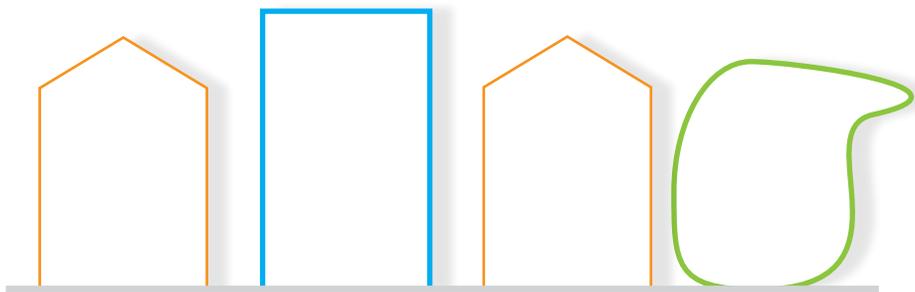


Nurturing Sustainable Behavior in a Changing Economic Landscape: Identifying patterns to motivate consumer behavior.



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MCAD Sustainable Design Thesis Project | Summer 2014

# Nurturing Sustainable Behavior in a Changing Economic Landscape: Identifying patterns to motivate consumer behavior

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## ABSTRACT

This thesis project identified patterns in consumer behavior that have the potential to influence and nurture sustainability as a key decision driver. By focusing on the low-hanging fruit of single use to-go items such as plastic cutlery, this study observed consumer behavior to test the effectiveness of the newly identified patterns. Pattern testing was designed to determine if price is the key-purchasing driver, or if in spite of the increase of low-income households that must place a heavier importance on price and convenience, sustainable consumer behavior could prevail. Through analysis of existing research and analogous studies, and the execution and examination of new research, these patterns were identified. Direct, simple, and convenient point-of-decision design solutions were selected as successful behavior modifiers during the testing phase, which allowed sustainable consumer behavior change to occur regardless of the user's economic situation. While the results were specific to the testing conducted in this project, it is concluded that such pattern application and design solutions could have the potential to achieve similar results to nurture and alter sustainable consumer behavior.

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## INTRODUCTION

We use without much thought, we take for granted the daily items that make our lives comfortable and convenient without regard to the consequences of our actions. As mainstream culture opens up to the ideal of sustainability and communication campaigns help us to become more aware of the environmental impacts of our actions, where will we choose to stand on the side of sustainable change? Will we awaken and realize that we hold the power to correct our behavioral mistakes, or could economic conditions be strong enough to force us into two consumer categories: those who have the financial ability to make sustainable choices, and those who are unable to consider change because of financial restraints? This thesis project will focus on single-use items (e.g. disposable to-go items) to analyze behavior and identify behavior patterns for leveraging “low-hanging fruit” on the path to nurturing consumer behavior to become more sustainable. This paper will additionally seek to determine if the widening economic gaps between lower, middle, and upper classes in the U.S. will worsen or strengthen environmental purchasing decisions, specifically the low-income group, and finally address ways to nurture behavior to address such consumer constraints.

Consumers have taken for granted the abundant resources at their disposal without much thought to the ramifications of those decisions. While consumers appear to be awaking to this realization (it can be seen in the reusable bags brought to the grocery store, the increase in the importance of buying local, the upswing of organic produce, and awareness of GMOs), one equally startling fact is showing its head in the US, the world’s second largest consumer of natural resources and the country with the second largest carbon footprint: our economic landscape is changing (EIA). The middle class is diminishing, creating a large upswing in low-income households and a widening gap into the upper 1% (CBS). With this changing economic landscape, where does sustainability factor into consumer purchasing behavior? Will more sustainable consumer behavior continue to rise, or will price play a larger role in the consumer buying behavior, decreasing the importance of the sustainability of consumer goods? This paper seeks to identify the communication patterns that can nurture sustainable decision behavior and how to increase their effectiveness through existing and new research on sustainable purchasing behavior. It will secondly seek to nurture change through tactics identified for their potential effectiveness in a manner conducive to adoption. By placing an emphasis on a typically price-neutral product-plastic cutlery-this thesis project will test the identified patterns to determine how consumer behavior it is or is not altered when presented with sustainable information. While this will not be a conclusive study, providing

concrete solutions to sustainable communications, it will seek to present possible patterns for more widespread adoption.

### The Sustainability Story

Consumers are faced with countless decisions when selecting products, and sustainability features have been steadily increasing in importance since the initial mainstream “green” campaign, marked by the first Earth Day in 1970. The increase in the weight of such factors has led to an increase in product offerings as well as information available for consumers. According to a 2007 and 2011 Experian study, over 33% of Americans consider themselves “Behavioral Greens” consumers who not only are concerned about sustainable practices, but actually purchase sustainably as well, a number that has been increasing since the induction of the survey in 2005 (Experian Information Solutions 2). Additionally, a recent Tork study found that 78% of Americans say they purchase “green” products, up from the 2012 number of 67% (Tork).

Added to this slow change spurred by green campaigns has been major environmental crises coupled with major weather events that have catapulted the question of environmental practices and the effects of global warming from debatable topics to glaring beacons of the inevitable, furthering the discussion of sustainability in general. Massive, destructive weather patterns such as Hurricane Sandy have opened the dialog to the economic ramifications of global warming. Bloomberg Weekly ran the cover article “It’s Global Warming, Stupid,” a play on Bill Clinton’s campaign rally of “It’s the Economy, Stupid” to further exemplify the point that the economy, both in consumer behavior and in the economic realities of the devastation of global warming, is intrinsically linked to global warming and that a separation of environment and economy is no longer a reality (Romm). This newfound awareness of an impending environmental “situation,” beyond simply reaching consumers as a news story, has the potential to affect consumer behavior. This awareness affects the types of products that are being purchased. As a BSR Study cited, “extreme and unpredictable weather patterns may affect not only consumer preferences, but the types of products they seek in response to resource and economic constraints, and what they are able to purchase in preparation for and in the aftermath of disasters and other disruptive events” (Joyce, Wong 2).

This collective increase of information and realization has led to a more educated consumer in the marketplace. According to *Fostering Sustainable Behavior*, “if we

are to make the transition to a sustainable future, it is critical that we are able to develop a set of societal norms that support sustainability” (McKenzie-Mohr 62). Consumers in the U.S. are much more aware of the impacts of their decisions than they were 44 years ago or even 5 years ago. For example, small adjustments in behavior have led to great strides in the single-use consumer market, specifically in the case of the eradication of plastic shopping bags; bring your own bag campaigns have led to government bans against the products in cities in California, Washington, and Hawaii, and considerations of such bans in Texas and New York (Plastic Bag Bans and Fees). In states where bags are still prevalent, perception prompts and incentives have led to a change in consumer behavior. Consumers are often given financial incentives for bringing their own bags or financial “punishments” for using a store bag. Signage and verbal prompts remind consumers to bring and use their own bags, which has led to the familiarization and normalization of such practices and, according to such behavioral guides as *Fostering Sustainable Behavior*, tremendously increase the likelihood that others will follow suit.

While great strides have been taken toward both awareness and action of sustainable consumer goods, single-use (i.e. disposable) items have entered into the daily habit of many consumers across the US based on their convenience, ease of use, and mass availability. Manufacturers reap the benefits of an increase in purchase and necessity to re-purchase. A product designed for planned obsolescence, “the deliberate process by which manufacturers make products that become useless, out of date, or out of fashion within a specific (usually short) time frame” stipulates that “consumers then toss the old model and buy a new one. This model boost profits as well as landfills” and requires buyers to purchase over and over again (Johnson). Planned obsolescence increases the profitability of the producing company while at the same time creates a dependence on that provider for such goods. Single-use, disposable items are literally designed to do just this, to use once and throw away.

Designed obsolescence invades other categories as well; software, clothing, and consumer electronics are often designed specifically so that they will ultimately be replaced. In *Design is the Problem*, Nathan Shedroff describes the four forms of obsolescence: Technical, aesthetic, functional, and cultural (Shedroff 164). Shedroff states that while “many of these are planned, several of them are actually natural evolutions that organizations can’t ignore as is the case in technological obsolescence;” technology advances and the product that relied on the old technology simply cannot function with new technology. While this sort of design evolution seems somewhat natural, reliance on single-use goods that in turn rely heavily on fossil fuels and energy for production are seemingly in a category of their own. According to the EPA, every year nearly 900,000,000 trees are cut down to

provide raw materials for American paper and pulp mills, and in 2012, 14 million tons of plastic waste was thrown out in the US from containers and packaging. Additional research shows that consumers use 40 billion pieces of plastic cutlery per year, and the average consumer uses approximately 6 napkins per day (Citron-Fink). All of these materials are designed for single-use and to be thrown away after completion of that one use.

While these products are created to be obsolete, designing for longevity is not necessarily the answer either. Taking into consideration a product's life cycle assessment, designing for longevity can have perilous results. The EPA defines a life cycle assessment, an LCA, as:

a technique to assess the environmental aspects and potential impacts associated with a product, process, or service, by

- Compiling an inventory of relevant energy and material inputs and environmental releases
- Evaluating the potential environmental impacts associated with identified inputs and releases
- Interpreting the results to help you make a more informed decision (EPA)

Taking into consideration the LCA of a product, it would be far worse to create traditional, metal cutlery and cloth napkins for use at to-go stations because the energy and materials used during the raw material extraction, manufacturing, packaging, and end-of-life stages for a reusable good to be used once would far surpass those of plastic cutlery and paper napkins. The real change driver is to affect behavior to make these habits less harmful. It is worth noting that while compostable and biodegradable options exist as alternatives to traditional plastic cutlery, their dependence on specific disposal practices fell beyond the scope of this project, and therefore they were excluded from the research.

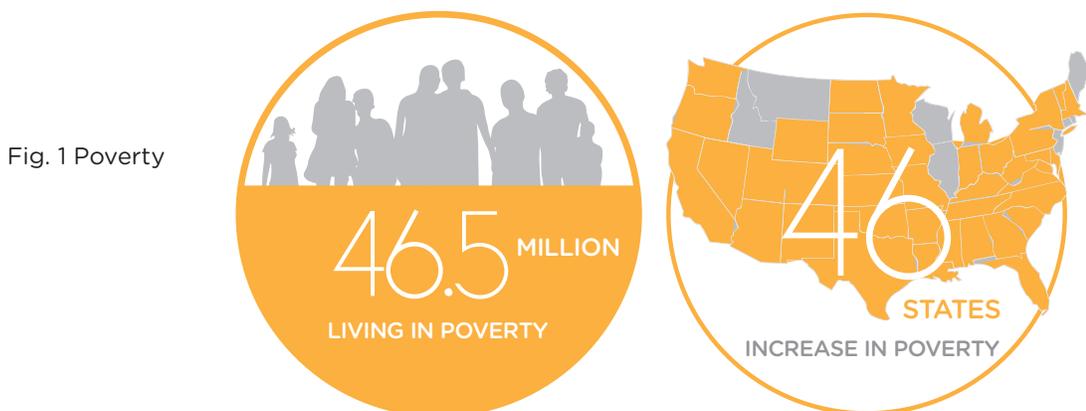
Providing users with an LCA analysis of disposable products can potentially have an impact on consumer behavior, however this information must compete with competing messaging. Consumers are flooded with near constant messages of offers for disposable goods from contact lenses to toilet bowl brushes to plastic forks; the option to use once and dispose touches almost every facet of the buying cycle. The buying cycle can be broken down into the following phases: awareness (customer identification of a need), consideration (customer evaluation of how your offering meets this need), preference (customer's logical and emotional inclination towards one solution or another), purchase (the action of ordering and buying) and finally

repurchase (emotional and logical process that (hopefully) leads to a repeat purchase ) (Redbord). At the same time this messaging creates the perception that single-use is clean and sanitary and to reuse is to be unclean, unsanitary. It is often more convenient, easier, and less expensive to use these single-use items than it is to invest in a product with an extended lifecycle. These single-use items appear to make our lives easier by giving us more time to devote to the other tasks of the day by allowing us to use and simply forget about the product after it has left the use phase of the product’s life cycle. This consistent, disposable behavior, often guised as a more sanitary and healthier option, can blind consumers to the consequences of their actions, adding to the 50 percent of municipal waste collected annually from packaging and non-durable goods (EPA). At the same time, this behavior can perpetuate the belief that time is limited and disposable offers the solution, thereby increasing the very busy lifestyle that it is trying to fix. Falling for this cycle of buy, use, dispose, and repeat can in fact increase expenditures and add to the lack of time by requiring the user to repurchase time after time. A recent Yahoo Finance article chronicled the cost savings of a contributor who gave up disposable items for a year; the result was a savings in over \$800 (Carroll).

### The Economic Story

The economic landscape in the US is changing. The economic gap is widening, polarizing our class structure, which has potential implications for purchasing behavior across the board (CBS). While conclusive-or inconclusive data-has yet to be realized into the extent of these behavioral implications, Harvard Professor David A. Moss states in a Forbes article, “It’s striking how much work has gone into examining this question... and how little we have to show for it, at least so far,” the question is worth examining (Blanding). While American consumers have more options when it comes to sustainable consumer goods than many global consumers, they also have more options for non-sustainable goods. And while consumers may be (or may have the option to be) more aware of the consequences of their decisions, a changing economic landscape threatens to undo or diminish positive strides that have been taken in sustainable consumer goods (Experian Information Solutions).

As the middle class begins to dwindle in the US, the number of citizens falling in the low-



income sector is beginning to rise. According to the Census Bureau, 46 states have seen an increase in poverty rates from 2007 to 2010 for a total of 46.5 million Americans living in poverty (see figure 1). On the opposite side, the average income for the top 1% of Americans is now \$1.2 million (United States Census Bureau). This group has also seen a percentage growth in income since 1967 of 88%, while middle income households have only seen a 20% increase (United States Census Bureau) (see fig. 2). The average net worth of the top 1% is \$16.4 million while the average household net worth of the middle class \$57,000 (a decrease of 22% from 1983) (United States Census Bureau). All of this equates to a shift in demographics resulting in a larger low-income household segment that must place a heavier emphasis on the importance of price.

Fig. 2 Percentage Increase



### Consumer Driver: Price

As the middle class continues to decline in size and stature, low-income households begin to take on a much larger role in the economy. Meanwhile, the upper 1% continues to increase its annual intake at a rate much faster than any other segment, polarizing segments of the country. According to data from the U.S. Bureau of Labor statistics, the average low-income household (cited here as \$17,563 HHI / year) will take in less than it spends in an average year, annual expenditures being \$24,806. Housing accounts for 40% of all expenditures and 56% of total household income, leaving only 44% total for food, health care, education, transport, entertainment, and miscellaneous expenditures (Mahapatra). Price, then, can play an integral role in the purchasing decision process for household items and consumer goods. This is not to say that it is the only important factor. Recent studies have concluded that while price is the main point of importance for low-income households, price is often broken down into usage and the optimization of use. This means that low-income consumers look not just at the price tag, but also the perceived value of the item as a whole, and price per piece as opposed to the total price as an isolated entity (Kaufman). Even with these stipulations on price, it must be viewed as a key decision driver.

### **Consumer Driver: Convenience**

While price remains a top decision driver, consumers, regardless of economic situation, more often than not are likely to choose disposable consumer goods based off of a second driver, convenience (Kantar). In a Kantar Media study, 75% of grocery consumers cited convenience ahead of price as a key decision driver. As a society, we constantly claim that we don't have enough time, that we are bogged down and pulled in so many directions that we have to make alternative purchasing decisions. According to Merchant, 90% of American homes use paper towels, which accounts for 3 tons of waste every day (Merchant). A primary consumer driver for paper towels? Convenience. Further research on paper towel usage will be explored later in this paper.

If price and convenience are in fact two of the main factors that drive consumer behavior regarding single-use items, how will the shift in the economic landscape impact the sustainability of consumer behavior? Will the increasingly price-sensitive low-income demographic consider sustainability when making purchasing decisions? What messaging and tactics can be taken to affect consumers making purchasing and behavioral decisions to help ensure that sustainability still plays a vital role in their decision-making process? By focusing on the increasing low-income demographic, this paper seeks to determine ways to affect the sustainable decision making processes, in the face of a changing economic landscape so that regardless of price, sustainable decisions are logical, and easy decisions.

## **PART 1: TRIAL AND SUCCESS: IDENTIFYING PATTERNS**

This section will identify and analyze successful sustainable behavioral shifts happening in the consumer marketplace. By analyzing the means by which behavior has been altered, patterns can be realized that have the potential to shape additional sustainable practices.

### **Analogous Studies: Plastic Bags and Hotel Towel Service**

As identified in the research, consumers are not immune to modifying their own purchasing behavior for the betterment of the planet. In addition to making more educated purchases, consumers are also willing to make changes when these changes become commonplace and acceptable. This section will identify other sustainable practices that have become adopted on a grand scale while drawing parallels in this new model. The two practices that will be discussed are the adoption of renewable bags and water conservation through hotel towel services.

## Plastic bags

Reusable bags have slowly changed from an “environmentalist badge of honor” to a mainstream, common item finding a home in grocery stores across the US and internationally. What was once seen as an “unusual” behavior is now being recognized, accepted, and adopted form of environmental conservatism, an apparent sustainable behavior. The plastic bag is an example of the sustainable “low-hanging fruit” that many consumers have adopted.

## Previous State

The US alone uses about 380 billion plastic bags, sacks and wraps per year currently, less than 10% of which end up recycled (EPA Wastes). Even if consumers use their plastic bags more than once and for a different purpose, the “second life” rarely halts the production of new plastic bags.

According to a Maccor study, 39% of US grocery shoppers currently use reusable grocery bags (not taking into account frequency of usage), 91% of which claim to do so out of environmental concerns. Approximately 62% of consumers still use plastic bags at the grocery store. They do so primarily because a) they won’t remember to bring their own bags, and b) they find it inconvenient to carry around their own bags (MaCorr). Even though there are still inconvenience factors that hinder full adoption, an overall average adoption rate of 39% (an average in locations both with and without government intervention) demonstrates the willingness of consumers to modify their behavior based on environmental concerns.

## What Worked

What led to this increase in adoption? What happened to enable acceptance for this seemingly inconvenient behavior? While the single-use bag (paper or plastic) is far from being removed from the system, and does have its place in sustainable consumer behavior (an LCA analysis concludes that a cotton reusable bag must be used 131 times before it becomes more environmentally friendly than a plastic bag), a shift in behavior is visible (Edwards, Fry 61). Casual observations of shoppers using bags, and stores providing bags for sale at any grocery store or department store visually tell the story that this behavior is becoming normal for many shoppers, not just for environmental extremists.

## Strategy 1:

On-boarding from retailers - Retailers pay to provide plastic bags (approx. \$.02-\$.05 /bag), and this cost is typically passed on to the customer. By removing this cost, the retailer can either pass on the savings, reward customers by offering a refund for using their own bags, or pocket the difference. In any scenario, the retailer stands to

gain from the use of reusable bags, not to mention the sale of their own branded reusable totes for which they often charge \$1-\$3 per bag. In an effort to facilitate an increase in the usage of reusable bags, and to increase their own brand perception, retailers are engaging in prompts with their customers in two ways: visual and audible. By placing notifications on the store front doors, aisle notifications, and the front-and-center displays to sell their own bags, retailers are using visual prompts to promote reusable bags. Retailers also rely on audible prompts by having clerks ask questions such as “did you remember your bags?” or simply saying “thank you for bringing in your own bags” (McKenzie-Mohr). Such simple strategies tap into the base of our human needs; social needs and esteem needs as defined in Maslow’s Hierarchy of Needs (Maslow). According to Maslow, a hierarchy of needs exists, of which human motivation relies. Basal needs must first be met in order to advance to more intrinsic needs. Social needs-belongingness, affection and love and esteem needs-self-respect, or self-esteem, and the esteem of others help to explain consumer motivation in any realm, sustainable or not (Maslow 380). The growing trend of reusable bag usage taps directly into these two drivers. Simply put, if others are doing it, we want to as well. The need to belong allows an individual to be motivated by others, whether that is human interaction, by visual signage, or by seeing others doing the same. Being thanked for bringing in a bag, or being fearful of disappointing the clerk (stranger or not) by not bringing a bag have allowed for the adoption of this behavior. While staff training, friendly competitions, and a willingness to be open must be present, the retailer stands to gain financially from facilitating such practices. This can be realized both from a cost savings standpoint by purchasing fewer bags and by generating a new revenue stream from selling branded bags.

### Strategy 2:

Government intervention - International, local, and state governments have recently taken steps to deem the plastic bag as a potential banned substance or have imposed taxes per bag to dissuade usage. Approximately 167 municipalities, cities, and states domestically have applied such legislation (Plastic Bag Bans and Fees). In Washington D.C, these regulations have led to a 65% reduction in the use of single-use plastic bags, and in cities like Los Angeles, the reduction rate has reached 95% from such legislation (Phillips). Internationally, approximately 19 countries have imposed such legislation, examples include the 90% overall reduction in Ireland (Harrison).

### **New Attitudes**

While reusable bags have certainly not reached the saturation point, The EPA estimates that the US alone goes through 380 billion plastic sacks and wraps

annually, the adoption of this practice has become more widespread and acceptable across generations, geographic locations, and consumer segments (EPA Wastes). What was once a small segment of the population is now an acceptable practice to the point of becoming a true social norm.

### **Hotel Towel Service**

Hotels are seeking to decrease energy consumption and create a greater “green” perception through a modified hotel laundry and water service. Hotels ask patrons to “go-green” by reusing their bathroom towels for multiple-night stays. The following section will review these practices.

### **Previous State**

The EPA estimates that hotels and other lodging institutions use about 15% of the total water used by all commercial and institutional facilities in the US (EPA WaterSense 10). Hotels across the US now use visual prompts, often in the form of placards placed near towels or in the bathrooms, to ask hotel guests to help the hotel “go green” by reusing their hotel towels for either their entire stay, or at least more than one use. This practice has become a commonplace, expected notification for hotel guests across the US and internationally.

### **What Worked**

Reusing towels in hotels has risen in popularity primarily because of benefits accrued by the hotels themselves for promoting such behaviors. Hotels must pay for water twice: first for the usage and second to dispose of the wastewater used (Tuppen). It simply makes economic sense for hotels to promote water conservation to hotel guests. This, coupled with an increase in consumer preference towards brands with sustainable practices, has broadened the appeal of such practices (Experian).

Consumer willingness to modify behaviors when prompted has increased both the adoption and levity of such programs. Whatever the core motives, the practice is working. The report, *A Room with a Viewpoint: Using Social Norms to Motivate Environmental Conservatism in Hotels* by Noah J. Goldstein, presents an analysis of different strategies for the reuse of towels to reduce water usage in hotels. According to the study, 75% of those who visit hotels with messaging geared towards conservation of water through the reduction of towel use participate in the program for at least one day of reuse (Goldstein, 4). The study went on to determine the most effective form of communication, visual prompts or social norms. To test the effectiveness of visual prompts and social norms, the researchers placed two different forms of placards in hotel bathrooms to determine which would be more effective. One version used the main call to action of, “Help Save the Environment” as a prompt. The second version of the placard utilized norms as its main call to action, telling viewers, “Join your fellow guests to help save the environment. Almost 75% of guests who are asked to participate in our new resource savings program do help by using their towels more than once. You can join your fellow guests in this program to help save the environment by reusing your towels

during your stay.” The study found that when a social norm was introduced, participation increased by 44%. The study went on to find that adding an even more specific norm, that is adding language about one’s “local settings and circumstances,” increased adoption by nearly 50%. In this case, the added text was specific to the room: “75% of the guests who stayed in this room (room number printed) participated in our new resource savings program by using their towels more than once. You can join your fellow guests in this program to help save the environment by reusing your towels during your stay.”

### **New Attitudes**

Hotel guests have become willing to adapt their behavior in an effort to make more sustainable decisions, lest be judged for their un-green choices. Additionally, norms such as those found in the Goldstein research study may influence participants to take some of these practices home with them and to modify their behavior as the practice is now deemed as normal, if even just slightly.

The push to reduce plastic bag consumption, and the communication initiative to promote water conservation in hotels are both examples of analogous studies that made an impact in sustainable consumer behavior (39% average reusable bag usage, and 75% participation in towel saving programs in hotels respectively) (Maccor) (Goldstein). By tapping into social norms that hit at Maslow’s core basal human needs of social and esteem, the studies found traction (Maslow). Using these models as potential patterns for consumer motivations in other areas of sustainability, such as the single-use disposable good, can help to identify trigger points for success.

### **Catalysts for Change**

As books such as *Fostering Sustainable Behavior* have noted, sustainable behavior is more likely to be adopted when it becomes a part of a natural behavior pattern, a norm. Behavioral change is more likely to happen when easy and effective campaigns are rooted in common behavior and when it is understood that for processes to change, the catalyst must be one that is natural. *Fostering Sustainable Behavior* identifies a few catalysts: social norms and prompts, which play off of this knowledge to change consumer behavior in a meaningful and engaging way.

### **Social Norms:**

Consumers are more likely to do something if they don’t feel as if they are the only ones doing it. As mentioned earlier, it is human nature to not want to be the outcast or to feel isolated, tapping into our social needs in the Maslow hierarchy. This is not

to suggest that consumers don't value their own individuality, but when it comes to consumer behavior, more often than not, the larger group influences consumers. This behavior can be observed by the popularity and effectiveness of online review sites such as Yelp and TripAdvisor. According to a recent study, 90% of consumers who recalled reading online reviews claimed that positive reviews influenced their decision to buy while 86% said that negative reviews also influenced their buying decisions (Gesenhues). This was exemplified in the hotel towel service study presented above. Several studies further perpetuate this notion. For instance, a University of California Santa Clara study asked users to preserve water when showering by turning the water off when washing, and only on when rinsing. Only when a "mock showerer" turned the water off and on during various cycles while others were nearby in neighboring showers did the study take off. Placards had been placed inside each shower asking users to conserve water, however as the users did not hear anyone else practicing this method, change did not happen. Only when users heard a neighbor turning his water on and off, did user behavior change, for risk of not becoming a social pariah (Mckenzie-Mohr 63). Stickers, badges, placards, even sustainable shopping bags in use all create a social norm; to tell users that they aren't the only ones and to show that other people are willing to do the same. But mimicking behavior seems to have the strongest influence.

### **Prompts and Rewards:**

When people are given a prompt, they are much more likely to perform a desired a behavior. As the Maccor study showcased, users often forget to act on behaviors that they would otherwise choose to act upon. Reusable totes are often unused simply because the consumer forgets to grab them. Prompts such as store door signage, parking lot signage, or even leaving the bags in route to the car at home, all act as prompts for consumers to bring their bags to the store. As *Fostering Sustainable Behavior* puts it, "Numerous actions that promote sustainability are susceptible to the most human of traits: forgetting" (Mckenzie-Mohr 83). A prompt or reminder at the place of the action has a significantly greater potential to work. McKenzie-Mohr goes on to say, "a prompt should be delivered as close in space and time as possible to the target behavior" (Mckenzie-Mohr 86). Placing prompts as close to the desired action, and rewarding those immediately after the action has taken place ensure greater adoption. When clerks, "thank you" for using a reusable bag, or give you \$.05 back for using your bag, users feel justified in their usage of the reusable bag.

Moreover, a study conducted by Chana Joffe-Walk of NPR measured the increase in organ donations in Michigan. When DMV workers started asking patrons if they'd like to be an organ donor, donations nearly doubled. In 2010, prior to DMV workers

asking the simple question, Michigan had 320,000 organ donors. Two years later when the employees began asking the question, the total increased to 520,000. Kim Zasa, the woman charged with leading the DMV drive likens the upswing to the simplicity of the question at a time when users aren't prepared to answer no. They may be slightly caught-off-guard, or in a mental state where a question posed in a casual manner at a time when the customer is trying to get in and out as soon as possible, causes a casual response of "yes". In addition to the simple prompt, Zasa incentivizes the employees by comparing DMV locations to one another, pitting employees against each other and rewarding them with something as simple as chocolate and a "job well done". In addition to the prompts working to increase adoption amongst customers, the chocolates and compliments act as rewards and social norms to increase adoption amongst employees (Joffe-Walk). Social change triggered by prompts and norms has succeeded in altering user behavior. Patterns which identifying norms and prompts as catalysts for change can seek to create additionally create norms and prompts for sustainable change as well.

## **PART 2: RESEARCH ANALYSIS: OVERVIEW OF NEWLY CONDUCTED RESEARCH ON CONSUMER BEHAVIORS AND (METHODOLOGY AND CONCLUSIONS)**

As part of the thesis project to identify patterns for greater adoption of sustainable consumer behavior, focus groups were conducted to better understand existing sustainable consumer behavior. Additionally, surveys based on results from the preceding focus groups were conducted to further test the findings of the focus groups and to broaden the sample size of the participants. The following section details these research tactics.

### **Focus Groups**

Focus groups were held to gain valuable and anecdotal information from consumers in the marketplace to further identify decision-making dynamics.

### **Methodology**

The primary aim of this thesis is to identify patterns that have the potential to affect sustainable consumer behavior in lieu of economic conditions. Focus groups were identified as ways to gain consumer insight and to facilitate an open a dialog as to why or why not consumers currently practice sustainable behavior. To begin the process, a consultation with a market research firm, Nucleus Marketing Labs, was

conducted to better identify best practices for conducting market research in the field. This meeting coupled with previous experience in conducting focus groups professionally and the additional insights of the book *Identifying Users* by Steve Portigal led to the framework of this focus group analysis. Based on the consultation with Nucleus Marketing Labs, focus groups were identified as the first step in conducting the research to help determine the correct questions to ask and provide further insights to drive additional questions that otherwise may not have been identified.

To further gain insights into whether sustainable decision making processes are specific to income and moreover price, two separate focus groups were conducted using household income as the primary demographic condition. The first focus group consisted of participants who fell into the high household income bracket defined as \$120,000. The second focus group consisted of participants with a lower household income, defined as under \$60,000, but those above \$40,000 had to have at least three people in the home sharing this income. The groups were selected based on requests from social media and solicitation of friends and work colleagues. All participants described themselves as the primary decision-maker in the home.

Focus group 1 was comprised of 4 women with the median age of 32. The women all worked out of the home, lived with a significant other, and only one had children in the home. The four participants had a median household income of \$150,000. Focus group 2 was comprised of 4 participants: two male and two female. In this focus group, the median household income was \$44,000 with a range of \$28,000-\$60,000. All participants worked out of the home and three participants had children. Two of the participants lived with their significant others; two did not or were self-described as single.

The focus groups were conducted in an in-person, group environment. I served as the moderator allowing the conversation to take shape based on an open dialogue framed with the following conversation points:

- Shopping factors
- Knowledge of environmental factors such as LCA
- Typical usage scenarios for single-use items
- Home and away-from-home use for single-use items
- Times when behaviors were modified because of information presented

### Focus Group Findings

The participants in focus group 1 could be described as possessing a medium to high knowledge of sustainable issues, and claimed to want to do more to live more

sustainably based on anecdotal conversations the group had with one another regarding their existing sustainable practices. Participants cited time constraints and lack of simple, straightforward solutions to determine what choices are more sustainable as the main barriers to acting more “green”. Additionally, the group related several stories they had heard from various programs or had read in articles that ultimately confused them whether something was actually “green,” making them feel confused and ultimately left them to doubt sustainable claims.

All participants used paper towels and cleaning wipes in the home rather than reusable towels or rags. When asked why they used them, two participants cited their concerns over the cleanliness of reusable items, while the two remaining did so primarily for convenience and simply because “they always have”. While they noted that there could be an improvement in their behavior of these paper products, when the group was asked about their habits regarding single-use disposable items, they all cited their lunch hour as the place that could benefit most significantly. One participant described her typical lunch hour at the cafeteria in the hospital in which she works. On a typical day, she uses a paper plate, plastic fork and knife, Styrofoam cup, and several napkins. On the days when she brings her lunch (which are rare) she would still use a plastic fork, knife, and napkins provided by the cafeteria. When prompted if she would ever consider bringing her own fork and knife, she responded that she had never really thought about it. A second participant described her typical lunch scenario as bringing her own food into the office, but using the company-provided plastic cutlery. When prompted, the participant acknowledged that her company did provide metal silverware, plates, cups, and bowls and a dishwasher for washing; however, she felt as if sharing a fork with co-workers, even cleaned in a dishwasher, was unclean and left her using a new plastic fork every day.

Focus group 2 could be categorized as having a low to medium knowledge of sustainable issues and specifically sustainable products, which was observed from anecdotal conversations amongst the group. They were aware of the names of some sustainable brands, such as Method and Seventh Generation, but rarely chose them in favor of the less expensive brand. One participant mentioned that she had tried a “green” product but felt as if it didn’t work as well, and left her frustrated to spend extra money on items that didn’t work as well as the “normal” products she normally chooses (Lysol, Clorox wipes, etc.). When asked how much more on average a “green” brand costs than a traditional brand, she was unclear but felt as if it was at least \$1-\$2 more than the traditional products.

Group 2 also heavily used items such as paper towels and cleaning wipes in the home primarily for the same reason as Group 1: convenience and because it was viewed as

a normal behavior. When asked about reusable products, the group agreed that while it might make sense it would be too time consuming. Additionally, the group was concerned that washing towels and rags would end up costing more money in energy and water. Additionally, one participant did not own a washer and dryer and felt as if it would be too difficult without easy access to a means for washing them. Within group 2, two of the group members regularly brought in their own lunches to work. One of these participants typically uses the napkins and plastic cutlery provided by his office break room. He carries his lunch in a plastic bag, which doubles as the trash bag at the end of his meal and uses sandwich bags and other disposable containers to store his food-these items are also discarded at the end of the meal. The other plastic-bagger has everything she needs at her desk inclusive of a plate, fork, knife, spoon, and so forth. She'll use her items, wash them, and return them to her drawer at her desk. Another participant stated that she traditionally picks up snacks on the way to work that make up her lunch, or will pick something up quickly on her break. When she picks up a to-go item, this always includes napkins and a fork. She'll use all of the items given to her, although she has access to traditional silverware at work. When all of the participants were asked why they use plastic cutlery as opposed to traditional, they agreed that it simply was easier and they hadn't given it much consideration. None seemed opposed to the idea.

Focus group participants, regardless of income level, cited convenience as the main driver in their consumer behavior. While sustainability is not a foreign concept to the participants, it simply is not a key driver in decision-making; therefore, it takes little to no priority over convenience. Additionally, several actions were taken because they were habit, and an alternative simply did not cross the minds of the participants.

## Surveys

After the conclusion of the focus groups, a set of questions was identified for further analysis. These questions were designed to gain more measurable data amongst a wider sample set to further identify sustainable decision-making dynamics.

## Methodology

The information conducted from the focus groups was transcribed, and analyzed for various patterns in the transcription. These patterns were then broadened to a specific list of questions to further the research. Again, the survey questions were based off of 5 general topics about consumer behavior and sustainability:

- Shopping factors
- Knowledge of Environmental factors such as LCA

- Typical usage scenarios for single-use items
- Home and away-from-home use for single-use items
- Times when behaviors were modified because of information presented

The market research firm Nucleus Marketing Labs reviewed this list for further validation and to ensure that no leading questions were included. The survey was then uploaded to the survey website, Survey Monkey, and distributed via web link over the course of 8 days. The survey was promoted via social media channels such as Facebook and Twitter as well as distributed to various groups directly through email. The survey was intentionally distributed to a wide audience and not specifically to a group interested in sustainable behavior to create a greater opportunity to reach a range of typical American consumers. Participants were given the chance to win one of three, \$25 Amazon.com gift cards for participating by providing their email addresses. In total, 98 surveys were completed.

**Survey Findings:**

The survey was broken down into two groups for analysis: high household income (\$175,000+) and low-income (\$49,000 and below). The following findings were established:

20% of low-income households use plastic cutlery in the home once per week, compared with 7% of high (see fig.3).

14% of low-income households and 13% of high household income homes purchase plastic cutlery once per month. The highest response for both was listed as rarely.

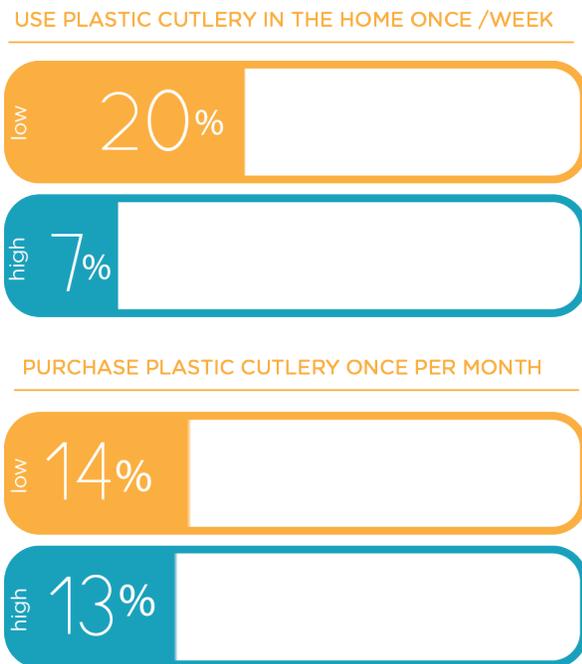


Fig. 3 Usage

78% of low-income and 89% of high-income households never ask for cutlery when getting to-go items, however 71% of low and 85% of high-income household respondents say cutlery is automatically given to them. The majority of high-income respondents either throw them away or recycle them, while the majority of low-income respondents used them at that time (see fig. 4).

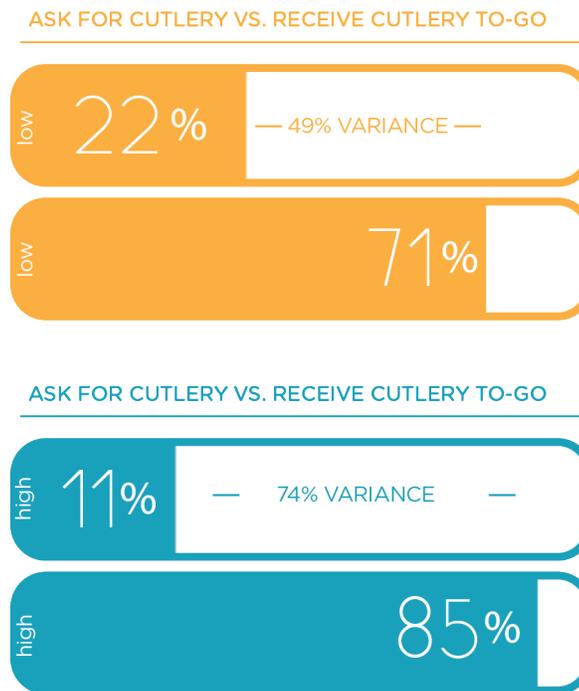


Fig. 4 Variance

### Additional Findings:

- Low-income households listed their primary occasion for using plastic cutlery as when ordering to-go items.
- The primary reason for high-income households to use plastic cutlery at work was for convenience, followed by “they are provided to me”, whereas the low-income participants use them primarily because “they are provided to me”.
- 42% of low-income households take 4 or more napkins when picking up food, whereas 57% of high-income homes say they take between 2 and 3
- All but two respondents total (high and low income respondents combined) said they use paper towels in the home and they are doing this primarily because of convenience.
- 39% of high-income households claimed they would be somewhat unlikely or unlikely to seek out information on materials and the environmental impacts of products, whereas 57% of low-income households responded the same way.
- 51% of high-income household respondents claimed they could be persuaded to choose sustainably, but it depended on other factors. 35% of low-income household respondents responded in the same manner.

Value followed by price were listed as the top decision making factors for high-income households, price played a larger role than value for low-income at 64% compared to 32% of high-income (see fig. 5).

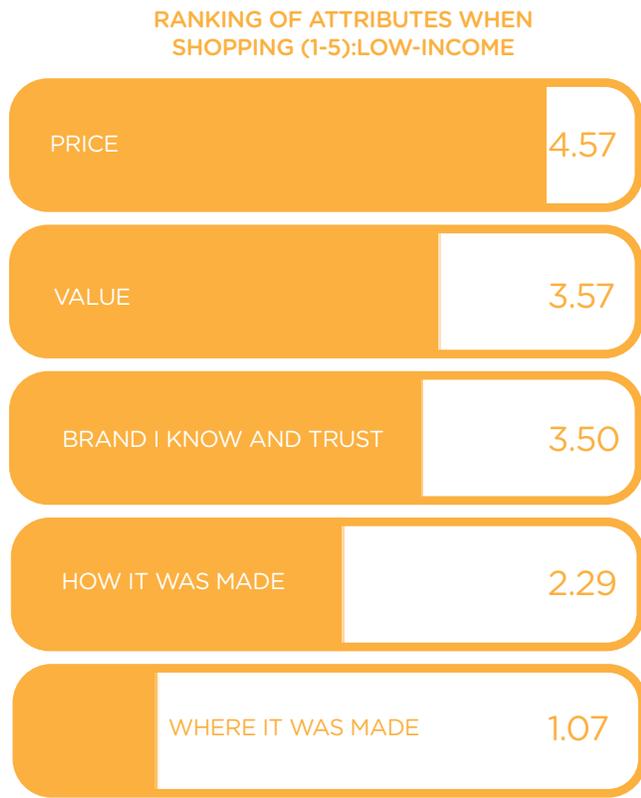
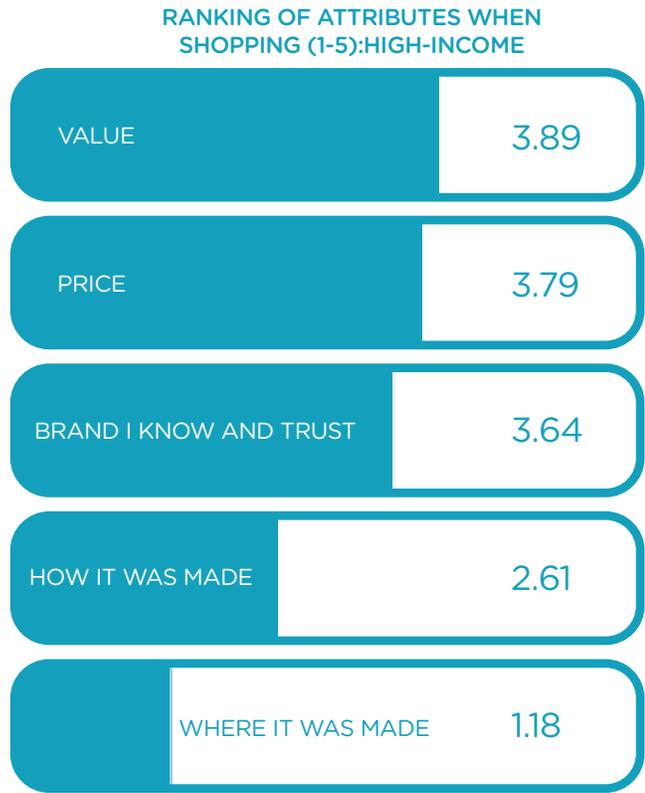


Fig. 5 Attributes

### Summation of Survey Results:

The collection of this data has led to the following narrative on sustainable consumer behavior, based exclusively on the results of this survey. This is not to say that the information presented below is a model for all consumer behavior, simply those represented by the survey.

While price is defined as the key decision making dynamic in consumer behavior, the behaviors identified by the participants of the survey show that convenience, more so than price, often guides the decision making process. This conflict of statement versus action is likely based on survey variance or because it makes sense that price would be the driving factor so it is listed first. Additionally, the survey participants may not realize that their behaviors seem to be dictated by convenience and therefore don't listed as their primary factor.

While the survey participants are not opposed to acting sustainably, it is not something they think about often and wouldn't go out of their way to learn more about sustainable issues and the impact of their consumer behavior. This isn't to say that they would be opposed to altering their behavior if they learned that their practices were "unsustainable;" however, it would have to be presented to them and require little to no additional effort to be placed in their hands.

## **PART 3: DISCUSSION OF RESULTS**

The results of the focus groups and surveys, compiled with the existing research and analogous studies compiled, begin to create the narrative. While this thesis project will not derive at a specific template to work time after time, the results or methods for discovery can begin to identify patterns that can help to affect sustainable consumer behavior.

Based on the work conducted in this thesis, the following patterns were identified as potentially successful tools and considerations for affecting sustainable behavior:

- Social norms have the potential to extend the reach of the sustainable practice by providing a sense of belonging, tapping into social and esteem needs.
- Prompts, utilized at the point-of-decision, can aid in the acceptance of sustainable behavior by acting as a reminder to the user.

- Consumers are not opposed to choosing sustainable behaviors over others, but it must be convenient for change to be considered and finally to take hold.
- Consumers likely won't reach out for sustainable information, but messaging either audibly or tangibly delivered to them can potentially be effective tools for communicating a message and creating awareness about a problem that may have otherwise been unrealized.

Based on the results of the focus groups, surveys and cumulative data collected from focus groups, it appears as if modifying consumer behavior by focusing on prompts at the point of decision, allowing for social norms, has the potential to be an effective means of affecting sustainable consumer behavior. While a change in consumer behavior regarding single-use items will not radically change the fate of the planet, it can have the effect of increasing awareness of common, every-day items that do not garner much attention. In addition, large-scale sustainable changes, such as installing solar panels in the home, switching to an electric car, or telecommuting may not be applicable to or an option for most consumers. Creating awareness for a small, simple, cost-effective item such as a plastic fork can serve as a model for larger-scale campaigns in addition to creating awareness to a product that touches nearly everyone's lives in some way at some time.

## **PART 4: ENACTING CHANGE**

Based on the newly conducted research and analysis of existing research, patterns have been identified as potential triggers for sustainable decision-making. The following section will seek to test these patterns to validate their effectiveness for effecting sustainable behavior.

### **Tactic Identification: Point-of-Decision Pattern Applications**

This thesis project is designed to identify patterns that have potential to effect sustainable behavior. In an effort to test the patterns identified previously (social norms, prompts, convenience, and awareness), single-use disposable items such as the plastic fork and paper napkins will be used as the low-hanging fruit that can effect sustainable behavior and serve as the focal point for the remainder of the thesis. The plastic fork and napkin have been selected as they represent the most commonly used items based on focus group dialog and observations conducted at various to-go environments.

In an attempt to test the thesis statement that an analysis of patterns to effect sustainable consumer behavior can provide a template to effect change in lieu of economic uncertainty, point-of-decision identification cards were designed to be

displayed at common to-go areas such as cafeterias, restaurants, and food courts. The cards themselves were designed to motivate consumers to use less or skip the disposable to-go items altogether by following the before mentioned patterns of:

- Social norms have the potential to extend the reach of the sustainable practice by providing a sense of belonging, tapping into our social and esteem needs.
- Prompts, utilized at the point-of-decision, can aid in the acceptance of sustainable behavior but acting as a reminder to the user.
- Consumers are not opposed to choosing sustainable behaviors over others, but it must be convenient for change be considered and finally to take hold.
- Consumers likely won't reach out for sustainable information, messaging either audibly or tangibly delivered to them can potentially be effective tools for communicating a message and creating awareness about a problem that may have otherwise been unrealized.

The cards were designed to be obvious, yet unobtrusive.

### Design Identification

The design direction of the point-of-decision cards is based on the above listed patterns. Two designs for cards were created with the intention to be placed at various to-go locations. The cards are designed to give consumers information they might otherwise not know, or not seek out while they are in the action of making the decision.

Card 1 focuses on the plastic fork (see fig.6). The copy utilizes social norms to allow consumers to feel as if they would not be the only one to refuse plastic cutlery and that many others are doing the same. The center graphic and text calls out the average number used in the US per year in an attempt to communicate the magnitude of individual actions when compiled cumulatively. Finally, the eye is led to the call to action in the lower left: a simple request to the user to reduce the waste by bypassing the fork. The lower left side also leaves space for the participating company logo. The copy can also be altered to include the company name in the body copy itself.



Fig. 6 Placard 1

A second identification card was created to reduce waste for single-use disposable paper napkins, following the same design approach (see fig. 7). The heading copy suggests that consumers rethink taking the napkins. The copy, "every day, customers like you are skipping the stockpile of napkins to decrease waste" sets the social norm. The very large number suggests the potential size of the impact. Finally, the simple call to action is highlighted in the lower left. The simple message placed at the point-of-decision (the napkin dispenser or holder), will aim to decrease usage easily and effectively.



Fig. 7 Placard 2

### Tactics in Use

These two point-of-decision information cards were tested in an office environment and at food court areas via grassroots, guerilla-style placement. Additionally, interviews were conducted with two restaurant managers to gauge effectiveness and feasibility of altering customer behavior.

### Office Environment:

The placards were placed in my current office space in the kitchen, the hub of the office, as a way to test the theory that the placards might affect behavior. The cards were displayed for one week with permission from the office manager. My office setting provides employees with plastic and traditional silverware, paper towels, and napkins. A dishwasher is also available for use.

According to the office manager, the company uses one box of plastic forks (containing 300) every month, or 75 per week. One large bundle of napkins (containing 400) is used every month, or 100 per week, and one full roll of paper towels is used every day.

The placards were placed in the office on a Monday morning and left for the full business week. The traditional box of forks was replaced with a smaller box containing exactly 100 forks, as was the napkin container to more accurately measure usage.

### Results:

During this time frame, paper towel usage dropped slightly: 4 rolls were used during this time frame as opposed to 5. Napkin usage also decreased by approximately 20% and plastic cutlery decreased by 30% during a comparable time frame. While the results were promising, it is worth noting that the rough study contained a few possibilities for inaccurate measurements; primarily, the awareness of the purpose of the project. The staff was aware of my aim and likely felt as if I was monitoring their behavior. It is likely that this knowledge led to an increase in the desired behavior. Additionally, the smaller sized containers for the forks and napkins may have led staff to believe that fewer forks and napkins were available, compelling them to take fewer.

### Local Restaurants:

In the focus groups and surveys, it became overwhelmingly clear that while most to-go users were given plastic cutlery automatically (an average of 61% variance existed between those who requested and those who received cutlery) more often than not customers didn't request them. In an effort to gain insights into restaurant processes, an over-the-phone interview was conducted with a local restaurant manager. The purpose of the meeting was to identify a) the restaurant's current to-go process and b) if the manager believed staff would be open (and if it was even feasible), to an alternative process if mandated by management. The alternative process was the presentation of the placard at the point of pick-up, or an audible prompt to ask customers if they in fact need cutlery.

The interview was conducted with a manager of a local casual dining chain in the Phoenix area. As described by the manager, the restaurant sees a lot of to-go traffic during the day primarily for lunch and again during the dinner rush. Currently, all to-go orders are picked up from the bar area. As is the process, the bartender places the to-go box (Styrofoam) in a bag along with a pre-wrapped package containing a fork, napkin, and salt and pepper packet. The manager approximated that the restaurant distributes approximately 40-50 to-go orders every day.

When asked if the restaurant would be open to changing their existing process, the manager seemed optimistic that if a clear business benefit, viewed as either a decrease in expenditures or a positive brand association by being viewed as more green were to be gained, upper management might be open to a change. While this change may not be physically placing a card near the to-go area, as it was not conducive to placement, the manager believed that with a slight adjustment to training, staff could modify their behavior to ask a guest if they needed the cutlery pack prior to automatically distributing one with every bag. The manager was quick to point out that this might take a little time, as with any to-go order, you try to

distribute the items as quickly as possible, and adding an extra step might be an inconvenience to both the employee and the customer. At the time of this thesis project publication, the manager is working with upper management to determine if a modified to-go process of an audible prompt can be implemented.

### **Cafeterias / To-Go Destinations:**

As was previously discovered in the focus groups and surveys, the lunch hour appears to be a common time for consumers to take and use single-use disposable items. As a means observe interactions with the placards, I placed the plastic fork placard in various to-go stations at food courts in a local mall, and a grocer catering to the grab-and-go customer. Permission was not sought for this experiment; this was more so a guerilla-style plan devised to gain insights into interactions.

The cards were placed at two local mall food courts during the lunch hour (12:00-1:00 PM) during the workweek and a local grocer during the same timeframe. The cards were displayed next to stations containing napkins, forks, straws, and so forth. The cards were displayed as inconspicuously as possible, and I took a seat at a neighboring table with my own lunch and laptop to observe behavior. Because this was not a controlled environment, I had no specific way of knowing how many napkins or forks were taken other than by my observations.

### **Results:**

The mall food court experiment contained mixed results; approximately one-third of those who visited the station (approximately 8 people) appeared to either not notice the cards (either option) or to ignore them. The remaining customers (approximately 17) did in fact read with the cards. While it cannot be deduced how many napkins customers would have taken had the cards not been present, approximately 10 appeared to take one to two napkins after interacting with the napkin card, while at least 3 read the cards and skipped the napkins altogether. Of those who interacted with the fork placard, 4 did not take a fork (again it is unclear if the card was the reason). It is important to note that everyone who interacted with the fork card did in fact appear to have a food container that would necessitate a fork.

The grocer station saw approximately 20 users during that time frame. Approximately 18 appeared to interact with the napkin card. Approximately 5 appeared to grab several napkins (approximately 3+), about 11 customers appeared to take one or two napkins, and 2 took zero napkins. Again, it cannot be deduced how many napkins would have been taken had the card not been present. Additionally, it cannot be clear that the placards were the catalyst that led to the

decision to take the amount of napkins that were chosen. Of those who interacted with the fork placard (approximately 10), 2 chose to skip the fork altogether, while the rest took a plastic fork. It is again worth noting that all of those who interacted with the fork placard appeared to have a food item that would have required a fork.

### **Additional Point-of-Decision Triggers**

In addition to the information cards, other tactics can be utilized to affect consumer behavior at the point of the decision. Gamification elements such as lighted napkin and fork dispensers can be utilized to reward those who take the desired amount and alert those who are taking too many. For example, the dispenser, clad with norm language, could light green when someone takes up to two napkins, but if a third napkin is dispensed within a three-second time period, the dispenser lights red. The social acceptance of the green light makes users modify their behavior to stay within the specific norm.

## **CONCLUSION**

### **Summary of research and tactic analysis**

Consumer behavior will likely always have a strong foothold in price, this is inevitable. As the income disparity increases, price as a decision point will likely increase, causing a complimentary rise in the need for sustainable products and practices to utilize alternative means to communicate their benefits. While consumer behavior has been and will likely continue to be more accepting of sustainable products and services, relying on consumers to do their due diligence is not an effective strategy for the long-term advancement of the movement. Making consumers (high-income and low-income alike) aware of opportunities to make sustainable choices at the point-of-decision, with designs that are socially accepting and appealing, could lead to an increase in awareness of opportunities that transcends the widening economic gap.

## **PRESENTATION OF RECOMMENDATIONS/ NEXT STEPS**

### **Validation of thesis statement**

While price is a critical decision driver, and will continue to rise in importance, sustainability does not have to completely lose its ever-increasing foothold as a

critical consumer behavior dynamic. Based on the results of the focus groups, surveys, and initial design testing, clear, concise, and direct visual representations can be used as a means to effect and to nurture more sustainable consumer behavior. Instilling information at the point-of-decision enacts real-time choices similar to those when government restrictions physically prevent the user from making choices that negatively affect the state of the planet, without having to rely on legislation to take hold.

While hurdles are larger to jump when price is the primary obstacle, this should not dissuade marketers and environmentalists as a whole from perusing differing segmentations in the market. It is simply not enough to create beautiful apps, websites, and other tools for the purpose of nurturing sustainable behavior by expecting those in which you seek to enforce a new behavior; we must instead go after them, where they are. If a consumer is simply “used to doing something” we cannot expect them to change their behavior without first opening their eyes to the current situation. The point of behavior triggers such as signage, gamification elements, and prompts can seek to reach our desired outcome significantly more so than by expecting the user to seek out the information on their own. Focused attempts in this manner can be expected to increase sustainability as a decision making tool, as opposed to decreasing its effectiveness as financial restraints tighten and monetary concerns take center stage.

Using the simple example of plastic cutlery as a pattern, it is recommended that other similar campaigns be created to alter additional sustainable behaviors, based on the patterns identified in this thesis project from cumulative research, focus groups and surveys:

- Social norms have the potential to extend the reach of the sustainable practice by providing a sense of belonging, tapping into our social and esteem needs.
- Prompts, utilized at the point-of-decision, can aid in the acceptance of sustainable behavior but acting as a reminder to the user.
- Consumers are not opposed to choosing sustainable behaviors over others, but it must be convenient for change be considered and finally to take hold.
- Consumers likely won't reach out for sustainable information, messaging either audibly or tangibly delivered to them can potentially be effective tools for communicating a message and creating awareness about a problem that may have otherwise been unrealized.

Once consumers become used to the change, their chance of making other, or larger change is much more likely, even when price stands as a barrier.

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## APPENDIX

### Survey Questions

1. What is the total number of people living in your home ( adults and children)?

1

2

3-4

5-6

6+

2. What is your approximate household income?

>\$18,000

\$18,001- \$25,000

\$25,001-\$45,000

\$45,001-\$65,000

\$65,001-\$85,000

\$85,001-\$105,000

\$105,001 - \$135,000

\$136,000-\$150,000

\$150,000 +

3. What is your sex?

Male

Female

4. What is your age?

18-24

25-29

30-34

35-45

46-55

56-65

66+

5. Do you work out of the home?

Yes

No

6. How often do you use disposable cutlery / plates in the home?

Every Day

Once a week

Only when I get to-go items

For a party / event only

Rarely

Never

7. How often do you purchase disposable cutlery / plates for use in the home?

Monthly

Yearly (I buy in bulk)

For special occasions only such as holidays or other get togethers

Rarely

Never

8. How often do you use disposable cutlery and / or plates out of the home? Examples include restaurants, work, and gatherings with friends / family.

Every Day

Once a week

Only when I get to-go items

For a party / event only

Rarely

Never

9. If you work out of the home, do you use disposable cutlery at your place of work during lunch? (If you answer is no, please proceed to question number 11)

10. What is your primary reason for using disposable cutlery at your place of work?

Convenience

Concern about cleanliness of reusable items

Timing, it's quicker and easier for me to use something I can throw away

They are provided to me

I never remember to bring cutlery / plates along with my food

11. When you pick up to-go food, do you ask for a disposable cutlery?

Yes

No

12. When you pick up to-go food, are you given disposable cutlery automatically?

Yes (all or most of the time)

No (rarely - never)

13. If you answered yes to number 12, do you use them, throw them away / recycle them or save them for later use?

Use them at that time

Throw them away / recycle them

Save them for later use

14. When you eat food out of the home at a restaurant where paper napkins are readily available, approximately how many napkins do you take?

None

1

2 or 3

4 or 5

More than 5

15. When you pick up to-go food, are napkins provided for you? If so, do you take additional napkins?

Yes

No

16. When you pick up to-go food, have you ever requested to give back the bag/ disposable cutlery / napkins?

Yes

No

17. Do you use paper towels in the home?

Yes

No

18. Do you use cleaning wipes in the home such as Clorox or Lysol wipes or any other similar product? (If your answer is no, please proceed to question number 20)

Yes

No

19. What is your primary reason for using disposable towels / wipes over reusable cloths? Please rank the following:

Convenience

Concern about cleanliness of reusable items

They are reasonably priced so it's worth the money

I've always used them

Other

20. Rank the following factors that you look for when shopping for home goods.

A brand I know and trust

Price

Value (it might not be the cheapest but I think it's a better value)

How it was made

Where it was made

Other

21. When shopping, do you bring your own reusable bags?

Every time I go shopping

Often, but it's hard to remember all of the time

Every once in a while, I wish I did more but I forget sometimes

Rarely , I never seem to remember

Hardly ever - I reuse the bags they give me so I like to take them

Never

22. When purchasing household items such as cleaning products, or disposable goods, how often do you think about the materials or energy used to make them and how this may or may not impact the environment?

Every time I purchase

Sometimes

If I've just read or heard about materials that are harmful or helpful for the environment

Rarely, it's not something I think about often

Never

23. Can you think of a time when presented with information it made you change your purchasing behavior? Did it last, or was it temporary?

Open Field

24. If you were given information about the materials used in items such as disposable cutlery, would it potentially change your behavior if you learned something new?

Yes, absolutely

Potentially, but it depends on other factors

Maybe

Probably not, I have different factors that are more important to me

No

25. How likely would you be to seek out information on materials and environmental impacts of products?

Very likely

Somewhat Likely

Somewhat Unlikely

Very unlikely

26. Would you visit a website or download a free app to learn about this information?

Yes

No

27. If you were reminded of this information when you were about to make a purchase, would it potentially affect your decision?

Yes, absolutely

Yes, potentially

No it's doubtful

28. If you were reminded of this information when you were about to make a pick up a free disposable item, would it potentially affect your behavior?

Yes, absolutely

Yes, potentially

No it's doubtful

Absolutely no