



## **Isis Shiffer**

***Isis Shiffer is a Brooklyn based industrial designer. She founded Spitfire Industry in 2016. After earning a BFA from the University of Pennsylvania and working as a bicycle frame builder for a few years, Isis returned to school and completed her Master's of industrial design at Pratt Institute. While there she won the international James Dyson Award for her folding paper ecohelmet.***

***At Spitfire, Isis and her team focus on function-forward products in the sustainability and urban-living spaces. Spitfire's clients include All-Clad, Blix Bicycles, Circadian Optics, Hunter Douglas, GoTrax, T-fal and many more. No matter the project, Isis tries to approach every design with technical rigor and humanism. She believes that it's a designer's responsibility to leave the planet better than they found it, and that designers have the best job in the world.***

***Isis also teaches industrial design and design business at Pratt Institute and occasionally lectures elsewhere. Outside the studio, she enjoys sailing, cycling, fine art, mountains, and underground music.***

## **NORMALIZING SUSTAINABILITY**

*Isis Shiffer*

**In design school you learn to study problems and conduct research. You learn CAD programs and prototyping and user testing. You hone your sense of aesthetics and fret over colors and ergonomics. Above all, you consider sustainability. It's drilled into you from day one that everything you design must be sustainable in one way or another.**

**It makes sense. Industrial designers are responsible for how new products are made, how long they last, and what happens to them when they are no longer needed. This is an opportunity, in a world hollowed of resources and burdened with waste, to do something good. It's also a big responsibility that weighs heavily on many of us and comes into conflict with reality the moment we graduate.**

**I took on a client, who we'll call Kevin\*, way back when I was founding my studio and a new client meant the difference between paying rent on time or not. Kevin owned a large consumer goods company that produced everything from plastic forks to plastic furniture to plastic decorative fruit. He approached me because he wanted to create a new line of plastic toys based on a movie franchise.**

**Fresh out of grad school and full of idealism, my impulse was to turn him down flat. I understood myself to be part of the front line fight against climate change and pollution, and this sort of work was**

**antithetical to everything I considered capital-D Design. But I needed the money and I didn't hate Kevin (although he and I disagree on politics, ethics, food, philosophy and every other metric you can think of we maintain a friendly working relationship to this day) so I gritted my teeth and took it on.**

**For Kevin, sustainability was a distant priority after cost and marketability. These two concerns influenced every decision he made, and when I brought up making his new toy line out of recycled plastic he was first bemused and then dismissive. Sustainability was expensive. It was elitist. Sustainable products looked bad and didn't work. It was a pointless exercise by coastal liberals to make themselves feel better. Never having encountered an attitude like this so openly expressed (I am indeed a coastal liberal) I felt a bit crushed.**

**This isn't to say Kevin and the many, many other business owners like him are acting in poor faith. They are right that using new materials and manufacturing techniques can increase costing significantly, that new plastics are untested and that changing one product makes no appreciable difference amid the overwhelming environmental damage done by our industries. The problem, nearly always, is that sustainable products are seen as something different and unfamiliar. The real key, I believe, is to normalize sustainability so it loses its sense of otherness and becomes as simple as selecting a color or surface finish.**

**It is helpful to begin by understanding the destructive stereotypes around sustainable design, some of which contradict each other. For example:**

- 1. *Sustainable products are coarse and colorless, attracting sanctimonious hippie types;***
- 2. *Sustainable products are expensive and elitist, appealing to insufferable snobs;***
- 3. *Sustainable products are functionally inferior, having poorer quality, shorter lifespans, or weaker structures than 'normal' items;***
- 4. *Producing sustainable products is more difficult.***

**The first one is the easiest to debunk because it is the least accurate. Sure, scratchy raw cotton T shirts that double in width in the dryer may be eco friendly, but so are aluminum cans, bamboo sheets, and most glass and steel objects. Conversely, some 'all natural' products actually use more resources than their synthetic counterparts. Silk, ceramic, and many woods can be extremely resource-heavy while looking green as can be.**

**It's also helpful to point out that many companies with a sustainability focus lean into the look we've come to associate with that message: soft greens and terra cottas, irregular shapes and textures, hand drawn-looking graphics. These are all choices made by a designer and not driven by the actual materials used.**

**The second point is a little more defensible. High end brands have the money to experiment with alternative materials and production**

methods and the marketing war chests to make them appealing. This is a particular concern for clients like Kevin, whose margins are low and for whom even a small cost increase would be disastrous. It's up to us then to find design changes that don't increase cost. Maybe cork costs more than plastic, but reduces the product's carbon footprint by half. Where else can you cut costs? Maybe the packaging can be replaced by a hang tag. Maybe you don't need packaging at all and you can stamp the bar code on the back. Without all that packaging, maybe the product can stack tightly and reduce the size of its shipping crate. Thinking of the product's entire journey from raw material to user as an opportunity for improvement can broaden your options considerably.

Like the first one, the third myth springs from a perception that all sustainable products are essentially 'earthy' and thus prone to crumbling. I like to explain that steel bridges, most concretes, and almost anything made before the industrial revolution is actually quite sustainable and certainly durable. It's also a good idea to point out that reusability (i.e. long life) is one of the most sustainable paths of all. Not every product can be recycled or recyclable, and when that is the case it's worth putting special effort into making sure it will be excellent quality. This often increases cost (though that isn't a given) and can be a hard sell for some clients. Showing glowing user reviews of other long life products can help, as can using the word 'heirloom' a lot. There's also something universally irresistible about a beautifully made, solid product to which even the most canny, profit-driven client can be susceptible. Paying particular attention to where parts interface, thoughtful hardware selection,

**and reinforcing vulnerable areas are reinforced can increase longevity in a cost effective way.**

**The last myth is the most true, at least as sustainability is generally perceived. Isn't it easier to just source virgin plastic pellets rather than pull waste from the ocean, sort it, clean it and grind it up? This implies a relatively narrow view of sustainable innovation as material driven only, which is just not true. Many traditional materials have quite carbon neutral lifecycles if they are treated correctly, and, crucially, the infrastructure already exists to do so.**

**So far, I have focussed on convincing the skeptical Kevins of the world to take sustainability more seriously. On the other end of the spectrum are companies (nearly always startups) who focus on manufacturing purity to the point of paralysis. I had one Australian home goods company that employed rural Indonesian women to produce their products for a decent wage. The objects were gorgeous and for a few years they made a small profit. But then there was a drought and a shortage of the natural dyes they used and when the artisans suggested switching to synthetic pigment the startup was scandalized. Production ground to a halt and, by the time the natural dyes became available again they had gone under.**

**This is an extreme example, and there were other issues at play, but it's not a particularly uncommon attitude for companies to take. It's important to keep sight of the overall goal: in this case, providing stable incomes to people who needed them, attractive products to people who wanted them, and reduced impact on the planet that supported the lot. The environmental implications of using**

functionally identical materials for a few production runs would have been minimal, and buyers could have been informed in a thoughtful way. Perfection, I tell clients while banging on the table, is the enemy of finished.

While I believe that the companies who manufacture consumer goods bear the greatest responsibility to create sustainable products, it gets us nowhere if the people who buy products are uninterested in trying anything new. Again, I believe the key is presenting recycled, recyclable, long lasting products as normal and attainable rather than as something moral or aspirational.

First however, I think it's important for designers to acknowledge how much unsustainable buying behavior is driven by income inequality. Someone struggling to make ends meet is going to reasonably go for the most convenient and cheapest option every time. A quick look at a 'best sustainable design' list shows products targeted squarely at the one percent, and while there is nothing inherently wrong with that, the products' impacts will be limited. This is one of the many reasons I think it's important for industrial designers to work in mass production, because while the products may not make any 'best of' lists they stand to actually make a difference.

I think there are three main things to keep in mind when launching a sustainable product into a normally non-eco-centric space:

- 1. It must not be significantly more expensive than traditional brands. If it is, it must have more features to justify the cost.*

2. ***It must look and feel as or more appealing as its competitors (this is the fun part)***
3. ***It must fulfill its sustainability bona fides effortlessly.***

**I have addressed the first point above, but there are a few more things to keep in mind from a buyer's perspective. Is something popular because it is cheap, or because it is convenient, or both? If cost really is the most important factor, can a lateral change help, such as a material swap? Even ensuring that the cap of a bottle can be recycled in the same bin as the bottle itself can have big implications at scale and not affect costing or user experience at all.**

**The second point is the hardest to describe and, for many of us, the easiest to do. A surprisingly large percentage of consumer goods are designed by engineers and not industrial designers, and it only takes a little thought to adjust a curve here and a touch point there to make a usually mundane product look and feel delightful. A good designer will also keep a tight eye on the manufacturing process and make sure that the factory sample bears more than a passing resemblance to the drawings you sent out.**

**As I talked about designing for sustainable manufacture above, here a product must be so easy to properly dispose of that users actually do it. No one has time to seek out specialized disposal; there is a reason we all have a pile of dead batteries socked away somewhere. Some companies institute buyback programs and dispose of products themselves, which isn't a bad solution if a product absolutely must be complex. It's important to study the target buyer's environment as well- a city dweller likely won't have access**



**to yard compost, while a rural user will not have municipal compost pickup (and neither do many city dwellers, unfortunately). Whether you are appealing to a broad or narrow range of users, you must be sure that the product works with the resources they have.**

**As time goes by and sustainability becomes more mainstream I believe and hope that our product design and manufacturing ecosystem will adjust for the better. More and more, clients have been adding recyclability and other eco specific sections to their briefs, and are showing more awareness of their companies' impacts. And sometimes nature intervenes to remind us both how small and how impactful our business of making products is.**

**A couple of years ago a container ship carrying products from Kevin's factory rolled in a storm and lost several containers overboard. There are now about twenty thousand items, designed by my own hand, on the bottom of the Pacific. They are not biodegradable, and will lie there for centuries. Kevin wasn't overly fussed about the loss- he has good insurance- but to my surprise he was distressed by the environmental implications. We made dark jokes about the fish enjoying their new decor. A few weeks later, he suggested, unprompted, that we switch one of his new products to a biodegradable material. And we did.**

**\*Some names and details have been changed, for obvious reasons.**