Motivating Sustainability among UC Berkeley Undergraduates

through Conspicuous Conservation and Social Norming

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ABSTRACT

This study explores ways to use conspicuous conservation (CC), a situation where consumers seek higher social status through spending on pro-environmental goods, social norming (SN), a phenomenon where individual's behaviors tend to conform to that of the social standard, and combining the two concepts together to motivate sustainable consumption patterns. My central research question asks which of the CC, SS, or the combined intervention is the most effective in motivating sustainable behaviors among UC Berkeley undergraduates. 399 undergraduates participated in the study and each completed one of the four versions of online surveys that collect data on demographics, sustainability knowledge, values and behaviors (SKVB), and product preferences. Each eversion of the four surveys integrated CC, SN, combined intervention, or the control. Results found that the combined intervention is the most effective out of the three interventions in motivating sustainable consumption, but online surveys may not be strong enough to influence behaviors, and SKVB positively correlates sustainable consumption patterns. Results indicate that more research is needed to create novel and effective ways to motivate conservation through combining interventions and future studies in other study populations should be done to provide better understanding of the interactions between demography and consumption behaviors.

KEYWORDS

sustainable consumption, combined intervention, priming, quantitative surveys, college students

INTRODUCTION

Unsustainable consumption in industrialized nations has long been recognized as one of the main drivers of global environmental problems (Wilk 2002, Schor 2005). For example, climate change is largely caused by the aggregate effects of unsustainable consumption choices (Dernbach 2008) made by consumers in mostly developed nations as shown in consumption-based carbon dioxide emission inventories (Davis and Caldeira 2010). Fads and marketing encourage wasteful consumption patterns that are damaging to both human health and the environment, such as electronic wastes (Lepawsky and Mcnabb 2010, Milovantseva and Saphores 2013). It is necessary to promote pro-environmental actions among consumers to solve global environmental problems, but we still do not know how to best achieve these ends (Dietz et al. 2009, Pimentel et al. 2009). Methods involving incentives, information, or education show varying effectiveness in promoting pro-environmental behaviors (Stern et al. 1986, Stern 1999, Abrahamse et al. 2005, Carrico and Riemer 2011). However, social interventions such as social networking, peer engagement, and goal setting show varying degrees of success in motivating sustainable consumption(Darby 2001, Abrahamse et al. 2007, Foster et al. 2010, Senbel et al. 2014). Two particularly promising types of intervention are conspicuous conservation and social norming.

Conspicuous conservation (CC) is defined as costly spending for environmental protection in order to seek higher social status, which is more prevalent in public settings, where actions are the most salient (Griskevicius et al. 2010, Sexton and Sexton 2014). For example, sales of Toyota Priuses are greater than those of other hybrid vehicles, because Priuses' iconic design sends the strongest signal that their owners are paying a premium for pro-environmental actions (Sexton and Sexton 2014, Sachdeva et al. 2015). CC is a specific case of conspicuous compassion, or seeking status through general means of prosocial actions (Grace and Griffin 2006), which is derived from conspicuous consumption, or the status-seeking display of wealth from buying expensive goods (Bagwell and Bernheim 1996, Corneo and Jeanne 1997).

Social norming (SN) is defined as shaping individual behavior based on social standard that is understood by the members of a particular group (Thøgersen 2006, Schultz et al. 2007, 2011). For example, OPOWER used SN by sending reports that compare energy consumption between homeowners, and their neighbors, resulting in a decline in energy consumption (Allcott

2011). Other successful examples include employing signs that say "the majority of guests reuse their towels" in a hotel, and hanging signs on doorknobs that say "energy conservation are common in the neighborhood" (Goldstein et al. 2008, Griskevicius et al. 2008, Schultz et al. 2008). Nevertheless, we still do not know how CC and SN interact when implemented together, and how they affect college students.

Although SN occurs in any settings, while CC occurs mostly in the public setting, CC has great potential to effectively motivate people to become sustainable as seen in the Toyota Prius sales (Goldstein et al. 2008, Schultz et al. 2008, Griskevicius et al. 2010, Sexton and Sexton 2014). Additionally, the effects of CC and SN can differ depending on the context, and evidence of conspicuous conservation among college students is still lacking when compared to SN (Cialdini 2003, Schultz et al. 2007, Goldstein et al. 2008, Schultz et al. 2011). College students are in a transitional period called emerging adulthood, and it is during this developmental stage that personality, identity, and behavior are susceptible to long-term changes (Werch et al. 2000, Robins et al. 2001, Wechsler et al. 2003, Nelson et al. 2008, Wyker and Davison 2010). Thus, research on the interaction between CC and SN, and how they may produce a synergistic effect among college students can lead to better methods for motivating people to become sustainable.

My central research question is: Is CC, SN, or the combination of these two interventions most effective in motivating sustainable behaviors among college students? To answer my central research question, I addressed the following sub-questions: 1) How does conspicuous conservation intervention affect Berkley undergraduates regarding pro-environmental action? 2) How does social norming intervention affect Berkeley undergraduates regarding pro-environmental action? and 3) How does the interaction between conspicuous conservation, and social norming interventions affect Berkeley undergraduates regarding pro-environmental action? The data collected include demography, sustainability knowledge, values and behaviors, and the participants' product preferences primed by the different interventions.

BACKGROUND

Sustainability and Consumerism

We must shift from a culture of consumerism to one of sustainability to ultimately solve global environmental problems. Consumerism values material possession and personal wealth, and it is places "material need of the self" over the community, as opposed to environmentalist concerns for broader social interests (Hirsh and Dolderman 2007). Industrialized nations with relatively high per capita incomes have excessive consumerist consumption patterns, which is a serious problem (Cairns Jr 2006, Orecchia and Zoppoli 2007).

In the U.S. and other developed nations, college undergraduates are susceptible to consumerism, but at the same time, they are also inclined to become sustainable. Credit card is one common mean that college students practice consumerism, because of the cards' easy access and widespread usage, and studies found that high frequency of credit cards use lead to unsustainable consumption, debts and even bankruptcies (Pinto et al. 2000, Borden et al. 2008). Consumer socialization, or how lifelong social interactions with parents, peers and media affect people's behaviors, attitudes and values as consumers, also manifests in college students (Pinto et al. 2005). Therefore, it is important for state, and non-state entities to recognize the necessity of developing alternate means to effectively address consumerism among college students, and motivate them to become sustainable.

Traditional Methods to Promote Sustainable Consumption

Governmental approaches to limiting consumption include command and control, and incentives, but these methods are not practical at the individual level, and are usually applicable to industries (Vandenbergh 2005, Costa and Kahn 2013). Moreover, command and control regulations can lead to oppositions from stakeholders, lack of innovation and incentives are costly and not effective in the long-term, because of limited motive (Sinclair 1997, Bénabou and Tirole 2006). On the contrary, non-state entities typically provide information and employ green consumerism, consumption patterns with environmental-friendly intentions, as traditional non-governmental approaches to promote sustainability. Providing information can serve to educate people regarding unstainable consumer practices, but many studies point out that this approach is modestly effective and ineffective when other obstacles like financial cost or inconvenience are present (Stern 1999, Frick et al. 2004, Goldstein et al. 2008). Environmental non-governmental organizations have used eco-labeling as a form of green consumerism to assist producers in

becoming sustainable, while producers are also able to meet the demand of pro-environmental consumers (Eriksson 2004, Sachdeva et al. 2015). Nevertheless, green consumerism exclude people that do not concern for environmental protection, and green consumerism can be misleading as it is co-opted by corporates (Gulbrandsen 2005, Poncibò 2007). Thus, alternatives to traditional methods are the knowledge gap to ultimately achieve sustainability.

METHODOLOGY

Conspicuous Conservation Intervention

CC is a social concept that is derived from the concept of "conspicuous consumption" and it has the potential to become an effective intervention to increase sustainable behaviors. Conspicuous consumption is defined as when people purchase costly goods, like luxury brands, to represent their wealth in order to seek a higher social status (Bagwell and Bernheim 1996, Corneo and Jeanne 1997). Alternatively, "conspicuous compassion" is defined as a specific form of conspicuous consumption in which people 'conspicuously' pay for costly prosocial actions (Grace and Griffin 2006). As environmental concerns become more prevalent in modern society, 'conspicuous conservation' emerges as a specific form of conspicuous compassion, where the costly prosocial actions manifest as pro-environmental actions (Griskevicius et al. 2010, Sexton and Sexton 2014). The high sales levels of the Toyota Prius and solar panels, especially in communities that place high values on pro-environmental action, offer prominent examples of CC (Dastrup et al. 2012, Sexton and Sexton 2014). Nonetheless, there is not much literature studying the effects of conspicuous conservation among undergraduates, especially through the use of surveys. Other than conspicuous conservation, social norming is also successful in motivating sustainable consumption.

I have adapted my CC from the experiment by Griskevicius et al. (2010), which studied CC through examining status, public and private settings and price. Priming is defined as the facilitation of one test item by a preceding item (Ratcliff and McKoon 1978). In the study, a status motive story is the priming and after reading the story, the participants would answer several product preference questions. For example, the question asks to choose between a

luxurious and an eco-friendly backpack. I modified this study as surveys, because there is a knowledge gap and surveys can save both time, and resources.

Social Norming Intervention

Social norming pertaining to everyday context is widely researched, but there are growing numbers of studies that focus on the sustainability context. Social norms are defined as the shared beliefs set by a particular group about the appropriate actions in a situation (Fehr and Fischbacher 2004, Ostrom 2014). The effects of social norming on decision making are stronger when people face uncertainty, because they would observe other people and identify more toward each other (Griskevicius et al. 2008). Moreover, social norms can be separated into injunctive and subjective norms, where injunctive norms are when people observe what behaviors are approved or disapproved, and subjective norms are when people observe if the actions are more prevalent (Cialdini 2003). For example, a message saying "Many people are doing this undesirable thing," contains injunctive norms from the word "undesirable", and subjective norms from the phrase "many people," but this message can produce less effect in promoting the "desired thing", because "many people" are also doing this (Cialdini 2003). Therefore, the message must align injunctive and subjective norms towards pro-environmental actions to maximize the effects of SN.

I have adapted my SN from Hertel and Kerr (2001), and Goldstein et al. (2008), studying the effect of priming on in-group favoritism. The study primed "loyalty" among the participants by making them memorize words like "conform, copy, customary, emulate, oblige, follow, and obey," resulting in a higher perception of in-group favoritism and identification (Hertel and Kerr 2001). Secondly, Goldstein et al. (2008) studied the effects of SN on sustainability among hotel guests, where different signs saying "Join your fellow guests in helping to save the environment," or "Join your fellow citizens in helping to save the environment" were put inside hotel rooms. It was observed that SN motivated sustainability better providing information on the benefits of saving the environment, and that SN was strongest when it included the guest's immediate circumstance, such the message saying "The majority of guests in this room reuse their towel," (Goldstein et al. 2008).

Combined Intervention

Both conspicuous conservation, and social norming reveal great potential, but many studies often ignore the interactions between different interventions, and their possible synergistic effects. In health, combined interventions of drugs, and behavioral intervention prove to be generally more effective than a single intervention in treating illnesses like ADHD, and alcoholism (Pelham and Waschbusch 1999, Gueorguieva et al. 2010). In the environmental context, studies had found that home energy conservation programs with stronger incentives are more effective in reducing electricity use, but the percentage of participants is low. Nonetheless, after information was given to the homeowners through postal letters, participation in the programs greatly increased, thus demonstrating the complementary effects of incentives and information interventions (Stern 1999). In another study that involve a combination intervention of information, goal setting, and feedback, there was a decrease in energy use and an increase in knowledge of energy conservation among the group exposed to the intervention when compared to the control group (Abrahamse et al. 2007). Nonetheless, there has not been any study on the interaction between CC and SN, and I have adapted my combined interventions from the studies described above.

METHODS

Study Population

My study population consists of 399 UC Berkeley undergraduates enrolled in Environmental Science, Policy and Management (ESPM) 50AC, Introduction to Culture and Natural Resource Management, taught during the Spring 2017 semester. According to the Fall 2016 admission data, the UC Berkeley undergraduate student body consists of 29,310 students that are diverse in ethnicity, socioeconomic status, and academic majors, which can be used to generalize the results (UC Berkeley Office of Planning and Analysis 2016). Although ESPM 50AC is a course about natural resource management in the United States, it is open to all

students and satisfies the University's American Cultures and breadth requirement, making the study population representative of the undergraduate population.

Data Collection Methods and Rationale

I used convenience sampling methods, by offering extra credits to students who completed the surveys, which is feasible for a large sample size. I used Survey Monkey to collect data on demography, sustainability knowledge, attitudes and behaviors (SKVB), and intervention results (Appendices). The SKVB data were rated on a Likert scale that can be converted into scores ranging from 25 to 120. The Likert scale was useful in compiling data for different questions together into a single value that could be used for analysis. SKVB and demographics sections were included in all surveys, which started with the SKVB section and followed by the intervention section and the demographics section.

I created four versions of the survey, differing in the intervention section: three containing CC, SM or a combined intervention of CC and SN, and one serving as a control. The intervention section contained a cover story designed to convince respondents that the study was about educational achievements and political opinions to eliminate the respondents' biases. Cover questions were also included after the intervention, as a part of the cover story. Each respondent would randomly complete only one version of the surveys.

The CC section began with the cover story, followed by the priming story and product preference questions, and concluded with the cover story questions. The cover story in the CC section claimed that my study was about memory, in association with educational achievements and political opinions. Therefore, the priming story served as both a cover and status-seeking motive priming, which I adapted from Griskevicius et al. (2010). The respondents answered questions about the priming story to test their memories after some memory decay by answering the product preference questions. The CC section ended with the memory recall questions to complete the cover story.

The SN section began with a different cover story, followed by the SN priming and concluded with the product preference questions. This cover story claimed that my study was about linguistic ability in association with educational achievements and political opinions. I

adapted the SN priming from studies by Srull and Wyer (1979), Epley and Gilovich (1999), and Hertel and Kerr (2001). Srull and Wyer (1979) used a scrambled sentence test as a primer and purporting the scrambled sentence test as a linguistic assessment would expose the respondents to the specific words used in Epley and Gilovich (1999), and Hertel and Kerr (2011) to prime for social norming. In each product preference question, I showed a text adapted from Goldstein et al. (2008), stating the norm to reinforce the SN priming. For example, the text stated "In your ESPM 50AC class, 79% of your fellow students chose the Honda Accord HYBRID (Choice B),"

Finally, I combined CC and SN as a single intervention in order to study the interaction between CC and SN. The combined intervention began with the cover story and status-motive priming from CC, which were followed by the scrambled sentence test from SN as additional exercise to enhance memory decay. The product preference questions with norm stating texts followed the scrambled sentence test and finally, ended with the memory recall questions from CC. In the control intervention, respondents had to simply answer only the product preferences questions.

I used Survey Monkey to conduct the online surveys, which enabled double blind tests to reduce biases, because the respondents and I could not influence one another. Moreover, I used the cover story and randomly assigned each respondent to different versions of the surveys to further reduce biases.

Data analysis techniques and rationale for analytical approach

I used quantitative methods to analyze the data. By coding in R Studios, I used multiple logistic regression to model and identify significant parameters affecting respondents' product preferences. Product preferences data were the dependent variables represented on the y-axis and they had nominal binary outcomes, either choice A or choice B. The SKVB and demographics data were the independent variables represented on the x-axis, which contained the various parameters that could potentially affect the product preferences. I determined which of the three interventions produced significant results when tested against the control intervention, and I identified significant parameters affecting the product preferences through p-values without establishing a mathematical equation. The null hypothesis was that SKVB and

demographics parameters did not affect the product preferences and p-values of less than 0.05 would reject this null hypothesis.

RESULTS

Summary

The CC intervention produced significant negative result when tested against the control group (Table 1), and respondents showed a decrease in conservation for all products after receiving CC. On the other hand, SN produced significant negative results for only the household products and unexpectedly, the combined intervention did not produce any significant results. SKVB scores were significant and have positive coefficient for all products indicating that respondents with higher scores chose the greener products. Moreover, many of the demographics factors that I expected to affect the product preferences, such as home residence household economic status and political beliefs, did not show significant results.

Table 1. Summary of the coefficients and p-values. I calculated these values from the multiple logistic regression for each intervention, SKVB score and key demographics parameters. The bolded numbers are p-values that are statistically significant (p-value < 0.05).

	Vehicle		Jacket		Backpack		Shoes		Sandwich	
	Coefficients	p-value	Coefficients	p-value	Coefficients	p-value	Coefficients	p-value	Coefficients	p-value
CC	-1.334	**0.000365**	-0.986	**0.00838**	-1.526	**4.61E-05**	-1.334	**0.000365**	-0.832	**0.0161**
SN	-0.607	0.107	-0.472	0.223	-0.820	**0.0203**	-0.607	0.108	-0.504	0.136
Combined	0.385	0.245	0.160	0.629	0.339	0.272	0.385	0.245	0.197	0.5058
SKVB score	0.0484	**5.26E-08**	0.0412	**3.01E-06**	0.0541	**1.10E-09**	0.0484	**5.26E-08**	0.035	**1.15E-05**
Home residence economic status	0.0188	0.889	-0.238	0.103	-0.0547	0.664	0.0188	0.889	0.0859	0.475
Political beliefs	-0.300	0.0518	-0.229	0.134	-0.0578	0.704	-0.300	0.0518	0.0128	0.929
Hometown types	0.0301	0.739	-0.100	0.269	0.0491	0.567	0.0301	0.739	-0.137	0.0954

	Lamp		Paper		Battery		Household cleaner		Eggs	
	Coefficients	p-value	Coefficients	p-value	Coefficients	p-value	Coefficients	p-value	Coefficients	p-value
CC	-1.955	**4.68E-05**	-2.299	**5.50E-07**	-1.872	**1.66E-05**	-0.858	**0.0196**	-1.32	**0.000379**
SN	-1.729	**0.000469**	-1.825	**8.84E-05**	-1.455	**0.00107**	-0.819	**0.0268**	-1.04	**0.00522**

Combined	-0.531	0.223	-0.684	0.0902	-0.408	**0.027**	0.0338	0.915	0.116	0.722
SKVB score	0.0505	**1.86E-06**	0.0554	**5.26E-08**	0.0642	**4.38E-05**	0.0500	**1.79E-08**	0.0494	**2.47E-08**
Home residence economic status	0.0492	0.767	0.241	0.266	-0.177	0.266	-0.0113	0.932	-0.0147	0.911
Political beliefs	-0.339	0.0548	-0.218	**0.0121**	-0.419	**0.0121**	-0.196	0.193	0.219	0.157
Hometown types	0.105	0.351	0.111	0.292	0.136	0.181	-0.105	0.232	0.0873	0.332

Demographics Data

The study population consisted of respondents from 50 academic majors, ranging from computer science and business to media studies and environmental sciences. Self-identified ethnic/racial backgrounds consisted of 52% Asian, 29% Caucasian, 10% more than one ethnic backgrounds, 2% Hispanic/Chicano, 2% African American, 0.5% Pacific Islanders and 0.75% others (Table 2). UC Berkeley Fall 2016 freshmen enrollment data showed that excluding international students, the undergraduates profile consisted of 31.4% Asian, 24.2% Caucasian, 13.5% Hispanic/Chicano, 2.5% African American, 0.2% Pacific Islanders and 11.3% others, which showed that the study population was representative of the undergraduate student body (UC Berkeley Office of Planning and Analysis 2016b). 50% of the respondents were females and 46% were male, and 52% of the respondents' residences were located in suburban areas and 21% in large cities. The self-identified home residence household economic status of the study population consisted of 4% below the poverty line, 8% between lower middle class and the poverty line, 22% lower middle class, 59% upper middle class and 7% upper class. The political beliefs spectrum of the study population consisted of 10% very liberal, 54% liberal, 27% neutral, 8% conservative and 1% very conservative.

Table 2. Demographics summary. I collected data on demography from the respondents (n = 399) and the table summarized the most important aspects of the demographics data. The table also presents the UC Berkeley Fall 2016 freshmen enrollment data (n = 2845) from the Office of Planning and Analysis (UC Berkeley OPA 2016).

Demographics parameters	Survey results	UC Berkeley Fall 2016 freshmen enrollment data
Ethnic/racial background	African American: 6 (1.50%) Asian: 209 (52.38%) Other Asian: 3 (0.75%) Hispanic: 7 (1.75%) Pacific islanders: 2 (0.50%) Caucasian: 114 (28.57%) More than one: 30 (7.52%)	African American: 158 (2.5%) Asian (Chinese, Filipino, Japanese, Korean, Vietnamese): 1963 (31.4%) Other Asian and South Asian: 677 (10.9%) Hispanic/Chicano: 840 (13.5%) Pacific islander: 12 (0.2%)

	Not available: 18 (4.51%) Decline to state: 10 (2.51%)	Native American/Alaska Native: 22 (0.4%) Caucasian: 1516 (24.2%) International: 744 (11.9%) Decline to state: 321 (5.1%)
Gender	Male: 183 (45.86%) Female: 201 (50.38%) Non-binary: 4 (1.00%) Prefer to not say: 11 (2.76%)	Male: 974 (46%) Female: 1091 (52%) Trans male, trans female, gender non-conforming, different identity: 35 (2%)
Political beliefs	Very conservative: 5 (1.25%) Conservative: 32 (8.02%) Moderate: 106 (26.57%) Liberal: 216 (54.13%) Very liberal: 40 (10.03%)	Very conservative: 15 (1%) Conservative/slightly conservative: 190 (9%) Moderate: 403 (20%) Liberal/slightly liberal: 1197 (58%) Very liberal: 207 (10%)
Household economic/social status	Below the poverty line: 16 (4.01%) Between lower middle class and the poverty line: 33 (8.27%) Lower middle class: 86 (21.55%) Upper middle class: 234 (58.65%) Upper class: 30 (7.52%)	Low income: 216 (10%) Working class: 226 (11%) Middle class: 727 (34%) Upper middle: 858 (41%) Wealthy 88 (4%)

Sustainability Knowledge, Values and Behaviors Data

The SKVB scores are categorized as low or high scores with low scores being less than or equal to the median and high scores being greater than the median. 80% of the respondents had high degree of sustainability knowledge, values, and behavior (Table 3). 78.88% of respondents got a high score for knowledge, 84.94% of respondents got a high score for values and 87.79% of respondents got high score for the behaviors categories.

Table 3: Summary of sustainability knowledge, values and behaviors scores.

Categories of sustainability	Low SKVB scores	High SKVB scores
Knowledge (n = 393)	83 (21.12%)	310 (78.88%)
Values (n = 385)	58 (15.06%)	327 (84.94)%
Behaviors (n = 393)	148 (37.66%)	345 (87.79%)
Total (n = 385)	77 (20%)	308 (80%)

Product Preferences Data

103 respondents received the CC intervention, which produced significant negative results in motivating conservation for both the fashion and the household products. For the fashion products, 67 respondents (65%) chose the greener option for vehicle, 65 (63%) for jacket, 42 (41%) for backpack, 61 (59%) for shoes and 47 (46%) for sandwich, and for the

household products, 80 respondents (78%) chose the greener option for lamp, 73 (71%) for paper, 69 (70%) for battery, 67 (65%) for household cleaner and 65 (63%) for eggs (Figure 1).
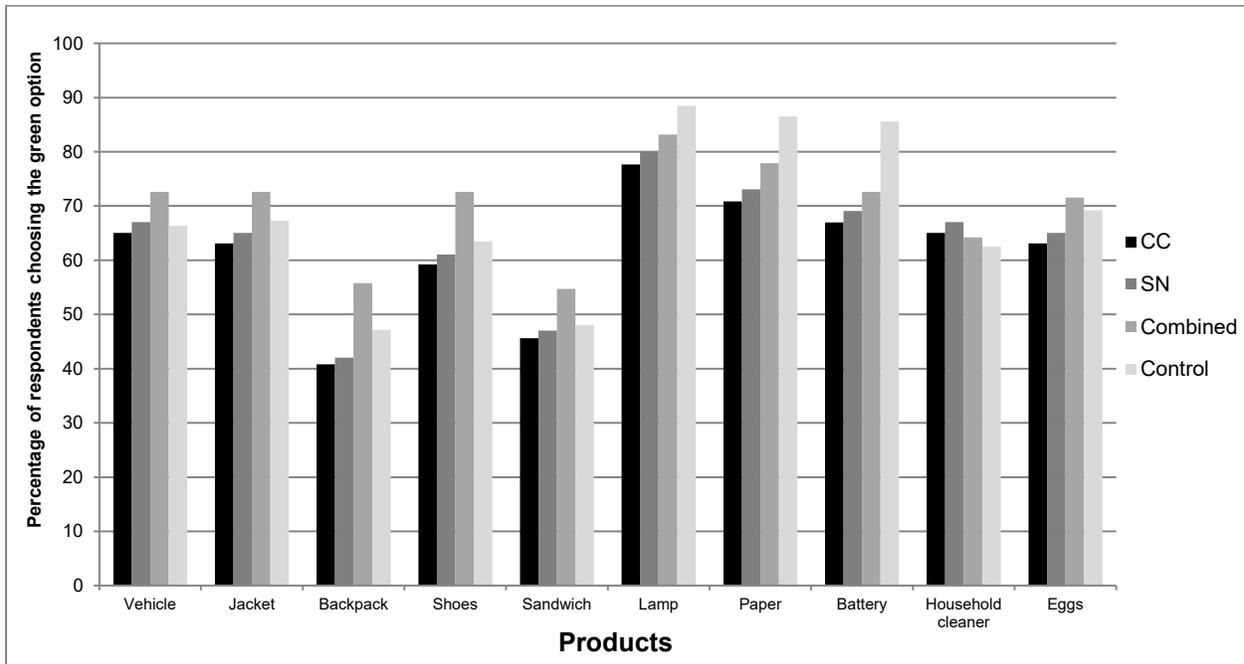

Figure 1: Percentage of respondents choosing the green option for CC (n = 103), SN (n = 97), combined intervention (n = 95) and control (n = 104). The products are sorted with the most conspicuous (fashion) on the left and the least conspicuous (household) on the right.

97 respondents received the SN intervention, which produced significant negative results in motivating conservation for only the household products. For the fashion products, 74 respondents (76%) chose the greener option for vehicle, 74 (76%) for jacket, 55 (57%) for backpack, 71 (73%) for shoes and 52 (54%) for sandwich, and for the household products, 79 respondents (81%) chose the greener option for lamp, 76 (78%) for paper, 76 (78%) for battery, 65 (67%) for household cleaner and 66 (68%) for eggs (Figure 1).

95 respondents received the combined intervention, which did not produced significant results in motivating conservation for any products, or that the combined intervention did not affect the respondents' product preferences. For the fashion products, 69 respondents (73%) chose the greener option for vehicle, 69 (73%) for jacket, 53 (56%) for backpack, 69 (73%) for shoes and 52 (55%) for sandwich, and for the household products, 79 respondents (83%) chose

the greener option for lamp, 74 (78%) for paper, 69 (73%) for battery, 61 (64%) for household cleaner and 68 (72%) for eggs (Figure 1).

104 respondents received the control intervention, of which all the other interventions were tested against. For the fashion products, 69 respondents (66%) chose the greener option for vehicle, 70 (67%) for jacket, 49 (47%) for backpack, 66 (63%) for shoes and 50 (48%) for sandwich, and for the household products, 92 respondents (88%) chose the greener option for lamp, 90 (87%) for paper, 89 (86%) for battery, 65 (63%) for household cleaner and 72 (69%) for eggs (Figure 1).

DISCUSSION

None of the interventions were effective in motivating conservation, and determining the distinct strengths and weaknesses of CC and SN intervention would be necessary to gain a better understanding of the combined intervention. Each intervention affected respondents' product preferences to varying extent; CC was the least effective as it produced negative results for all products, while SN produced negative results for only the household products. In addition, respondents' SKVB scores played an important role, as a higher SKVB scores was associated with more sustainable product preferences. The combined intervention did not affect the product preferences for any products, suggesting that CC may not be compatible with SN. Hence, it is important to gain insights into these findings in a well-developed theoretical framework focusing on CC and SN.

Conspicuous Conservation Intervention and Pecuniary Emulation

Thorstein Veblen's *Theory of the Leisure Class* (1899) provides one explanation for how CC affects consumption patterns. Veblen proposed that people with higher income (leisure class) would often have conspicuous consumption patterns to signal their wealth and achieve higher social status (Bagwell and Bernheim 1996). Veblen also defined the conspicuous consumption practiced by people with lower income as 'pecuniary emulation', which is "driven by relative status considerations," because people with lower income are more likely to spend more in order to imitate the consumption pattern of people with higher income (Bowles and Park

2005). An example of pecuniary emulation is evident in a study in which respondents reported that they did not feel any pressure from their co-workers and friends' financial status (Bowles and Park 2005). Based on the co-workers and friends' financial status, respondents with lower financial status displayed pecuniary emulation as they saved less than respondents with higher financial status.

Even though demographics data showed that most of the respondents were in the upper middle class, they can still be affected by pecuniary emulation, because household economic status is probably much higher and do not represent the respondents' disposable income. However, college students' may perceive luxury as high social status instead of the assumption that environmental protection indicates higher social status, but college students may associate (Griskevicius et al. 2010). This could explain why pecuniary emulation and CC, primed for status-seeking motive rather than prosocial behaviors, increased preferences of the luxurious products. Moreover, college students did not have high disposable income, so they would chose the luxurious option that gave them the highest utility instead of the green option(Eckhardt et al. 2015). Although CC produced undesirable results, it gave us insights into how college students view higher social status.

Social Norming Intervention and Affinities for the Group Identity

The SN intervention did not affect the respondents' product preferences for the fashion products and decreased the conservation for the household products. Many studies have established that social norming can influence conservation of goods or behaviors, but the results showed otherwise, even if the results show that SN is more effective than CC (Goldstein et al. 2008, Chen et al. 2009, Allcott 2011). One explanation for this is the lack of group identity within the study population (Lapinski and Rimal 2005). A higher degree of affinity or cohesion to the group would enhance the effectiveness of SN, because the respondents would experience positive affect to conform and that deviation would be known to the other group members (Lapinski and Rimal 2005).

However, this study was conducted through online surveys, in which respondents were indifferent about conforming to the pro-environmental norm because their product preferences would not be known by the other respondents. Furthermore, SN used the ESPM 50AC class as

the group identity, which is inadequate for eliciting conformity. According to the demographics data, obvious factors that the respondents would have already known about the study population like academic majors and ethnic/racial background were very diverse, which weakened respondents' affinities to the group.

The goal of the SN intervention was to increase conservation for household products, but because they were inconspicuous, the respondents did not feel a need to become sustainable. Again, conspicuousness played a role in SN, and might explain how there was no effect on fashion products and negative effects on household products.

Combined Intervention and the Methodological Gap in Social Intervention Studies

I hypothesized that the combined intervention would be the most effective in motivating conservation due to the synergistic effects of combining CC and SN, but the combined intervention did not produce any significant results. Although the combined intervention did not affect the respondents' product preferences, it was still the intervention that produced the least undesirable results, because CC and SN decreased conservation. An explanation for the results is the contradicting nature of CC and SN. CC utilized people's status seeking motive and their propensity to be salient, while SN utilized people's conformity to the group's identity, which contradicted each other. I hypothesized that this difference between CC and SN would help the combined intervention target different types of product, in which CC and SN would strongly affect the fashion and the household products respectively. Nevertheless, the results indicated that the difference natures were incompatible and did not produce any significant effect.

Even though combining different interventions may have great potential as a novel method of influencing behaviors, there is still a methodological gap in the literature on social intervention studies. It is common for cognitive psychology, education, and clinical studies to combine intervention with medical treatment. For example, many studies combine pharmacology with cognitive interview, behavioral therapy, or education to treat cognitive disorders like depression, Attention-Deficit/Hyperactivity Disorder and alcoholism (Pelham and Waschbusch 1999, Asarnow et al. 2002, Anton et al. 2006). These studies can be used as models for future studies to determine ways to apply these methods to social research and how to make different interventions compatible. In the treatment for ADHD, patients could be prescribed with

drugs to alleviate the symptoms and received the behavioral treatment to help them adjust to functional impairment like school related tasks or relationship difficulties (Safren et al. 2005). ADHD medication focused on short-term treatment, similar to how CC could be used to increase conservation immediately if the respondents were correctly primed that prosocial behaviors were associated with higher social status. The behavioral treatment helped with long-term behaviors, similar to how respondents could be primed to gradually increase their affinity to the group by SN.

Limitations

The combined intervention entailed a complex design, exhibiting the limitations of using both CC and SN interventions, particularly in terms of their contradicting nature. Pecuniary emulation associated CC with the respondents' economic status, but determining economic status is complicated, because it is personal information that many people are reluctant to share. To raise respondents' willingness to share their economic status with me, I asked for the perceived home residence household economic status, which might greatly reduce accuracy, because it depended on perceptions instead of true values. As mentioned earlier, the home residence household economic status did not accurately representation of the respondents' current disposable income required to assess the effect of pecuniary emulation, but the current disposable income can be too personal. If CC was given to another study population that obviously has high disposable income, I could have avoided the problems with collecting home residence household economic status.

Other than the lack of affinities to the group, the SN intervention was limited to descriptive norms. Considered as a subcategory of social norms, descriptive norms are the standard that members of a community would expect and conform to (Schultz et al. 2007). I integrated descriptive norms in the SN priming by stating that most of the students chose the green option in their product preferences. This descriptive norm could be effective in a population that values ostentation like many Asian countries (Eckhardt et al. 2015). Nouveau riche consumers often practice "over-the-top" conspicuous consumption and a descriptive norm stating how the group favors sustainability could have immediate effect (Schulz 2006).

However, the study population was enrolled at UC Berkeley, and results showed that most respondents have high SKVB scores, meaning that the descriptive norm could have caused the boomerang effect, in which people may feel that their freedom of decision are being threatened and deviate from the norm, or when people who are already displaying desirable behaviors at a higher extent conform to the norm advocating for a lesser extent of the behavior (Mann and Hill 1984). For example, people with lower alcohol consumption than the consumption level stated in the descriptive norm may consume more alcohol in order to conform to the norm (Schultz et al. 2007). Thus, most respondents had high SKVB score and they might think that they were more sustainable than the norm, so they might have decreased their sustainability to conform to the norm. SN might have backfired when used in a study population that was already highly regarded conservation.

The boomerang effect could be lessened by adding injunctive norms to SN (Schultz et al. 2007). Injunctive norms is the standard of whether the group would approve or disapprove a particular behavior (Mann and Hill 1984, Schultz et al. 2007). In the context of this study, injunctive norming conveys that choosing the luxury option for each product is disapproved by the group, which will discourage the respondents with high SKVB scores from shying away from the greener option. Last but not least, the main instrument in the study design is an online survey, feasible for large sample size, but might decrease the influence of priming and the affinity toward the group when compared to an experiment. Online surveys happen in a private setting and can influence product preferences to lean towards the luxurious products, because the purchase is not salient to other people (Griskevicius et al. 2010). The affinity for the group can be weaker depending on the study population such as how some courses and majors can be more independent and competitive than others.

Future Directions

Most of the existing literature on conspicuous conservation and social norming are experiments designed to identify cause-effect relationships, suggesting the need for my future research to test combined intervention as an experiment designed to reduce confounding variables and study the causal relationship of the combined intervention and conservation. Priming can also be done more effectively in an experiment, because I could also deploy

confederates to strengthen the priming and make the circumstance more realistic. I would also have to adopt the injunctive norm in my interventions to reduce the boomerang effect and conduct the study on another study population.

Many of the limitations of my study stem from the study population, and future research can be tested on other populations. The study population is representative of UC Berkeley undergraduates, which is an elite public university that is very liberal. The characteristics of UC Berkeley did not support pecuniary emulation as students do not have much disposable income and might have caused the boomerang effect as discussed earlier. For example, if the study is conducted at a private university that belongs to the middle tier and is located in another area differing in political beliefs like rural areas in the Southern United States, it is very likely that the results would be completely different. I am also certain that the results would be different if the study is done in a drastically different population like a retiring community in Miami or in Beverly Hills.

Broader implications

As we gain more understanding of the motivations behind pro-environmental actions, we can enact more effective policies. This study aims to provide new insights for policy makers in developing new tools to promote sustainable lifestyles. For example, OPOWER utilizes the established methods of SN to decrease household electricity use (Allcott 2011). However, OPOWER's approach is not practical for affecting behaviors occurring in the public setting, such as when buying cars. Alternatively, conspicuous conservation is a novel concept to motivate conservation in such actions (Griskevicius et al. 2010, Sexton and Sexton 2014). As consumers shift consumption patterns toward sustainability, new policies that combine conspicuous conservation and social norming will have a greater impact in mitigating environmental problems, and these policies are cost effective. On the other hand, policies can sometimes focus on the wrong target. For example, the Green Clean Air Vehicle Decal imposed by the California Air Resources Board gives access to carpool lane for owners of certain models of hybrid vehicle, but consumers are already exhibiting conspicuous conservation without the incentives (California Air Resources Board 2017). Thus, resources can be allocated elsewhere and studying the motivations behind conservation will minimize such discrepancies in policies.

Businesses can also benefit from understanding people's motivation behind conservation as environmental-friendly products or services can have high value and are good for marketing. For example, a hotel could provide a doorknob hanger to guests with a message that read "The guests in this room turn off the lights upon leaving. Join us in saving the environment and turn off your lights" (Goldstein et al. 2008). This approach combined CC and SN, because the doorknob hanger makes turning off lights explicit and the latter sentence establishes the norm that many guests conserve energy. Although more research is needed, my study contributes to the knowledge gap of how to effectively combine CC and SN by showing how the study population, pecuniary emulation and the boomerang affect my interventions.

ACKNOWLEDGEMENTS

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APPENDIX A: Conspicuous Conservation Intervention Survey

Sustainability Knowledge, Values, Behavior

* 42. Which of the following best describes your level of interest in sustainability?

No interest Passionate	Little interest	Neutral	Considerable interest	
◯	◯	◯	◯	◯

* 43. On a scale of 1 to 5, please indicate how strongly do you agree or disagree with the following statements.

Strongly disagree 1 || Disagree 2 || Neutral 3 || Agree 4 || Strongly Agree 5

I am knowledgeable about environmental issues	◯	◯	◯	◯	◯
I am knowledgeable about sustainability issues	◯	◯	◯	◯	◯
My daily behavior reflects a concern about sustainability issues	◯	◯	◯	◯	◯
I value knowing that my food is grown locally	◯	◯	◯	◯	◯
I think about how and where my clothes are made	◯	◯	◯	◯	◯
I would like to learn more about sustainability while in college	◯	◯	◯	◯	◯
I am aware that human activities contribute to climate change	◯	◯	◯	◯	◯

* 44. On a scale of 1 to 5, please indicate the degree of importance you place on the following:

Very unimportant 1 || Unimportant 2 || Neutral 3 || Important 4 || Very important 5 || Not Sure N/A

	1	2	3	4	5	N/A
Recycling, and Reducing wastes						
Reusing products						
Choosing food based on its environmental and social impacts						
Purchasing environmentally friendly products						
Water conservation						
Energy conservation						
Using public transportation						
Supporting activist groups						

* 45. On a scale of 1 to 5, please rate the frequency with which you do the following:

Never 1 || Rarely 2 || Sometimes 3 || Usually 4 || Always 5

	1	2	3	4	5
Recycling, and Reducing wastes					
Reusing					
Choosing food based on its environmental and social impacts					
Purchasing environmentally friendly products					
Water conservation					
Energy conservation					
Using public transportation					
Supporting activist groups					

* 46. Please select all choices that best describe why you do not conserve energy, for instance not turning off the lights when you are not in the room.

☐ I choose not to because I do not care

☐ I choose not to because I do not think that conserving energy is beneficial

☐ I choose not to because I think that there are negative consequences

☐ I do not know how to conserve energy properly

☐ Conserving energy is inconvenient for me

☐ Other (please specify)

Educational Achievements, and Political Opinions

Studies have shown that good memory is associated with educational achievement, which can provide valuable information on political opinions. Therefore, you will read a short passage, and after reading, you will answer some questions that are intended to allow for memory decay from some time lapse. Finally, you will answer some questions about the short passage read earlier.

Please carefully read the following story. As you read, try to imagine yourself in the scenario and try to feel the emotions and feelings that the person is experiencing.

You have recently graduated from college, and after months of hardship in applying for jobs, and interviews, you have finally been accepted at a well-known firm in the San Francisco financial district. Today is your first day of work at this high-status job. As you walk up to the entrance, you are impressed by the many prestigious features of your new work environment. A luxury car is parked at the entrance, as a well-dressed man steps out and enters the building. The floor is squeaking as you walk across the main lobby toward the elevator, and a giant LED screen showing the company's new revolutionary product welcomes you. As the elevator reaches the 45th floor, you step out and hurry to see your boss. Your workplace is just what you see in the movies, full of young employees working hard to succeed in their careers. As you head toward the boss's office, you see that two other individuals are already standing in the office. After you enter the office, your boss congratulates you, and the other two individuals for being accepted into the firm. However, the boss informs the three of you that the firm will fire one of the three, and will promote only one of the two remaining new employees. If you get promoted, you will get a luxurious corner office, a large bonus, and be put on the fast track to the top. Then the boss begins telling you about his experience when he first entered the company, and got the same promotion. He specifically said that after two years, he was promoted as the team leader, and after another year, he was promoted to department head. He boasts that the reason he is currently living in a large house and owns a sports car is because of this promotion. The boss encourages the three of you to work hard, and get the promotion. After meeting with the boss, you sit at your temporary desk, and imagine the wealth, and success from getting the promotion. You are inspired, enthusiastic, and motivated to rise above the other two new employees, and begin your successful career.

* 47. Which product do you prefer?

○ A) Honda Accord EX-L V-6 ($30,000)
- Fully equipped with leather seats, GPS navigation system, and a full stereo system
- Has a high-performing 244-horsepower engine
- Averages 22 miles per gallon

○ B) Honda Accord HYBRID ($30,000)
- Has a high-performing 244-horsepower engine
- Comes with standard cloth seats and standard AM–FM radio
- Averages 35 miles per gallon

* 48. Which product do you prefer?

○ A) Lysol Industrial Strength Household Cleaner ($7)
- Awarded most effective cleaner on the market award
- Chemically engineered to cut through the toughest grease, rust, and mold
- Kills 99.9% of germs on contact

○ B) Lysol Natural Household Cleaner ($7)
- Made from biodegradable nontoxic materials
- Contains no acids, dyes, or harsh chemicals
- Not tested on animals

* 49. Which product do you prefer?

  ◯ A) North Face KD100 Ultra-Strength Backpack ($64)
  - Contains eight different storage compartments for maximum versatility

  - Stylish design crafted with water-resistant coating

  - Solid construction lasts twice as long as the next leading brand on the market

  ◯ B) North Face Eco-Life Backpack ($64)
  - Made from 100% organic fibers

  - Utilitarian design minimizes waste in the construction process

  - Comes with instructions on how to recycle the backpack when you are done with it

* 50. Which product do you prefer?

  ◯ A) Energizer e2 Lithium AAA Batteries ($8)
  - Last almost twice as long as conventional alkaline batteries

  - Weigh 1/3 less than standard alkaline batteries

  - Perform in even the most extreme temperatures from – 40 to 140 degrees F

  ◯ B) Energizer Enviromax AAA Batteries ($8)
  - Contain zero amounts of lead, mercury, and cadmium

  - Easiest battery to recycle

  - Awarded "Most Environmentally Friendly" battery

* 51. Which product do you prefer?

  ◯ A) Patagonia Ultra-light Down Hood
  - Superlight 15-denier 100% nylon Pertex Quantum

  - Humanely plucked down, 800-fill-power

  - Durable water repellant

  ◯ B) Patagonia 100% Recycled Down and 100% Recycled Polyester Down Jacket
  - 100% Recycled down, 600-fill-power

  - 100% Recycled polyester

  - Durable water repellant

* 52. Which product do you prefer?

  ◯ A) Target brand Chromium-Plated Lamp with Silk Shade ($60)
  - Lamp frame is plated with Chromium that is resistant to dulling

  - Uses an adjustable 150-watt incandescent bulb with four brightness settings

  - Silk shade produces optimal ambient light filtering

  ◯ B) Target brand Efficiency Low-Wattage Lamp with Organic Cloth Shade ($60)
  - Lamp frame is constructed in a clean and waste-friendly facility that does not produce toxic waste

  - Comes with a single-setting fluorescent bulb that uses only 15% of the electricity of conventional bulbs

  - Cloth shade made from recycled organic cotton fibers

* 53. Which product do you prefer?

⚪ A) Xerox Polyester Paper 100 Sheets ($19)
  - Extra strong and never tear
  - Water-proof coated
  - Cannot be normally recycled

⚪ B) Xerox Sustainably Harvested Premium Multipurpose Paper 80 sheets ($19)
  - Use less trees in the manufacturing process
  - Sustainably harvested
  - WWF, Rainforest Alliance and Forest Stewardship Council Certifications

* 54. Which product do you prefer?

⚪ A) Tuna melt sandwich ($6.50)
  - Lots of tuna filling
  - Cheese from a ranch in California
  - Multigrain bread

⚪ B) Organic Grilled Tofu sandwich ($6.50)
  - Organic tofu
  - Organic lettuce grown in California
  - Multigrain bread

* 55. Which product do you prefer?

⚪ A) TOMS Leather Classic ($60)
  - Made of leather
  - Rubber sole
  - Removable antimicrobial sock liner

⚪ B) TOMS Vegan Hemp Blanket Stitch Classic
  - Made of hemp cotton, no animal product
  - Rope sole
  - Removable, molded footbed for increased cushioning

* 56. Which product do you prefer?

⚪ A) 12/pack Extra Large Eggs ($4.99)
  - 12 eggs per pack
  - Extra large
  - Not organic and not cage-free

⚪ B) 8/pack Organic Cage-free Eggs ($4.99)
  - 8 eggs per pack
  - Smaller size
  - Organic, no antibiotics, cage-free

* 57. How many characters are included in the short passage?

[   ]

* 58. Based on the short passage, where is the company located?

○ New York

○ London

○ Tokyo

○ San Francisco

* 59. Based on the short passage, which floor did you get out of the elevator?

○ 35

○ 40

○ 45

○ 50

* 60. Based on the short passage, what three benefits that come with the promotion?

Benefit 1   [   ]

Benefit 2   [   ]

Benefit 3   [   ]

* 61. Based on the short passage, what is shown on the LED screen at the elevator?

[   ]

Demographics

* 76. What year are you at UC Berkeley?

○ Freshman

○ Sophomore

○ Junior

○ Junior Transfer

○ Senior

○ Senior+

* 77. What is your major/minor? If you are not sure or do not have one write N/A.

Major

Major 2

Minor

Minor 2

* 78. In which category would you place your major?

○ Undeclared Social

○ Sciences Biological

○ Sciences Physical

○ Sciences

○ Humanities

○ Arts

○ Business and/or Economics

○ Engineering and/or Computer Sciences

○ Other (please specify)

* 79. What is your ethnic or racial background? (Mark all that apply)

☐ Caucasian/ White

☐ Black/ African-American

☐ Asian

☐ Native Hawaiian or other Pacific Islander

☐ Native American

☐ Prefer not to say

☐ Other (please specify)

[   ]

* 80. Are you of Spanish, Hispanic or Latino origin or descent?

○ Yes

○ No

○ Prefer not to say

* 81. What gender do you identify with?

○ Male

○ Female

○ Non-binary

○ Prefer not to say

○ Other (please specify)

[   ]

* 82. What is your place of longest residence before coming to UC Berkeley? (City and State). If you are international enter your country of longest residence.

City   [   ]

State   [   ]

Country [   ]

* 83. Classify your hometown as one of the following.

⬭ Rural

⬭ Suburban

⬭ Small urban city

⬭ Medium-sized urban city

⬭ Large urban city

* 84. Estimate the population of your hometown. For reference, Berkeley has a population of around 120,000. San Francisco has a population of around 840,000. Los Angeles has a population of nearly 4,000,000.

⬭ Less than 25,000 people

⬭ 25,000 to 100,000 people

⬭ 100,000 to 500,000 people

⬭ 500,000 to 1,000,000 people

⬭ More than 1,000,000 people

* 85. For your home residence (not college residence), please classify your household economic status to the best of your ability.

⬭ Below the poverty line

⬭ Between lower middle class and the poverty line

⬭ Lower middle class

⬭ Upper middle class

⬭ Upper class

* 86. How old are you?

[   ]

* 87. Where do you live while at college?

  ◯   Residence hall or dormitory

  ◯   Non-university student housing (The Berk,

Wesley, etc.) ◯ Complex (1-6 units)

  ◯

Apartment

(6+ units)

  ◯   House

  ◯   Co-op

  ◯   Sorority or fraternity

  ◯   Other (please specify)

[   ]

* 89. Rate how you would consider your political beliefs on the spectrum of liberal to conservative.

  ◯   Very liberal

  ◯   Liberal

  ◯   Neither liberal nor conservative

  ◯   Conservative

  ◯   Very conservative

APPENDIX B: Social Norming Intervention Survey

Sustainability Knowledge, Values, Behavior

* 42. Which of the following best describes your level of interest in sustainability?

No interest Passionate	Little interest	Neutral	Considerable interest
○	○	○	○ ○

* 43. On a scale of 1 to 5, please indicate how strongly do you agree or disagree with the following statements.

Strongly disagree 1 || Disagree 2 || Neutral 3 || Agree 4 || Strongly Agree 5

	○ 1 5	○ 2	○ 3	○ 4	○
I am knowledgeable about environmental issues	○	○	○	○	○
I am knowledgeable about sustainability issues	○	○	○	○	○
My daily behavior reflects a concern about sustainability issues	○	○	○	○	○
I value knowing that my food is grown locally	○	○	○	○	○
I think about how and where my clothes are made					
I would like to learn more about sustainability while in college					
I am aware that human activities contribute to climate change					

* 44. On a scale of 1 to 5, please indicate the degree of importance you place on the following:

Very unimportant 1 || Unimportant 2 || Neutral 3 || Important 4 || Very important 5 || Not Sure N/A

	1	2	3	4	5	N/A
Recycling, and Reducing wastes						
Reusing products						
Choosing food based on its environmental and social impacts						
Purchasing environmentally friendly products						
Water conservation						
Energy conservation						
Using public transportation						
Supporting activist groups						

* 45. On a scale of 1 to 5, please rate the frequency with which you do the following:

Never 1 || Rarely 2 || Sometimes 3 || Usually 4 || Always 5

	1	2	3	4	5
Recycling, and Reducing wastes					
Reusing					
Choosing food based on its environmental and social impacts					
Purchasing environmentally friendly products					
Water conservation					
Energy conservation					
Using public transportation					
Supporting activist groups					

* 46. Please select all choices that best describe why you do not conserve energy, for instance not turning off the lights when you are not in the room.

- [ ] I choose not to because I do not care

- [ ] I choose not to because I do not think that conserving energy is beneficial

- [ ] I choose not to because I think that there are negative consequences

- [ ] I do not know how to conserve energy properly

- [ ] Conserving energy is inconvenient for me

- [ ] Other (please specify)

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┌──────────────────────────────────────┐
│                                      │
│                                      │
└──────────────────────────────────────┘
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Educational Achievements, and Political Opinions

Studies have shown that good linguistic ability is associated educational achievement, which can provide valuable information on political opinions. Therefore, you will complete the following exercise about linguistic ability.

* 47. **Please form grammatically correct sentences using each scrambled string of words as fast as possible.**
Example: "the is sky blue" becomes "the sky is blue"

Click onto this link http://stopwatch.onlineclock.net/ to access the online stopwatch, and time yourself while you are completing the exercise. Please report your time afterwards.

to adheres it them	
the obeys he rule	
him she to complies	
it I to agree	
order maintain the you	
we instruction follow the	
supportive very is he	
their they uphold identity	
it quite is uniform	
them I to conform	
give they me respect	
other the imitates it	
copy will them you	
he her to oblige	
customary our it is	

* 48. Please report your time below.

* 49. In your ESPM 50AC class, 79% of your fellow students chose the Honda Accord HYBRID (Choice B).

Which product do you prefer?

◻ A) Honda Accord EX-L V-6 ($30,000)
  - Fully equipped with leather seats, GPS navigation system, and a full stereo system
  - Has a high-performing 244-horsepower engine
  - Averages 22 miles per gallon

◻ B) Honda Accord HYBRID ($30,000)
  - Has a high-performing 244-horsepower engine
  - Comes with standard cloth seats and standard AM–FM radio
  - Averages 35 miles per gallon

* 50. In your ESPM 50AC class, 82.5% of your fellow students chose the Lysol natural household cleaner (Choice B).

Which product do you prefer?

◻ A) Lysol Industrial Strength Household Cleaner ($7)
  - Awarded most effective cleaner on the market award
  - Chemically engineered to cut through the toughest grease, rust, and mold
  - Kills 99.9% of germs on contact

◻ B) Lysol Natural Household Cleaner ($7)
  - Made from biodegradable nontoxic materials
  - Contains no acids, dyes, or harsh chemicals
  - Not tested on animals

* 51. In your ESPM 50AC class , 70% of your fellow students chose the North Face eco-life backpack (Choice B).

Which product do you prefer?

◻ A) North Face KD100 Ultra-Strength Backpack ($64)
  - Contains eight different storage compartments for maximum versatility
  - Stylish design crafted with water-resistant coating
  - Solid construction lasts twice as long as the next leading brand on the market

◻ B) North Face Eco-Life Backpack ($64)
  - Made from 100% organic fibers
  - Utilitarian design minimizes waste in the construction process
  - Comes with instructions on how to recycle the backpack when you are done with it

* 52. In your ESPM 50AC class, 88% of your fellow students chose the Energizer Enviromax AAA batteries (Choice B).

Which product do you prefer?

◯ A) Energizer e2 Lithium AAA Batteries ($8)
- Last almost twice as long as conventional alkaline batteries
- Weigh 1/3 less than standard alkaline batteries
- Perform in even the most extreme temperatures from – 40 to 140 degrees F

◯ B) Energizer Enviromax AAA Batteries ($8)
- Contain zero amounts of lead, mercury, and cadmium
- Easiest battery to recycle
- Awarded "Most Environmentally Friendly" battery

* 53. In your ESPM 50AC class, 85% of your fellow students chose the Patagonia 100% Recycled Down and 100% Recycled Polyester Down Jacket (Choice B).

Which product do you prefer?

◯ A) Patagonia Ultra-light Down Hood
- Superlight 15-denier 100% nylon Pertex Quantum
- Humanely plucked down, 800-fill-power
- Durable water repellant

◯ B) Patagonia 100% Recycled Down and 100% Recycled Polyester Down Jacket
- 100% Recycled down, 600-fill-power
- 100% Recycled polyester
- Durable water repellant

* 54. In your ESPM 50AC class, 70% of your fellow students chose the Target Efficiency low-wattage lamp with organic cloth shade (Choice B).

Which product do you prefer?

◯ A) Target brand Chromium-Plated Lamp with Silk Shade ($60)
- Lamp frame is plated with Chromium that is resistant to dulling
- Uses an adjustable 150-watt incandescent bulb with four brightness settings
- Silk shade produces optimal ambient light filtering

◯ B) Target brand Efficiency Low-Wattage Lamp with Organic Cloth Shade ($60)
- Lamp frame is constructed in a clean and waste-friendly facility that does not produce toxic waste
- Comes with a single-setting fluorescent bulb that uses only 15% of the electricity of conventional bulbs
- Cloth shade made from recycled organic cotton fibers

* 55. In your ESPM 50AC class, 89% of your fellow students chose the Xerox Sustainably Harvested Premium Multipurpose Paper (Choice B).

Which product do you prefer?

☐ A) Xerox Polyester Paper 100 Sheets ($19)
- Extra strong and never tear
- Water-proof coated
- Cannot be normally recycled

☐ B) Xerox Sustainably Harvested Premium Multipurpose Paper 80 sheets ($19)
- Use less trees in the manufacturing process
- Sustainably harvested
- WWF, Rainforest Alliance and Forest Stewardship Council Certifications

* 56. In your ESPM 50AC class, 78% of your fellow students chose the Organic Grilled Tofu sandwich (Choice B).

Which product do you prefer?

☐ A) Tuna melt sandwich ($6.50)
- Lots of tuna filling
- Cheese from a ranch in California
- Multigrain bread

☐ B) Organic Grilled Tofu sandwich ($6.50)
- Organic tofu
- Organic lettuce grown in California
- Multigrain bread

* 57. In your ESPM 50AC class, 80% of your fellow students chose the TOMS Vegan (without animal product) Hemp Blanket Stitch Classic Shoes (Choibe B).

Which product do you prefer?

☐ A) TOMS Leather Classic ($60)
- Made of leather
- Rubber sole
- Removable antimicrobial sock liner

☐ B) TOMS Vegan Hemp Blanket Stitch Classic
- Made of hemp cotton, no animal product
- Rope sole
- Removable, molded footbed for increased cushioning

* 58. In your ESPM 50AC class, 85% of your fellow students chose the 8/pack Organic Cage-free Eggs (Choice B).

Which product do you prefer?

○   A) 12/pack Extra Large Eggs ($4.99)
- 12 eggs per pack
- Extra large
- Not organic and not cage-free

○   B) 8/pack Organic Cage-free Eggs ($4.99)
- 8 eggs per pack
- Smaller size
- Organic, no antibiotics, cage-free

Demographics

* 73. What year are you at UC Berkeley?

○ Freshman

○ Sophomore

○ Junior

○ Junior Transfer

○ Senior

○ Senior+

* 74. What is your major/minor? If you are not sure or do not have one write N/A.

Major

Major 2

Minor

Minor 2

* 75. In which category would you place your major?

○ Undeclared Social

○ Sciences Biological

○ Sciences Physical

○ Sciences

○ Humanities

○ Arts

○ Business and/or Economics

○ Engineering and/or Computer Sciences

○ Other (please specify)

* 76. What is your ethnic or racial background? (Mark all that apply)

☐ Caucasian/ White

☐ Black/ African-American

☐ Asian

☐ Native Hawaiian or other Pacific Islander

☐ Native American

☐ Prefer not to say

☐ Other (please specify)

[   ]

* 77. Are you of Spanish, Hispanic or Latino origin or descent?

○ Yes

○ No

○ Prefer not to say

* 78. What gender do you identify with?

○ Male

○ Female

○ Non-binary

○ Prefer not to say

○ Other (please specify)

[   ]

* 79. What is your place of longest residence before coming to UC Berkeley? (City and State). If you are international enter your country of longest residence.

City   [   ]

State   [   ]

Country [   ]

* 80. Classify your hometown as one of the following.

 ⚪ Rural

 ⚪ Suburban

 ⚪ Small urban city

 ⚪ Medium-sized urban city

 ⚪ Large urban city

* 81. Estimate the population of your hometown. For reference, Berkeley has a population of around 120,000. San Francisco has a population of around 840,000. Los Angeles has a population of nearly 4,000,000.

 ⚪ Less than 25,000 people

 ⚪ 25,000 to 100,000 people

 ⚪ 100,000 to 500,000 people

 ⚪ 500,000 to 1,000,000 people

 ⚪ More than 1,000,000 people

* 82. For your home residence (not college residence), please classify your household economic status to the best of your ability.

 ⚪ Below the poverty line

 ⚪ Between lower middle class and the poverty line

 ⚪ Lower middle class

 ⚪ Upper middle class

 ⚪ Upper class

* 83. How old are you?

 [   ]

* 84. Where do you live while at college?

○　Residence hall or dormitory

○　Non-university student housing (The Berk, Wesley, etc.)

○　Complex (1-6 units)

○　Apartment (6+ units)

○　House

○　Co-op

○　Sorority or fraternity

○　Other (please specify)

[   ]

* 85. How many people do you live with?

○　None

○　1 to 3

○　4 to 5

○　6 to 7

○　8 to 9

○　10+

* 86. Rate how you would consider your political beliefs on the spectrum of liberal to conservative.

○　Very liberal

○　Liberal

○　Neither liberal nor conservative

○　Conservative

○　Very conservative

APPENDIX C: Combined intervention survey

5. Sustainability Knowledge, Values, Behavior

* 24. Which of the following best describes your level of interest in sustainability?

No interest Passionate	Little interest	Neutral	Considerable interest	
○	○	○	○	○

* 25. On a scale of 1 to 5, please indicate how strongly do you agree or disagree with the following statements.

Strongly disagree 1 || Disagree 2 || Neutral 3 || Agree 4 || Strongly Agree 5

	1 5	2	3	4
I am knowledgeable about environmental issues	○ ○	○ ○	○ ○	○ ○	○ ○
I am knowledgeable about sustainability issues	○ ○	○ ○	○ ○	○ ○	○ ○
My daily behavior reflects a concern about sustainability issues	○	○	○	○	○
I value knowing that my food is grown locally	○	○	○	○	○
I think about how and where my clothes are made	○	○	○	○	○
I would like to learn more about sustainability while in college					
I am aware that human activities contribute to climate change					

* 26. On a scale of 1 to 5, please indicate the degree of importance you place on the following:

Very unimportant 1 || Unimportant 2 || Neutral 3 || Important 4 || Very important 5 || Not sure N/A

	1	2	3	4	5	N/A
Recycling, and Reducing wastes						
Reusing products						
Choosing food based on its environmental and social impacts						
Purchasing environmentally friendly products						
Water conservation						
Energy conservation						
Using public transportation						
Supporting activist groups						

* 27. On a scale of 1 to 5, please rate the frequency with which you do the following:

Never 1 || Rarely 2 || Sometimes 3 || Usually 4 || Always 5

	1	2	3	4	5
Recycling, and Reducing wastes					
Reusing					
Choosing food based on its environmental and social impacts					
Purchasing environmentally friendly products					
Water conservation					
Energy conservation					
Using public transportation					
Supporting activist groups					

* 28. Please select all choices that best describe why you do not conserve energy, for instance not turning off the lights when you are not in the room.

☐ I choose not to because I do not care

☐ I choose not to because I do not think that conserving energy is beneficial

☐ I choose not to because I think that there are negative consequences

☐ I do not know how to conserve energy properly

☐ Conserving energy is inconvenient for me

☐ Other (please specify)

[ ]

51

9. Educational Achievements, and Political Opinions

Studies have shown that good memory is associated with educational achievement, which can provide valuable information on political opinions. Therefore, you will read a short passage, and after reading, you will answer some questions that are intended to allow for memory decay from some time lapse. Finally, you will answer some questions about the short passage read earlier.

Please carefully read the following story. As you read, try to imagine yourself in the scenario and try to feel the emotions and feelings that the person is experiencing.

You have recently graduated from college, and after months of hardship in applying for jobs, and interviews, you have finally been accepted at a well-known firm in the San Francisco financial district. Today is your first day of work at this high-status job. As you walk up to the entrance, you are impressed by the many prestigious features of your new work environment. A luxury car is parked at the entrance, as a well-dressed man steps out and enters the building. The floor is squeaking as you walk across the main lobby toward the elevator, and a giant LED screen showing the company's new revolutionary product welcomes you. As the elevator reaches the 45th floor, you step out and hurry to see your boss. Your workplace is just what you see in the movies, full of young employees working hard to succeed in their careers. As you head toward the boss's office, you see that two other individuals are already standing in the office. After you enter the office, your boss congratulates you, and the other two individuals for being accepted into the firm. However, the boss informs the three of you that the firm will fire one of the three, and will promote only one of the two remaining new employees. If you get promoted, you will get a luxurious corner office, a large bonus, and be put on the fast track to the top. Then the boss begins telling you about his experience when he first entered the company, and got the same promotion. He specificallysaid that after two years, he was promoted as the team leader, and after another year, he was promoted to department head. He boasts that the reason he

* 52. **Now you will complete the following exercises intended to allow for time lapse and memory decay. Please form grammatically correct sentences using each scrambled string of words.**

   Example: "the is sky blue" becomes "the sky is blue"

to adheres it them

the obeys he rule

him she to complies

it I to agree

order maintain the you

we instruction follow the

supportive very is he

their they uphold identity

it quite is uniform

them I to conform

give they me respect

other the imitates it

copy will them you

he her to oblige

customary our it is

* 53. In your ESPM 50AC class, 79% of your fellow students chose the Honda Accord HYBRID (Choice B).

   Which product do you prefer?

   ⬜ A) Honda Accord EX-L V-6 ($30,000)
   - Fully equipped with leather seats, GPS navigation system, and a full stereo system
   - Has a high-performing 244-horsepower engine
   - Averages 22 miles per gallon

   ⬜ B) Honda Accord HYBRID ($30,000)
   - Has a high-performing 244-horsepower engine
   - Comes with standard cloth seats and standard AM–FM radio
   - Averages 35 miles per gallon

* 54. In your ESPM 50AC class, 82.5% of your fellow students chose the Lysol natural household cleaner (Choice B)

Which product do you prefer?.

⬜ A) Lysol Industrial Strength Household Cleaner ($7)
- Awarded most effective cleaner on the market award
- Chemically engineered to cut through the toughest grease, rust, and mold
- Kills 99.9% of germs on contact

⬜ B) Lysol Natural Household Cleaner ($7)
- Made from biodegradable nontoxic materials
- Contains no acids, dyes, or harsh chemicals
- Not tested on animals

* 55. In your ESPM 50AC class , 70% of your fellow students chose the North Face eco-life backpack (Choice B).

Which product do you prefer?

⬜ A) North Face KD100 Ultra-Strength Backpack ($64)
- Contains eight different storage compartments for maximum versatility
- Stylish design crafted with water-resistant coating
- Solid construction lasts twice as long as the next leading brand on the market

⬜ B) North Face Eco-Life Backpack ($64)
- Made from 100% organic fibers
- Utilitarian design minimizes waste in the construction process
- Comes with instructions on how to recycle the backpack when you are done with it

* 56. In your ESPM 50AC class, 88% of your fellow students chose the Energizer Enviromax AAA batteries (Choice B).

Which product do you prefer?

⬜ A) Energizer e2 Lithium AAA Batteries ($8)
- Last almost twice as long as conventional alkaline batteries
- Weigh 1/3 less than standard alkaline batteries
- Perform in even the most extreme temperatures from – 40 to 140 degrees F

⬜ B) Energizer Enviromax AAA Batteries ($8)
- Contain zero amounts of lead, mercury, and cadmium
- Easiest battery to recycle
- Awarded "Most Environmentally Friendly" battery

* 57. In your ESPM 50AC class, 85% of your fellow students chose the Patagonia 100% Recycled Down and 100% Recycled Polyester Down Jacket (Choice B).

Which product do you prefer?

⬜ A) Patagonia Ultra-light Down Hood
- Superlight 15-denier 100% nylon Pertex Quantum
- Humanely plucked down, 800-fill-power
- Durable water repellant

⬜ B) Patagonia 100% Recycled Down and 100% Recycled Polyester Down Jacket
- 100% Recycled down, 600-fill-power
- 100% Recycled polyester
- Durable water repellant

* 58. In your ESPM 50AC class, 70% of your fellow students chose the Target Efficiency low-wattage lamp with organic cloth shade (Choice B).

Which product do you prefer?

⬜ A) Target brand Chromium-Plated Lamp with Silk Shade ($60)
- Lamp frame is plated with Chromium that is resistant to dulling
- Uses an adjustable 150-watt incandescent bulb with four brightness settings
- Silk shade produces optimal ambient light filtering

⬜ B) Target brand Efficiency Low-Wattage Lamp with Organic Cloth Shade ($60)
- Lamp frame is constructed in a clean and waste-friendly facility that does not produce toxic waste
- Comes with a single-setting fluorescent bulb that uses only 15% of the electricity of conventional bulbs
- Cloth shade made from recycled organic cotton fibers

* 59. In your ESPM 50AC class, 89% of your fellow students chose the Xerox Sustainably Harvested Premium Multipurpose Paper (Choice B).

Which product do you prefer?

⬜ A) Xerox Polyester Paper 100 Sheets ($19)
- Extra strong and never tear
- Water-proof coated
- Cannot be normally recycled

⬜ B) Xerox Sustainably Harvested Premium Multipurpose Paper 80 sheets ($19)
- Use less trees in the manufacturing process
- Sustainably harvested
- WWF, Rainforest Alliance and Forest Stewardship Council Certifications

* 60. In your ESPM 50AC class, 78% of your fellow students chose the Organic Grilled Tofu sandwich (Choice B).

  Which product do you prefer?

  ☐ A) Tuna melt sandwich ($6.50)
      - Lots of tuna filling
      - Cheese from a ranch in California
      - Multigrain bread

  ☐ B) Organic Grilled Tofu sandwich ($6.50)
      - Organic tofu
      - Organic lettuce grown in California
      - Multigrain bread

* 61. In your ESPM 50AC class, 80% of your fellow students chose the TOMS Vegan (without animal product) Hemp Blanket Stitch Classic Shoes (Choibe B).

  Which product do you prefer?

  ☐ A) TOMS Leather Classic ($60)
      - Made of leather
      - Rubber sole
      - Removable antimicrobial sock liner

  ☐ B) TOMS Vegan Hemp Blanket Stitch Classic
      - Made of hemp cotton, no animal product
      - Rope sole
      - Removable, molded footbed for increased cushioning

* 62. In your ESPM 50AC class, 85% of your fellow students chose the 8/pack Organic Cage-free Eggs (Choice B).

  Which product do you prefer?

  ☐ A) 12/pack Extra Large Eggs ($4.99)
      - 12 eggs per pack
      - Extra large
      - Not organic and not cage-free

  ☐ B) 8/pack Organic Cage-free Eggs ($4.99)
      - 8 eggs per pack
      - Smaller size
      - Organic, no antibiotics, cage-free

* 63. How many characters are included in the short passage?

  _____

* 64. Based on the short passage, where is the company located?

◯ New York

◯ London

◯ Tokyo

◯ San Francisco

* 65. Based on the short passage, which floor did you get out * of the elevator?

◯ 35

◯ 40

◯ 45

◯ 50

* 66. Based on the short passage, what three benefits that come with the promotion?

Benefit 1   [   ]

Benefit 2   [   ]

Benefit 3   [   ]

* 67. Based on the short passage, what is shown on the LED screen at the elevator?

[   ]

12. Demographics

* 82. What year are you at UC Berkeley?

Freshman

○

Sophomore

○

Junior

○

Junior Transfer

○

Senior

○

Senior+

○

* 83. What is your major/minor? If you are not sure or do not have one write N/A.

Major

[   ]

Major 2

[   ]

Minor

[   ]

Minor 2

[   ]

* 84. In which category would you place your major?

Undeclared Social

○

Sciences Biological

○

Sciences Physical

○

Sciences

○

Humanities

○

Arts

○

Business and/or Economics

○

Engineering and/or Computer Sciences

○

Other (please specify)

○

[   ]

* 85. What is your ethnic or racial background? (Mark all that apply)

☐ Caucasian/ White

☐ Black/ African-American

☐ Asian

☐ Native Hawaiian or other Pacific Islander

☐ Native American

☐ Prefer not to say

☐ Other (please specify)

[   ]

* 86. Are you of Spanish, Hispanic or Latino origin or descent?

◯ Yes

◯ No

◯ Prefer not to say

* 87. What gender do you identify with?

◯ Male

◯ Female

◯ Non-binary

◯ Prefer not to say

◯ Other (please specify)

[   ]

* 88. What is your place of longest residence before coming to UC Berkeley? (City and State). If you are international enter your country of longest residence.

City   [   ]

State   [   ]

Country   [   ]

* 89. Classify your hometown as one of the following.

⭕ Rural

⭕ Suburban

⭕ Small urban city

⭕ Medium-sized urban city

⭕ Large urban city

⭕ Other (please specify)

[   ]

* 90. Estimate the population of your hometown. For reference, Berkeley has a population of around 120,000. San Francisco has a population of around 840,000. Los Angeles has a population of nearly 4,000,000.

⭕ Less than 25,000 people

⭕ 25,000 to 100,000 people

⭕ 100,000 to 500,000 people

⭕ 500,000 to 1,000,000 people

⭕ More than 1,000,000 people

* 91. For your home residence (not college residence), please classify your household economic status to the best of your ability.

⭕ Below the poverty line

⭕ Between lower middle class and the poverty line

⭕ Lower middle class

⭕ Upper middle class

⭕ Upper class

* 92. How old are you?

[   ]

* 93. Where do you live while at college?

◯ Residence hall or dormitory

◯ Non-university student housing (The Berk, Wesley, etc.)

◯ Complex (1-6 units)

◯ Apartment (6+ units)

◯ House

◯ Co-op

◯ Sorority or fraternity

◯ Other (please specify)

* 94. How many people do you live with?

◯ None

◯ 1 to 3

◯ 4 to 5

◯ 6 to 7

◯ 8 to 9

◯ 10+

* 95. Rate how you would consider your political beliefs on the spectrum of liberal to conservative.

◯ Very liberal

◯ Liberal

◯ Neither liberal nor conservative

◯ Conservative

APPENDIX D: Control Survey

5. Sustainability Knowledge, Values, Behavior

| ○ | ○ | ○ | ○ | ○ |

* 24. Which of the following best describes your level of interest in sustainability?

| No interest | Little interest | Neutral | Considerable interest | Passionate |

* 25. On a scale of 1 to 5, please indicate how strongly do you agree or disagree with the following statements.

Strongly disagree 1 || Disagree 2 || Neutral 3 || Agree 4 || Strongly Agree 5

	1	2	3	4	5
I am knowledgeable about environmental issues	○	○	○	○	○
I am knowledgeable about sustainability issues	○	○	○	○	○
My daily behavior reflects a concern about sustainability issues	○	○	○	○	○
I value knowing that my food is grown locally	○	○	○	○	○
I think about how and where my clothes are made	○	○	○	○	○
I would like to learn more about sustainability while in college	○	○	○	○	○
I am aware that human activities contribute to climate change					

* 26. On a scale of 1 to 5, please indicate the degree of importance you place on the following:

Very unimportant 1 || Unimportant 2 || Neutral 3 || Important 4 || Very important 5 || Not sure N/A

	1	2	3	4	5	N/A
Recycling, and Reducing wastes						
Reusing products						
Choosing food based on its environmental and social impacts						
Purchasing environmentally friendly products						
Water conservation						
Energy conservation						
Using public transportation						
Supporting activist groups						

* 27. On a scale of 1 to 5, please rate the frequency with which you do the following:

Never 1 || Rarely 2 || Sometimes 3 || Usually 4 || Always 5

	1	2	3	4	5
Recycling, and Reducing wastes					
Reusing					
Choosing food based on its environmental and social impacts					
Purchasing environmentally friendly products					
Water conservation					
Energy conservation					
Using public transportation					
Supporting activist groups					

* 28. Please select all choices that best describe why you do not conserve energy, for instance not turning off the lights when you are not in the room.

☐ I choose not to because I do not care

☐ I choose not to because I do not think that conserving energy is beneficial

☐ I choose not to because I think that there are negative consequences

☐ I do not know how to conserve energy properly

☐ Conserving energy is inconvenient for me

☐ Other (please specify)

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[                                           ]
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9. Product Preferences

* 52. Which product do you prefer?

  ◯ A) Honda Accord EX-L V-6 ($30,000)
      - Fully equipped with leather seats, GPS navigation system, and a full stereo system
      - Has a high-performing 244-horsepower engine
      - Averages 22 miles per gallon

  ◯ B) Honda Accord HYBRID ($30,000)
      - Has a high-performing 244-horsepower engine
      - Comes with standard cloth seats and standard AM–FM radio
      - Averages 35 miles per gallon

* 53. Which product do you prefer?

  ◯ A) Lysol Industrial Strength Household Cleaner ($7)
      - Awarded most effective cleaner on the market award
      - Chemically engineered to cut through the toughest grease, rust, and mold
      - Kills 99.9% of germs on contact

  ◯ B) Lysol Natural Household Cleaner ($7)
      - Made from biodegradable nontoxic materials
      - Contains no acids, dyes, or harsh chemicals
      - Not tested on animals

* 54. Which product do you prefer?

  ◯ A) North Face KD100 Ultra-Strength Backpack ($64)
      - Contains eight different storage compartments for maximum versatility
      - Stylish design crafted with water-resistant coating
      - Solid construction lasts twice as long as the next leading brand on the market

  ◯ B) North Face Eco-Life Backpack ($64)
      - Made from 100% organic fibers
      - Utilitarian design minimizes waste in the construction process
      - Comes with instructions on how to recycle the backpack when you are done with it

* 55. Which product do you prefer?

  ◯ A) Energizer e2 Lithium AAA Batteries ($8)
      - Last almost twice as long as conventional alkaline batteries
      - Weigh 1/3 less than standard alkaline batteries
      - Perform in even the most extreme temperatures from – 40 to 140 degrees F

  ◯ B) Energizer Enviromax AAA Batteries ($8)
      - Contain zero amounts of lead, mercury, and cadmium
      - Easiest battery to recycle
      - Awarded "Most Environmentally Friendly" battery

* 56. Which product do you prefer?

◯ A) Patagonia Ultra-light Down Hood
- Superlight 15-denier 100% nylon Pertex Quantum
- Humanely plucked down, 800-fill-power
- Durable water repellant

◯ B) Patagonia 100% Recycled Down and 100% Recycled Polyester Down Jacket
- 100% Recycled down, 600-fill-power
- 100% Recycled polyester
- Durable water repellant

* 57. Which product do you prefer?

◯ A) Target brand Chromium-Plated Lamp with Silk Shade ($60)
- Lamp frame is plated with Chromium that is resistant to dulling
- Uses an adjustable 150-watt incandescent bulb with four brightness settings
- Silk shade produces optimal ambient light filtering

◯ B) Target brand Efficiency Low-Wattage Lamp with Organic Cloth Shade ($60)
- Lamp frame is constructed in a clean and waste-friendly facility that does not produce toxic waste
- Comes with a single-setting fluorescent bulb that uses only 15% of the electricity of conventional bulbs
- Cloth shade made from recycled organic cotton fibers

* 58. Which product do you prefer?

◯ A) Xerox Polyester Paper 100 Sheets ($19)
- Extra strong and never tear
- Water-proof coated
- Cannot be normally recycled

◯ B) Xerox Sustainably Harvested Premium Multipurpose Paper 80 sheets ($19)
- Use less trees in the manufacturing process
- Sustainably harvested
- WWF, Rainforest Alliance and Forest Stewardship Council Certifications

* 59. Which product do you prefer?

◯ A) Tuna melt sandwich ($6.50)
- Lots of tuna filling
- Cheese from a ranch in California
- Multigrain bread

◯ B) Organic Grilled Tofu sandwich ($6.50)
- Organic tofu
- Organic lettuce grown in California
- Multigrain bread

* 60. Which product do you prefer?

◯   A) TOMS Leather Classic ($60)
- Made of leather

- Rubber sole

- Removable antimicrobial sock liner

◯   B) TOMS Vegan Hemp Blanket Stitch Classic
- Made of hemp cotton, no animal product

- Rope sole

- Removable, molded footbed for increased cushioning

* 61. Which product do you prefer?

◯   A) 12/pack Extra Large Eggs ($4.99)
- 12 eggs per pack

- Extra large

- Not organic and not cage-free

◯   B) 8/pack Organic Cage-free Eggs ($4.99)
- 8 eggs per pack

- Smaller size

- Organic, no antibiotics, cage-free

12. Demographics

* 76. What year are you at UC Berkeley?

   ◯ Freshman

   ◯ Sophomore

   ◯ Junior

   ◯ Junior Transfer

   ◯ Senior

   ◯ Senior+

* 77. What is your major/minor? If you are not sure or do not have one write N/A.

   Major

   Major 2

   Minor

   Minor 2

* 78. In which category would you place your major?

   ◯ Undeclared Social

   ◯ Sciences Biological

   ◯ Sciences Physical

   ◯ Sciences

   ◯ Humanities

   ◯ Arts

   ◯ Business and/or Economics

   ◯ Engineering and/or Computer Sciences

   ◯ Other (please specify)

* 79. What is your ethnic or racial background? (Mark all that apply)

☐ Caucasian/ White

☐ Black/ African-American

☐ Asian

☐ Native Hawaiian or other Pacific Islander

☐ Native American

☐ Prefer not to say

☐ Other (please specify)

[   ]

* 80. Are you of Spanish, Hispanic or Latino origin or descent?

○ Yes

○ No

○ Prefer not to say

* 81. What gender do you identify with?

○ Male

○ Female

○ Non-binary

○ Prefer not to say

○ Other (please specify)

[   ]

* 82. What is your place of longest residence before coming to UC Berkeley? (City and State). If you are international enter your country of longest residence.

City   [   ]

State   [   ]

Country [   ]

* 83. Classify your hometown as one of the following.

◯ Rural

◯ Suburban

◯ Small urban city

◯ Medium-sized urban city

◯ Large urban city

◯ Other (please specify)

[   ]

* 84. Estimate the population of your hometown. For reference, Berkeley has a population of around 120,000. San Francisco has a population of around 840,000. Los Angeles has a population of nearly 4,000,000.

◯ Less than 25,000 people

◯ 25,000 to 100,000 people

◯ 100,000 to 500,000 people

◯ 500,000 to 1,000,000 people

◯ More than 1,000,000 people

* 85. For your home residence (not college residence), please classify your household economic status to the best of your ability.

◯ Below the poverty line

◯ Between lower middle class and the poverty line

◯ Lower middle class

◯ Upper middle class

◯ Upper class

* 86. How old are you?

[   ]

* 87. Where do you live while at college?

◯ Residence hall or dormitory

◯ Non-university student housing (The Berk, Wesley, etc.)

◯ Complex (1-6 units)

◯ Apartment (6+ units)

◯ House

◯ Co-op

◯ Sorority or fraternity

◯ Other (please specify)

[   ]

* 88. How many people do you live with?

◯ None

◯ 1 to 3

◯ 4 to 5

◯ 6 to 7

◯ 8 to 9

◯ 10+

* 89. Rate how you would consider your political beliefs on the spectrum of liberal to conservative.

◯ Very liberal

◯ Liberal

◯ Neither liberal nor conservative

◯ Conservative

◯ Very conservative