Transcript: Pants on Fire

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Sam Evans-Brown (SEB): The other day, I took a short drive over to the home of Erika Janik - Outside/In’s executive producer.

[door knocking]

SEB: I was not JUST there to pet her dog, Britt.

SEB: Oh but you’re so cuuuuute! Look at how sweet you are.

SEB: I was there to visit Erika’s workshop!

Erika Janik (EJ): So Sam, this is my sewing room. It’s kind of a mess.

SEB: you’ve got like an IV bag for your iron. [fades down]

SEB: Erika… makes all of her clothes. Mostly dresses. Mostly whimsical patterns and prints like typewriters. Bespectacled stags. Little bears with parasols.

Erika: Do I need this many dresses, probably not. But if I need a shirt, I can just make myself one.  I feel like Mrs. Frizzle from the Magic School Bus.

Erika invited me over here to witness just one of the invisible costs of making clothes. The thing those of us who buy our clothes at stores never really see : scraps. Wasted fabric.

Erika: I’m going to show you just how much waste I have from one year.

SEB: [Gasps] One giant rubbermaid tub. Two giant rubbermaid tubs. [Gasps again] Three giant rubbermaid tubs!!

Erika: Here’s the stuff that hasn’t even made it in there yet.

SEB: If one person making a couple dozen pieces can produce this much waste… how much is being made in factories worldwide?

SEB: It’s a lot!

EJ: Scary a lot!

SEB: It is a lot… it’s something on the order of one garbage truck every second. But if there is one thing that I have promised myself Outside/In WILL NOT BE, it is a show about the constant bummer of seeing the impacts of being a human in a consumptive economy, SO DEAR LISTENER, we submit to you that this problem has solutions readily at hand… and we’re going to tell you about them.

EJ: not a bummer

SEB: not a bummer! I mean kind of a bummer but we’ll help.

[Theme drop]

SEB: This is Outside/In, a show about the natural world and how we use it. I’m Sam Evans-Brown. Textiles are all around us. We live in them, sleep on them, sit on them, walk on them, live in houses filled with them. It’s one of the biggest industries in the world. But it’s also one with a big problem and, at least to consumers in the United States, a largely invisible one - textile waste.

Today, Erika Janik is tearing the very shirt off your back to explore the old is new approach to textiles that could eliminate millions of tons of garbage a year….

Sam: Okay so this is…

EJ: This is a piece of fabric.

SEB: Very sparkly. You’ve laid out a piece of sparkly fabric.

EJ: Yes yes, that’s what I’m looking for, sparkly fabric.

SEB: Now, in case you’ve never seen how clothes actually get made, here’s a quick explainer:  imagine a big square of rolled out gingerbread dough. That’s the fabric.

Sam: So what are you putting on the fabric here.

EJ: So these are pattern pieces. This is the shirt, these are the sleeves.

EJ: Each piece of a dress or a shirt  - pockets, collars, etc…. requires a different design- a different shaped cookie cutter that’s going to be placed onto the dough.

Erika: This is the sleeve. This is the front, folded in half.

SEB: What Erika is doing right now is showing me how the cookie cutters fit on the big piece of dough. She’s got the time, and the motivation, to really get as many cookies out of this dough as she can. But clothes make for a bunch of very strangely shaped cookies.

Erika: But you can still see like, I didn’t use this whole piece. And there’s still fabric around the edge.

Sam: Like kind of a lot.

Erika: When you’re a home sewer you’re pretty economical with what you’re doing, but if you’re making 100 million shirts you need to make them as quickly as possible. And you’re not trying to make them all fit on this fabric, you’re I’m going to cut one front.

SEB: ZZZhhht.

Erika: Put it right there. And them I’m going to throw the rest of it out.

Timo: the way that fabric is  caught in the mass manufacture where you have dozens and sometimes I think even up to 100 layers of fabric on top of each other and you have essentially was it like a bandsaw going through those layers,

EJ: This is Timo Rissanen. He’s a designer and assistant professor of fashion design and sustainability at the Parsons School of Design. He went into fashion it like a lot of people do - studying design in school and then working at big fashion houses.

Timo: “I had a menswear brand in Australia from 2001 to 2004 and sometimes literally half of the fabric that I needed for a t-shirt would go in the trash.”

EJ: Seeing the waste in mass production is what made Timo decide he had to think about clothes differently - to create designs that produced little to no waste.

Timo: I did about six years ago with an artist in Finland where we built a factory inside a museum where we had a garment worker make white T-shirt for no reason other than just for the sake of making t shirts and also so we made the labor visible but also the waste that was created in the making of the T-shirt.

[00:09:08] If somebody wanted to buy one of these t-shirts that also had to take the waste with them and then to take over the surface it was kind of we were being a bit much. We hope to provoke thinking with the artwork and we got some great responses from people. People did some interesting customization with the with the scraps onto the T-shirt and things like that.

EJ: Using the scraps or not creating any waste at all is known as zero waste design. And it’s our first solution to the problem of rampant textile waste. In other words, start with design - change the fashion - and we’ll produce less waste by default.

But creating clothing with zero waste is challenging… especially in a global system that wasn’t built with reducing waste in mind. Denim, for instance, comes on a big roll that measures 60 inches wide. You could change that width to reduce waste but it would require an expensive reengineering of a supply line that spans the globe.

To get a sense of how big a problem that would be…and how we got here... we have to go back in time.

Clothing used to be made here in the United States.

Elizabeth Cline: “So we used to manufacture textiles in the United States and about half of our clothes were still made here as recently as 1990.

EJ: This is journalist Elizabeth Cline. She’s the author of the book Overdressed.

Textiles were a key driver of the industrialization of the United States in the 18th and 19th centuries. They were also a major employer of women.

Elizabeth: And all of that changed very very quickly to the point where by the early 2000s, it was almost unheard of to walk into a store and see something that was made in the United States.”

EJ: The  globalization of the fashion industry gave clothing brands access to really cheap labor and a huge pool of factories, mostly in Asia. For these nations, textiles are a really attractive industry, just as they were for the US in the 18th century. It’s labor intensive but the equipment is cheap. It’s labor that continues to be done largely by women.

And so with these changes… fashion companies made a choice.

Elizabeth: “Instead of making higher quality products and selling them at a slightly higher price and making less, we’re going to start making clothes as a disposable product and make more and more and more of that by selling more. Sell it for cheaper at a lower markup and see if people go for it.”

EJ: And we did. Clothes got cheaper and we started buying more of them. A LOT more of them… 80 to 100 billion garments are made a year. With about 7.5 billion people on the planet, that’s roughly 13 garments per person… but most people on the planet aren’t buying that much. Nearly all of that consumption is happening in North America and Europe. Because who can resist a $5 t-shirt … and what’s the harm in owning a few pairs of $29 jeans?

This is likely the fast fashion clothing story you’ve heard...even if your interest in clothing and textiles is purely utilitarian. Sheets to sleep on; a shirt and pants to get you through the day.

We’re not only buying more clothes, we’re also wearing those clothes a lot less.

Elizabeth: “It’s about half as long as it was 20 years ago. And some clothing use surveys show that there are people that are only wearing something between three and seven times at the most extreme before they consider old and move on to something else… ninety percent of clothing is thrown away or donated before its worn out.”

EJ: Each American sends 65 to 80 pounds of textiles to the landfill every year.

So there are clothes that get bought but barely used. Scraps from all those barely used clothes. And there’s another source of waste: clothes that are made and never get used at all. Brands are producing so many clothes every year that nearly a third of the 100 billion garments made annually are never sold.

News clip: Burberry takes extreme measures to protect its brand by burning millions of dollars worth … [fades down]

EJ: In 2017, Burberry made headlines for burning 28.6 million pounds of unsold clothing reportedly worth more than $35 million.

News clip: ...The company calls the extremely wasteful method a way to control brand authenticity.

EJ: H&M has also been accused of burning more than 60 tons of clothes since 2013…. A claim they dispute though a Swedish powerplant in H&M’s hometown has replaced coal with clothes.

Burning waste for energy is its own complicated environmental issue but we can maybe all agree that burning never worn clothing doesn’t seem like the ideal fuel for generating electricity.

Elizabeth: people were outraged about him burning clothes because they were unsold. They were brand new. They never been worn. So you think about all of the water and all the energy and all of the cotton or polyester that oil that went into the polyester all the resources that went into making those clothes just to have them burned it. Oh my gosh it's so it's outrageous. It's just it's so inexcusable. And unfortunately I think that it's common practice brands are very good at hiding it. But a lot of brands from fast fashion all the way through luxury destroy their unsold product at the end of the season. It's very very prevalent.

EJ: Maybe you’re thinking - burn them? Why not recycle them? Or reuse them?

It turns out fabric - whole clothes or scraps -  isn’t easily recycled into something else.

One reason is the nature of the material - cotton for instance is made of long fibers. The longer the fiber, the softer more silky feel that cotton has. But if you cut those fibers to make a new piece of clothing, the cotton gets less soft. Current brands that do use recycled cotton mix them with new fibers so your jeans, for instance, are still comfy. Recycling sacrifices comfort.

Then there’s synthetics like nylon, lycra, polyester that don’t easily recycle either. When you see recycled man-made fabrics, they’ve been made from plastic bottles, not from a pre-worn polyester t-shirt.

The recycling programs that do exist are largely limited to fabrics made of a single fiber, but few of us are wearing all-cotton or linen clothes. Most than half of our clothes are now made of cheaper synthetic fibers and even more are blends.

Okay but what about thrift stores?

While buying second-hand at thrift shops is a good way to opt out of the fashion industry’s labor and environmental problems, donating that bridesmaid dress or awesome 80s-band t-shirt to Goodwill or the Salvation Army is not exactly a perfect solution.

Charities like Goodwill might take anywhere from 10-20% of donated material for retail stores. The other 80 to 90%  ends up with this guy, or guys like him.

Eric Stubin:  Sure. My name is Eric Stubin. I am the president and CEO of Transamerica Textile Recycling, a recycler of secondhand clothing.

Textile recyclers and rag graders like Eric Stubin have been around for a long time. It’s actually the oldest recycling industry. Though… recycling in this case is really reuse.

Eric: So about half the material will get turned into either fiber or reclaimed rags and about 45 percent of the material will be find a second life as secondhand clothing.

EJ: [00:02:17] Is that all done by people.

Eric: Yeah it's a very labor intensive process and our facility 70 people sort through approximately 70,000 pounds of clothing every day.

EJ: A small percentage is resold as vintage clothing. The rest — 97% of the stuff that isn’t turned into rags—is exported… largely to Africa… something that Eric sees as a benefit to the African economy.

Eric: You know secondhand clothing in places like sub-Saharan Africa is responsible for significant portions of the economy.  USAID has said that it's a key driver of the economy as well. So it really has a positive impact overseas where we see tremendous demand.

Elizabeth Cline: So the impact of secondhand clothes in East Africa is a hotly debated contested issue.

EJ: This is journalist Elizabeth Cline again. She says -- not everyone agrees with Eric.

Elizabeth Cline: There's kind of mounting evidence that even in East Africa where there is a big demand for our second hand clothes a lot of it still ends up going into landfill or being incinerated there. People are donating things without bothering to wash them, there's like food and pet hair all over it. It's just this really low quality worthless stuff and then that means that African countries are stuck with the bill for landfilling our garbage.

EJ: The waste may be largely hidden from us now but it’s unlikely to stay that way. American charities and thrift stores have been overwhelmed by clothing donations in recent years, fueled by minimalism and the joy sparking techniques of Marie Kondo.

And shipping clothes overseas may not be an option in the near future. Members of the East African Community, including Rwanda and Uganda, have proposed banning the import of secondhand clothes to stimulate local textile industries and to cut down on absorbing our outsourced waste.

Just to reiterate, buying from thrift stores is fine— in fact, if more Americans did this, fewer clothes would get landfilled in developing countries … but there’s way more supply of secondhand clothes than demand for them… which means they still get tossed... And we’re still left at the end of the day with a pile of scraps with no obvious path to a second life.

Timo: Yeah  I think the visibility or lack of visibility is a big issue both to design it but also to the public because if we don't know about something it's very difficult to care about.

SEB: ERIKA, we promised them solutions! We said this would not be an unrelenting bummer!

EJ: Sam! Fine... that’s after the break.

BREAK

SEB: Welcome back to Outside/In, I’m Sam Evans-Brown. Before the break, Erika Janik was taking us down through the clothespacalypse that we’ve created. Now… a way to design our way out…. Maybe?

EJ: So a few years ago, Timo Risannen, the Parsons professor, set out to create a simple button down shirt that produced no waste. It didn’t go so well at first…

Timo: And like you know you could say Oh that's a really kind of like Avant-Garde conceptual cool kind of thing but it's like no it's actually ugly. And so it was kind of the unresolved thing is I wanted to create a button down shirt that I actually was happy with the look of.

EJ: The goal was something that served a practical purpose - the classic kind of work shirt  - rather than a piece of modern art.

Timo [Montage style] [00:18:10] And so I really worked with the silhouette. So you know working with fabric on the body finding a shape that I was really happy with and then starting to look at those pieces you know I had the body and the sleeves figured out starting to look at those pieces on the actual fabric width and seeing what kind of spaces you know arranging them in different ways what kind of spaces were created out of which I could then figure out the cuffs and the colours. And whether it was going to have pockets and things like that.

EJ: Zero waste is a philosophy rather than a particular method. It’s also a mental challenge…. in part because he and other zero waste designers are working with lengths of fabric designed for efficient production rather than for environmental benefits.

Timo’s tried a lot of different ways of cutting and folding to make things, including pajamas out of some old sheets.

Timo: I used a different technique. I worked with paper because it was easy to cut piece of paper to the same proportions. The two fabric rectangles and then I just folded paper and it was also very efficient in terms of space because I could do that in my office at my desk. And one wall of my office was just covered with these paper folds. It kind of looked like christmas decorations with no semblance of christmas.

EJ: Timo’s struggles to design for no waste are real…But producing clothing with little waste isn’t new. It’s something we know how to do already. Or we used to.

Timo - But if you look at a lot of historical garments even in Europe you go back to the late 80s and hundreds you start to find examples of garments that were cut very efficiently and. And. And also people just had a different relationship with material. This idea of waste barely existed.

EJ: Many cultures through history have designed clothing that wasted very little fabric. These items were designed to be folded or draped to use as much of a piece of fabric as possible. Kimonos,togas, and saris are all ways to wear a square… without being square.

You might have heard that the expression “the whole nine yards” referred to the fact that the traditional patterns for a kilt took nine yards of fabric to create. This doesn’t actually appear to be true, since the expression seems to have popped up in the United States first, but the the sentiment of the myth is spot-on - kilts are made of a single piece of fabric many yards long.

Garments were also made to be remade and altered again and again…. Because fabric was precious and expensive. Fabrics like cotton and linen are plants… that have to be grown and harvested in season. Or in the case of wool, you need land and a bunch of sheep.

But today fabric is cheap and can be made without plants or animals. And fashion is a global year round industry. Now labor and time are more expensive than fabric, so it’s more profitable in the short-term for companies to just punch out clothes as fast as they can - scraps be damned.

And either way, modern clothing designs themselves aren’t helping. Designers experiment with all kinds of things that look cool but are super wasteful.

Think of a wedding dress or any kind of standard formal wear for women. Most of these garments are form fitting and curvy… it’s those curves in the pattern pieces that tend to produce more scraps.

Even a men’s suit is made up of lapels, collars, and pockets… a bunch of pieces that are all cut from a length of fabric and are all surrounded by wasted fabric. Same with running tights… and any number of clothes that aren’t variations on a square.

There are some things that we love to wear that are hard to make zero waste… so for this to work, we might have to give them up… or at least, rethink what a wedding dress looks like.

[mux]

But zero waste designers also need to make something that people want to wear. Remember Timo and his attempts to make a simple button down shirt like millions of people wear to work every day? I showed Sam a few zero waste patterns to see what he thought.

EJ: What do you think of this one, Sam?

SEB: That’s actually pretty stylish. I’d wear that!

EJ: See, zero waste can be stylish. Here’s the back of that buttondown shirt. I’m not sure what this quilted part is…

SEB: Butt ruffles.

EJ: I think it’s better than butt ruffles.

SEB: I say that with no judgment.

EJ: While Timo ties himself in knots trying to figure out to design modern clothes with zero waste patterns,  most designers he says are focused on the fashion. For them, butt ruffles are not going to fly, and waste is a secondary concern.

Timo:  the day to day job of a designer you don't really see it. And so and that's partly because of the  way that the industry operates now where design tends to be in places like New York City or London or Paris but then the actual making of the garment the sort of mass production of things tends to be in other countries. And so any kind of problems whether it's safe shoes to do with waste or also to do with labour they tend to be very invisible to the designer

EJ: Designers don’t see the problem … and neither do we because we’ve exported the industry and its labor and  waste overseas.

Rachel Faller: [00:01:09] So my name is Rachel and I run Tonle which is a zero waste fashion business.

EJ: This is Rachel Faller. Rachel’s business, Tonle, is based in Cambodia. Textiles are the backbone of the Cambodian economy. More than 600 factories produce clothes for 200 brands like Nike, Gap, and Adidas.

Rachel first went to Cambodia in 2007 and returned again on a Fulbright grant where she saw both sides of the fashion equation.

Rachel Faller: I came into contact both with these artisans who were producing in these very you know artisans who were producing in these very traditional ways that were sort of we could call slow fashion now but also the bigger scale textile and garment industry which is very very present in Cambodia.

EJ: So Rachel saw what was happening and decided she wanted to try something else. To create the kind of clothing she’d actually want to wear… fashionable but also affordable, moral, and responsibly made.

Rachel Faller: And there aren't many raw materials in Cambodia that are produced sustainably. A lot of the material is being imported….So then I started turning to recycled materials and then I discovered more about this problem with waste in the garment industry. I was like Okay that's that's what I'm going to tackle to me that was like a no brainer. There’s all this stuff that’s going to be thrown away that’s going to be polluting the environment. Let’s use that as a first step.

EJ: Rachel started buying overstock fabric from the markets in Cambodia. Fabric leftover from all those textile mills producing for big clothing companies.

Rachel Faller: I didn’t want to throw things away when everyone else was throwing so much away. It just kind of became this design challenge. How do we incorporate these scraps into our design. And until eventually we had really tiny scraps left, I partnered with these weaving groups, I trained them how to incorporate those woven scraps into new textiles, and eventually had very smalls craps left and we started making paper out of them.

EJ: Zero waste was her goal from the start but it took a decade to get there.

Rachel’s designs aren’t like the fabric origami of designers like Timo but rather designs that make use of all the scraps for everything from accessories down to the tags. Looking at them, you’d never know they were zero waste - Rachel’s clothes have the clean aesthetic of a lot of modern brands, loose fitting and flowy.

But how do you do this at scale?

Tonle is a relatively small business but Rachel says she’s faced pressure from stores to produce new items more often. Places like H&M and Zara - new clothes every week, sometimes every day - has conditioned consumers to want something new more often.

It’s a classic feedback loop - companies make more money when they roll out new stuff, which trains consumers to want the newest clothes, which drives companies to roll out the next line ever faster.

Timo thinks that this means brands are pushing new fashions faster than consumers are even asking for them.

Timo: Fashion doesn’t actually change at that rate. Like your product might change but we’re not talking about real fashion change, that’;s just marketing at this point, just an attempt to make more stuff, and an attempt to make what was there last week obsolete.

EJ: Then there’s price. Maybe you’ve looked at sustainable clothing and thought - how can anyone afford that?

Elizabeth: You know a lot of times people tell me oh ethical and sustainable fashion is expensive. But what they mean is independent ethical and sustainable fashion is expensive. But major brands.

[00:36:30] You know we should be pointing the finger at them because it's their fault that it's not affordable because they're the ones that aren't there that they have the scale and they have the leverage to make sustainable and ethical fashion and bring it to the masses at a price that everybody can afford.

EJ: Zero waste design is hard and requires a wholesale change… something even its ardent proponents like Timo is the first to admit is unlikely to take over the industry. That’s not to say big designers can’t do it - Kenneth Cole released a zero waste t-shirt last year. Some governments have started taking note of all this too  - the UK’s Environmental Audit Committee recently recommended a tax on individual garments that would fund a national textile recycling program.

SEB: So where does this leave us??

SEB: Let’s just tick through the many obvious solutions to this problem:

Buy less clothing. Wear your clothes longer.

Buy second-hand, wear that till it’s toast. - and then make rags out of them!

When you do buy new, buy better clothing… wear that for longer.

And if it’s possible buy the stuff that’s better produced

EJ - I can make just about anything. I can be my own H&M. And it’s really tempting to do so... But I’m really bothered by the scraps… so the solution for me is making only what I really need.

SEB: The big question is will the big brands, the ones with the power to drive down the cost of zero-waste designs get on board, or will this remain super niche and boutique.

SEB: And actually Erika, your sewing habit is super enviro-friendly because look it made you aware of this problem!!

EJ: but they make me feel terrible!

SEB: But there’s another solution, you can just soak the scraps in gasoline and burn them to heat your house! Or let them pile up around you as insulation until your sewing room becomes like a giant cozy mouse nest that keeps your warm all winter long!