in the pursuit for newness, we in fashion tend to walk away from great ideas purely because of an artificial expiry date. A good idea does not have a half-life, nor should a good idea be wasted.

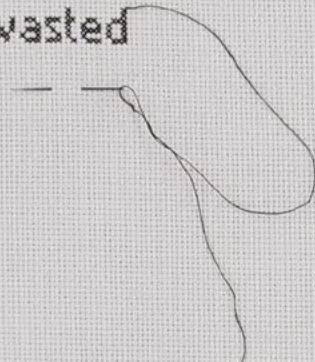
Timo Rissanen
timorissanen.com
[@timorissanen](https://twitter.com/timorissanen)

Timo Rissanen is Assistant Professor of Fashion Design and Sustainability at Parsons School of Design in New York City, and is an artist and expert on zero waste fashion design.

good design
endures

good design
tickles
the imagination

good design
is not to be
wasted



JOB OPPORTUNITY

TO WORK AT THE FOREFRONT OF INNOVATION IN THE FASHION INDUSTRY

CREATIVE WASTE ENGINEER

Are you brimming with ideas on how to turn waste into treasure?

Do you consider yourself a hyper-creative problem solver?

Are you passionate about resource efficiency?

Then this job is for you!

RESPONSIBILITIES INCLUDE:

- Liaising with suppliers to identify, evaluate and catalogue discarded materials.
- Liaise with design and buying offices to integrate waste and discarded materials into new product designs.
- Develop new functions to be embedded in the company's Design, Production and Planning systems that will enable discarded materials to be re-introduced into the manufacturing cycle to ensure these are accounted as a valuable resource.

Successful candidates need not apply

Why? Because this job does not yet exist. But it should!

Please contact your favourite fashion brands and tell them to do more about waste.

www.fashionrevolution.org

WHAT HAPPENS TO CLOTHING THAT GOES UNSOLD?

DR CHRISTINA DEAN

[No one knows the true scale of 'deadstock' clothing waste — in other words, clothes that are unable to be sold at full or discounted price and must be gotten rid of somehow.](#)

We know that around 100 billion garments are manufactured annually.⁴² Let's say the sell-through rate (both full and discounted) is a generous 90%, then potentially 10 million items of clothing become 'deadstock' every year. That's a lot of clothes to miraculously make 'disappear.' So what do brands and retailers claim to do with the products they can't get customers to buy?

> ["We sell through discounts and outlets"](#)

Shockingly, 75% of apparel purchases are now made at discounted prices⁴³ — fuelling a race to the bottom where increasingly lower price points gets consumers hooked on cheap, cheap, cheap! Some traditional retailers now have more discount outlets than full-priced stores. But when the thrill of discounted shopping fails to entice the consumer into making a purchase then brands and retailers must get rid of their 'deadstock'. The truth is that offering discounted prices will never ensure all products are sold. Retail space, warehouse space and even prime website ad-space isn't infinite, which means products that aren't selling need to be gotten rid of. But where?

> ["We sell on through our partners"](#)

This is fashion lingo for a process in which brands and retailers sell their unsold wares in bulk into other non-competing markets. In this process clothes are often de-labelled or re-labelled to be sold on again. For example, European brands look to Australia to sell this sort of 'deadstock.' The secondary market for clothes and textiles is orchestrated by 'jobbers.' Think of used car salesmen but instead of Porsches it's polyesters.

> ["We organise friends and family sales"](#)

Unless all their staff members have huge families and thousands of friends, this tactic will hardly make a dent in the huge volumes of apparel going unsold each season.

> ["We donate unsold clothes to charities"](#)

Whilst this sounds good on paper, in reality donating and selling (aka dumping) unsold clothes to lower income countries can have negative consequences on their local economies and communities. More on this topic later in the zine.

> ["We destroy unsold clothes"](#)

This is a reality very few brands are willing to admit. In fashion talk, especially by the tongues of luxury brands, this means that

clothes are either shredded and recycled (think catwalk couture becoming carpets) or incinerated (think puffs of exquisitely luxurious smoke.)

Whilst those working in the industry know that incineration is sometimes, sadly, par for the course, the public can only rely on rumours about how unsold or damaged clothes goods are destroyed. It's quite a well-kept secret.

But the lid is increasingly being lifted off about the incineration secret. This was recently - and rather dramatically - exposed by Operation X, the investigative report by Danish TV Channel, TV2.⁴⁴ Reporters delivered a strong blow by providing their own evidence that supposedly systematically demonstrates incineration of clothes by several big high street brands. This programme is bringing awareness (and in some cases righteous anger) to the issue of waste incineration. However, a healthy dose of reality is required. The battle for brands to cope with unsold inventory isn't as straightforward as it seems. Large scale recycling is not yet up to scratch and brands and retailers strive to protect their highly-prized intellectual property and brand image.

Also, no one really wants to take the blame for the type of fashion waste that essentially arises from trying to sell clothes that customers don't want — be this due to buyers' irresponsible judgment calls, lack of understanding of their customers' changing tastes or missing the boat in terms of the whippet-fast trends. Someone has got to take the blame for getting order numbers, production and retail wrong.

[No more excuses](#)

There are solutions that don't involve destroying or sending perfectly good materials to landfill.

In the short term, there is an urgent need for fashion buyers to curb their enthusiasm, rein in their purchase orders and place orders more responsibly up front to limit the amount of dead stock inventory at the end of a season. Plus, tech and logistic improvements will also do wonders at helping fashion brands get to grips with ordering more realistically and according to what customers ultimately want. In the longer term, all solutions point to keeping surplus and discarded materials in the fashion loop for longer.

To fuel this change further and faster, as consumers we must all be asking our favourite fashion brands:

> ["What do you do with your waste?"](#)

WRITTEN BY:

Dr Christina Dean
www.redress.com.hk
[@drchristinadean](https://twitter.com/drchristinadean)

Dr Christina Dean is the founder of Redress, a Hong Kong-based environmental NGO working to reduce waste in the fashion industry.

PHOTOGRAPHY:

William Farr
williamfarr.co
[@william_farr](https://twitter.com/william_farr)

William Farr is an installation artist and image maker, working primarily with found materials.



THINK

DIFFERENTLY

**TO CHANGE THE SYSTEM, WE
MUST CHANGE THE CULTURE IT
THRIVES ON. WE MUST BEGIN
WITH OURSELVES. INDIVIDUAL
ACTIONS ON A COLLECTIVE SCALE.
THIS REVOLUTION STARTS WITH
THINKING DIFFERENTLY ABOUT THE
CLOTHES WE BUY AND WEAR.
TO LOVE FASHION BUT TO QUESTION
WHY WE FEEL COMPELLED TO
SHOP. TO BE MORE MINDFUL OF
THE IMPACTS OF OUR SHOPPING
HABITS AND THE WAY WE CARE
FOR CLOTHING. WHERE OUR SENSE
OF VALUE IS NOT DEFINED BY
THE LATEST TRENDS BUT BY THE
BEAUTIFUL STORIES BEHIND OUR
CLOTHES, SO THAT IT BECOMES
A TERRIBLE WASTE TO DISPOSE
OF CLOTHING TOO SOON.**

shopaholic

For many of us even just the thought of shopping can send our brains into pleasantries overdrive!

The neurotransmitter dopamine is released when we're just considering shopping. Some research shows that anticipation has a higher level of dopamine release than reward itself. This part of our brain is called the nucleus accumbens or 'pleasure centre'.

When we get to the shops, all dopamine driven and looking for rewards, something even more interesting happens. When we see a price tag a different part of our brain kicks in; the prefrontal cortex associated with decision-making. This area is implicated in processing pain.

So to put it simply, if the pleasure of the purchase outweighs the pain of the payment, then 'retail therapy' wins! Fast fashion has made it possible for shoppers to experience this dopamine high more frequently than ever before.

It used to be that fashion outlets stock changed every season. Our need for variety has seen that cycle reducing. Fashion brands can get a product from production order to retail sale in as little as 36 hours.⁴⁵

Stores, fashion houses and magazines telling us what's 'trending' fulfills our need for certainty, consistency and belonging. Whilst we still want variety, we also want to belong. So wearing the latest 'in thing' fulfills the need for variety and for certainty.

According to UCLA neuropsychologist Robert Bilder, PhD, excessive shopping was recognised as a compulsion. It's now argued by Bilder that it is actually an addiction. Bilder explains that to call something an addiction suggests it's possible to "develop a tolerance" to it, saying "it requires a larger dose to get the same effect. You find yourself needing more and more."⁴⁶

It's been suggested that a dopamine high can be equivalent to the high felt whilst gambling or drinking alcohol. These addictions have strict rules and regulations around them for consumer safety. Yet shopping addiction seems to be the acceptable addiction.

WRITTEN BY:
Kirsty Milligan
[@kirstymilliganstylist](#)

ILLUSTRATION:
Celeste Mountjoy
[@filthyratbag](#)



Stills from the film 'Loved Clothes Last', produced by Fashion Revolution, directed by Balhazar Klarwein, produced by Feel Films, and starring Angelina Jesson. youtu.be/4zxQWrcTKgs



If the girl who made your skirt's not paid
you cannot say it's beautiful
if the pay is less than living wage
you cannot say it's beautiful
if the coloured dyes now lie in rivers
poisoned fish, polluted waters
if there's no sick pay, no toilet breaks
if the factories are in decay
no matter what your mirror says
or how stylish you might look today
you cannot claim it's beautiful

HOLLIE MCNISH
@holliepoetry

Jonathan Chapman
@iamichapman

Jonathan Chapman is Professor and Director of Doctoral Studies at Carnegie Mellon University's School of Design and prolific author, including the book "Emotionally Durable Design: Objects, Experiences & Empathy."

WAKE UP

JONATHAN CHAPMAN

EXTRACTS FROM THE BOOK
EMOTIONALLY DURABLE DESIGN

We are consumers of meaning and not matter; it could be argued that material objects simply provide a tangible means through which these connotations may be signified to the user.

We transfer resources into products that provide us with existential mirrors, allowing us to view and experience our dreams and desires in real time. These reflections help us to construct an identity that we feel is individual while also being indicative of our individual aspirations and dreams. In this respect, objects are meaningful in that they illustrate – both to society and the self – our personal life journeys. The process of consumption also appears to possess a quality of avoidance; by continually busying ourselves within a world of goods and services, we cunningly sidestep sensations of emptiness through sheer distraction – consumption gives us a sense of purpose and belonging.

Sociologist

Robert Bocock defines the very ideology of consumerism as a vital sociocultural process, emerging primarily from a sense of lack: "Consumption is founded on a lack – a desire always for something not there. Modern/post-modern consumers, therefore, will never be satisfied. The more they consume, the more they will desire to consume."

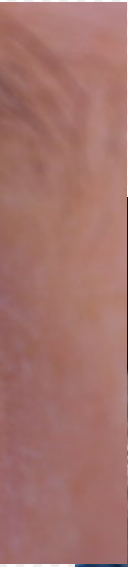
The advertising industry has been capitalizing on this phenomenon for the last few decades, ensuring that we, as consumers, are exposed to a continual stream of slightly more desirable futures to guarantee that a sense of lack is never far away.

Stills from the film 'Loved Clothes Last', produced by Fashion Revolution, directed by Baltazar Klarwein, produced by Feel Films, and starring Angelina Jesson. Watch: youtu.be/4zXQWrcTKgs



The passionate early stages of a subject-object relationship could be described as a honeymoon period – a period of intense synergy during which everything is new and interesting and the consumption of one another is feverish. Honeymoon periods are by their very nature short-lived and must, ultimately, give way to the inevitable onset of normalcy.

Modern consumers are short-distance runners, promiscuous debauchees who only stay for the getting-to-know-you period, when all is fresh, new and novel. In these scenarios, waste is nothing more than a symptom of a failed relationship, a failure that led to the dumping of the static one by the newly evolved other. As is so often witnessed in human pair-bonding relations, the original bond weakens when adoration fades. Fresh bonding urges are promptly motivated, resulting in the acquisition of another. Thus, the original relationship is superseded and the partner is rendered obsolete. In a sense, we outgrow what was once great, feeling we no longer need them or, perhaps, could do better. We become familiar with their greatness, and as we acclimatize to it, our expectation of greatness itself subsequently increases. The newly evolved self soon becomes impatient with that which, in evolutionary terms, holds it back. Adoration rapidly mutates into a resentment of a past that is now outdated and obsolete.





after the binge, the hangover

Greenpeace is an independent global campaigning organisation that acts to change attitudes and behaviour, to protect and conserve the environment and to promote peace.

www.greenpeace.org
[@greenpeace](https://twitter.com/greenpeace)

New research from Greenpeace reveals how people all over the world consume far more clothes than they actually need and use. It's not just a western problem; it's an international phenomenon. The survey¹ included at least 1,000 people aged 20 to 45 in China, Hong Kong, Taiwan, Italy and Germany.

THE SIDE EFFECTS OF BINGE SHOPPING

While people seek happiness and self-worth by shopping, the survey results show that they are deeply ambivalent about their own behavior. Stating guilt and shame, people often feel bad about their own useless purchases and overspending habits. Many people realize that shopping does not lead to increased happiness in the long term. Around 50 percent report that their shopping excitement wears off within a day – the binge is followed by a hangover.

Excessive shoppers experience emptiness and boredom in between shopping periods, with feelings of restlessness and dissatisfaction fuelling their desire for further shopping experiences. Young, high-income women are the most vulnerable. The spread of online shopping and social media makes people even more susceptible to overconsumption.

“
we need to stop promoting the wasteful and broken narratives of micro trends and consumerism”

People around the world have already reached the point where closets are cluttered with cheap trends from yesterday that are no longer wanted and used. American and European markets are saturated. Secondhand shops and markets are overflowing with unwanted clothes.

REEVALUATING WHY WE SHOP

On the bright side, some people are questioning the consequences of their own consumption habits and reevaluating materialistic values. Not only are many people well aware that planetary boundaries and unfair working conditions in the industry mean that we cannot continue business as usual, they are increasingly seeking meaning and happiness in experiences and relationships rather than the consumption of material goods.

With negative experiences of overconsumption rising, there is an underlying longing for physical and emotional durability based on real connections.

SHIFTING OUR VALUES TOWARDS BETTER QUALITY AND CARE

Fashion industry leaders and social media influencers need to stop promoting the wasteful and broken narratives of micro trends and consumerism, and instead, offer more alternatives that incorporate and emphasize values such as caring, sharing and repairing our clothes. Fashion companies should shift the focus of their dominant marketing narratives from convenience and short-lived trends to the aesthetics of durability, longevity and quality.

The business models of the future should aim to foster a deeper and longer lasting connection to fewer and better clothes, which will engage their customers in a sustainable, valuable relationship.

READ THE FULL REPORT:

After the Binge, the Hangover

www.greenpeace.org/international/Global/international/publications/detox/2017/After-the-Binge-the-Hangover.pdf



BUY

LESS

CHOOSE

WELL

**WHEN IT COMES TO SHOPPING
AND WEARING CLOTHES,
OUR ACTIONS CAN CHANGE
EVERYTHING. WE SHOULD
CONSIDER WHETHER WE NEED
TO BUY ANYTHING AT ALL.
CAN WE GIVE EXISTING CLOTHES
A NEW LEASE OF LIFE?
WE DON'T NEED TO BOYCOTT
NEW CLOTHES, BUT WE CAN
BECOME MORE DEMANDING
CONSUMERS. DEMAND BETTER
QUALITY CLOTHES THAT
AFFORD A BETTER QUALITY OF
LIFE TO THE PEOPLE WHO MAKE
THEM. DEMAND THAT EACH
ITEM WE CHOOSE TO BUY AND
WEAR WAS MADE WITH DIGNITY
AND MADE TO LAST.**



edit your wardrobe

1

don't cut corners

Your wardrobe review needs time – three hours, minimum – to give it the attention it deserves. As with most things, rushing leads to cutting corners in your decision-making process, and you may find yourself keeping or disposing of clothes for the wrong reasons. Ask a friend to help you – a truthful, rather than kind, friend is best – to make journeying into the furthest reaches of your wardrobe easier and more enjoyable.

2

let the skeletons out

To take full stock of the situation, you will need to empty your entire wardrobe and lay it all out in one place, including any clothes that have found their way into extra cupboards, the loft or the garage. Assessing all of your clothes in one go will help you rediscover forgotten items and identify repeated purchases in similar colours and styles (how many pairs of black trousers do you own? Or need?) And lastly, you'll be better able to spot new outfit combinations.

3

scrutinize your clothes

Once everything is laid out and you've recovered from seeing just how much it is that you own, start scrutinizing. Try on all of your clothes in front of a full-length mirror to remind yourself what you like about them. Ask yourself if you love the item, and if it fits. Have you worn it recently? Would you buy it again if you saw it in the shop today? Put your clothes into two piles: 'yes' and 'no'. Be honest with yourself, otherwise you'll end up returning everything back to the wardrobe.

4

tackle the 'no' pile

Next, go through your 'no' pile to get to the bottom of what you're not wearing and why. Don't be in a rush to discard. Think about ways to give the clothes new life: do they need stain treatment or repair, for example. Then split the 'no' pile into smaller piles: those items needing care and attention or repair, restyling, redesigning or disposal. But be strict: don't put anything back into your closet you probably won't wear.

5

sort the 'yes' pile

Now, back to the 'yes' pile, with which you will restock your closet. First, group garment types (trousers, skirts, tops) together, and then organize by colour. A highly organized wardrobe will pay back dividends as you become inspired by new, previously unimagined outfit combinations.

6

divide and conquer

You may want to split up what's left of your clothes into seasons, so that your daily outfit edit is even quicker. Access is key in ensuring you wear your wardrobe to its maximum, so storage will become an important part of your closet edit, allowing you more room for inspired dressing.

7

document it

If you want to take your wardrobe edit even further (think Cher's epic computerized walk-in closet in the film *Clueless*), make lists, take photos, label your clothes or use one of the many apps out there, such as *Stylebook* or *KonMari*. This system works especially well for shoeboxes and garment bags, where contents aren't always visible.

8

go with a pro

Finally, if the idea of editing your closet feels overwhelming, you could always bring in the experts. You don't need a celebrity wardrobe or bank balance to do this. Investing in a one-off wardrobe edit with a stylist or closet organizer will make sense of your clothes and bring them back into fashion action. Find someone who matches your style and understands body shapes.

Want to avoid buying new clothes? Try the **#haulternative challenge.**

What's #haulternative?

A way of refreshing your wardrobe without buying new clothes: from shopping secondhand, swapping with a friend, renting special pieces, to DIY customisation. You don't always need to go shopping to try out new styles. Try something a little different!

To discover more #haulternative ideas, download our guide:
www.fashionrevolution.org/haulternative



◀ VINTAGE

Buying vintage is a great way to give old clothes a new beginning. We can all find unique pieces of history.

SECOND HAND ▶

Recreate your favourite looks for a fraction of the price by buying from local charity shops. This keeps perfectly good clothes out of landfill and supports charitable cause too. Win-win!



◀ SWAPPING

Swapping, swishing, sharing. The simplest way to extend the life of your clothes is by giving them a new owner. Organise a clothes swap with friends or work colleagues. Make it a party!

HIRE ▶

Hire catwalk looks for high street prices, it makes perfect sense. Affordable designer clothes to loan and wear for any occasion, before giving them back for someone else to wear. This means clothing gets way more mileage before it's retired.





THE BUYERARCHY of NEEDS



there's always an alternative

Want to try the latest look? Chances are you already have a similar piece in your wardrobe; you just need to get creative and style it up differently. Or go 'old school' and borrow it from a friend. If it's 'on trend', you might only wear it a couple of times, so what does it matter if you own it or not? Or why not try renting? Once the preserve of dodgy wedding tuxedos, the fashion rental market has stepped up its game. You can hire small independent labels alongside big name brands and even cool sustainable labels. And if you're still yearning for a new purchase, then consider buying from a sustainable label or commission a local tailor.

will you really wear it?

There is nothing like a good old wardrobe edit to throw into focus what we do and don't need. So before you hit the shops, take a good look at your wardrobe! If you find yourself with 5 pairs of jeans or 6 floral dresses, chances are you don't need another. If you really must have it, be your own stylist and ask yourself how versatile is this item? Do I have at least 3 things already that I can wear it with? And can I wash and care for it easily? If you honestly don't think you'll get at least 30 wears out of it, then don't take it home.

quality over quantity

Heard the old adage, 'buy cheap buy twice'? Poorly made clothes are more likely to shrink in the wash, lose their shape and fall apart quickly, leaving you having to purchase a replacement item sooner than you'd bargained for. Spending more on a well-made garment will ensure it sticks around longer. It may cost more at the outset, but when you work out your costs per wear, it's a long-term investment piece that's the real bargain. Turn it inside out, look at the label and inspect the seams for quality, as always the devil is in the detail.

vote with your notes

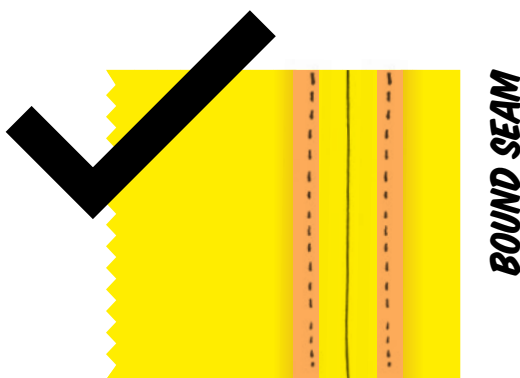
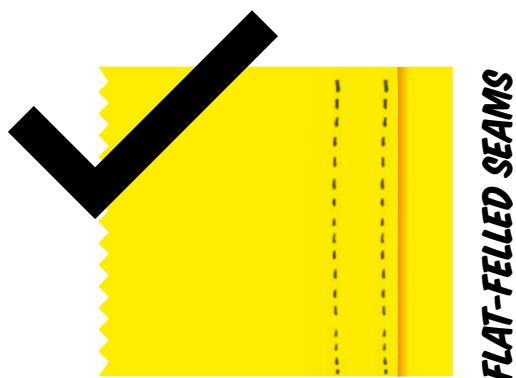
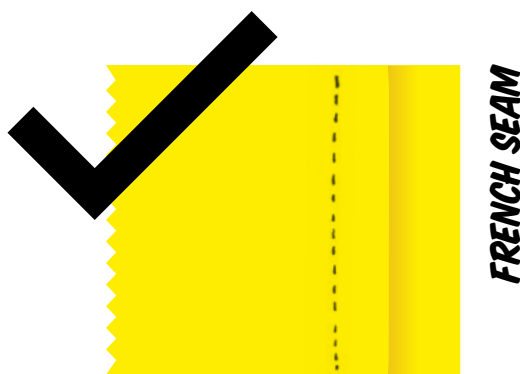
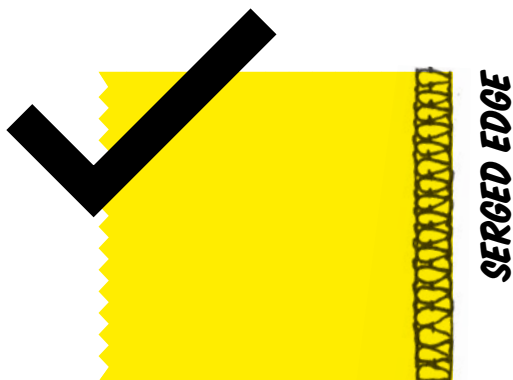
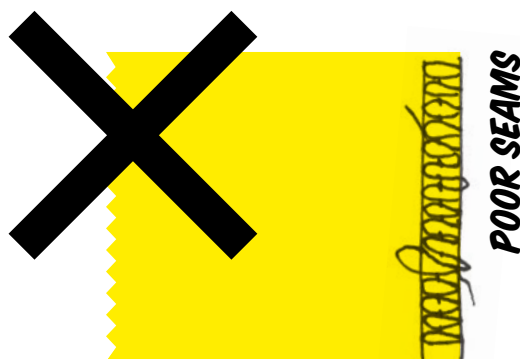
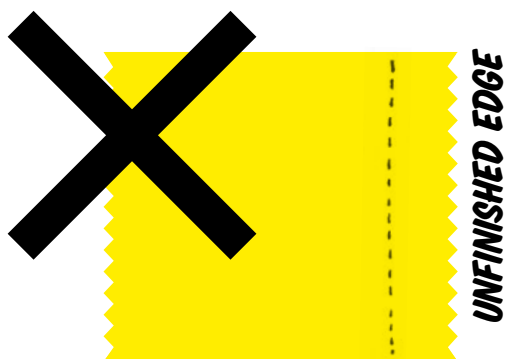
Want to build a sustainable wardrobe but don't know where to start? Simply pick an issue that is important to you and start there. Maybe you are passionate about empowering women in marginalised communities, or eradicating plastic from the ocean, or simply just don't want to wear leather anymore? Then why not spend your money on artisan-made knitwear, or invest in a pair of jeans made with bionic yarn, or try some vegan accessories on for size.

learn how to love them

Like all the best relationships, your fashion love stories take a bit of work. No matter how careful we are with things, wear and tear happens. But this shouldn't be the end of your favourite frock. Learn the little things like sewing back on buttons, how to fight moths effectively, what temperature and how often to wash things and how to store your winter/summer wardrobe out of season to ensure it remains in great condition. Your clothes will thank you for it. And if you want to stay ahead of the game, shop for a brand that offers free lifetime repair services.

HOW TO TELL IF CLOTHES ARE LOW QUALITY OR WELL-MADE

The quickest and easiest way to tell if the garment is good or bad quality is by looking at the seams. Turn it inside out and take a good look at where it's been visibly sewn together. The seams should look smooth and lay flat with no puckering or snags. They should look neat and tidy, not higgledy piggledy. The closer the stitches are together, the more durable and better quality it is. You can tell by counting the stitches — a high number is a good sign. French seams are the sign of true high quality. Flat felled and bound seams are the sturdiest and won't fray easily. Unfinished edges are a sign of bad quality (but it might just be its style). Serged edges are better. Learn a bit about seams, so you'll know when you're looking at a well-made piece.



BROKEN

IS

BEAUTIFUL

**WE WANT OUR JEANS TO BE
TORN, WORN AND WEATHERED
BY USE, SO WHY NOT SHARE
THE SAME LOVE FOR OTHER
PIECES OF CLOTHING? A
DROPPED HEM, GIVING THAT
DRESS AN ASYMMETRICAL
FALL. A PERFECTLY PLACED
TEAR SOMEWHERE ON YOUR
FAVOURITE SHIRT. THAT FUNNY
HEART SHAPED MOTH HOLE ON
YOUR JUMPER. SURE, WE CAN
MEND IT, VISIBLY, INVISIBLY,
WITH A PATCH OR WITH A STITCH
— OR WE CAN LEAVE IT AS IS,
AN ODE TO A MOMENT WORTH
REMEMBERING, LIKE THE
CHILDHOOD SCAR THAT
MAKES US WHO WE ARE.**



**BROKEN IS
BEAUTIFUL**
WILLIAM
FARR

William Farr
williamfarr.co
[@william_farr](https://twitter.com/william_farr)

William Farr is an installation artist and image maker, working primarily with found materials.







CARE

REPAIR


REWEAR

**REPAIR AND MENDING
DOESN'T MEAN WE CAN'T
AFFORD TO BUY SOMETHING
NEW, IT MEANS WE CAN'T
AFFORD SOMETHING BEING
THROWN AWAY. WHAT USED
TO BE A BADGE OF SHAME
IS NOW SOMETHING TO BE
PROUD OF. REPAIRING OUR
CLOTHES IS A PRACTICAL,
SYMBOLIC, AESTHETIC,
ORIGINAL, CREATIVE,
TRENDSETTING, BADASS,
REVOLUTIONARY WAY TO
SAY MY CLOTHES ARE ME,
MY CHOSEN SKIN, MY
PRINCIPLES, MY STORY.
LONG LIVE MY CLOTHES.**



STAINS BE GONE!

*DON'T LET A LITTLE COFFEE, KETCHUP
OR RED WINE RUIN YOUR FAVOURITE
CLOTHES. HERE'S HOW TO GET RID
OF PESKY STAINS, SO YOU CAN MAKE
YOUR #LOVEDCLOTHESLAST*



TEA AND COFFEE

Everyone at some point has spilt tea or coffee down their front, usually in a half-asleep state first thing in the morning. If you find yourself in this predicament, get the garment soaking ASAP in 1/3 cup white vinegar and

2/3 water. This can help lift the stain before washing as per the label's instructions (you can also add a little vinegar to the machine for good measure).



MAKE UP

Make up is easily transferred onto clothing and is especially noticeable on white clothing. However, with a little shaving cream and water almost any make up stain can be removed.

STEP 1: Add shaving cream to the make up stain, and rub it in, leave the foam to sit for 5-10mins, then rinse it off under cold water.

STEP 2: Repeat the process of adding shaving cream to the stain and leaving for 5-10mins, but this time rinse it off under hot water.



STEP 3: Afterwards add to a laundry load and wash according to the labels instructions.

FOOD STAINS / OILS AND GREASE

Dish soap is designed to get those greasy food leftovers off your plates and cups, so applying its power at breaking down oils to clothing makes total sense.

STEP 1: Try to treat your garment as quickly as possible by adding a little baby powder to the stain and leaving for 10 mins. Scrub the powder in with a toothbrush and shake off the excess.



STEP 2: Add a little clear liquid dish soap onto the food stain and rub that in too. Rinse the garment under the tap with cool water before washing as normal.



Alternatively, soaking a whole garment in warm soapy water and leaving it for a few hours before washing can help rid your favourite jumper of that stubborn greasy food stain.

WINE

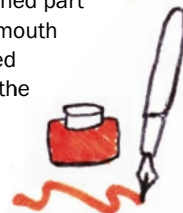
Follow the same methods as above for wine stains but instead of using baby powder use salt. Also, let the salt soak up the stain for longer (about 20 mins). If you have time, shake off the excess and add a fresh batch of salt about halfway through. Then follow step 2 above.



INK STAINS

Denatured alcohol or methylated spirits (aka a form of ethanol) is a preferred substance for the cleaning of machinery. Despite the intense chemical smell, it is actually a lot less toxic than many other cleaning products. Using a little on a stubborn ink stain can help fade it much more than a general wash. Products such as alcohol hand-sanitisers can also be used in place of denatured alcohol.

STEP 1: Place the stained part of the fabric over the mouth of a jar with the stained side facing down into the jar. Then either hold taut or secure with a hair tie/rubber band.



STEP 2: Slowly drip the alcohol onto the stain soaking it, and the ink should drop into the container as it is being removed. Continue this process for as long as possible until the stain has faded.

STEP 3: Rinse thoroughly and follow washing instructions.

Many ink stains will never be fully removed, particularly from light coloured textiles but this process should at least fade them.

WRAP

www.wrap.org.uk
[@wrap_uk](https://twitter.com/wrap_uk)

WRAP (Waste & Resource Action Programme) works with businesses, individuals and communities to reduce waste, develop sustainable products and use resources in an efficient way.

DISCLAIMER:

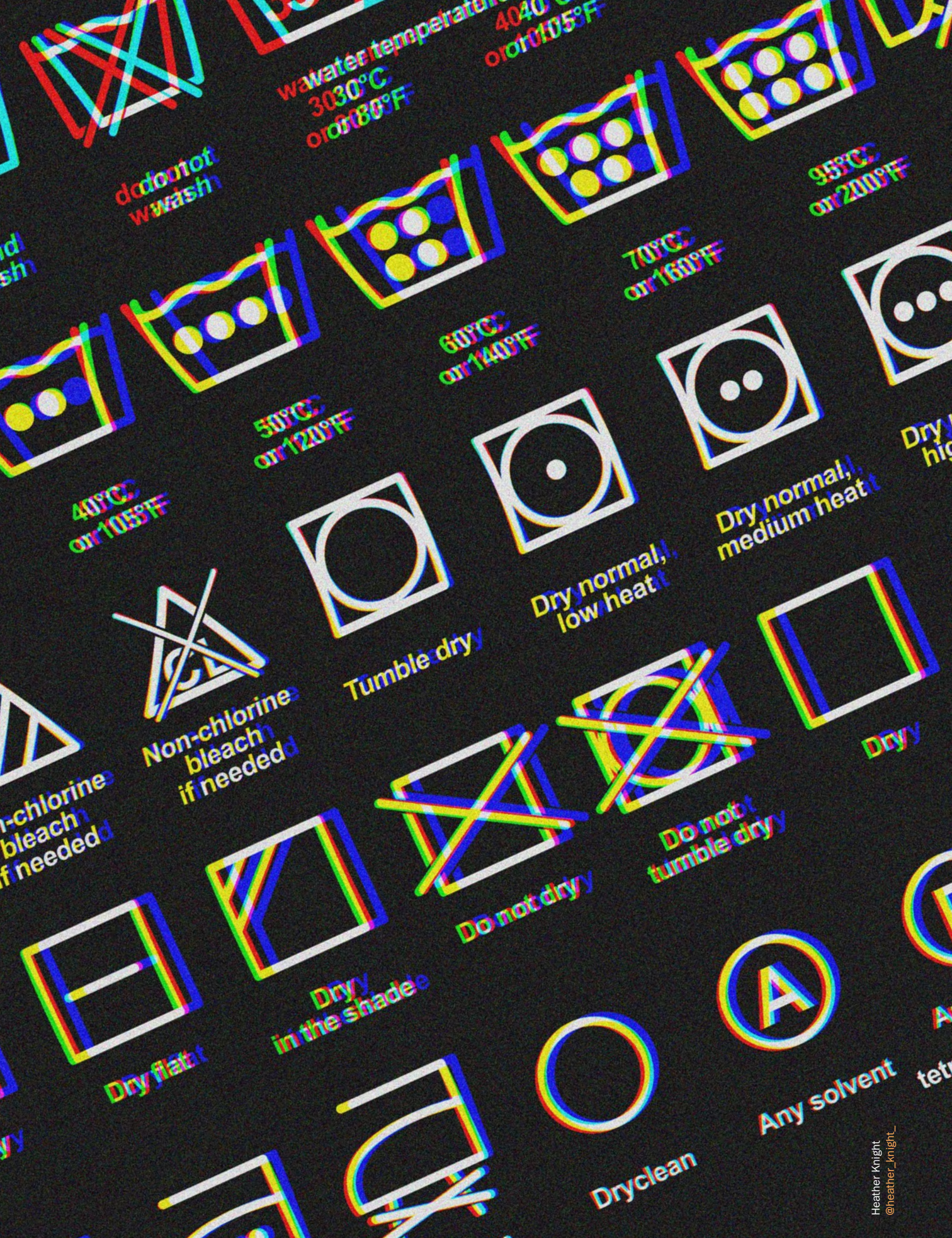
Don't try these methods on clothes with special cleaning instructions or silks, delicates, leather or suede.

TOP TIP:

Vinegar is your best friend (and best value for money) when it come to stains. Add up to 1 cup white vinegar to the fabric softener drawer of your laundry loads. This will not only help tackle stains but add brightness to whites and colours, remove lint, help prevent dyes running, kill bacteria, neutralise odours and help keep your clothes and machine clear of soap residue — making both stay cleaner and last longer.

TOP TIP:

If your stain requires some rubbing or scrubbing, always try and go with the grain of the fabric, this way you will minimise breakage of the fibres.



Water temperature
30°C
86°F

Do not wash

40°C
105°F

95°C
210°F

70°C
160°F

60°C
140°F

50°C
120°F

40°C
105°F

Tumble dry

Dry normal,
low heat

Dry normal,
medium heat

Non-chlorine
bleach
if needed

Non-chlorine
bleach
if needed

Dry

Do not
tumble dry

Do not dry

Dry
in the shade

Dry flat

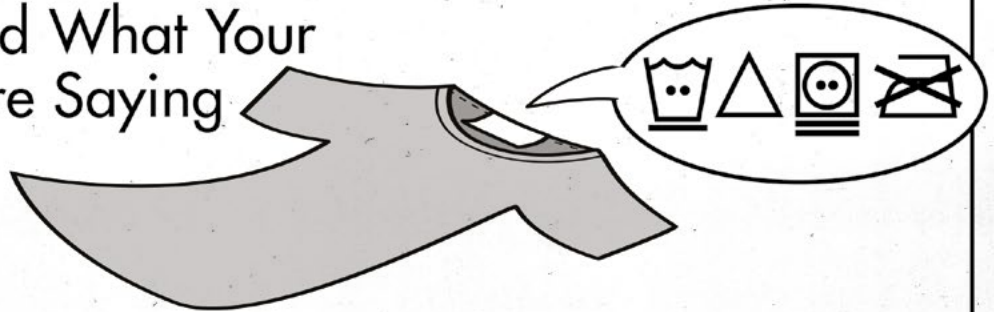
Dryclean

Any solvent

Heather Knight
@heather_knight_

Fabric Care Language Made Easy!

Understand What Your Clothes Are Saying



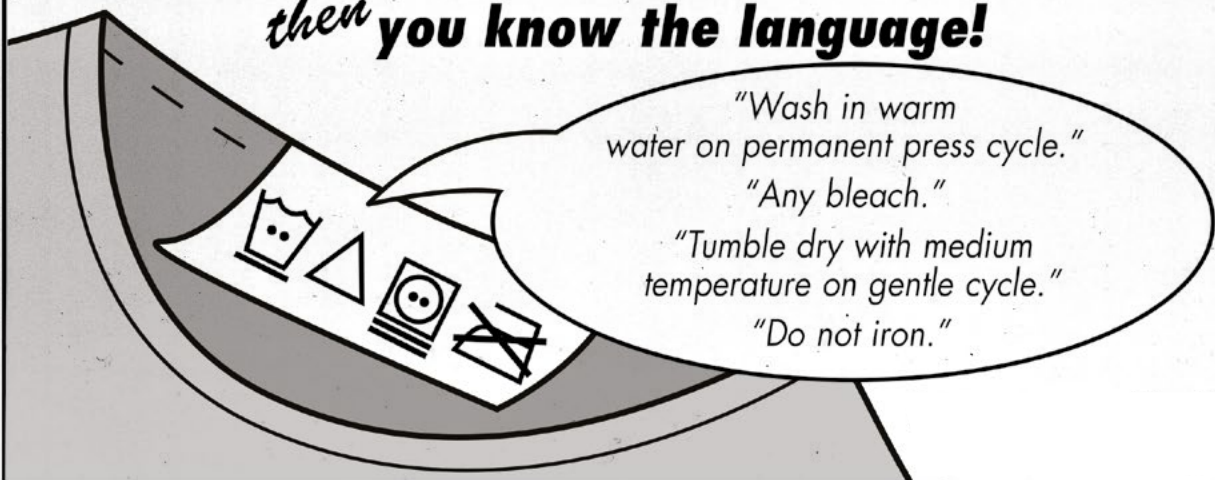
If you know these symbols...

WASH	BLEACH	TUMBLE DRY	IRON	DRY CLEAN

and these codes...

More Dots → More Heat			More Bars → More Gentle		
COOL/ LOW	WARM/ MEDIUM	HOT/ HIGH	PERMANENT PRESS CYCLE	GENTLE/DELICATE CYCLE	
DO NOT					

then you know the language!



Courtesy of: American Cleaning Institute® • Developed in cooperation with the Federal Trade Commission.
 Visit our web site! <http://www.cleaninginstitute.org> • info@cleaninginstitute.org

KNOW YOUR MATERIALS

Love your clothes for longer by understanding how best to wash and care for various types of fabrics. Here's a quick guide to get you started.

DENIM

Denim was invented in 1873 by Jacob Davis and Levi Strauss.⁵⁰ Denim is cotton-based, and can be woven with other fibres to add elements denim traditionally lacks, such as elastane to add stretch. Jeans are the most popular denim product with 1.24 billion pairs sold annually.⁵¹

WASHING

Always close zips or buttons and turn your denim garment inside out before washing. If your jeans aren't dirty, don't wash them, freeze them! Try popping your denim garments in a bag and put them in the freezer to get rid of germs and freshen them up. If you absolutely have to wash them, do so at 30 °C.

DRYING

When drying denim, flatten the garment into shape then hang-dry or dry flat. This prevents, or at least reduces, the need to iron the garment.⁵²

DISPOSE

Denim is a very durable material and should last you a long while. First check if you can pass along your pre-loved denim to a friend. When you decide it's time to part with your denim, it's possible that it can be reused or recycled or down-cycled. For example, Blue Jeans Go Green turns denim that can't be re-worn into building insulation, keeping it out of landfill for a while.⁵³

COTTON

Cotton accounts for 40% of global textile production⁴⁷ and supports the livelihoods of an estimated 300 million people across the world. It is woven from the fluffy ball of pale soft fibres that encase the seeds of the cotton plant.

WASHING

Natural fibres can be prone to shrinkage so always wash on a cool wash (max 30 °C) or in lukewarm water.

DRYING

Cotton is best dried flat or hang-dried to prevent the need for ironing. If an item requires ironing then best to do so whilst slightly damp or use a steam setting.⁴⁸

DISPOSE

Cotton is a natural fibre and if non-dyed or vegetable-dyed can potentially be composted. But this is rarely the case with typical cotton garments, unless certified 'organic'. It is also possible to recycle cotton. If your garment is beyond wearable and can't be composted, then take it to the nearest textile recycling bin. If nothing else, old cotton clothes or home textiles can make useful cleaning rags.⁴⁹

WOOL, CASHMERE, ANIMAL HAIRS

Wool is a yarn that is created from the fleece of animals such as sheep, goats, llamas or camelids. Individual wool fibres attach together when spun to create yarn, which is then used to create garments.⁵⁴ Wool retains warmth well and is naturally stain and wrinkle resistant and absorbent, which makes it easy to dye.⁵⁵

WASHING

Like denim, animal hairs should only be washed when absolutely needed. Always use a detergent designed for woollens and wash on a gentle cycle or hand wash.⁵⁶

DRYING

Dry the garment flat and placed in its normal shape. If you hand-washed the garment, place the damp garment flat on a clean towel, roll the towel up and squeeze out excess water.

STORE

Moths love woollens and often leave big holes in clothes. Moths don't like light so regularly worn items are less likely to end up with holes than those left in storage.

Putting cedar wood balls in your wardrobe can help keep them away, or store your woollens in sealed cotton bags as moths don't like cotton. Put woollens in the freezer for 24 hours, take out and bring up to room temperature, and repeat once again to get rid of moths.⁵⁷

DISPOSE

First, try swapping with a friend as woollen clothes can often have a long lifespan. Otherwise, pure, un-dyed or vegetable-dyed animal fibres can be composted, as long as the garment doesn't contain any synthetic fibres or dyes (check the label). If in decent condition, your local charity shop may also accept it.

SILK

Silk is a luxurious natural protein fibre produced by moth caterpillars in order to spin its cocoon. Mulberry silk worms feast on the leaves of least 3 trees to produce 3kg of silk. It's a very strong fibre.⁵⁸

WASHING

Check the label. If pre-washed, some silk items can be machine washed but always use the delicates setting or the silk specific programme and wash at 30°C or lower. For extra protection you should wash silk garments in a mesh bag.⁵⁹ If hand washing, add 1/4 cup distilled white vinegar to 3.5 litres of water. This restores its shine. Submerge and soak before rinsing a number of times in fresh water.

DRYING

Once clean, lay the damp garment flat on a towel and roll the towel up to get out excess water.

Lay flat to dry in order to prevent too many creases. Never dry garments on a wooden rack, this can leave stains. Never dry using heat (i.e. on a radiator or in the tumble dryer), this can cause shrinkage or damage.

DISPOSE

If properly cared for, silk garments should last a very long time. However if you no longer want your silk garment, you might try selling it on, gifting it to someone who will wear it or transforming it into another item you'll use.

FLEECE

Fleece is a fabric made from synthetic fibres and is designed to mimic the qualities of wool. Fleece is made from poly-ethylene terephthalate (PET aka plastic), this means that fleece can be made from recycled plastic bottles.

WASHING

A fleece jacket may shed as many as 250,000 microfibrils per wash, which can release toxins as they break down and poison the food chain once they reach the water supply.⁶¹ Wash your fleece garments with a Cora Ball⁶² or using Guppy Friend⁶³ wash bag in order to prevent this from happening.

DRYING

Avoid tumble drying and ironing fleece. Heat and friction will cause the tiny plastic fibres that make up fleece to melt. Lay flat to dry and prevent creasing.

DISPOSE

Fleece can potentially be recycled if 100% polyester, check the label or contact to the company to find out how. Fleece can also be down-cycled into building insulation. If in good condition, you might consider donating the item to charities that provide clothing to homeless people.

RAYON, LYOCELL, MODAL

These semi-synthetic fibres derive from raw natural materials but are treated with chemical processes in order to create wearable textiles. Also known as 'cellulosic fibres'.⁶⁰

WASHING

Turn your clothes inside out before washing in the machine. If hand-washing, use 30°C temperature water with mild detergent and skip the fabric softener. Avoid wringing out rayon (also called viscose) items as this can leave them misshapen.

DRYING

Rayon is prone to shrinkage, so always lay flat to dry. Modal and lyocell are much more resilient and can be tumble dried if absolutely required.

STORE

These sorts of fabrics are not particularly prone to creasing and can be folded in drawers or stored hanging in your wardrobe.

DISPOSE

Modal and lyocell fibres especially are very durable and should last you years if properly cared for. If no longer wanted, bring to your local textile recycling collection point for reuse or down-cycling.

ACRYLIC, NYLON, POLYESTER

Synthetic fibres are cheap to produce and offer increased durability and diversity of uses compared to many natural fibres. However, these fabrics are not environmentally friendly and can take hundreds of years to biodegrade.⁶⁴

WASHING

When machine washing clothes made from synthetic fibres, wash them with a Cora Ball or using a Guppy Friend wash bag in order to prevent tiny microfibrils from polluting the water supply.

DRYING

It's best to hang dry synthetic garments. They shouldn't need long to dry. Never tumble dry synthetic fabrics as this weakens and damages the fibres quickly.

DISPOSE

If you must get rid of your synthetic garment, bring it to your local textile recycling collection point for reuse, recycling or down-cycling. For now, most synthetic fibres cannot be recycled but some companies are developing technologies that will make this more possible in future. If 100% polyester, check the label or contact the brand to find out how it can be recycled. Sounds obvious but never burn synthetic fabrics as it can release poisonous gases into the air.

Loved
Clothes
Last

My aunt got this bathing suit in the 1960s. It was one of the first garments that made her feel feminine—and it was maybe here that her life-love for feminine garments started.

Most people would be depressed when diagnosed with breast cancer, but my aunt chose a different direction. Instead, she was just thankful for having showed off her beautiful bosom most of her life. I admire her for her attitude and it taught me that you should love what you have got, because you never know when you'll lose it.



This t-shirt is a Finnish classic and my sister had two of these, one with pink and one with blue stripes. She wore them during the year she lived in America. When she came back, a dress size bigger, she handed them over to me.

When I moved to England I took the shirts with me – it's funny how patriotic you become when you move abroad.



My grandmother bought the fabric in Scotland; my grandmother designed the suit and her loyal seamstress made it for her. It was one of my grandmother's favourite suits. She wore it for many years at lunches and receptions when she had to look presentable.

I decided to continue the tradition and am loyal to my grandmother in that I've also worn the suit or jacket at occasions when I've needed to look presentable.



Looking at all the shoes, hats, dresses and handbags she left behind, she must have been such a glamorous woman.

There aren't many people like her anymore. No matter how hard I try I know I'd never be half as glamorous.

WHAT'S YOUR CLOTHING LOVE STORY?

1

Anissa @anissajebli

The first time I saw you, I wanted you. You were quite expensive but I convinced my mom to buy you.

And the next thing I know, you were locked in my closet for over a year. I don't really know why it took me so long to see that you were beautiful. Simple but still fashionable.

When I realized that, I started wearing you over and over again. Some people said too much. It was six years ago, but I still love you like the first day.

Miraculously, you haven't aged at all. Your gray is still the same, your softness is still the same.

I don't know where you are from. But I know where you are going: with me for as long as possible.

2

Ann @anntutt

Found at a festival at a vintage stall. My husband bought you home & I knew you were mine. You may not look much crumpled on my bed but... on top of jeans or over a dress you keep me looking the best. My Harris Tweed which has been worn before keeps me dry & still restores to former glory.

3

Dawn @frenchiewashere

This coat was custom made from faux fur my grandmother collected. Grannie was a rough & tumble gal but she loved her some faux fur! I found a seamstress & picked out the buttons & the pattern. They said they didn't think it would look right but it turned out beautifully! I had this coat made in 1991 for \$122.79. I will never part with it even though it has those large shoulder pads. They will come back into style, right?!

4

Georgina @georginaahooper

Rita is my very adventurous little 3 year old and this is her most favourite dress. Rita and I would get into wrestling matches where I would attempt to wriggle her out of it and wrench the dress off her if she so much as looked at a strawberry or skimmed her fingertips along the felt tip pens. BUT what if clothing was designed to stain? So I thought I would experiment myself and see the transformational journey this little frock can go on. So now Rita has free rein to enter into this collaboration with me; to splish in every puddle and gobble as many strawberries as she likes in her frock – whilst colouring in!

5

Anna @anna_mattei

I first eyed you up whilst snooping inside my Mum's wardrobe on a rainy day when I was 14. I traced my fingers along your soft silky fabric and knew I had found the perfect classic blouse for my wardrobe. I kept asking my mum to borrow you until she gave in and you moved over to my wardrobe. You complete blue jeans and look great tucked into a skirt. You've accompanied me shopping with friends in Oxford, days in London, dinners, lunch, afternoon tea and layered under jumpers on cold days. You may have a few pulls and ladders but those are a sign of the many times I've worn you and loved wearing you more and more as the years have gone by. My mum bought you in Next back in the day but now you're my favourite go-to vintage piece. Here's to many more adventures together in the future!

6

Molly @realmollymalloy

When I put on these shoes, they're my daily reminder to continue to fight for gender equality, to kick ass while I do it and never put my foot down. And to never apologize, especially for puns.

7

Scarlett @scarlintheshire

By the age of six, I had devoted myself to a pair of pink silk flip flops with sequins sewn onto the straps. Each year, my family would venture to Brittany, France, where I would bring my beloved flip flops with me. My shoes met sand, and sea and scraped along the tarmac as I ran riot around the campsite. As another birthday passed, another sequin fell off and my heels slowly began to surpass the length of the sole. I was devastated to find when I came home from school one day, that my trusted flip flops were sitting lonely on a pile of clothes to be sent to the tip, looking forlorn and frayed, signs of a well-loved life. So I pleaded and begged for them to be saved. Fourteen years later I wish my feet were the same size and I could still clatter around in my withered flip flops that have now been framed and placed on the bathroom wall.

8

Henry @futerra

My battered old leather jacket. I picked it up second hand years ago. The defects, scratches, lost buttons become part of its personality.

9

Student, London College of Fashion, 'Love Story' photoshoot by Anna @anna_mattei

This scarf... where I work, this is like the dead stock and I was searching all the way through it... I found this one thing in this random location and nobody had ever seen it before and I was like 'It's mine!'... I think it was woven in Italy, the cool thing about it is that it was woven on the traditional wooden looms so it takes about 6 hours to make one of these so they only make like 4 in a day.



“Every piece of clothing in our closet is full of memory and meaning. Every closet is an archive of experiences, adventures and memories. Thinking like this, clothes are considered to get more unique, valuable and more beautiful with age.”

Sophie @sophie_loos





Black Sabbath, AC/DC, KISS, Thin Lizzy, Iron Maiden, Motörhead, Scorpions are all big names in Heavy Metal but they are also patches on my kutte. In 2014 I saw a picture of one of my favorite bands, Volbeat, and I thought: I want one, I absolutely have to have one. A kutte (pronounced “cut”), is a jean or leather jacket, sometimes with its sleeves cut off, covered in patches and marked or painted with messages. The kutte originated in the biker culture but found its way to punk and heavy metal subcultures and depending on how it’s adorned, with chains, patches or studs you can identify who is wearing it. No two kutties are alike, they represent your particular taste in Metal, your favorite bands, it tells the world if you are into traditional Heavy Metal, Death Metal, Thrash Metal or other subgenre. Popular bands’ patches are easy to get, but every metalhead has his own roster of favorite bands and for some of them it takes months or years to find the correct one. I’m still looking for the right Dark Tranquillity patch, or Amorphis, or Anathema or Metal Church.

— Juan @jpmart70



36 years I've owned these 501s. I was 13 years old 4ft 11ins tall and 90lbs when I got them new. I was so proud to own my first pair. They were \$27 and my mom and dad struggled to come up with the money for me. They were sooo dark. It took about 4 years to get them the right color without bleach.

— Jaki @slowfiber

Honestly, I didn't spend a single penny on you (the perks of being a blogger), but that doesn't mean that I don't value you. You took months to wear in and your laces now need repairing, but you still look as shiny and beautiful as ever. I don't know who made you but I would like to find out. I'd like to think you'll last me well as that's what DMs are meant to do.

— Tolly Dolly Posh [@tdposh](#)

I remember my Mum wearing this shirt with her velvet suit when I was a child – she was, and is, very stylish and I always loved that outfit. It evokes memories of my childhood and my mum in her younger years, going out with Dad while we stayed home with the babysitter. When I wear it I feel like I'm in the 1930's – something to do with the feel of the material and the cut of the shirt. That shirt has seen a lot of life – growing up and growing older, nights out on the town and more recently the death of a father and husband. One day I hope I can hand it down to someone else in my family. So it feels special...and still looks great with a velvet jacket!

— Christine Morrissy [morrissyphotography.com](#)







WRITTEN BY:
Lydia Higginson
[@mademywardrobe](#)

ILLUSTRATION:
Rob Phillips
[@robphillipswork](#)

DEAREST CORSET...

You make me so happy. I love the shades of ochre gold, sunshine yellow and dusty pink silk that you are made of. Rather than contorting my body, you fit my exact shape. You are so incredibly comfortable, sometimes I wear you when I'm curled up on the sofa watching a film or just for fun under my clothes on days when I need something to cheer me up. My favourite way of all, is to wear you proudly on top of jumpsuits, trousers, skirts, shirts and dresses. You play such an important part in my wardrobe which is now only made up of clothes I have made. You were so satisfying to construct. I loved every minute of inserting your cording and hammering your eyelets. Now I teach workshops on how to make things just like you. Because I think every woman needs a corset in her life. Your shape is making a comeback all over the catwalk. For hundreds of years you were a symbol of female oppression. But in an age where fashion has never been more concerned with being feminist, you represent to me, how powerfully women can reclaim and reinvent what clothing means to them.

Yours Lovingly,

LYDIA





They seemed to shimmer as I took the lid off the trunk, brightly colored, beautifully embroidered and just stunning kimono. My great-grandmother had selected them as options for Shichigosan, a traditional rite of passage ceremony in Japan for kids ages three, five and seven. I had graduated from the more childish outfit worn when I was three, and was giddy that I could finally wear a real kimono.

This memory is held in an almost dreamlike state in my mind. I remember vividly the whole ritual of picking out ornamental hair pieces, getting my hair done and being dressed layer after layer. I barely recall the actual ceremony at the shrine. For me, the magic of the moment lay in the rituals of dress, being wrapped in the textiles, connected to my heritage, and sharing a bond with my great-grandmother. This fascination with the ceremony of clothing followed me, what I put on my body was personal and emotional.

When I got a bit older, my love affair with traditional Japanese clothing transformed as I discovered the thrill of hunting for vintage kimonos at thrift stores with my Mom. Looking for unique weaving patterns, interesting dyeing techniques, and salvaging partially-stained or moth-eaten textiles.

The initial allure of ceremonial kimono shifted from elaborate brocades and colorful designs, to simple elegance and hidden design elements; seeking playful linings, markings sewn into seams, and imagining new designs from damaged pieces.

Love,

CAMILLE



WRITTEN BY:
Camille Mori
[@ethicalfashnerd](#)

ILLUSTRATION:
Stephen Doherty
[@stephen.doherty](#)



DEAR WHITE PIN TUCKED KURTA

You were my first piece of clothing from 'Fabindia' and I simply love wearing you at almost every occasion. Wearing you was not my usual style because I only had one traditional Indian outfit before I bought you. I still remember the time when I was strolling by the shops and showrooms in Connaught Place, Delhi and I don't know what dragged me inside the store. I picked up one white top and the other one was you. I loved you the first time I saw you on me in front of the mirror. It was love at first sight.

The first time I wore you to my college, all my friends complimented me as they never saw me in that avatar. I paired you with lovely silver bangles and black leggings. More than anyone else, it was my mother who loved you because of your classic style and colour. Whenever I am confused about wearing something, my mother always suggests me to wear you. The white colour reflects purity, serenity, simplicity and I just adore you for that. Now it's been more than 5 years and I want to assure you that you are still safe in my closet. I am not letting you go anywhere until I get out of shape to fit in you.

With the time you have gone a bit off-white, but that doesn't mean you are not wearable anymore. You are a classic piece of traditional Kurti and I can still style you in many ways. My recent look wearing you is very chic and I have paired you with quirky silver earrings. Perfect for any day in the summer, your soft cotton has kept my skin safe from the scorching sun.

Years spent with you will always be cherished with those unforgettable memories that you have created. You gave me the confidence to wear traditional Indian clothes and I will always remember you. Our love for each other will go a long way and I hope you will keep cheering me during every phase of my life. Thanks for being so magnificently sophisticated and making me feel immensely confident.

Lots of love

SHWETA

WRITTEN BY:
Shweta Chowdhary
[@ShwetaChowdhary](https://www.instagram.com/ShwetaChowdhary)

REDUCE

REPAIR

RECYCLE

REPURPOSE

REINVENT

RECLAIM

RESCUE

REWEAR

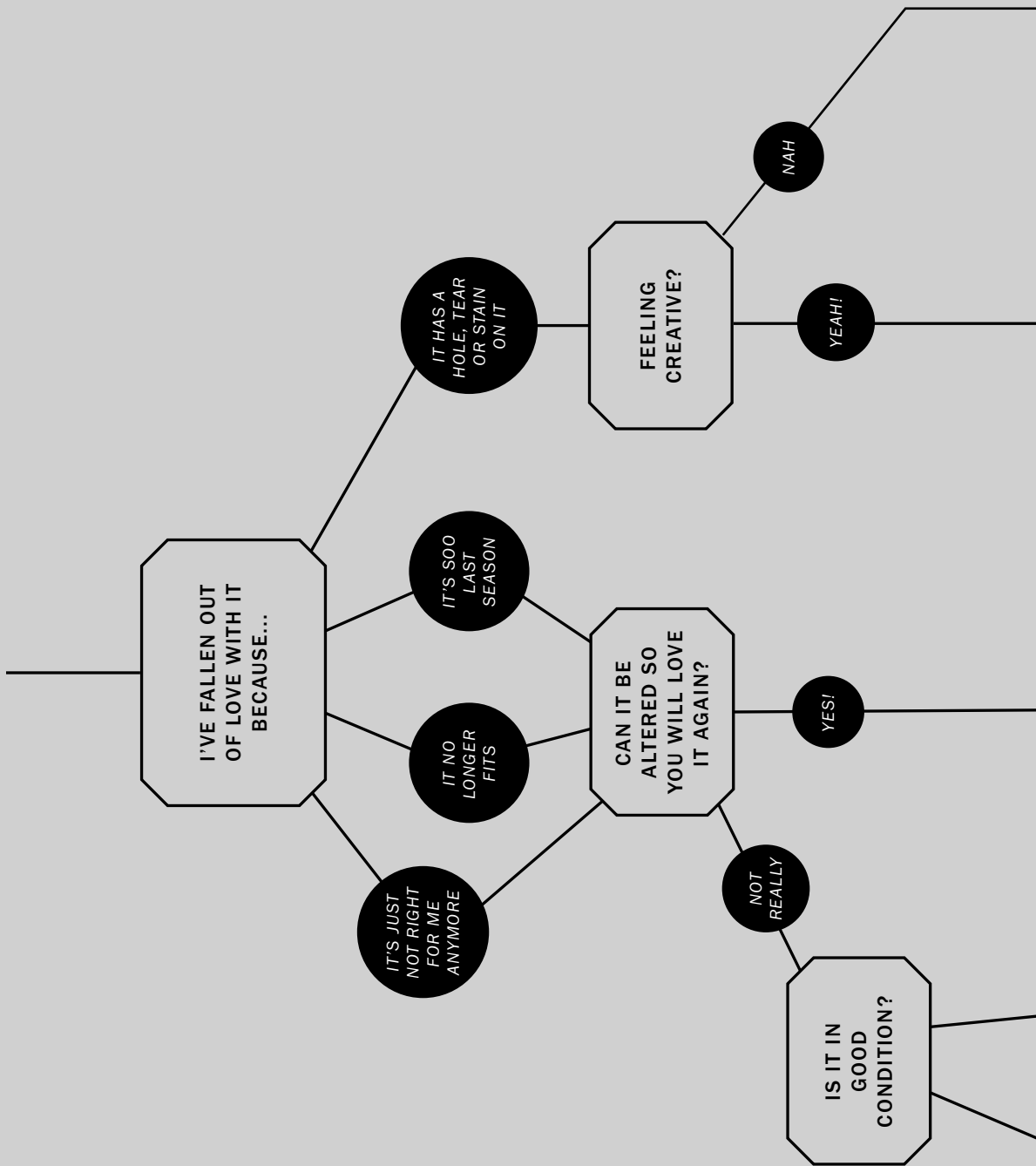
Mindfulness and agency

Open attention to and awareness of the clothes in our wardrobes, like that which occurs as we mend, offers the prospect of a changed relationship with fashion consumption. It works with a similar mechanism of influence as mindfulness and its attention to the present-moment, to savouring experience, which in turn reduces desire for external pleasures that depend on money and material goods. Psychological studies suggest that a capacity for mindfulness – that is attention to and awareness of internal states and external events in the present moment – results in less emphasis being placed on materialistic values, like image, and greater emphasis on internal aspirations, such as community involvement and personal development, that don't require major material inputs.¹³ Furthermore it has been shown that mindfulness reduces the susceptibility to consumerist messages, 'because the receptive attention to internal states promoted by mindfulness may facilitate attunement to deeper needs and desires'.¹⁴ What is more, mindfulness may conduce to a greater acceptance of self and one's circumstances: a perception that what one has is sufficient'.¹⁵

Mindfulness studies raise the prospect, as yet untested, that using fashion pieces with open attention and knowledge might lead us to want what we already have. There is agency here; the capacity for us, as individuals, to act with awareness to shape the fashion system differently. To make heavy use of skills, ideas, attentiveness, community, and scant use of scarce natural resources, and therefore create conditions for, what Juliet Schor calls, 'plentitude'.¹⁶

For me, the prospect of abundance in fashion is made real through direct involvement of using clothes. With it we supplement rationally derived truths as the basis of all knowledge and decisions about sustainability with subjective experience that reflects life on the ground in a changing world. Here we call out a role for experiment, for play, for composing and re-composing, as a way to better understand the world and our material, social and mental engagement with it. The *Local Wisdom* stories gathered under the theme 'action tools' show such learning, doing and agency. Here profuse use of safety pins, paper clips, ballpoint pen, sewing machine, and even the rain, supplement more

here's what to do with that item of clothing you don't wear anymore



wear it with love and make it last!

give it a fashion fix

Feeling creative? Cover a stain with embroidery, patch it up (p66) or stitch up a hole in contrasting thread. Check out the visible mending tutorial on p73 and wear your repair like a badge of honour!

recycle it

Give it a hug and recycle it. Find your local textile recycling bin on p91.

CAN I ALTER IT MYSELF?

NO WAY

I'VE
GOT
SKILLZ

get it tailored

Take it to a tailor or a sewing-savvy friend to transform!

give it a new home

give it to a friend or host a clothes swap party.

donate it

Donating unwanted clothes to charity is a great way to support your favourite causes. Find out how to do it responsibly on p87.

WOULD A FRIEND ENJOY WEARING IT?

STILL
LOOKING
GOOD!

MAYBE

reinvent it

Let the memories live on, and give it a new lease of life as something else... a cushion cover, bag, face cloth.

I DON'T
THINK SO...
NOT THEIR
SIZE/STYLE

CAN I SELL IT?

HELL
YEAH

sell it

With two thirds of people already buying pre-owned and vintage clothes, there's a willing market out there. You can sell clothing online through websites such as eBay, Vinted, Depop and even Facebook, or through your local cash for clothes outlet and at car boot sales.

IT'S NOT
WORTH THE
EFFORT..

TBH
IT'S SEEN
BETTER
DAYS...



PATCH IT UP

When we wear clothes we adore again and again, they can start to show signs of wear and tear. A rip, a missing button or a stain should never stand in the way of you and a good outfit. Don't throw them out, give them a **fashion fix**. Make your clothes last longer by repairing them when they need it.

Found a hole or tear in your favourite garment? Consider sewing on a cool patch as a way to mend it. Give yourself some extra style flair!

These Fashion Revolution patches were made by Avery Dennison RBIS with up to 90% recycled yarn.

PHOTOGRAPHY: Tolly Dolly Posh tollydollyposhfashion.com

Written by Zoë Robinson @thegoodwardrobe

Illustrated by Nina Chakrabarti

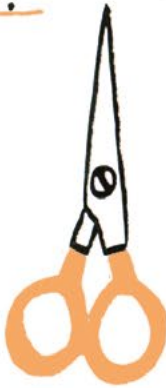
YOU WILL NEED:



BUTTON



THREAD



SCISSORS



NEEDLE



1

Thread the needle and knot the end. The knot should be big enough so that it can't pull through the weave or knit of the fabric.

2



Secure the thread with a couple of neat stitches on the underside of the fabric, below where the button will go.

TUTORIAL:

HOW to SEW ON a BUTTON

3

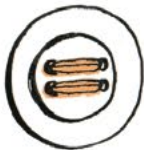


Hold the button in place and bring the thread up from the underside through one of the holes.

4



Then, pass the needle back through the next hole to the underside and then back up through the next hole. Repeat.



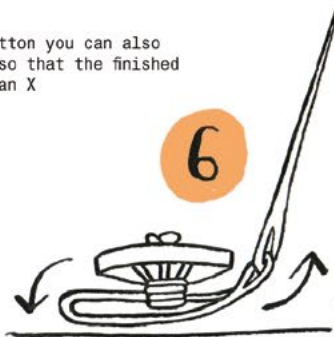
For a two-hole or four-hole button you can go straight from one hole to the next so the stitches resemble a - or =

5



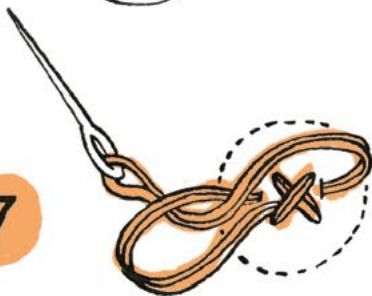
For a four-hole button you can also stitch diagonally so that the finished stitches resemble an X

6



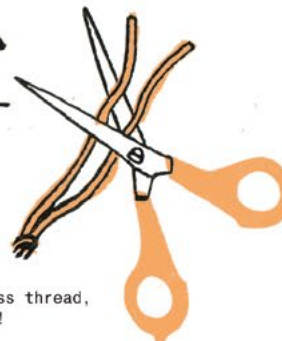
When it feels secure, pass the needle through to the underside of the button and wind the thread around the thread you have sewn, between the button and fabric.

7



Pass the needle through to the underside of the fabric, make a neat stitch, then start a second, but leave a large loop - twist the needle twice through the loop and pull to make a knot at the back of the button. Repeat.

8



Cut off the excess thread, and you're done!



TA-DA!

Clothes
worth
wearing
are worth
repairing



DARWIN

**STITCH, CROSS STITCH,
BACK STITCH, THREAD,
PIN, PATCH, IRON,
FUSE, FIX, COVER,
UNCOVER, EMBROIDER,
ADD BEADS, MEND A
SEAM, NEEDLEWORK,
PATCHWORK, INTERFACING,
OVERLOCKING, OVER
PRINTING, OVER KNITTING,
RE-HEM, RESHAPE,
CUSTOMISE, IMPROVISE,
TRANSFORM, REBORN,
RECONSTRUCTED,
DECONSTRUCTED,
BESPOKE, CUT SHORT,
MADE LONGER, TAILOR
MADE, REMADE, SAVED.
LOVED CLOTHES LAST.**

Holey sock or thinning elbows? Don't throw it out, give it a fashion fix. Turn your holes and tears into a fashion statement.

It's sometimes difficult to accept that things no longer look new and box-fresh, but by repairing you can extend the life of your garments, and replace them less frequently.

The term Visible Mending has very simple roots: when I first started mending clothes, I attempted to make my repairs invisible. It requires a lot of skill to make the repairs invisible, and so, over time, I have come to accept and positively celebrate a visible repair.

Although the techniques are based on creating an invisible repair, you can use threads in contrasting colours, instead of trying to let them blend in. By repairing in a visible way, you can add to the story of the garment and show it has a history. Adding a Visible Mend is also a chance to add some of your own creativity and wear your beautiful darn as a badge of honour!

Share your Visible Mending results on social media using the hashtag **#visiblemending**.
Happy darning!

Tom of Holland

www.tomofholland.com
[@tomofholland](https://twitter.com/tomofholland)

Tom of Holland teaches darning workshops across the UK called The Visible Mending Programme that highlights the art and craftsmanship of clothes repair.

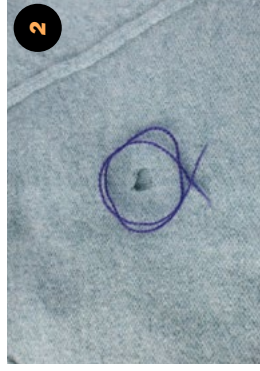
TUTORIAL: VISIBLE MENDING

The following tutorial shows you how to do a traditional stocking darn. It is suitable for small holes and thinning areas around it.



You will need:

A darning mushroom (although you can easily substitute this with an old light bulb, a boiled egg, or a ladle). Darning thread or yarn: make sure it is of similar weight or slightly lighter as the yarn used for the item to be darned. A darning needle, which is very long (around 2.5-3 inches), has a large eye and a sharp point.



If necessary, tidy up any loose threads around the hole. The area to be darned is shown here by my circle of mending thread.



A stocking darn is worked from the wrong side. Put the darning mushroom behind the hole and pull the fabric over it. Starting at the lower left corner, pick up alternate purl bumps, working your way up, using a column of purl bumps 'pointing up'. First put all the loops on the needle, before pulling it through. Leave a short tail.



Select the column immediately next to the previous one, with the purl bumps pointing down. Pick up alternate purl bumps, opposite the ones you did before. Don't pull through too far, instead make sure to leave a small loop at the turning point. This prevents puckering.



Keep doing this until you reach the hole, gradually enlarging the area where you pick up the purl bumps. When you get to the hole, pick up any live loops and span the hole with the needle and pick up the purl bumps at the other side before pulling through the needle.



Continue until you reach the other side of the area to be darned. By making the area octagonal instead of square, any strain on the fabric will be evenly distributed.



Now start working across. This time, you only have to pick up the darning thread, again, picking up alternate strands. There is no need to cover the whole area, just one or two strands outside the hole will suffice.



Like before, pick up the opposite strands on the way back and leave a little loop at the turning point, thus creating a patch of fabric.



When finished, cut the thread, leaving a small tail. There is no need to weave in any ends or knot them.



On the right side, you will only see a small woven patch. With wash and wear, the darn will integrate even better with the fabric. Needless to say, I prefer using contrasting yarn and turn it into a feature!



TEXTILE ART:
Celia Pym
celiapym.com

PHOTOGRAPHY:
Michele Panzeri
panzeri.co.uk



LEFT: **FIRST ONE'S THE BEST**
60 sports socks, wool
and acrylic yarn, 2015

ABOVE: **NORWEGIAN SWEATER**
original sweater from Annemor
Sundbø's Ragpile collection,
and white wool darning, 2010



REKNIT REVOLUTION

USE YOUR KNITTING SKILLS TO REWORK THE KNITWEAR IN YOUR WARDROBE. HANDMADE OR MASS-PRODUCED, CHUNKY OR FINE: EVERY STITCH IS A UNIT OF POSSIBILITY, RIPE FOR RECONFIGURATION.

REKNIT REVOLUTION is a project by designer, maker and researcher **AMY TWIGGER HOLROYD**
reknitrevolution.org



RECYCLE

CLOTHES

RESPONSIBLY

**WE STILL CHUCK UNWANTED
TEXTILES IN OUR HOUSEHOLD
BINS. WE DUMP IN CHARITY
SHOPS BEFORE CONSIDERING
OTHER AVAILABLE OPTIONS,
AND LETS FACE IT, PEOPLE
ALL OVER THE WORLD ARE
GETTING TIRED OF OUR
HAND-ME-DOWNS. PEOPLE
ALL OVER THE WORLD
AREN'T THRIVING IN OUR
UNWANTED CLOTHES, THEY
ARE DROWNING IN THEM.
WHEN IT COMES TO CLOTHES,
CHOOSING WHERE
THEY WILL END UP IS AS
IMPORTANT AS KNOWING
WHERE THEY COME FROM.**



a new dawn for textiles recycling

CYNDI RHOADES, *WORN AGAIN*

WHEN WE TALK ABOUT TEXTILES AND CLOTHING RECYCLING, DO WE MEAN REUSE/RE-WEAR, REPURPOSE/REPAIR, DOWNCYCLE/UPCYCLE AND/OR 'CIRCULAR TEXTILES' - FOR THOSE OF YOU FOLLOWING THE LATEST BUZZPHRASE?

Textiles recycling can mean all of these things. However, if we mean it in its truest sense, i.e. the raw materials in clothing being turned back into new raw materials to make clothing, again and again, the reality is that virtually no textile-to-textile recycling exists today. Instead, even if our unwanted clothing gets collected and resold at a charity shop or sold on e-Bay, the vast majority of it will eventually end up in landfill or incineration at some point.

Of this, according to our own research, about 50% of collected clothing is re-wearable and can be resold as clothing in local markets or exported to countries in Eastern Europe and sub-Saharan Africa.⁶⁵ Though once reused, it's unlikely it'll get collected for recycling again as many regions across the world lack the infrastructure to collect unwanted textiles. It's more likely to get thrown on the scrap heap when it's no longer wearable. About 40-45% of collected clothing is shredded and 'downcycled' into lower value products, like industrial wipers, furniture stuffing or insulation.⁶⁶

This is a great secondary use of materials. However, once 'downcycled' there are no collection methods for recovering these textiles and they too are likely to end up in landfill or incineration at some point. About 5% of what remains has no reuse or resale value whatsoever.⁶⁷ It goes direct to landfill or incineration.

So what about the percentage of clothing being turned back into clothing? Staggeringly, less than 1% of textile-to-textile recycling exists today.⁶⁸ The reasons for this are fairly straightforward. Today's methods for breaking textiles down to a fibre or raw material level in order to re-spin back into yarn and fabric again are extremely limited, due to both technical and economic barriers. We'll focus on polyester (PET) and cotton, given that between them, these two raw materials make up over 80% of all fibres used in our clothing, with other materials like nylon, wool and rayon/viscose making up the rest.⁶⁹

The first challenge with today's recycling, primarily referred to as 'mechanical' recycling, is the inability to separate raw materials, like polyester and cotton, from the other inputs that went into the garment during production, such as dyes, finishes and/or elastane (the stuff that gives stretch to our clothes). For instance, a 100% polyester shirt (made from virgin oil by-products), can be melted down, extruded and spun back into new yarn to produce fabric.

But if that shirt was red, so too will be the outputs created from it. Much of what went into the original garment gets carried through to the recycled yarn, which can affect quality, performance and colour in the new fabric.

"STAGGERINGLY, LESS THAN 1% OF TEXTILE-TO-TEXTILE RECYCLING EXISTS TODAY"

The issues with cotton recycling are similar on the dyes and colour front, but slightly different when it comes to re-spinning it into a recycled yarn.

Cotton fibre in clothing gets damaged during the consumer use phase, which results in shorter length fibres. To achieve a high enough quality in recycled yarn, it's necessary to blend in high volumes of virgin cotton during the spinning process.

In addition to these technical limitations, mechanical recycling is often associated with a price premium, which is prohibiting widespread industry take up.

The other big challenge with textile-to-textile recycling is blended materials. Once fibres like polyester and cotton have been blended into a fabric, today's methods for recycling are unable to separate them. Given that over 35% of all textiles are made up of poly/cotton blends, this represents a huge barrier for recycling clothing today and new approaches are needed.

For clarity, it's worth pointing out the difference between bottles-to-textiles and textiles-to-textiles recycling. The former, which happens in relatively significant volumes these days, involves plastic polyester (PET) bottles being melted down and made into recycled polyester or 'rPET' which is spun into yarn and textiles. It's a great use for recycling bottles, but don't be fooled, once it has been blended with other fibres, like cotton, it suffers the same textile recycling challenges: the inability to separate the raw materials from dyes and other contaminants or to separate blends. So while a product might be made from recycled content, it doesn't necessarily mean it's 'recyclable'.

But this is all about to change.

A new wave of recycling technologies is about to rock the entire clothing and apparel industry and change the way we produce and consume clothing forever.

This new technology - dubbed 'chemical recycling' - has the potential to recapture raw materials from end-of-use textiles (and post industrial textile waste), restore them back to virgin equivalent raw materials, in terms of quality (leaving behind all of the other stuff that went into clothing during production), to go back into the supply chain as new. From here, they get spun into yarn, made into textiles and then garments again and again and again.

The primary goal of developing this innovative chemical technology is to produce raw materials that are comparable in quality and competitive in price to their virgin counterparts, making the sourcing choice for brands a no-brainer in the future.

What will this mean for the industry?

New chemical recycling technologies will enable the industry to go from a linear model of production – make, wear and throw away – to a circular model, where existing (non re-wearable) clothing provides the feedstock to make new clothing, indefinitely.

For processes which can deal with both pure and blended polyester and cotton textiles, it will mean the ability to truly recover and reuse over 80% of the raw materials that go into our clothing and apparel today. A huge leap forward in comparison to the 1% textile to textile recycling today!

In the wider context, it will also mean more land to grow food to eat rather than to grow cotton to wear. We're going to need that food and land given the population is set to increase from 7 billion people to 9.8 billion by 2050.⁷⁰

what happens to post-consumer clothes that are collected?

resold
50%



PHOTOGRAPHY: 'Resold': Maria Bayer @marjabayer 'Downcycled': t:CO/ SOEX Group www.ico-spirit.com



“THERE’S MORE THAN ENOUGH CLOTHING AND TEXTILES IN EXISTENCE TODAY TO PROVIDE OUR ANNUAL DEMAND FOR NEW RAW MATERIALS”



What will this mean for clothes wearers?

In essence, it will mean that we will become the raw materials suppliers to the industry. The industry will rely on us to return clothing back into collection systems for the raw materials to be recaptured and made back into new clothing. We will become active participants in this solution, not passive consumers.

“WE WILL SEE QUITE AN EXTRAORDINARY SHIFT AHEAD. HOWEVER, THIS NEW ERA IS STILL ON THE HORIZON. WE ARE STILL A FEW YEARS AWAY FROM SEEING THESE NEW TECHNOLOGIES AT INDUSTRIAL SCALE”

In the meantime, there’s plenty to be getting on with, primarily around improving our textiles and clothing recycling habits.

In the UK, we’re collecting about 60% of our end-of-use textiles, according to WRAP,⁷¹ which isn’t bad in comparison to the US – one of the highest consuming nations in the world – at a shockingly low 9% collection rate.⁷² According to Worn Again’s research, the global average evens out at about 20% of textiles being recycled, meaning the other 80% is getting lost to landfill or incineration. The tragedy of this is that we are throwing away almost as much as we’re making every year in terms of the raw materials that go into our clothing.

What can we do in the meantime, while we’re waiting for these exciting innovations to scale?

Reuse and return everything in the form of textiles – clothing, sheets, curtains, even that weird missing sock. Take them to textile banks, charity shops, or basically whomever or wherever will take them. Even if those clothes have holes, stains or smell like old socks, the products themselves may no longer have a value, but the raw materials in them do.

One final thought. There’s more than enough clothing and textiles in existence today to provide our annual demand for new raw materials. All we need to do is collect them and bring these new technologies to scale.

Cyndi Rhoades

www.wornagain.co.uk

Cyndi Rhoades is the founder of Worn Again, a UK based company focused on developing circular recycling tech for textiles.






LEFT:
Photograph by Roel van Tour
and Mathijs Labadie

ABOVE:
Photograph by Luke Hayes

'Fibre Market' by Christien Meindertsma is an installation exploring the role of technology to increase textiles recycling. Meindertsma worked with two textile companies to machine-sort 1,000 discarded woollen jumpers into rainbow-hued piles of fibres.

However, while sorting through the jumpers, Meindertsma discovered that the 100% wool labels weren't that accurate. Many jumpers were blended fabrics with as little as 40% wool. Therefore, whilst critiquing a lack of mainstream textile recycling, Meindertsma also manages to shed light on consumer misinformation rampant in the fashion industry today.

Christien Meindertsma
www.christienmeindertsma.com



LEIGH MCALEA, TRAID

what you need to know about secondhand clothing

BEING RESPONSIBLE ABOUT THE CLOTHES WE BUY ALSO EXTENDS TO BEING RESPONSIBLE ABOUT WHAT WE DO WITH CLOTHES WE NO LONGER WANT.

Some organisations and most local authority recycling centres accept donations in any condition because they recycle and shred damaged and unsuitable textiles. Other organisations, such as charity shops like TR Aid, are primarily focussed on reuse rather than recycling. That means we ask for donations – whether clothes, homeware or shoes – which are in good enough condition to resell in our stores.

WHAT CLOTHING CAN BE DONATED TO CHARITY SHOPS?

However, what makes a donation ‘good enough’ varies wildly as it’s dependent on the subjective norms, personal tastes and opinions of the person clearing their wardrobe.

The people who know exactly what makes or breaks a donation are TR Aid’s sorters who inspect and handle nearly every item donated to us. Hugely experienced, eagle-eyed and fast, our sorters select clothes for our shops based on style, brand and condition.

WHAT SORT OF DONATED CLOTHING CANNOT BE RE-SOLD?

Donation no-no’s include stained items, fabrics smelling strongly of anything unpleasant like smoke or damp, items which are moth eaten, single shoes and garments with rips, holes or worn out patches. A good rule of thumb regarding stains is that if it didn’t wash out for you, it won’t for anyone else.

Shrunken items like jumpers, clothes which have lost their shape or become bobbly due to washing and wear, and most clothes, shoes and accessories with broken zips, straps, buckles or handles also won’t make the grade.

DON’T BE DETERRED BY A MISSING BUTTON

Spend a day sorting with our team and you’ll quickly learn there are entirely no hard or fast rules. The sorters may select slightly damaged items if it’s an easy fix for the customer like a missing button, dropped hem or removable mark. This is most common when it’s an expensive or designer brand or a special vintage piece. In these cases, items are sold ‘as seen’ and command a lower price.

WHAT HAPPENS WHEN SECOND-HAND CLOTHING DOESN’T SELL IN THE SHOP?

Most is sold on to wholesale markets by weight. In TR Aid’s case, the majority is sold to Eastern Europe for further reuse, mainly in second-hand shops, with a small percentage of damaged textiles recycled.

While TR Aid finds a route to reuse for the vast majority of donations given to us, our priority is to put the huge volume of wearable clothes back into circulation so they can be worn again. As citizens, extending the life of our clothes, and sourcing more of our clothes second-hand, is one of the most environmentally beneficial things we can do to shrink our fashion footprints.

SECOND-HAND CLOTHING CAN PROMOTE A SENSE OF COMMUNITY

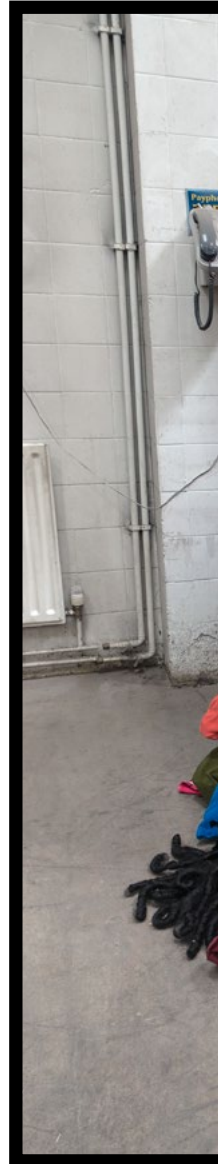
Increasing our use of second-hand clothes – both in terms of sourcing more of our wardrobe second-hand and passing clothes on – also has positive social and cultural outcomes. It encourages us to act collectively as citizens and resist being defined as individualistic consumers; it connects us with the communities we live in by finding alternative ways to transact which places value on sustainable and ethical outcomes. Second-hand also loosens the grip of advertising and corporations on shaping our style and identity, and can reconnect us to the joy of wearing clothes and passing them on.

TR AID

www.traid.org.uk

@traid

TR AID is a UK based fashion reuse charity working to tackle the environmental and social injustice caused by the production, consumption and waste of clothes.





**SECOND
LIFE**
WILLIAM
FARR

William Farr
williamfarr.co
[@william__farr](https://www.instagram.com/william__farr)

William Farr is an installation artist and image maker, working primarily with found materials.

ASSISTANT:
Nicola Haffmans

LOCATION:
TRAID warehouse



where to recycle

AN EASY GUIDE TO FIND YOUR LOCAL TEXTILE RECYCLING SERVICE

AFRICA

SOUTH AFRICA mywaste.co.za

ASIA

SINGAPORE The National Environment Agency's app has a map detailing collection points:
itunes.apple.com/sg/app/myenv/id444435182?mt=8

ISRAEL Jerusalem www.greenmap.org.il/places?nid=2&Catid=24&lang=en

Tel Aviv www.tel-aviv.gov.il/Residents/Environment/Pages/WasteSeparation.aspx

Other areas check their local municipality website

OCEANIA

AUSTRALIA recyclingnearyou.com.au/charities

EUROPE

BELGIUM Check local municipality website

CZECH REPUBLIC Prague www.recyklujemetextil.cz/kde-najdete-kontejnery

DENMARK The Red Cross accepts both clothes and household textiles, and have a map of collection bins here:
www.rodekors.dk/det-goer-vi/genbrug/toejcontainer-genbrugscontainer

ESTONIA Tallinn www.prugi.ee/portal/en/riidekonteinerid/

FINLAND www.kierratys.info

FRANCE www.ourecycler.fr/recycler/tissus-vetements

GERMANY www.fairwertung.de/standortsuche/index.html

This website shows locations of donation bins from approved charitable associations, to try to combat a number of illegal collection bins that have been installed for commercial gain.

IRELAND www.repak.ie/for-consumers/facilities-search

You can't search specifically for textiles recycling, but when you search for your area you can see which materials can be taken to your local recycling centres.

ITALY Containers are provided by Caritas, each province has a separate website so we would recommend searching 'Caritas in ...'

LITHUANIA Vilnius www.ecoservice.lt/wp-content/uploads/Tekstiles-konteineriu-sarasas.pdf

LUXEMBOURG Recycling centres can be found the Varolux app:
play.google.com/store/apps/details?id=luxapps.lu.valorlux&hl=en

NETHERLANDS Amsterdam kaart.amsterdam.nl/?boundsfilter=52.413233,5.049026,52.308973,4.727851&types=518

NORWAY www.fretex.no/gi-til-fretex/naermeste-fretexboks/finn-naermeste-fretexboks-i-kartet
www.uffnorge.org/toyinnsamling/hvor-kan-du-gi-til-uff

POLAND Check local municipality website for recycling centres

RUSSIA www.recyclemap.ru

SLOVENIA www.tekstilnica.si/zemljevid/

SPAIN Madrid www.madrid.es/UnidadesDescentralizadas/LimpiezaUrbanaYResiduos/Descriptivos/ficheros/Dependenciasmercadillosropausada.pdf

Barcelona www.robaamiga.cat/es

For other areas check their local website

SWEDEN Stockholm www.stockholmvattenochavfall.se/om-oss/vara-kontor-och-anlaggningar/atervinningscentraler/

SWITZERLAND www.recycling-map.ch

UK www.loveyourclothes.org.uk/recycle-your-clothes

NORTH AMERICA

USA There are multiple firms operating collection bins, including:
www.usagain.com/find-a-collection-bin (AL, CA, CO, CT, GA, IA, IL, IN, MA, MI, MN, MO, ND, NE, NJ, NY, PA, SD, WA, WI), <http://atrscorp.com/> (AZ, CA, CO, FL, GA, IN, MI, OK, TN, TX) and www.planetaid.org/find-a-bin (CA, CT, KS, MA, MD, ME, MI, MO, NC, NH, NJ, NY, OH, PA, RI, VA, VT).

SOUTH AMERICA

ARGENTINA www.dondereciclo.org.ar/textiles

Countries where recycling collection bins are in place, but there is no official website with locations: China, South Korea (most apartment blocks will have a textile recycling bin in the communal area), Taiwan, New Zealand, Austria, Greece, Hungary, Portugal, Slovakia, Canada

Countries where no information was available: Malaysia, Turkey, United Arab Emirates, Ukraine, Brazil (no information available other than as of 2014 there was no system in place for recycling textiles)

The secret world of secondhand clothing

ELIZABETH L. CLINE

In 2014, there were 3.8 billion pounds of clothing donated to charities and textile recyclers in the United States,⁷³ the equivalent in weight of over 8 billion t-shirts, enough to dress the world.

While charities do what they can to sell what they receive, it's not possible to sell it all locally. In fact, more than 60% of unwanted clothing donated in the United States is sent to other nations to be sold or recycled in thrift shops and informal markets from Angola to Pakistan. An estimated 70% of clothes donated globally end up in Africa.⁷⁴

As the volume mounts and our throwaway culture deepens, we have a long way to go toward developing truly smart, ethical and sustainable solutions to textile waste.

MORE TRANSPARENCY ABOUT TEXTILE WASTE IS NEEDED

The global secondhand clothing industry is complex, fraught with controversy, and lacking in transparency. It needs to be far better regulated. Yet its impact on other countries is not a simple black-and-white issue. In Nairobi, used clothes create lots of jobs, albeit many pay poverty wages. The city's show-stopping street style is due in no small part to plentiful access to cheap and stylish worn wares. But the local textile mill owners and fashion designers will tell you that used clothes are killing their businesses, and some secondhand dealers themselves argue it should be banned for suppressing economic growth. Kenya and many other developing nations are wrangling with what's best for their countries and where used clothes fit into that picture.

Chile, to use another example, imports over 110 million pounds of used clothes from the U.S.⁷⁵ and much of it ends up in thrift stores that look like a typical Salvation Army or Brooklyn vintage shop. But there's also a booming illicit trade of smuggled clothes out of Chile into neighboring Bolivia, where used clothes are banned. India, on the other hand, imports massive quantities of scrap wool and acrylic to downcycle into affordable blankets and bath mats, a boon for the planet and the poor. For every shadowy undercurrent, there is a reputable and much-needed aspect to this global churn of worn apparel.

IS DONATING OUR UNWANTED CLOTHING MORE THAN JUST GOOD INTENTIONS?

In the rich world, clothing donations are framed as a moral good, a redemptive act that has both social and environmental benefits. It's a well-intentioned sentiment stuck in a past when clothing was scarce and more expensive. We want to believe that charities and recycling organisations need every single item we donate and that there's another person in our own community thrilled to make last season's leather pants their own. Yet, if we truly face up to the profusion of unwanted clothes we're creating, the force driving the global secondhand industry comes into sharp focus. That force is us and our shopping habits.

TEXTILE WASTE IS A THORNY ISSUE BUT CAN BE TACKLED

With more transparency in the industry and heightened awareness surrounding the issue of textile waste, I believe attitudes will change. The U.S. and other developed countries have an opportunity to take a leadership role — educating the public on clothing care and reuse, pioneering new recycling technologies, and helping to expand the sale of used clothes domestically by making it more convenient and desirable. But it all starts with each of us on an individual level making simple but profound changes in the way we choose to buy, care for, and dispose of clothes.

Elizabeth L. Cline
overdressedthebook.com
[@elizabethcline](https://twitter.com/elizabethcline)

Elizabeth Cline is the acclaimed author "Overdressed: The Shockingly High Cost of Cheap Fashion" and is currently working on a documentary about textile waste.



LARGEST EXPORTERS OF USED CLOTHING

(BY WEIGHT, IN KG. 2016)

1. USA 753m
2. Germany 505m
3. UK 353m
4. South Korea 278m
5. Japan 239m
6. Netherlands 175m
7. Poland 163m
8. Belgium 144m
9. Italy 135m
10. China 127m



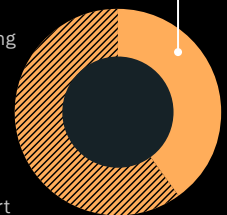
LARGEST IMPORTERS OF USED CLOTHING

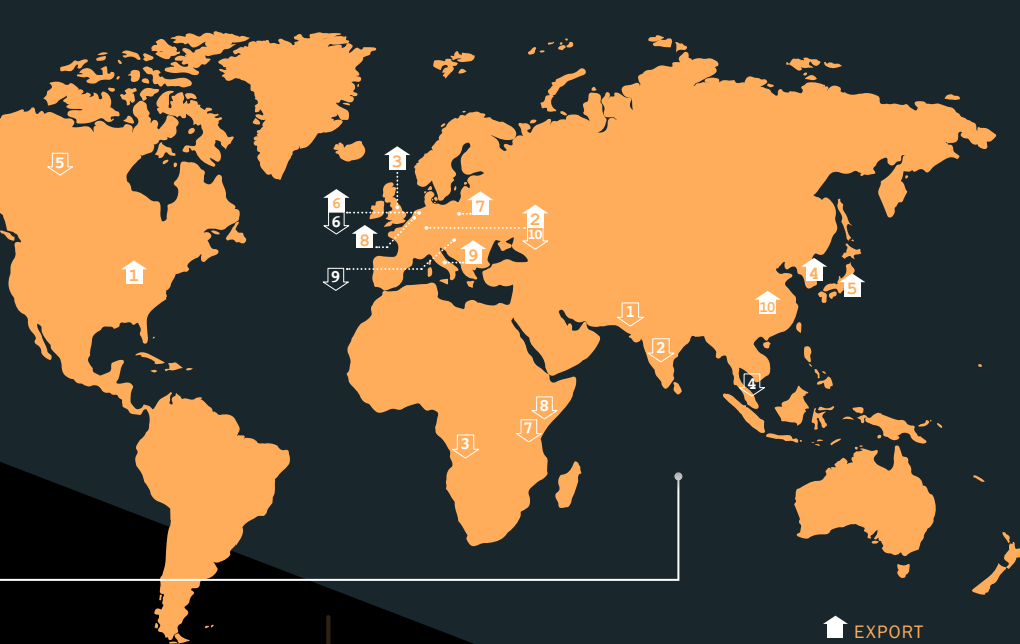
(BY WEIGHT, IN KG. 2016)

1. Pakistan 625m
2. India 318m
3. Angola 339m
4. Malaysia 206m
5. Canada 154m
6. Netherlands 128m
7. Tanzania 102m
8. Kenya 101m (2013)
9. Hungary 90m
10. Germany 74m

WHAT HAPPENS TO OUR UNWANTED CLOTHES?

In the USA, UK, and Canada, charities sell 10% to 30% of donated clothing in their shops. The remainder is sold to textile sorting and recycling companies, who then export the bulk of it.





↑ EXPORT
↓ IMPORT

AFRICA

The final destination for up to a third of all used clothes. In countries like Uganda and Kenya, as much as 80% of the population wears secondhand clothes imported from wealthy nations.

EUROPE

A major generator of used clothes and a center for sorting and re-exporting to other countries. In Eastern Europe, large volumes of secondhand clothes are imported to be worn.

ASIA

Japan, South Korea and Taiwan generate used clothes, while Malaysia and the Philippines are major sorting destinations. In India and Pakistan, worn clothes are often turned into recycled blankets, which are exported.

RUSSIA

Russia imports over 29 million kgs of used clothes annually, much of it high quality finds from Europe.

SOUTH AMERICA

Most countries import higher-quality used clothing to be worn locally. Much of it comes from the U.S.

AUSTRALIA

Used clothing is collected and sold through local shops and also exported.

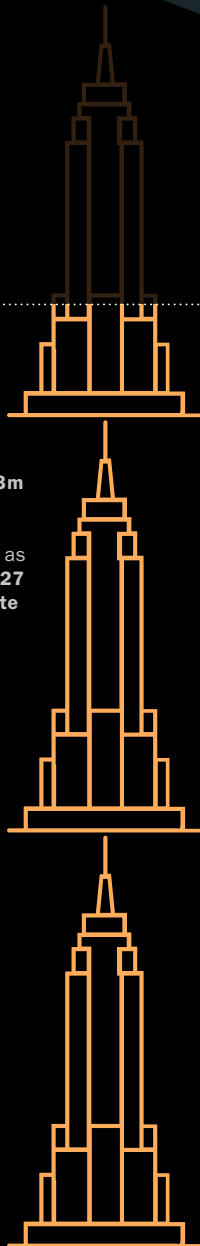
UAE

Large sorting facilities import and re-export clothes to other parts of the world, including Africa.

USA

Generates the most used clothing in the world and exports about 60% of it to other countries.

The USA exports 753m kgs of used clothes per year. That's as heavy as 2.27 Empire State Buildings!

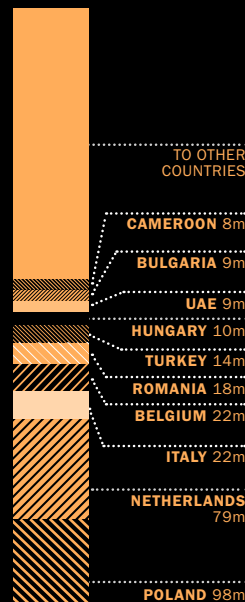


MILLION KG

USA

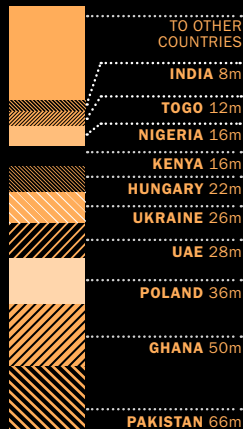


GERMANY



WHERE DO THE TOP 3 LARGEST EXPORTERS OF USED CLOTHES SEND THEIR CLOTHES?

UK



Based on UN ComTrade Data and compiled by Elizabeth L. Cline
*Burundi, Tanzania, Kenya, Rwanda, Uganda

1



2



3



4



5



6



TEXTILE RECYCLING IN INDIA

LUCY NORRIS

Used winter clothing can be hard to sell into global re-use markets, which either have hotter climates (sub-Saharan Africa, South Asia) or customers who value only high quality, branded garments (Eastern Europe, Russia). The Indian textile recycling industry imports coats, jackets and jumpers to shred them and reclaim their fibres. The fibres can be spun into recycled yarns. These are then woven into cheap blankets, shawls and even fabric for new garments. But these are prime examples of down-cycling, where poor-quality recycled materials mean that products often don't last long.

The economic, social and geographical distance between disposer and recycler means that they know little about each others' lives, and reveals cultural differences around the value of clothing. Indian families tend to use and reuse cloth until it literally falls apart, and clothing is never simply thrown away. The film *Unravel* shows sorters at a processing factory wondering how the huge piles of nearly-new clothing can be simply discarded, imagining that there must be a water shortage abroad, and that it is cheaper to give them away than wash them.

Reshma, who is a sorter, reflects on the situation with both wonder and pity at the lifestyles she imagines women in richer countries enjoy — free to wear what they want and then discard it so easily. But her husband concludes, "you tend to get dressed for other people... but at the end of the day you'll be as beautiful as God made you. All people have a natural beauty."

Profits in this global second-hand trade have depended upon brokers in the middle connecting dealers, while those at either end know very little about the system as a whole. The workers who sort, prepare and shred the used clothing regard it as a resource upon which their livelihood depends, but working conditions in the recycling factories are often poor and unregulated. While expensive new technologies are promising to transform the landscape of textile recycling in the global north, will these marginal industries in the global south be incorporated into reconfigured recycling economies in such a way as to ensure that they are transparent, equitable, and sustainable?

PHOTOGRAPHY:

© Tim Mitchell and Lucy Norris
www.timitchell.co.uk

RESEARCH:

Dr Lucy Norris, a Visiting Fellow at Textiles Environment Design (TED), University of the Arts London, and anthropologist currently exploring sustainable design concepts for emerging circular economies. Download publications at:
www.lucynorris.co.uk

DOCUMENTARY: 'Unravel'

(dir. Meghna Gupta 2012)
aeon.co/videos/this-is-the-final-resting-place-of-your-cast-off-clothing

1
Textile recyclers sort used clothing into over 400 categories.

2
Clothing is compressed into bales weighing up to 1000kg each.

3
The UK is one of the largest global exporters of used textiles, but clothing is often re-sorted in import/export hubs before reaching its final destination.

4
Used clothing is exported to sub-Saharan Africa, South Asia, Eastern Europe and Russia for re-use and recycling.

5
India imports over 100,000 tonnes of used clothing a year to supply its textile recycling industry.⁷⁶

6
Women prepare the clothing for shredding by hand.

CAN BANNING SECOND-HAND CLOTHES IN EAST AFRICA MAKE A DIFFERENCE?



On any weekday morning, the entrance to Xipamanine Market is crowded; minivans clog the narrow road and hawkers circle, touting cheap Chinese manufactured goods such as plastic clothes pegs, pressed steel cutlery or affordable garments like polyester socks.

Xipamanine is the largest market in Maputo, the capital of Mozambique in southeast Africa. When you enter the market you pass through narrow alleys between market stalls selling local food like coconuts, mangos, pineapples and fresh fish. It is lively and vibrant, as stereos pump out the latest R&B beats from New York and Los Angeles, and rich in all sorts of smells. Moving further into the melee you begin to encounter noisy traders negotiating the sale of more cheap, low-quality, imported new clothing made in Asia. There are soccer shirts with English Premier League logos or Mozambican flags. Beyond these new clothing vendors is the heart of the market and here we find Mario's used clothing stall.

“THE JEANS HAVE BEEN BOUGHT, OWNED AND WORN BY SOMEONE ELSEWHERE AND THEN RECYCLED AND ENDED-UP FAR AWAY IN AN EAST AFRICAN MARKETPLACE.”

Mario makes a living selling second-hand jeans imported from North America and Europe. The jeans are carefully arranged according to quality. Pristine pairs of Levis' hang on display on improvised coat-hangers, while low value torn and soiled denim is heaped on the ground on polythene sacks.

All of the jeans have their own unique and unknown stories; maybe they were outgrown by an American teenager or discarded by a fashion conscious British student. At one time the jeans have been bought, owned and worn by someone elsewhere and then recycled and ended-up far away in an east African marketplace. Some jeans show the marks of their previous lives; there are rips, scuffs and stains, and even scraps of paper in the pockets. The dirtiest and most torn jeans won't be sold and if Mario gets too many low-quality pairs he will lose money. His livelihood is precarious and he is trapped in poverty. Second-hand clothes from developed countries are a mainstay of many African informal markets.

Elsewhere in east Africa, Burundi, Kenya, Rwanda, Tanzania and Uganda, which together make up The East African Community (EAC), recently implemented a ban on imported used clothes and shoes. Their aim is to encourage local garment production within EAC member countries. In the 1970s, east Africa's clothing factories employed hundreds of thousands of people, but when the debt crisis hit Africa in the 1980s and 1990s, local manufacturing struggled to compete with international competition and factories were forced to close. Today, the small remaining sector is geared towards production for exports.

Many orthodox economists disagree with banning imports because it goes against the principles of free trade. Rather than having the freedom to choose imported used clothing, consumers will have to buy higher priced local goods or new clothes imported from Asia.

Increasing the cost of clothing will hit many low-income consumers in the short-term, but a revitalised local market could ultimately boost the EAC's economy by providing more jobs in manufacturing than in second-hand retail. Factory jobs could be better than Mario's precarious market work. Furthermore, retaining money in East African economies that currently goes to Europe and the U.S. to pay for second-hand imports will improve their balance of trade.

It is important to emphasise, however, that turning off the supply of used clothing alone will not enable the growth of local manufacturing in these east African countries. The ban on imports does not include new clothing imports from outside the EAC. While new garments from Asia will be more expensive than used clothes, they are likely to be cheaper than locally manufactured clothes.

Efforts to ban used clothing imports are therefore unlikely to be beneficial for the local economy unless there are similar controls on new clothing imports.

Clothing manufacturers in east Africa face other challenges. If countries such as Kenya are to revitalise their

clothing industry, which once employed an estimated 500,000 people and now only has around 20,000 workers, then the EAC needs to promote industrial policies. These might include improving communication, transport infrastructure and power supplies to enhance distribution and avoid delays in production; providing tax relief for factories; and offering export incentives. Links could also be established with east Africa's cotton growing sector to improve its sustainability and help ensure a reliable local supply of raw materials.

“EFFORTS TO BAN USED CLOTHING IMPORTS ARE UNLIKELY TO BE BENEFICIAL FOR THE LOCAL ECONOMY UNLESS THERE ARE SIMILAR CONTROLS ON NEW CLOTHING IMPORTS”

Successful nations such as China and South Korea did not emerge from poverty by becoming dependent on exports from the west. Instead they protected domestic markets. Second-hand clothes may be more affordable, but trading in them reinforces an unequal relationship between haves and have-nots in the global economy. East Africans like Mario would rather have secure employment than informal market work. If leaders want to do more than maintain the status quo they need to take bold decisions, even if this means sometimes making choices that might be unpopular with international advocates of free trade. The intention of the EAC ban and the goal of promoting industrialisation in the east African region is commendable, but for it to be successful more needs to be done to support the local textile and clothing industry and to break the cycle of dependency.

Dr Andrew Brookes
clothingpoverty.com

Dr Andrew Brooks is a Lecturer in Development Geography at King's College London and the author of *Clothing Poverty: The Hidden World of Fast Fashion and Second-hand Clothes*, published by Zed Books, London.









how long does it take clothes to decompose in landfill?



FASHION

SHOULD

BECOME

WASTELESS

WASTE IN FASHION CAN BE REDESIGNED AND MINIMISED. IT CAN BE A MASSIVE PROBLEM OR COULD BE AN UNTAPPED NEVER-ENDING RESOURCE. AS LONG AS THERE ARE CLOTHES BEING MADE, THERE WILL BE OFF-CUTS. AS LONG AS WE WILL BE WEARING CLOTHES, WE WILL LEAVE A TRAIL OF OUR UNWANTED PIECES. SO LET'S INVEST IN CREATIVE DESIGN SOLUTIONS, WASTE CUTTING SKILLS AND TECHNIQUES, RECYCLING INNOVATION IN PRODUCTION AND END-OF-LIFE DISPOSAL. BRANDS AND CONSUMERS ALIKE: WE MUST DISCOVER WAYS TO ACT ON OUR SURPLUS, BEFORE IT BECOMES WASTE.

UPPER ARCHEOLOGY - SILVER by Helen Kirkum.
A study of upper overlays and underlays in footwear.
www.helenkirkum.com





CURATED BY:

Sass Brown

Author of "ReFashioned: Cutting Edge Clothing From Upcycled Materials" and Founding Dean of Dubai Institute of Design and Innovation.

7 FASHION BRANDS THAT ARE DESIGNING OUT WASTE



NAME:	Doodlage
LOCATION:	India
www.doodlage.in @doodlageofficial	
"With 40% of garment production being done in India, Bangladesh and China, these countries alone produce enough waste to be able to create 6 billion garments from just scraps and leftovers. These were some alarming stats that led us into creating a brand using fabric that would otherwise go into landfills."	



NAME:	RE;CODE
LOCATION:	South Korea
www.re-code.co.kr @recode_	
"We disassemble and re-commercialise ready-made products. People might find it surprising that we use industrial materials such as seat covers, airbags, and fabric linings that make up a car's interior, waste that is collected from our sister companies within the Kolon group, to design jackets, bags and laptop cases."	



NAME:	Ecoalf
LOCATION:	Spain
ecoalf.com @ecoalf	
"Discarded fishing nets, post-consumer plastic bottles, worn-out tires, post-industrial cotton, and even used coffee grinds become our outerwear, swimsuits, sneakers and accessories. In order to ensure 100% transparency and provide the highest levels of quality, our team manages the full process from waste collection to recycling technologies, manufacture, design and retail."	

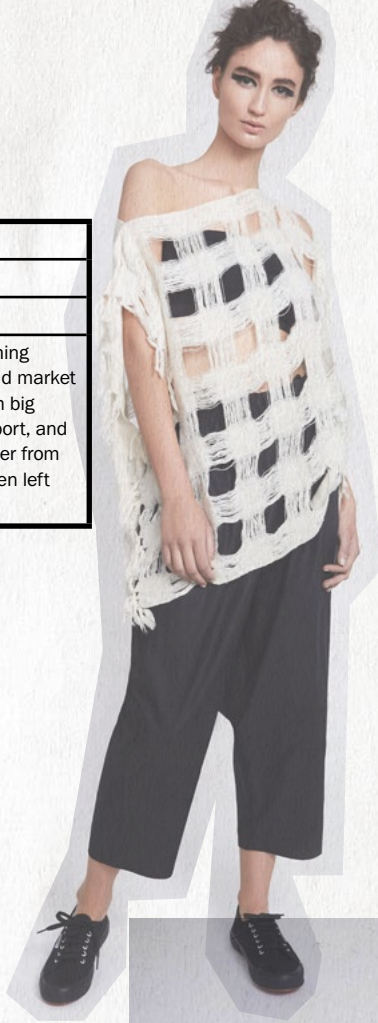




NAME:	Suave
LOCATION:	Kenya
suavekenya.com @suave_ke	
<p>"We buy unwanted and unsellable clothing from traders at the biggest second hand market in Kenya. We source waste offcuts from big factories manufacturing clothes for export, and we also buy rejected, lower grade leather from local tanneries, materials that have been left behind by other buyers."</p>	



NAME:	Zurita
LOCATION:	Chile
zurita.co @zuritaofficial	
<p>"Many of my designs are influenced by the geometrical thinking and creations of the Andean weavers. This ancient pre-Columbian way to conceive textiles and clothing doesn't leave any waste. Not only in the woven pieces but also in the use of fabric, I try to use the whole piece of textile from design through production."</p>	



NAME:	Bundgaard Nielsen
LOCATION:	Denmark
bundgaardnielsen.com @bundgaardnielsen	
<p>"I am currently working on developing a new size-flexible garment system, which will do away with bad fit and standard sizing, one of the main reasons people discard clothing. I was once told a story of my father fixing an airplane engine using only a bottle cap and his creativity while travelling in Africa. This gave me a challenge to make do with what you are given within a certain framework."</p>	



NAME:	Bethany Williams
LOCATION:	United Kingdom
bethany-williams.com @bethany_williams_london	
<p>"For my most recent collection 'Women of Change' I have worked alongside San Patrignano in Rimini, Italy – an education and rehabilitation programme for people with drug and alcohol dependency that teaches traditional Italian craft and fosters a sense of community. Together we developed hand-woven textiles from recycled packaging materials found within the workshop."</p>	



WHAT SHOULD THE GOVERNMENT BE DOING TO TACKLE FASHION'S WASTE PROBLEM?

Governments around the world aren't making it easy for citizens to recycle their unwanted clothing and textiles. There are very few laws, regulations or governmental initiatives that tackle this big waste issue.

MAKE COMPANIES ACCOUNTABLE FOR THEIR WASTE

France might be the only country in the world that requires "extended producer responsibility"⁷⁷ for clothing, textiles and footwear, meaning that manufacturers, importers, distributors and brands across France are responsible for the products they make or sell, and any associated packaging, when they become waste. How does this work?

Companies pay an upfront fee proportional to how much product they place on the market, and this levy helps fund the collection and recycling infrastructure needed to deal with any waste created. Canada is considering similar legislation,⁷⁸ and California has a similar law for carpets but not for clothing.⁷⁹ Sweden does not have "extended producer responsibility" legislation but does offer citizens tax breaks when they choose to repair clothing and shoes rather than throwing them out.⁸⁰



MAKE RECYCLING CLOTHES EASIER FOR PEOPLE

Curbside clothing and textile recycling isn't yet common practice. Across many parts of the U.S., Simply Recycling is a free non-profit curbside clothing and textile recycling service for municipalities and residents.⁸¹ The city of Queen Creek in Arizona collects towels, clothing, blankets, sheets and shoes in special waterproof bags from residents' homes and sends them to textile recyclers.⁸² Several local authorities in the UK, including Norwich, Nottingham and Wrexham, have a similar programme to collect textiles from residents homes on a weekly basis. Packmee, an initiative in Germany and the Netherlands, allows citizens to ship their old clothes for free to textile recyclers.⁸³ However, drop-off recycling of textiles is still the industry standard, which means people need to seek out their closest collection bin for their unwanted clothes and shoes. Some of these bins will send used clothes to charity and others to for-profit textile recyclers. In fact, the city of Markham in Canada has banned residents from putting clothing and textiles into curbside trash in order to encourage more recycling at the city's drop-off bins.

INVEST IN MORE EDUCATION AND INNOVATIVE SOLUTIONS

Government investment in education, research and innovation in this area is also poor. As circular textiles expert Becky Earley explains, "Funding bodies tend towards investment in recycling smart or technical materials because the piece price is higher (per metre), but the volume of clothing and textile waste that goes uncharted is often ignored. We are still exporting our clothing and textile waste – to places like Africa (see p.97) – but it is likely that this will cease soon (due to changes in regulations in several African countries) and so we will have the chance to use this waste ourselves. In the way that the micro-brewing industry has changed our choice of beer to buy, micro-circular fashion businesses need not be far away".

"As oil prices go up, and land for cotton becomes scarcer due to food demand and water scarcity, we will need alternatives. Materials regenerated from clothing and textile waste may well be the solution. As a result we will need more research into innovations that deal with clothing and textile waste – looking for what can be improved economically and socially by using our waste (and of course creating less of it in the future). Once taxes are raised for using virgin materials and reduced for using recycled ones instead, the future for circular fashion businesses will flourish."

6 ACTIONS TO ASK YOUR GOVERNMENT OR LOCAL AUTHORITY TO TAKE

1

Make it easy for citizens to reuse and repair clothes and shoes.

2

Make it easy for citizens to recycle used clothing and textiles.

3

Provide more information for citizens on reusing, repairing and recycling used clothing and textiles.

4

Pass "extended producer responsibility" legislation so that businesses are accountable for the textile waste they create.

5

Raise taxes on the use of virgin materials and issue penalties for creating textile waste. Cut taxes for using recycled materials and recycling clothing and textiles.

6

Invest in research, infrastructure and innovations to reduce clothing and textile waste and build circular economies.

Designing from Abundance

Lewis Perkins is the President of the Cradle to Cradle Products Innovation Institute, a non-profit organisation created to bring about a large scale transformation in the way we make things. Here we pick his expert brain about how fashion brands should be tackling waste and moving faster towards circularity.

can be perpetually cycled from one product life cycle to the next.

FR How far away are we from a wasteless fashion industry?

LP We have a long way to go! The fashion industry still has a lot of 'low-hanging fruit' when it comes to reducing waste across the supply chain. That said, many leading brands are heavily investing in this very thing: looking for and implementing ways to move their own operations and the fashion industry as a whole more fully into the circular economy.

FASHION REVOLUTION What's the "Cradle-to Cradle" approach all about?

reclaimed using materials that can be recycled or reused — then, and this is really key, provide accessible, easy ways for consumers to return products into the reuse cycle once those products are no longer needed.

FR Who does a circular economy benefit?

LEWIS PERKINS The Cradle to Cradle Certified Product Standard guides designers and manufacturers through a continual improvement process that determines the impact of a product across five categories: material health, material reutilization, renewable energy and carbon management, water stewardship, and social fairness. One of the goals of the certification standard is that materials have the capacity to remain in a perpetual cycle of use and reuse — the kind of design thinking we now call the circular economy.

LP Everyone! Right now, according to the UN, if growth rates continue at their present trajectory, the global population will reach 9.8 billion by 2050.⁸⁴ If this occurs, we will need the equivalent of three planets to provide the natural resources necessary to sustain current lifestyles. So when we talk about the circular economy, what we're really talking about is a way to sustain our planet by moving away from the traditional "take, make, waste" approach that depletes resources without replenishing them, and moving as quickly as possible into a closed-loop or circular approach to production and consumption that reduces natural resource dependency and is fueled by the perpetual cycling of materials from one product cycle to the next.

FR What should brands be doing to tackle fashion's waste problem?

FR Why should more fashion brands be investing in waste solutions?

LP One of the most important things any brand can do is to use Cradle to Cradle principles to design with the end in mind, creating products that can be

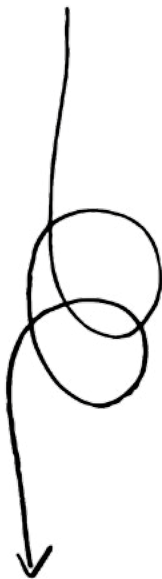
LP The business case for investing in a circular system is the case for sustainability. It's no longer a feel-good, nice-to-have policy: it's a smart business practice that many companies are already using to spur innovation and drive efficiency improvements that yield operational savings as well as reduce environmental and social impact — not to mention strengthen business and customer relationships. Ultimately, the success of the circular economy — and therefore the success not just of the fashion industry but of our future world — depends upon broad-scale access to safe, healthy ingredient materials that

WWW.C2CCERTIFIED.ORG

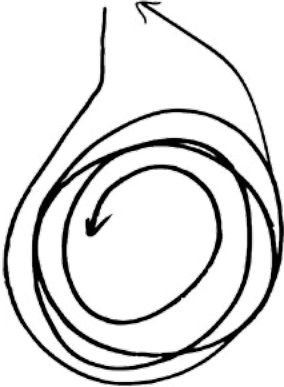
LINEAR ECONOMY



RECYCLING ECONOMY



CIRCULAR ECONOMY



CC by Circular Flanders

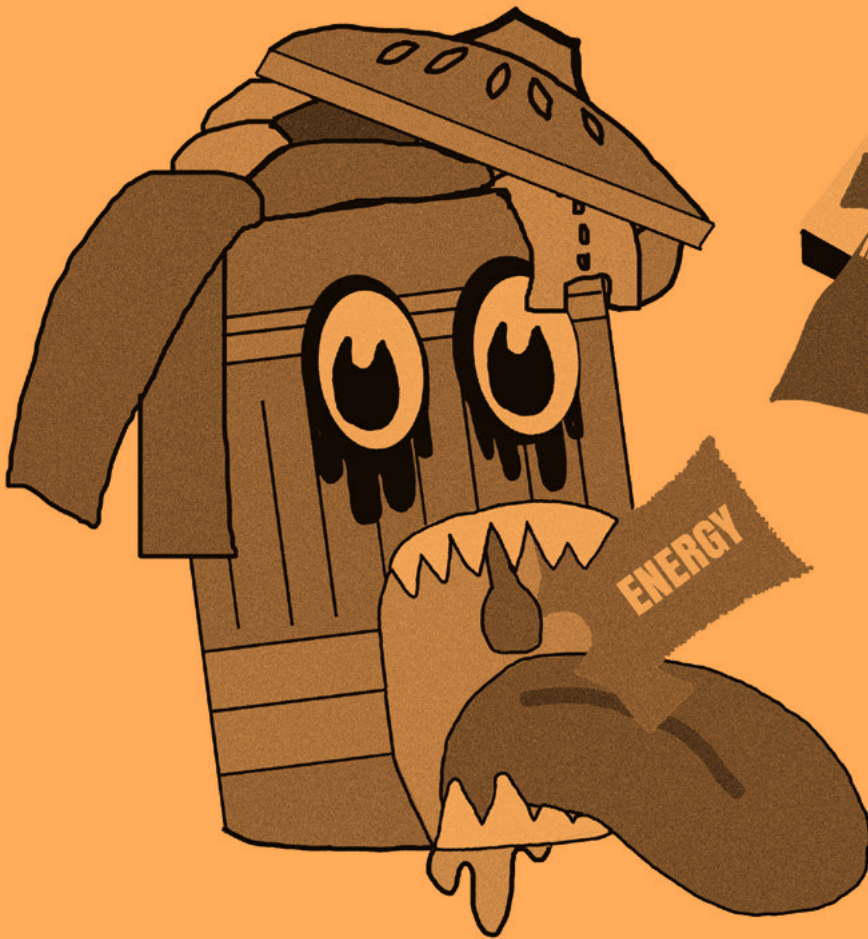
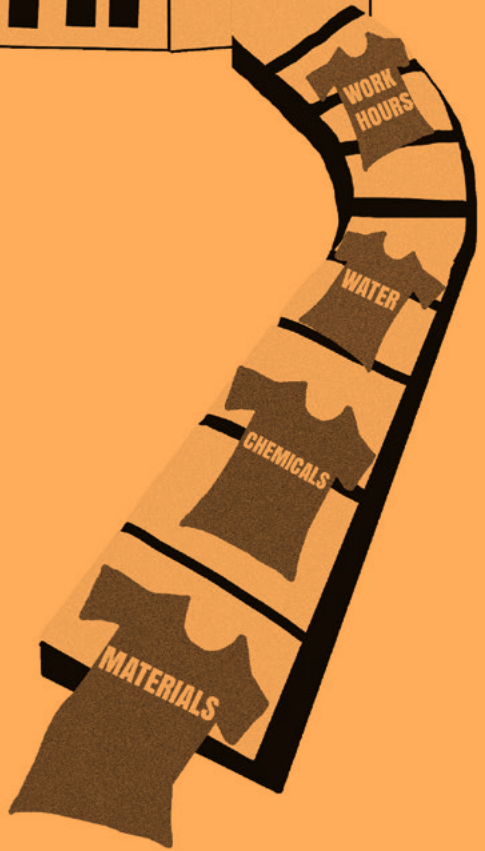
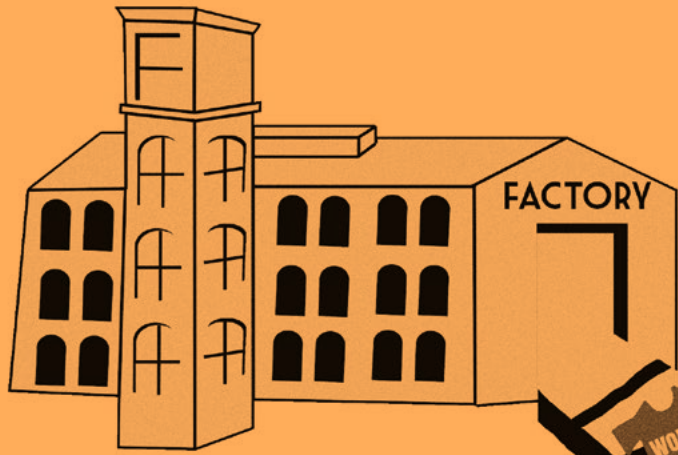
HEY BRANDS AND RETAILERS!

HELP US MAKE OUR #LOVEDCLOTHESLAST

The fashion industry has a massive waste problem. Far too many materials and clothes are sent to landfills each year. As consumers we know we're part of the problem, but brands and retailers have a big responsibility too. Here's what we are asking you to do towards ensuring that fashion's waste problem becomes a thing of the past.

- Offer fewer but better quality products that won't fall apart so quickly
 - Use recyclable materials
 - Design products that can be easily disassembled and recovered
 - List the ingredients in your clothes and inform me how to better care for and dispose of them
 - Offer repair components and services for my purchases
 - Offer convenient in-store or home collection clothes recycling
- Disclose how much waste is created and what happens to that waste across your value chain
 - Create less waste throughout your value chain, including surplus and packaging
 - Stop slashing and burning samples and unsold stock in the name of brand protection
 - Invest in creative pre-consumer and post-consumer upcycling solutions
 - Invest in closed loop, circular resources

**SO TELL ME, WHAT STEPS ARE YOU TAKING
TO TACKLE SURPLUS MATERIALS AND WASTE
ACROSS YOUR VALUE CHAIN?**



what is circular fashion?

By bringing together design and scientific researchers with industry experts, the new *Centre for Circular Design* is focused on moving towards a future where textiles and materials are designed, produced, used and recovered in radical new ways. This includes the creation of new economic, environmental and social models.

- circular design is a strategy that aims to use the planet's finite resources in a more sustainable way. In circular design anything material is considered to be part of a loop or a system, where recovery or future use is anticipated and enabled. The aim is to keep materials in circulation in perpetuity.
- circular resources are designed with recovery in mind, or extracted from currently linear waste streams to retain their value in use.
- circular material flows anything which escapes an industrial cycle should aim not only to do no harm but to be an active nutrient in the system as a whole.
- circular systems the ultimate aim is to eradicate waste altogether. When applied to textiles, a circular system achieves a more sustainable future for one of the world's most impactful industries.

Prof Rebecca Earley
beckyearley.com
[@centreforcirculardesign](https://twitter.com/centreforcirculardesign)

Professor Rebecca Earley is Co-Director of the Centre for Circular Design (CCD) at Chelsea College of Arts, University of the Arts London, and researcher at MISTRA Future Fashion, the EU Horizon 2020 Project, Trash-2-Cash.

Dr Kate Goldsworthy
kategoldsworthy.co.uk

Dr Kate Goldsworthy is a designer and academic working to bridge science, industry and design. She works with MISTRA Future Fashion, the EU Horizon 2020 Project, Trash-2-Cash and Worn Again.

Whilst a circular system might seem a far future reality we can move closer towards this goal by focusing on ways to join up the circle. There will be important material and technical as well as behavioural and societal challenges to overcome. But how?

redirect & recover existing resources

We need technology advances to improve the forward use of existing materials so they can be efficiently sorted and chemically or mechanically reprocessed. We need people to learn to return the clothes they've finished wearing through the proper channels for reprocessing and reuse.

design new materials for recovery

We need to design materials and clothes for disassembly in order to recycle or reuse them as part of the life-story of the garment. The more we do this, the faster we will accelerate the move to a zero-waste industry.

EXAMPLES OF CIRCULAR TECHNOLOGIES

- Materials made from food-waste streams
- Automated and responsive production
- Personal customisation at scale
- Fibre-to-fibre recovery and reuse
- Water-free and chemical-free processing
- Peer-to-peer resale
- Subscription-based clothing libraries
- Clothing rental services
- Digitally mapping production surplus materials

towards a multi-speed wardrobe?

Circular systems are essentially built upon the oldest of all – our ecological system, a synergistic network of cycles and open-loops which feed each other at multiple scales and speeds.

We will undoubtedly see both old and new technologies and processes contribute to the whole system. Someone who repairs their garments lovingly by hand can be part of the same system that includes hi-tech manufacturing processes and automation.

The same system could include slow garments, which are handcrafted or upcycled from pre-loved ones, at the same time as fast garments, which are made from fibres that can be chemically recycled back to virgin quality in a closed loop system.

A 'slow' approach may include multiple 'fast' lives which build over time to reveal a super slow product. Whereas a 'fast' approach might entail an ultra-short-life compostable or easily recyclable product which is designed with only a few or even single use in mind at the outset. The important factor is that whilst the product life may be short, the materials which can be recovered over and over again actually keep the materials in use over the longest time.

The truth is that all of us will want clothes at different times for different reasons, for different amounts of time. Whilst some of this need can be catered for by beautiful, good quality, clothes that we look after for a long time, some of our needs can't or won't be met this way.

The great thing about circular design is that it 'connects' – it's not about polarised arguments of tradition vs technology, synthetic vs bio or fast vs slow. It's about relationships, participation and collaboration.

We need to reimagine all the processes of all parts of all the flows.

In creating circular systems and products we will also need new social innovation models, communities and businesses that embrace efficient and measurable resource use.

There are concerns that circular tech advancement and automation will result in job losses and be harmful to the people who make our clothes. However, this is not inevitable. There are many examples of technological advances improving conditions for workers as well as creating new industry opportunities which previously didn't exist. Speed and technology are not inherently bad ideas, but they have come to represent over-consumption and unethical production systems. We will have to fundamentally rethink the way things are done.

"Speed and technology are not inherently bad ideas, but they have come to represent over-consumption and unethical production systems."

There are many challenges ahead in the move towards a circular industry; improving technology, changing behaviour and mindsets, economic and political pressures, finding and moving towards new untested models, overcoming misunderstandings and myths, accurately understanding the impacts we are having (across the whole system). These are complex and wicked problems but a great deal of progress is already being made.

We are at the beginning of a very long journey.

dystopia



ILLUSTRATION: Ioni Morton @_i.o.n.i.

WHAT MIGHT THE FUTURE LOOK LIKE IF CLOTHING AND TEXTILE WASTE WAS NO LONGER A PROBLEM?

LOCALISED MICRO FASHION BUSINESSES ARE FLOURISHING

In the way that microbreweries and micro-roasteries have transformed the beer and coffee industry, micro circular fashion businesses are now flourishing. All across our cities and neighbourhoods we can purchase and experience clothing that is locally made on-site using our discarded clothes and other circular materials and processes. In these places we can participate in the manufacturing process and meet the makers in person. In these spaces we can learn how to make our own clothes and to repair or remake the clothes we already own. Independent designers are welcomed to produce in small-scale tailoring studios across the world, enriching cultural connections and exchanging heritage and crafts. Provenance, craftsmanship, ingredients and materials, participation and community now define how we consume and experience most of our clothing.

WE HAVE MULTI-SPEED WARDROBES

Our wardrobes consist of both fast and slow garments. For example, some clothes are designed to be worn only once and then recycled, either through biodegrading or the materials can be regenerated through a chemical recycling processing. Whilst the product life may be short, the materials can be recovered over and over again to actually keep the materials in use over the longest time.

Meanwhile, slower garments are designed to last for a long time, easily repaired, cared for and loved forever. Slower garments are often lovingly made by hand, through age-old techniques in local communities or upcycled from pre-loved clothes. Repairing and making certain clothes last as long as possible is the coolest thing one can do.

WE OWN LESS AND WEAR MORE

Borrowing, sharing and hiring clothes has become common practice rather than purchasing to own. We wear and share garments with our communities via clothing libraries and an 'Airbnb' style wardrobe service. This fuels our creativity, opens up doors to try out myriad styles and reduces the space we need to store clothes in our homes.

MATERIALS ARE REGENERATED AND REUSED IN INFINITE LOOPS

The fashion industry has transformed into a synergistic network of cycles and open loops, which feed each other at multiple scales and speeds. All large-volume factories have effective disassembly units in which surplus garments can be regenerated, reused or upcycled efficiently into new products. The chemical reprocessing of materials keeps resources in infinite use. Through technology that is rooted in our ecological system we utilise sophisticated regeneration of materials and transformation of living matter into circular resources.

INDUSTRIES WILL BE MORE INTERCONNECTED

Resources and materials from one industry will feed others. For example, fabrics will commonly be made from food waste streams. 'Grape leather' is made from the waste of the wine industry; jersey-like fabric can be from discarded milk; orange peels from the juice industry can produce a silky material; a polyester type fabric can be produced from animal manure.

Calling all artists, illustrators and casual doodlers... What does a fashion utopia look like to you? Unleash your creativity and send your illustrated vision to: photo@fashionrevolution.org or tag us at [@fash_rev](https://twitter.com/fash_rev) and we'll share our favourites!

TIME

TO

SHIFT

**WE ARE COMING TO THE END
OF OUR STORY. BY NOW WE
KNOW THAT WE SHOULDN'T
BUY IT UNLESS WE LOVE IT (OR
NEED IT), THAT IF WE LOVE IT
WE SHOULD MEND IT, THAT IF
WE DON'T WANT IT WE SHOULD
FIND A RESPONSIBLE WAY OF
DISPOSING OF IT. WE KNOW THAT
BRANDS ARE BECOMING AWARE
THAT SOMETHING MUST BE DONE
TO AVERT A CRISIS AND THAT
TECHNOLOGY WILL (EVENTUALLY,
HOPEFULLY) SAVE US. WE KNOW
THERE IS NO TIME TO WASTE.
THIS IS OUR FASHION, THESE
ARE OUR CLOTHES, MADE BY THE
BRANDS WE LOVE: WE HAVE
THE POWER TO CREATE POSITIVE
CHANGE, STARTING NOW!**

READING LIST

THE SUSTAINABLE FASHION HANDBOOK | SANDY BLACK

CRADLE TO CRADLE | MICHAEL BRAUNGART & WILLIAM MCDONOUGH

CLOTHING POVERTY | ANDREW BROOKS

REFASHIONED | SASS BROWN

EMOTIONALLY DURABLE DESIGN | JONATHAN CHAPMAN

OVERDRESSED | ELIZABETH L. CLINE

CRAFT OF USE | KATE FLETCHER

STITCHED UP | TANSY HOSKINS

FIXING FASHION | MICHAEL LAVERGNE

THE STORY OF STUFF | ANNIE LEONARD

SLOW FASHION | SAFIA MINNEY

WARDROBE CRISIS | CLARE PRESS

TO DIE FOR | LUCY SIEGLE

WORN STORIES | EMILY SPIVACK

STUFFOCATION | JAMES WALLMAN

OTHER KEY REPORTS AND RESOURCES

SUSTAINABLE CLOTHING GUIDE | ECAP

THE CIRCULAR ECONOMY: A WEALTH OF FLOWS
ELLEN MACARTHUR FOUNDATION

FASHION TRANSPARENCY INDEX | FASHION REVOLUTION

AFTER THE BINGE THE HANGOVER | GREENPEACE

FASHION AT THE CROSSROADS | GREENPEACE

SUSTAINABLE APPAREL MATERIALS | MIT

TEXTILE TOOLBOX | TED

LOVE YOUR CLOTHES | WRAP

VALUING OUR CLOTHES | WRAP

KEY ORGANISATIONS ADDRESSING FASHION WASTE

CENTRE FOR CIRCULAR DESIGN
www.circulardesign.org.uk

CRADLE TO CRADLE PRODUCTS INNOVATION INSTITUTE
www.c2ccertified.org

ECAP
www.ecap.eu.com

ELLEN MACARTHUR FOUNDATION
www.ellenmacarthurfoundation.org

GREENPEACE
www.greenpeace.org/international/en/campaigns/detox

MISTRA FUTURE FASHION
www.mistrafuturefashion.com

REVERSE RESOURCES
www.reverseresources.net

TRAID
www.traid.org.uk

WRAP
www.wrap.org.uk

ZERO WASTE EUROPE
www.zerowasteurope.eu

POWER THE FASHION REVOLUTION WE NEED YOUR DONATIONS, YOUR SKILLS AND YOUR VOICE

Fashion Revolution is working to secure radical change in the way that our clothing is produced, sourced and consumed. But we need your support.

You can make this change happen in lots of ways. Together we can push for greater transparency through social media outreach, investigative research, innovative events and inspiring, informative content like this fanzine.

Donations are incredibly important to us. Even the smallest contribution can keep our movement going from strength to strength. Help us fight to ensure that fashion is much cleaner, safer, and fair for everybody and the environment too.

Join the Fashion Revolution.

Please visit www.fashionrevolution.org/donate and give what you can

WHAT'S NEXT...?

Our next fanzine explores fashion's impact on the environment, including climate change and water. Stay tuned!



**FASHION
REVOLUTION**

REFERENCES

All figures in fanzine only up-to-date at the time of publication.

- 1, 14, 34** p1, 12 | Greenpeace (2016) **Timeout for Fast Fashion** www.greenpeace.org/international/Global/international/briefings/toxics/2016/Fact-Sheet-Timeout-for-fast-fashion.pdf
- 2** p4 | Wikipedia (Oct 2017) **History of Anthropology** en.wikipedia.org/wiki/History_of_anthropology
- 3** p4 | Strasser, Susan (1 Sept 2000) **Waste and Want: A Social History of Trash** www.goodreads.com/book/show/398445.Waste_and_Want
- 4** p5 | Rovine, Victoria L. (15 Dec 2014) **African Fashion, Global Style: Histories, Innovations, and Ideas You Can Wear** www.iupress.indiana.edu/product_info.php?products_id=807366
- 5, 18** p7 | WRAP **Clothing Longevity and Measuring Active Use report** www.wrap.org.uk/sustainable-textiles/scap/extending-clothing-life/report/measuring-active-life-of-clothing
- 6** p7 | Global Fashion Agenda & The Boston Consulting Group (2017) **Pulse of the Fashion Industry** www.copenhagenfashionsummit.com/wp-content/uploads/2017/05/Pulse-of-the-Fashion-Industry_2017.pdf
- 7, 13, 15, 38** p7, 12 | Value Village (2017) **The State of Reuse Report** www.valuevillage.com/rethinkreuse
- 8, 11** p7, 8 | The Atlantic (18 July 2014) **Where Does Discarded Clothing Go?** www.theatlantic.com/business/archive/2014/07/where-does-discarded-clothing-go/374613/
- 9, 28, 29, 30, 31, 37, 71** p7, 8, 12 | WRAP (2017) **Valuing Our Clothes: the cost of UK fashion** www.wrap.org.uk/sustainable-textiles/valuing-our-clothes
- 10** p7 | Environmental Protection Agency (2014) **Advancing Sustainable Materials Management: Facts & Figures** www.epa.gov/smm/advancing-sustainable-materials-management-facts-and-figures
- 11** p7 | The Seattle Times (26 Jan 2003) **Donating to Charity? Clean, usable clothing is most welcome item** community.seattletimes.nwsources.com/archive/?date=20030126&slug=axdonation26
- 12** p7 | NSW EPA (2016) **EPA Annual Report 2015-2016** www.epa.nsw.gov.au/about-us/publications-and-reports/annual-reports
- 16, 23, 25, 68** p7, 8 | Circle Economy (6 April 2017) **Post-consumer Textile Collection is Step One, But Then What?** www.circle-economy.com/post-consumer-textile-collection-fibersort/#.WD0sVBNL9E4
- 17** p7 | Greenpeace (16 April 2016) **Fast fashion is "drowning" the world** www.greenpeace.org/international/en/news/Blogs/makingwaves/fast-fashion-drowning-world-fashion-revolution/blog/56222
- 19** p7 | Changing Markets (2017) **Dirty Fashion** changingmarkets.org/wp-content/uploads/2017/06/CHANGING_MARKETS_DIRTY_FASHION_REPORT_SPREAD_WEB.pdf
- 20** p7 | McKinsey & Company (October 2016) **Style That's Sustainable: A new fast-fashion formula** www.mckinsey.com/business-functions/sustainability-and-resource-productivity/our-insights/style-thats-sustainable-a-new-fast-fashion-formula
- 21** p7 | AEG (2017) **The Care Label Project** www.aeg.co.uk/care/inspiration/care-label-project
- 22** p8 | H&M (2017) **Recycle Your Clothes** about.hm.com/en/sustainability/get-involved/recycle-your-clothes.html
- 24** p8 | Council for Textile Recycling (2009) **The Lifecycle of Second Hand Clothing** www.wearonaterecycle.org/images/clothing-life-cycle.png
- 26** p8 | Triple Pundit (4 March 2016) **How Cotton Recovery is Changing the Game for Sustainable Fashion** www.triplepundit.com/special/cotton-sustainability-c-and-a-foundation/cotton-recovery-changing-game-sustainable-fashion
- 27** p8 | Slate (5 Jan 2010) **A Hairy Situation: Should I choose fake fur over real fur?** www.slate.com/articles/health_and_science/the_green_lantern/2010/01/a_hairy_situation.html
- 32** p12 | Gugnami & Mishra (2012) **Textile & Apparel Compendium 2012** www.technopak.com/files/Technopak_Compndium_Textile_Apparel_2012.pdf
- 33** p12 | Alertnet (13 August 2015) **It's the Second Dirtiest Thing in the World—And You're Wearing It** www.alertnet.org/environment/its-second-dirtiest-thing-world-and-youre-wearing-it
- 35** p12 | Oxfam (6 June 2016) **Over 3 billion clothes left unworn in the nation's wardrobe** www.oxfam.org.uk/media-centre/press-releases/2016/06/over-three-billion-clothes-left-unworn-in-the-nations-wardrobes-survey-finds
- 36, 61** p12 | Orb Media (Sept 2017) **Invisibles: The plastic inside us** orbmedia.org/stories/Invisibles_plastics
- 37** p12 | WRAP (2012) **Valuing Our Clothes: the cost of UK fashion** www.wrap.org.uk/sustainable-textiles/valuing-our-clothes
- 39, 52** p12 | The Guardian (6 July 2015) **How second-hand clothing donations are creating a dilemma for Kenya** www.theguardian.com/world/2015/jul/06/second-hand-clothing-donations-kenya
- 40** p12 | Greenpeace (2017) **Fashion at the Crossroads** www.greenpeace.org/international/Global/international/publications/detox/2017/Fashion-at-the-Crossroads.pdf
- 41** p14 | Textile Toolbox (2012) **Design to Minimise** www.textiletoolbox.com/research-writing/design-minimise-waste
- 42** p16 | Massachusetts Institute of Technology (October 2015) **Sustainable Apparel Materials** msl.mit.edu/publications/SustainableApparelMaterials.pdf
- 43** p16 | NPD Group (July 2016) **Two-Thirds of All Retail Shoppers Shop Off-Price** www.npd.com/wps/portal/npd/us/news/press-releases/2016/two-thirds-of-all-retail-shoppers-shop-off-price-reports-npd-group
- 44** p16 | TV2 Nyhederne (Oct 2017) **Experts wonder about H&M's burning of new clothes** nyheder.tv2.dk/samfund/2017-10-15-eksperter-under-sig-over-hms-afbraending-af-ny-tøj
- 45** p20 | The Telegraph (20 Oct 2014) **How Zara became the world's largest retailer** www.telegraph.co.uk/finance/newsbysector/retailandconsumer/11172562/How-Inditex-became-the-worlds-biggest-fashion-retailer.html
- 46** p20 | Elle (6 Jan 2017) **Yes, Shopping Can Be Addictive** www.elle.com/fashion/shopping/a41845/shopping-dopamine
- 47** p48 | The Guardian (9 Dec 2011) **Can the Better Cotton Initiative transform the global textile industry?** www.theguardian.com/sustainable-business/blog/cotton-sustainable-textile
- 48** p48 | Love Your Clothes (2017) **How to Care for Cotton** www.loveyourclothes.org.uk/guides/how-care-cotton
- 49** p48 | 1 Million Women (21 Sept 2016) **How to Compost Fabrics** www.1millionwomen.com.au/blog/how-compost-fabrics
- 50** p48 | Levi Strauss (2017) **The History of Denim** www.levistrauss.com/our-story/the-history-of-denim
- 51** p48 | Statistic Brain (Aug 2016) **Denim Jeans Industry Statistics** www.statisticbrain.com/denim-jeans-industry-statistics
- 52** p48 | Love Your Clothes (2017) **Fabric Focus: Denim** www.loveyourclothes.org.uk/guides/fabric-focus-denim
- 53** p48 | Blue Jeans Go Green bluejeansgogreen.org
- 54** p48 | Encyclopaedia Britannica (Sept 2017) **Wool** www.britannica.com/topic/wool
- 55** p48 | Love Your Clothes (2017) **Fabric Focus: Wool** www.loveyourclothes.org.uk/guides/fabric-focus-wool
- 56** p48 | Love Your Clothes (2017) **Washing Your Woolens** www.loveyourclothes.org.uk/tips/washing-your-woolens
- 57** p48 | Love Your Clothes (2017) **Fabric Focus: Preventing Moth Damage** www.loveyourclothes.org.uk/videos/fabric-focus-preventing-moth-damage
- 58** p49 | Love Your Clothes (2017) **Fabric Focus: Silk** www.loveyourclothes.org.uk/guides/fabric-focus-silk
- 59** p49 | Love Your Clothes (2017) **Fabric Focus: How to Wash Silk** www.loveyourclothes.org.uk/tips/how-wash-silk
- 60** p49 | Love Your Clothes (2017) **Fabric Focus: Synthetic** www.loveyourclothes.org.uk/guides/fabric-focus-synthetic-fabrics
- 62** p49 | Cora Ball coraball.com
- 63** p49 | Guppy Friend bag guppyfriend.com
- 64** p49 | Love Your Clothes (2017) **Fabric Focus: Synthetic Fabrics** www.loveyourclothes.org.uk/guides/fabric-focus-synthetic-fabrics
- 65, 66, 67** p81 | Based on internal research compiled by Worn Again wornagain.info
- 69** p81 | Textile Exchange (2016) **Preferred Fiber Market Report** textileexchange.org/wp-content/uploads/2017/02/TE-Preferred-Fiber-Market-Report-Oct2016-1.pdf
- 70, 84** p82 | United Nations (21 June 2017) **World population projected to reach 9.8 billion by 2025** www.un.org/development/desa/en/news/population/world-population-prospects-2017.html
- 73** p92 | Environmental Protection Agency (2014) **Textile Recycling Fact Sheet** www.themailbox.com/storage/Images/projects/2013/SO/smart2013.pdf
- 74** p92 | The Guardian (6 July 2015) **How second-hand clothing donations are creating a dilemma for Kenya** www.theguardian.com/world/2015/jul/06/second-hand-clothing-donations-kenya
- 75** p92 | Based on UN ComTrade Data and compiled by Elizabeth Cline comtrade.un.org
- 76** p95 | Norris, Lucy (2015) **The limits of ethicality in international markets: Imported second-hand clothing in India** www.sciencedirect.com/science/article/pii/S0016718515001529
- 77** 108 | European Commission - DG Environment (2014) **Development of Guidance on Extended Producer Responsibility** ec.europa.eu/environment/waste/pdf/target_review/Guidance%20on%20EPR%20-%20Final%20Report.pdf
- 78** 108 | EPR Canada (2014) **Extender Producer Responsibility Report Card** www.eprcanada.ca/reports/2014/2014-Extended-Producer-Responsibility-Report-Card-EN.pdf
- 79** 108 | Carpet America Recovery Effort (2014) **California Carpet Stewardship Bill** carpetrecovery.org/california-ab-2398
- 80** 108 | Green Growth Magazine (Sept 2017) **Nordic strategy aspires to double the collection of textiles for reuse and recycling** nordicway.org/2015/04/nordic-strategy-aspires-to-double-the-collection-of-textiles-for-reuse-and-recycling/#.WWSw58v2Z88
- 81** 109 | Simply Recycling www.simplyrecycling.com
- 82** 109 | Huffington Post (31 Dec 2012) **Textile Recycling: (Don't) Curb Your Enthusiasm** www.huffingtonpost.com/mattias-wallander/textile-recycling-curb-enthusiasm_b_2051106.html
- 83** 109 | Packmee www.packmee.nl



This document has been produced with the assistance of the European Union. The contents of this document are the sole responsibility of Fashion Revolution and can in no way be taken to reflect the views of the European Union.

SPONSORED BY:

This fanzine was produced with support from AEG Global.
www.aeg.co.uk/care/inspiration/care-label-project

[@aegglobal](https://twitter.com/aegglobal)

AEG

Published by **Fashion Revolution**
Editor **Sarah Ditty**
Art Director **Heather Knight**
and creative direction from
Orsola De Castro

**WITH THANKS TO THE
FASHION REVOLUTION
GLOBAL COORDINATION
TEAM:**





Carry Somers, Co-founder
Orsola de Castro, Co-founder
Sarah Ditty
Heather Knight
Jocelyn Whipple
Ian Cook
Lucy Shea
Martine Parry
Roxanne Houshmand

Thanks to Tamsin Blanchard and
Vicky Nida for their help too.

This fanzine is dedicated to all the **Country Coordinators** who power the Fashion Revolution in brilliant, effective and creative ways around the world.

#lovedclotheslast
#fashionrevolution
#whomademyclothes

FIND US HERE:

 @fash_rev
 @fash_rev
 fashionrevolution.org
 fashrevglobal

Thank you to.....

AEG	Kate Goldsworthy
Aphra Kennedy-Fletcher	Katharine Hill
Alden Wicker	Kirsty Milligan
Alice Wilby	Leigh McAlea
Amy Twigger-Holroyd	Lewis Perkins
Andrew Brooks	Lie Dirkx
Anissa Jebli	Lily Jones
Ann Tutt	Lucy Norris
Anna Mattei	Lydia Higginson
Balthazar Klarwein	Maria Bayer
Camille Mori	Michelangelo Pistoletto
Celeste Mountjoy	Molly Malloy
Celia Pym	Molly Stillman
Charlotte Trounce	Nina Chakrabarti
Christien Meindertsma	Orsola de Castro
Christina Dean	Rebecca Earley
Christine Morrissy	Rob Phillips
Cyndi Rhoades	Rosanna Hopkins
Dawn Williamson	Rozalina Burkova
Eesha Anchan	Sarah Ditty
Elizabeth L. Cline	Sarah Jay
Fionnuala Walravens	Sarah Lazarovic
Ged Palmer	Sarina Saddiq
Georgia Keeling	Sass Brown
Georgina Hooper	Scarlett Baker
Greenpeace	Shweta Chowdhary
Heather Knight	Sophie Loos
Helen Kirkum	Stephen Doherty
Henry Hicks	Timo Rissanen
Hollie McNish	Tim Mitchell
Ida Taavitsainen	Tolly Dolly Posh
Ioni Morton	Tom of Holland
Jake Hall	Tyler Spangler
Jaki Turman	Vicky Hartley
Jonathan Chapman	William Farr
Juan Pablo Martínez	WRAP
Kate Fletcher	Zoe Robinson