



Eliminating destructive design

By Brennan Commons

There is a point in time in which humans will reach a tipping point for which there is no return, and the products we consume become our remembrance. We treat ourselves the luxury of disposable design. We ship products encased in plastic, coffee cups that cannot be recycled, and handbills that cascade into the nearest dumpster. There is no longer a justifiable reason for the ignorance of sustainable design. Design is an overarching process that starts with an idea and through iterations, changes to best adapt to the market and consumer audience. So why is sustainable design a choice to undertake rather than an ultimatum? Why do designers ignore the need for sustainability when our greatest client, the Earth, has already said enough? The fault does not rely on the consumer who cannot distinguish a sustainable product amid the heaps of retail waste. It is the designers' obligation to influence and educate their client to appeal to the needs of all parties affected. The time has passed where we can decide if our ideals line up with those of generations before. It is important to align ourselves with the needs of society to be able drive systematic change. There are inherent issues within the system of sustainable design including flawed waste streams, unethical marketing, delayed design processes, lack of material education, failure to consider form, and the fear of driving limited change. Designers can reconfigure design standards through packaging

design to alter the unsustainable consumer relationship with the manufacturer's destructive glut.

Waste streams inhibit sustainable packaging

Sustainable packaging design redirects reusable packaging into the appropriate recyclable waste streams. This helps prevent consumers from incorrectly disposing of their product packaging. When considering their current waste systems, designers can better adapt their package to fit within. While each city, state, and country has built their own unique system, one can consider how "waste management systems are... facing large challenges when contributing to all three aspects of sustainable development: economic, environmental, and social. These challenges become more demanding in developed countries, where there is a strong link between economic growth, consumption, and the amount of generated waste."¹ When considering the consumer culture where the new gadget is released almost monthly and the next coffee break is in fifteen

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1 Babak Nemat, Mohammed Razzaghi, Kim Bolton, and Kamran Rousta. "The Role of Food Packaging in Consumer Recycling Behavior—A Literature Review," (MDPI AG, 2019).

minutes, commodities aren't going away anytime soon. The designer doesn't need to discourage innovation or luxury, only to correctly direct the waste at the end of its life cycle. In fact, there is a benefit to this. Consumer trends suggest buyers are largely interested in the sustainability of packaging, which will affect their purchasing decisions and willingness-to-pay.² Indeed, it is not a battle of sales, rather an adjustment in the education of the consumer, by the designer, to find enhanced value in goods that can be driven in a circular economy. The linearity of a package's lifespan is not an appealing element of design. One would rather save the planet than cover the world in trash, but if there is a greater cost in doing so, will choose the effortless alternative. Engaging the consumer to support society-wide benefits by disengaging their interest in the consumption of finite resources improves their welfare, thus forming a circular economy.³ Social benefit can become a motivator of change by improving our waste systems through clarity and accountability. Packages can more clearly define which waste stream they are part of. Therefore, consumers can direct packaging into the right renewable waste stream. Marketing strategies can engage consumers to act correctly. As packaging increasingly becomes sustainable, the consumer will seize the opportunity of sustainable decision. Sustainable packaging must systematically redirect packaging into the correct waste stream, improving the social welfare of humanity and relieving the effect of consumption on the planet.

Ethical design is not a marketing decision

The pervasiveness of sustainability practice, as a marketing decision, corrupts sustainable design and entices businesses into trickery. The designer can transform the ethics

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2 Nigel D. Steenis, Ivo A. van der Lans, Erica van Herpen, and Hans C.M. van Tijp, "Effects of Sustainable Design Strategies on Consumer Preferences for Redesigned Packaging.", vol. 205 of *Journal of Cleaner Production*, (Elsevier Ltd. 2018).

3 What is a circular economy?, (Ellen MacArthur Foundation, 2017).

of design. Appropriate actions are necessary to support global sustainability and Starbucks "committed to phasing out plastic straws from our 29,000 stores worldwide by 2020, eliminating more than 1 billion straws a year"⁴ fails at doing just this. Their solution of a recyclable straw-less lid seems meaningful. Yet, consider what's in the trash bin outside of the nearest Starbucks store. Are there more straws or more cups? Straws were only a small step for a multi-billion-dollar corporation with the resources to drive change globally. Alternatively, imagine yourself as the consumer. Empty cup in hand on your walk to work. Where will you dispose of your cup? Starbucks declared that customers should "choose reusability whenever possible."⁵ Therefore, that waste bin on the next block is convenient. But it isn't sustainable. Starbucks didn't inform the consumer of the correct way to dispose of their package. Only, that it is meant to be disposed of. Once the transaction is complete, Starbucks takes no responsibility for the disposal of their product. We are past the time of choice and can no longer be sustainable for monetary gain. A coffeeshop, ANMLY, in Bellingham, Washington said, "simply promoting environmental values has become an acceptable excuse, and an extremely brandable front" and that consumers will choose the convenience of a dumpster over the proper disposal of a compostable container.⁶ Despite their offering of \$1 glass cups to take home and return later for a discount, there has been a sizable loss of profit impacting their business. Their attempt at designing an entire system of reusable cups is successful, but is facing systematic challenges with the current wasteful consumer culture. Unfortunately, designers may not be able to prevent wasteful packages on their own. CEOs and other authoritative positions can restrict sustainable innovation for profit with no regard for the environmental cost. While designers may not be empowered to design ethically, they can help discourage unethical marketing and packaging

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4 Starbucks Coffee Company, *Greener Cups and Packaging*, <https://www.starbucks.com/responsibility/environment/recycling>, October 31, 2019

5 Ibid.

6 Anmly Café, *News*, <https://www.anmlycafe.com/news>, October 11, 2019

design. Designers can help establish sustainable norms and a visual language for packaging that is sustainable whenever possible. Society is cemented in the one-time-use culture humanity has lovingly adopted. As consumers, we desire the product but are careless towards the package. The case of the paper cup is the most audacious way consumers convince themselves of their love of nature.

Designers are not a last-minute solution

Designers can no longer be disassociated from the development of an idea until the need of its packaging. Envision the shelves of a store, plastic bottles and bags everywhere. You need shower gel and your eyes are drawn towards bright neon packaging but right below it, is a paper-based bottle. You are confused as you don't know how this could be used in the shower. Despite the lack of sustainable products on the shelves of stores, L'Oréal USA has introduced Seed Phytonutrient packaging, a recyclable and compostable paper bottle for use in the shower. L'Oréal wanted to improve its brand and engage with new sustainable markets with its seed-infused paper-based design.⁷ Consumers no longer need to worry about the disposal of this product, as it is recyclable and compostable. Instead of walking down the street with a paper cup in hand and nowhere to dispose of it correctly, L'Oréal made it easy for you to be sustainable at home. Collaboration between engineers and designers is typically limited and this shower bottle is evidence that a relationship between design and engineering is critical. Not every sustainable change is profitable. Adding sustainable design increases the manufacturing cost of the product while reducing the environmental cost. If the new product does not have an accompanying increase in demand or reduction in production costs, the redesigned package will decrease its profitability compared to the original package.⁸ The solution is to ensure that the product is equally or more profitable with a

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7 Kate Bertrand Connolly, "L'Oréal's paper bottle: Easy on the earth but tough in showers," *Packaging Digest*, 2018.

8 Kevin Coyne, "Sustainable Competitive Advantage—What It Is, What It Isn't," *Business Horizons*, 1986.

significant reduction in its environmental cost. If the alternative is not reducing cost, the manufacturer is enticed to return to a less sustainable design and the work of the designer is looked over. Engineers and designers each make proposals on the best solution for the package. Each is then approved separately and often does not connect well together.⁹ By working hand in hand, engineers and designers can work on the same timeline and accommodate one another more effectively to improve the consumer experience.

One sustainable product can change a business, but economic policies can benefit the world. Surprisingly, Wal-Mart seeks to be more sustainable each day by encouraging products to be engineered sustainably. Through the development of a packaging scorecard, Wal-Mart intends to reward businesses for being sustainable throughout their manufacturing process.¹⁰ Instead of requiring a business to work with a designer, Wal-Mart will differentiate packages in their own visual hierarchy supporting sustainability. Their theory suggests consumers will purchase sustainable products over similar ones that are less sustainable. Through hierarchal design, as the consumers we can walk through the stores and without having to inspect each package, we can make a sustainable choice with the help of the retailer. Unlike L'Oréal, Wal-Mart is encouraging businesses to adapt packages based on consumer interest. When walking through the aisles of a retail store, sustainability could be similar in hierarchy to brand, instead of being a secondary thought. Thai vendors have done just that, they have made sustainable choice available to consumers out of necessity. They have redefined what a package can be designed with by considering the environment they are in and designing for it. Through innovation and collaboration, street vendors are designing "coffee cups made of discarded milk tins, equipped with handles made of banana-leaf twine" and by packaging foods within banana leaves, a

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9 Roland ten Klooster and Eric Lutters, *Bridging the Gap between Design and Engineering in Packaging Development*, University of Twente, (2014).

10 Claudia H. Deutsch, "Incredible Shrinking Packages," *New York Times*, (2007).

native plant of Thailand.¹¹ These vendors are not marketing the coffee cup as something that looks good on the shelf, they are designing a package that eliminates the need for traditional sustainable design. The design of these packages occurred because access to waste streams available in wealthier regions is not available in Thailand. The coffee cup has become recyclable within certain scenarios, meeting the needs of the consumers, despite the imperfect recycling system of Thailand. Sustainability only needed a modest amount of design innovation on the part of the vendors. Designers can be monumental in their desire for sustainability by working with manufacturers at the start of an idea to ensure the needs of the customer and Earth are met with the final product.

Material design is left out in education

Sustainable packaging often fails to be considered during the manufacturing process. Consider the last five packages you purchased. How many were recyclable or compostable? How do you know that? Part of design is choosing the medium of the design. Designers make the choice for the consumer so that they do not need to understand what is recyclable. The education of design inconsistent when considering manufacturing. Research into the available materials used by manufacturers is only available to some universities and schools. Like the Thai vendors using locally sourced materials, larger corporation can consider biomaterials, antimicrobial packaging, or pectin in their packaging.¹² Alone these materials are not functional as standalone packaging, but in combination with other innovations, can increase shelf-life of products and use sustainable resources. As designers generate new sustainable ideas, these technologies can be integrated directly into packaging design. For example, antimicrobial packaging inhibits the growth rate

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11 Brian Merterns, "Food Vendors: A Thai Tradition With a Twist of Innovation," *New York Times*, 2009.

12 Elisabeta Elena Tănase, Adina Alexandra Baicu, Vlad Ioan Popa, et al., "Sustainable Packaging Solutions for Organic Fresh Berries," vol. 26 of *Journal of Faculty Food Engineering*, University of Suceava, (2017): 269-275.

of microorganisms which spoil berries and other produce.¹³ These new technologies only need to be incorporated in a greater system to see social and sustainable benefits. Designers who are more knowledgeable about packaging materials allows for more technological innovations in their packaging design. Consumers do not need to worry over what the package was made of, only that it was made to be recycled or upcycled. Individually, the typical consumer is not concerned with how the package was made, only how it can be disposed of. Thus, eliminating the need to educate the consumer on packaging materials. The role of the designer is to learn the possibilities of material design so that the consumer can purchase at their convenience.

The function of a package should not be restricted to one use

Designers can manipulate the function of a package through improved form, integrated labeling, and a stronger visual hierarchy. What was the last time that you reused a package for a purpose it wasn't intended for? How did that work? Consumers are rarely told what is possible when reusing packages. Usually, repurposing packages is reserved for arts and crafts projects, but what if packages were intentionally designed to be used in more than one way? Currently, a package can be differentiated from sustainable versus one-time-use is through its material form. While this drives sales, these products are not necessarily sustainable and could be even more adaptable. The "packages' functionality influenced consumers perception of the quality of the packaging. This is due to a change in view of the function of the packaging from a dependent product, where the packaging is merely a container for its contents, to an independent one, where it can also be used to convey a message."¹⁴ When a package is the container for a product, there is limited functionality in how the product can be reused or disposed of. Think of the milk carton, in most situations the

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13 Ibid.

14 Nemat, "The Role of Food Packaging in Consumer Recycling Behavior - A Literature Review"

lid is not recyclable and needs to be cut out. This isn't convenient and isn't clearly indicated. As the consumer, you aren't informed as to how to do this. Instead, you conduct your own research which takes time. Packages that provide functionality are preferred by consumers. Designers can design a package's form to be functional during use and easy to sustainably dispose of it. Maybe even to keep it for continued use, something designers can remind consumers. Consider turning a bottle into a vase because it was designed that way. Or burning a box that has a natural scent from the food within it. The labeling of a package, on its exterior and on the shelf, can be more intentionally used by designers to improve user experience and reward sustainable choices. As a consumer walks through a store, the products' brand is considered first. Price tags could be used to highlight sustainability in a three-dimensional form. The layout of the store or the design of the price tags could encourage consumers to make decisions based on the label of the product rather than textual information.¹⁵ Visually showcasing the sustainability of a package could impact sales. Wal-Mart's economic reward system could be heightened to visually display sustainable packaging directly on the label. While the form and visuals are within the control of the designer, "a sufficient difference between better and worse packaging has to be established."¹⁶ Economically, a systematic change will have to be formed to differentiate products that are sustainable. In the meantime, a designer can help consumers clearly navigate sustainable packages versus wasteful ones. Products must not appear sustainable if they are not. If a consumer is buying a coffee or a milk carton, they should know how to correctly dispose of it through the instructions on the package. Both are intended to be recyclable but neither exemplify that characteristic. The recycling icon is typically on the bottom of its form rather than being prominently displayed. Both forms barely contrast from a plastic container, a package that is rooted

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15 Ibid.

16 Ana Pires, Graça Martinho, Rita Ribeiro, et al., "Extended Producer Responsibility: a Differential Fee Model for Promoting Sustainable Packaging," vol. 108 of *Journal of Cleaner Production*, Elsevier, (2015), 343-353.

in the throwaway culture of today. Multifunctional packages can help prevent unnecessary waste. Bee Bright was designed as a result of growing concerns over packaging waste. The honey package can be turned upside down to become a candle because of its wax structure. The wooden lid is then used as candle stand.¹⁷ This encourages consumers to buy a package with the intention of using it for more than the transportation of the product within. Designers can rethink how a package can be presented to the consumer to remind them of their commitment to improve the health of the world.

Do not fear minor changes

Sustainability is a global and systematic change affecting the production, distribution, and consumption of packaging. The consumer cannot control these systems, your choice of buying a sustainable product is limited in scope. In the end, you just want your coffee. The objective of sustainable packaging design is to remove the "unsustainable human habit associated with the original product. The design focus is on new long-term socio-cultural environments."¹⁸ Consumers cannot be presented with the opportunity to be destructive in their consumption. When taking the coffee cup from the store, the consumer is presented with a choice of sustainability. You should be able to dispose of your cup sustainably without needing to think about it. Currently, the paper cup is in competition with the Styrofoam cup. The question arises, why are we still using the Styrofoam cup? It's the goal of the designer to eliminate that competition in its entirety. The human habit can be broken by the designer with the support of the consumers. The designer must not be overwhelmed with the extensive amount of data for sustainable design.¹⁹ The design process can be adapted to include new materials and change through user experience research.

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17 Maude Paquette-Boulva, *Bee Bright*, <https://maudepaquette.com/>, (November 2019).

18 Carmela Cucuzzella, "Creativity, Sustainable Design and Risk Management," vol. 135 of *Journal of Cleaner Production*, Elsevier, (2016): 1548-1558.

19 Ibid.

Questions can be considered as to how a cup can be used after its original purpose and how the form of a cup can change to better serve the consumer. While the designer can redesign a product to improve its function and transform consumer culture, the primary issue is the determination of a package's life cycle according to sustainability perspectives.²⁰ The designer may not always be perfect. The consumer may be unintentionally misled. Each of these can be used as case studies to help improve the overarching wasteful systems in place. Designers have the option to decide what can be sustainable from the creative standpoint. The paper cup is sustainable in its intention but not effective in its use. It was a step in the right direction, but limited in its success. Designers can formulate data to understand these habits, to change the perspective of consumers, and to redesign packaging to improve its sustainability until the social systems are overhauled.

Design can be a driver for systematic change

Sustainable design is as much a visual change as it is a policy, innovation, and global transformation. The human experience has always been a linear path, a start and a finish. We have built a waste system that parallels humanity's history. We have built ourselves this utopia hinged on an infinite combination of peoples, organizations, and structures. And we will be remembered for destroying all of that. We have a choice to make. Individually, we must ask ourselves how we want to live our lives. Are we inherently a civilization built on the linearity of disposable waste or through change and adaptation that can rebuild the systems pivotal to our societies? The reach of such change is feasibly impossible for one person but through the empowerment of design, this transformation can become feasible. There is no fault for practicing sustainability and failing as long as the individual endeavors to do better each day. Designers can choose to reimagine the possibilities of sustainable design and be memorialized for their action against

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wasteful glut. Sustainable design for packaging is achievable but remember "the main issues and concerns move to the relationship between the [product] and the larger system of changes within which the [product] is embedded."²¹ Through individual action, the designer redirects how consumers interact with packaging every day. That change is the responsibility of the world and is economically viable. That is not a discouragement, only an acknowledgement for the reality of the situation. What is doable can be condensed into three main points.

To redirect consumer attention toward the need for sustainability

To ethically educate the client to inform consumer choice

To innovate upon existing systems through material demands

Redirecting consumer behavior will reward the environment, the economy, and the social benefit of the world. There is no point in which we need to wait for action to take effect, only to embrace it in all the ways we can. The benumbing of sustainability within the global design culture, must be reconfigured by the designer to redefine sustainable packaging ultimately preventing consumer waste.

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