THREE ESSAYS ON MARKETING AND PUBLIC POLICIES: AN ANALYSIS OF SOCIAL CONDITION ON CONSUMER HEALTH ASSOCIATIONS AND PERCEIVED HYPOCRITICAL CORPORATE SOCIAL RESPONSIBILITY ON COMPANY OUTCOMES

by

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DISSERTATION

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DEDICATION

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ABSTRACT

Three Essays on Marketing and Public Policies: An Analysis of Social Condition on Consumer Health Associations and Perceived Hypocritical Corporate Social Responsibility on Company Outcomes

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Over three essays this project reviews social conditioning and the influence on consumer decision-making. Essay one analyzes health associations between fruit and average daily caloric intake. The relative impact is greater for food possessing unique lay belief associations. Essay two investigates ethical leadership in a social media context. The study primes hypocritical leadership and the impact on consumer perceptions of a company. Essay three studies outcomes to a CEO's response addressing damaging social media information about a company. Moderators reduce the effect of perceived unethical leadership. Implications on marketing policies are discussed.

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CHAPTER 1

Comparing Apples to Bananas to Oranges: The Impact of Lay Health Associations to Average Daily Caloric Intake

Abstract

Not all fruit are equal in total calories, nutritional composition, and perceived benefits. Most pronounced is the perceived health symbolism associated with apples over other fruit. The ubiquitous refined proverb 'An apple a day keeps the doctor away', associating apples to health properties, has pervaded society since first written in Wales (Phillips, 1866). Although not always true, the repetition and associated health symbolism of apples has carried on through societal marketing. Over two studies, the researcher investigates societal lay health beliefs with daily consumption and health associations. Study one indicates a greater number of categorizations with healthy objects to apples over bananas and oranges. Study two finds relationships between apples, lay lean health beliefs and reduced calorie consumption. The influence of lay societal belief and repetitive marketing over time has influenced what is considered healthy (even relative to other nutrient rich foods) and consumption patterns.

Keywords: lay implicit beliefs, health association task, calorie intake, nutrition marketing, consumer decision-making, food diary

Theoretical Background

Food Symbolism and Social Conditioning

In addition to nutritional sustenance (Nugent & Clark, 2010), food carries symbolic social values and beliefs (Arhem, 1989; Letarte, Dube, & Troche, 1997; S. J. Levy, 1981; Paasovaara, Luomala, Pohjanheimo, & Sandell, 2012). Certain foods associate to mortuary rituals (e.g. cooked/uncooked) (Parry, 1985), cultural dietary rules (e.g. milk) (Arhem, 1989), and social status (e.g. high-status gourmet/medium- to low-status picnic) (S. J. Levy, 1981). Levy (1981) found qualitative evidence evincing low social status related to utilitarian and extreme attributes (e.g. too greasy, too salty, and too spicy); while high social status related to sophisticated and transcendental attributes (e.g. broccoli). Cognitive processing of symbolic foods, attributes unique values to certain foods over others despite similar nutritional composition (Letarte et al., 1997).

Food preferences are influenced by cognitive and affective categorizations (Letarte et al., 1997). Sensorial, social, and emotional food aspects are affective based. Symbolic, functional, and physiological food aspects are cognitive based. Social learning theory proposes that a person's environment, media, and social interactions influence behavior (Bandura, 1971; Proffitt et al., 2006). Through social learning, symbolic food categorizations and eating behaviors are developed (Lupton, 1994). Certain foods carry unique associated properties over others, allotted by repeated social beliefs through sayings (e.g. apples and health).

Food and Nutrition

Considerable research on food has focused on disease risk (Bazzano et al., 2002; Hertog et al., 1995; Kant, 2010; L. H. Kushi, Meyer, & Jacobs Jr, 1999; Lawrence H. Kushi et al., 2012; McCullough et al., 2002; Ness & Powles, 1997), obesity (Ebbeling, Pawlak, & Ludwig, 2002; Popkin, Adair, & Ng, 2012; Prentice & Jebb, 2003; Schuldt & Schwarz, 2010; Swinburn, Caterson, Seidell, & James, 2004),

hedonic/utilitarian selection (Cramer & Antonides, 2011; Finlayson, Bryant, Blundell, & King, 2009; Nagpal, Lei, & Khare, 2015; Okada, 2005), labels (Bender & Derby, 1992; Campos, Doxey, & Hammond, 2011; Chu, Frongillo, Jones, & Kaye, 2009; Drichoutis, Lazaridis, & Nayga, 2005; J. H. Goldberg, Probart, & Zak, 1999; Grunert, Fernandez-Celemin, Wills, Bonsmann, & Nureeva, 2010; Grunert & Wills, 2007; Kreuter, Brennan, Scharff, & Lukwago, 1997; Neuhouser, Kristal, & Patterson, 1999; Pelletier, Chang, Delzell, & McCall, 2004; Satia, Galanko, & Neuhouser, 2005; Variyam, 2008), and nutritional quality (Basiotis, Kramer-LeBlanc, & Kennedy, 1998; Dangour et al., 2009; Drewnowski, 2010; Hansen, 1973; Lappalainen, Kearney, & Gibney, 1998; Newby et al., 2003; Serra-Majem et al., 2004; Williams, 2002). Researchers have found inconclusive evidence to support better health outcomes with organic diets (Dangour et al., 2009; Williams, 2002). The concept of healthy is not necessarily micro-nutrient composition, but perceptions of benefits attributed from retailers (Nagpal et al., 2015), family (Hansen, 1973), and habits (Schuldt & Schwarz, 2010). In fact, certain nutritional labels (e.g. Low-Fat) have related to under-estimations of calorie content (Chandon & Wansink, 2007) and behaviors relating to over-eating (Schuldt & Schwarz, 2010; Wansink & Chandon, 2006). This research evince food marketing labels influence consumer selections and can develop on-going eating habits. The global epidemic and trend is rising obesity rates relating to over-eating high-density foods lacking nutritional sustenance (CDC, 2014; Lobstein, Baur, & Uauy, 2004; Popkin et al., 2012; Prentice & Jebb, 2003). However, can food marketing and symbolism influence consumers to consume less; within recommended daily values?

Lay/Implicit Theory and The Food Industry

To understand social and cognitive complexities, people use lay "implicit" theories to make sense of their environment (Plaks, Levy, & Dweck, 2009). Lay beliefs are core societal beliefs held by individuals in an environment or culture (S. R. Levy, 1999; S. R. Levy, West, & Ramirez, 2005).

Many of these beliefs are encompassed in common sayings like "you can't teach a dog new tricks" which imply a lack of ability to learn with age (S. R. Levy, Stroessner, & Dweck, 1998). Lay theories extend to causes for happiness (Furnham & Cheng, 2000), stereotypes (S. R. Levy et al., 1998), mental health disorders (Angermeyer & Matschinger, 1999; Furnham & Rees, 1988; Matschinger & Angermeyer, 1996), and health (Smith, Sullivan, Bauman, Powell-Davies, & Mitchell, 1999; R. P. Wilson et al., 2002). Societal trends and sayings have shaped beliefs about what constitutes good health (Smith et al., 1999; R. P. Wilson et al., 2002). By understanding these lay beliefs it is possible to study decision-making related to social conditioning.

The proverb 'An apple a day keeps the doctor away' (Phillips, 1866) captures the lay health belief that eating certain foods will provide health benefits that will allay illnesses warranting a visit to a medical professional. The proverb encompasses the concept that certain foods have higher nutritional value or properties that benefit overall general health over others. Whether or not certain foods are more nutritious than others, lay beliefs help make sense of the complexities when making food choices. This study investigates if these exalted properties (repeated over centuries) influences daily eating patterns captured in a measure of health (calories) (Khare & Inman, 2009).

Repetition and marketing influences consumer food selection (Jaeger & Harker, 2005). Over time, the food industry has shaped nutrition and public health policies (Nestle, 2013). Familiar is the "Got Milk" campaign and "Daily Food Guide Pyramid" recommending 3-4 servings of milk (Nestle, 2013). 'Milk mustache' celebrity endorsements and targeted marketing have played a role in influencing consumers to drink copious amounts of milk for stronger bones (Hsu & McDonald, 2002). Less studied, however, is the diurnal behavioral influence of consuming these foods with symbolic nutritional benefits. This study investigates the relative difference between similarly nutritious foods and exalted societal benefits placed on certain foods.

Social conditioning through lay beliefs of health foods is worthy of studying because it can influence consumer buying choices and potentially long-term health. Too often health fads perpetuated by marketing are eventually proven to have negative health effects (e.g. margarine is healthier than butter). However, they become woven into common public beliefs that it take years of education to undo. Studying how and the degree of influence lay health beliefs has on diurnal outcomes will reveal how consumers can be reached with less marketed nutritious wholesome foods (e.g. fruits and vegetables).

Hypotheses Development

Food consumption is influenced by social (Lupton, 1994) and environmental factors (Swinburn et al., 2004). Environmental factors (e.g. access to healthy foods or advertisements) can promote healthier eating and physical activity which reduce behaviors linked to obesity (Donavan, Janda, & Suh, 2006; Swinburn et al., 2004). Meanwhile, sedentary lifestyles, high intake of foods lacking nutrient, and snacks (i.e. chocolate doughnuts) are likely causes to obesity (Swinburn et al., 2004). Given widespread marketing of eating energy-dense and micronutrient-poor foods, researchers argue that these environments buttress weight gain and obesity (Swinburn et al., 2004). Likewise, an environment rich with fruits and vegetables hypothetically should reinforce health conscious decisions like consuming appropriate amounts in accordance to one's weight. Particularly, apples (with ubiquitous symbolic lay health properties) are expected to relate to the fewest additional average calories consumed compared to other fruit – accounting for calories eaten from the fruit.

H1: Apple will have greater healthy associations compared to Banana and Orange.

Given that the apple proverb relates to positive health, the converse should also be present in categorization. It is expected that banana and orange should be associated to unhealthy stimuli greater than apple.

H2: Apple will have fewer unhealthy associations compared to Banana and Orange.

Study 1

Pretest

To determine if participants can categorize objects without priming health notions and practice for the main task, words and pictures of furniture was used in a pretest. The pretest programmed in Qualtrics with JAVA script provided a new apparatus to assess understanding and ability to categorize presented objects. This also enabled participants to perform the main task without a learning curve of seeing one object and selecting one of two categories below.

This task assessed participants' (n = 373) ability to distinctly categorize words and pictures. Furniture and rooms were used as stimuli because they were unrelated to food (main part of study). Four bedroom and four living room object was presented to participants (words: bold Arial twenty-eight point font, pictures: 300x300 pixels). Participants selected between two categorical options: Bedroom/Living Room and Living Room/Bedroom (differing only by position as left or right). Once a participant selected a categorical option, the page automatically proceeded to the next object. Random sections and presentation of categorical options, balanced stimuli presentation to control for method bias.

Participants categorized four words and four pictures as objects in a bedroom or living room. Two words (mattress and wardrobe) and two pictures (nightstand and bed) typically appear in the bedroom, while the other two words (coffee table and sofa) and two pictures (easy chair and couch)

normally appear in the living room. Each participant made a total of 8 categorical selections. With 373 participants a total of 2,984 categorical selections were made. Selection for bedroom as opposed to living room were switched between the words and pictures. Objects were presented randomly in two groups: 1) "Bedroom" left and "Living Room" right option; and 2) "Living Room" left and "Bedroom" right option objects). New items appeared automatically after clicking their selection.

Descriptive statistics indicate the number of instances and average selections for each object (see Table 1). Exactly 1,492 room categorical selections had Bedroom/Living Room as the provided option and 1,492 selections with the mirror option (Living Room/Bedroom). The mirror option was converted to place all values on the same Bedroom/Living Room scale (Bedroom = 1, Living Room = 0). Combined these values constituted the number of times 'Bedroom' was associated with a bedroom object opposed to 'Living Room'. Each participant made a total of 4 bedroom and 4 living room categorical selections. 'Bedroom' opposed to 'Living Room' for bedroom objects was selected 1,348 out of 1,492 times with an average 'Bedroom' categorization 3.61 out of 4 selections. This same method was applied to the mirror categorization (Living Room/Bedroom). 'Living Room' opposed to 'Bedroom' for living room objects was selected 1,436 out of 1,492 times with an average 'Living Room' categorization 3.85 out of 4 selections.

Table 1. Descriptive Statistics Pre-test Furniture Categorization Task

	Bedroom Objects				Living Room Objects			
	Words		Pictures		Words		Pictures	
Object	Mattress	Wardrobe	Nightstand	Bed	Coffee Table	Sofa	Easy Chair	Couch
Presentation of Category	B/L	L/B	B/L	L/B	B/L	L/B	B/L	L/B
Categorization Count	354 (.22)	354 (.22)	280 (.43)	360 (.18)	358 (.20)	352 (.23)	363 (.16)	363 (.16)
Percentage	94.91%	94.91%	75.07%	96.51%	95.98%	94.37%	97.32%	97.32%

Note: N = 373, Standard deviations in parentheses, B/L and L/B denote the presentation of options as left/right below the stimuli.

To statistically analyze differences between categorization, living room selections were re-coded in the number of times bedroom was selected for these objects. The Chi-square percentage difference test indicated participants distinctly categorized bedroom objects with bedroom opposed to living room objects with bedroom ($\chi^2(1) = 2245$, $p < .001$). Paired sample t-tests between the bedroom to these living room selections indicated a significant negative correlation ($r = -.321$, $n = 373$, $p < .001$). This provided evidence for task understanding. Participants demonstrated the ability to make distinctions between presented objects and categorizes without priming. Results evinced that participants used prior knowledge to place objects within a given category without priming. Conceptualization of where and which category an unrelated food stimuli may associate with was uniform among participants. The task of categorizing one stimuli into one of two options was inherently clear with no apparent learning curve discrepancies.

Main Task

This study tested symbolic health associations socially conditioned with apples opposed to bananas and oranges. Do people associate apples with healthy stimuli more than bananas and oranges? Do people associate apples with unhealthy stimuli less than bananas and oranges?

Method

Participants and Procedures

The same participants from the pretest (n = 373) categorized healthy (4 words and 2 pictures) and unhealthy (4 words, 2 pictures) objects to one of the three fruits presented in pairs. Each healthy/unhealthy object was presented exactly six times to participants in sections (words: bold Arial twenty-eight point font, pictures: 300x300 pixels) (see Table 2). In each section, participants viewed the word or picture six times with the fruit options switched six times. Participants were given two

fruit options with each word or picture. A stimuli varied only in the two categorical options presented that participants could select. The six options follow: Apple/Banana, Banana/Apple, Apple/Orange, Orange/Apple, Banana/Orange, Orange/Banana. The categorical options were randomly presented followed by the mirror option. For example, if Orange/Apple was presented, Apple/Orange was presented next. Once a participant selected a categorical option, the page automatically proceeded to the next object. These random object sections and random presentation of categorical options reduced method bias through balancing stimulus presentation.

Table 2. Healthy/Unhealthy Stimuli for Categorization

	Healthy Objects	Unhealthy Objects
Words	Organic	Greasy
	Nutritious	Fatty
	Athletic	Diabetic
	Wholesome	Obese
Pictures		
		

For each section, participants viewed the same healthy or unhealthy object 6 times and made 6 categorical selections, totaling 36 categorizations. Each participant made a total of 72 categorical selections. With 373 participants a total of 26,856 categorical selections were made from all participants.

Results

Exactly a total of 2,238 healthy categorical selections had Apple/Banana as the provided option and 2,238 selections with the mirror option (Banana/Apple). The mirror option was converted to place all values on the same Apple/Banana scale (Apple = 1, Banana = 0). Combined (4,476 selections) these values constituted the number of times 'Apple' was associated with a healthy object opposed to 'Banana'.

This same method was applied to the other 5 comparisons (Apple/Orange Healthy Objects, Banana/Orange Healthy Objects, Apple/Banana Unhealthy Objects, Apple/Orange Unhealthy Objects, Banana/Orange Unhealthy Objects). Given the absence of clear general health associations bananas and oranges have to any of the stimuli, banana to orange categorizations was referenced as the baseline for comparison. 'Banana' opposed to 'Orange' for healthy objects was selected 2,177 out of 4,476 instances with an average 'Banana' categorization 5.84 out of 12 instances or approximately half of the presentations. An ANOVA test comparing categorization groups to Banana to Orange healthy objects was significant ($F(5, 2233) = 39.65$, $p < .001$) (see Table 3).

Table 3. Descriptive Statistics Comparing Average Healthy and Unhealthy Stimuli Selections

	Healthy		Unhealthy		Healthy-Unhealthy (Difference)	
Variable	Average	Percent	Average	Percent	Average	Percent
A to B	7.46	62.17	4.20	35.00	3.26	27.17
A to O	7.59	63.25	5.78	48.17	1.81	15.08
B to O	5.84	46.67	7.53	62.75	-1.69	-14.08

Note: A = Apple, B = Banana, O = Orange; DV = Selection of first fruit to second fruit.
Averages are out of 12 presented selections per participant.
Percentages are out of 4,476 total presented selections.

'Apple' opposed to 'Banana' for healthy objects was selected 2,783 out of 4,476 instances with an average 'Apple' categorization 7.46 out of 12 presentations. F-test comparison to the reference categorization (B to O Healthy) significantly differed ($M_{difference}$ = 1.62, F(1, 2237) = 7.81, p <.001) where 'Apple' was selected an average 1.62 instances more than 'Banana', than 'Banana' was selected to 'Orange' for healthy objects (Hypothesis 1). Further, 'Apple' opposed to 'Orange' for healthy objects was selected 2,828 out of 4,476 instances with an average 'Apple' categorization 7.58 out of 12 presentations. F-test comparison to the reference categorization (B to O Healthy) significantly differed ($M_{difference}$ = 1.75, F(1, 2237) = 8.38, p <.001). Apples were significantly associated to healthy objects on average a greater number of instances compared to bananas and oranges.

Meanwhile, 'Apple' opposed to 'Banana' for unhealthy objects was selected 1,566 out of 4,476 instances with an average 'Apple' categorization 4.20 out of 12 presentations ($M_{difference}$ = -1.64, F(1, 2237) = -7.87, p <.001). Apples were significantly associated to unhealthy objects on average a fewer number of instances compared to bananas and oranges. 'Apple' opposed to 'Orange' for unhealthy objects was selected 2,154 out of 4,476 instances with an average 'Apple' categorization 5.77 out of 12 presentations ($M_{difference}$ = -0.06, F(1, 2237) = -0.30 p = .77) (Hypothesis 2). Apples compared to oranges did not significantly differ in their association to unhealthy objects. 'Banana' opposed to 'Orange' for healthy objects was selected 2809 out of 4,476 instances with an average 'Banana'

categorization 7.53 out of 12 presentations ($M_{difference}$ = 1.69, $F(1, 2237) = 8.14$, $p < .001$). Bananas were significantly more likely to associate to unhealthy objects than oranges.

Summary of study 1 results

Widely accepted healthy and unhealthy words and pictures could be categorized distinctly to fruit. Behavioral categorization evidence demonstrated apples associated with healthy objects greater than bananas and oranges. Corollary, apples had the greatest healthy object associations compared to bananas followed by oranges (i.e. healthy associations: A > B > O). Similarly, participants made fewer unhealthy associations with apples compared to bananas.

Study 2

Hypotheses Development

This study quantifies the influence of social marketing and lay beliefs about fruit consumption on an indicator of general daily health (i.e. calories). Do consumers eat fewer daily calories with greater consumption of apples, compared to other fruit?

H3: Average daily calories consumed will differ among apples, bananas, and oranges consumed per day where apples will relate to the fewest additional average calorie intake followed by bananas and then oranges (Apples < Bananas < Oranges).

Social psychologists studied learning in the context of social settings, modeling, and through direct experiences (Bandura, 1971). Humans will imitate behaviors in the presence of others (Chartrand & Bargh, 1999). Chartrand and Bargh (1999) studied that positive attitudes were attributed to those who showed similar body language. Studies of couples in long-term relationships showed that facial and physical appearance converged over time (Zajonc, Adelmann, Murphy, & Niedenthal, 1987). Modeling behaviors of family members is a part of social learning that can become habituated into diurnal lifestyles (Bandura, 1971). Food selection and lay beliefs were expected to be modeled by household members.

H4a: Head of households' lay lean health beliefs will moderate the relationship of apples consumed per day on household's average daily calorie intake. Specifically, higher lay lean health beliefs and apples consumed per day will relate to a more than additive reduction in average daily calories consumed.

H4b: Head of households' lay lean health beliefs will have no interaction effect with bananas, oranges, and chocolate doughnuts consumed per day on household's average daily calorie intake.

Method

The National Purchase Diary (NPD) Group has collected National Eating Trends panel data since March 1980. This current study analyzes recorded food diaries from 2009-2010 and 2010-2011, following similar procedures in prior NPD panel data research (Khare & Inman, 2006, 2009). Heads of households completed entries for food and beverage consumption for all members within a household. Each entry documented approximate size and nutritional composition providing a calculated estimated calorie intake (dependent variable).

Analyzing average calorie intake differences across households with individuals nested suited two level hierarchical modeling ($\gamma_{00} = 26.18$, $p < .0001$) (Hox, 1998; Raudenbush & Bryk, 2002). Total participation equaled 7,307 individuals nested within 3,116 households. Infants ages 1-3 years old consume comparatively far fewer calories per day (1,400-1,000 or less) depending on exercise activity level (U.S. Department of Health and Human Services and U.S. Department of Agriculture, 2015). Hence, 350 infants were not part of the hierarchical linear modeling (HLM) analysis given that the dependent variable was average daily calorie intake. The researcher analyzed individuals (n = 6957) nested within households for unbiased HLM results with a large sample size (Maas & Hox, 2005).

Participation ranged from one to fourteen consecutive days (M = 9.58 days; ~10 days, SE = 0.48) depending on heads of household's diligence. Households participated in waves where each week a new set would record and report their consumption. Additional collected individual information included: gender (53% females), age (M = 41.73 years), height and weight (Mean BMI = 26.61), diet, medical conditions, exercise history/diversity, year participation started, and ethnicity

(87.98% White, 6.71% Black, 2.35% Asian, and 2.96% Other), and Hispanic identification (4.36% Hispanic). Household information collected included: household size (3.23 members) and income (M = 5.37; 1 =<$10K, …, 5 = $40K-$49K, …, 9 =>$100K).

Extensive information for each entry detailed meal occasion, location, and specific food or beverage item. For example, four rows would describe a lunch meal away-from-home consuming an apple, hamburger, can of diet soda, and ketchup added as a condiment. Each food item has its own row with calories and nutritional estimates. Food items were assigned NLINK codes. For each reported item, there are 184 NLINK2 general classifications codes (e.g. 'Fruit: Apples' 'Fruit: Citrus', 'Beverage: Regular', or 'Chicken') and 4,245 NLINK specific identifiers (e.g. 'Applesauce', 'Orange, Raw', 'Cola, Regular', or 'Chicken Thigh, Breaded') based on the USDA Food and Nutrient Database for Dietary Studies, (version 4.1, 2010).

Variables and Data Sources

Dependent Variable

The researcher aggregated diary entries and calorie consumption at the day level. Summed calories (dependent variable), macro-nutrients, and micro-nutrients were each divided by the participant's number of food diary days. Each participant had one row with their average food consumption values in the dataset for analysis. For instance, if a participant reported eating 58 items across ten days they had 58 rows initially; then after aggregation, this participant's food consumption sums were divided by ten days and represented with one row.

Independent Variables

Apple, banana, and orange consumption acted as independent variables. To test relative influence of apples (with symbolic health properties) on calorie intake, common nutrient rich fruit with

relatively similar calorie composition and size (i.e. bananas and oranges) was used. The typical commercially consumed fruits weigh the following: medium raw apples 3 inch diameter/125 grams (94.6 calories), medium raw bananas 7-$7^{7/8}$ inches long/118 grams (105 calories), and medium raw oranges 2-$2^{5/8}$ inch diameter/131 grams (62.6 calories) (U.S. Food and Drug Administration, 2016).

Over the course of food diary participation (M = 9.58 days, Range = 1-14 days), participants consumed one (n = 788), two (n = 384), and three (n = 270) apples. Participants consumed one (n = 830), two (n = 502), three (n = 320), four (n = 249), and five (n = 159) bananas. Participants consumed one (n = 460), two (n = 235), and three (n = 122) oranges. Participants consumed at least one apple and one banana (n = 1,195); at least one apple and one orange (n = 597); at least one banana and one orange (n = 652); and at least one of each of the fruit (n = 439) (see Table 4). Of the total 70,653 food entry days recorded for all participants the target fruits were eaten in 5,896 (apples), 9,306 (bananas), and 2,540 (oranges) days. The dataset provided ample values for consuming apples, bananas, and oranges at the daily level. Hence, the researcher aggregated fruit consumption across participants' full food diary participation. Two-level hierarchical modeling (opposed to three levels) suited this dataset and hypothesized variable relationships (Bryk & Raudenbush, 1992).

Table 4. Number of Participants that Consumed at Least One of Each of the Listed Healthy/Unhealthy Food Items

	Apple	Banana	Orange
Banana	1,195	-	-
Orange	597	652	-
Doughnut	104	159	72
Banana and Orange	439	-	-
Banana, Orange, and Doughnut	30	-	-

NLINK codes for raw apples and raw apples away-from-home (AFH) were counted for each person across all days of participation. These totals were divided by the number of days of participation by each person producing their average apple consumption per day. To make results sensible on average calorie intake because individuals vary in diurnal calorie consumption (e.g. quick options during the weekdays, hearty weekend meals), these totals divided by the number of average days participated (~10 days) produced average fruit consumption over ten days. Participants consumed approximately 0.83 apples/10 days (SE = 0.23, Range = 0-18), 1.31 bananas/10 days (SE = 0.03, Range = 0-30), and 0.36 oranges/10 days (SE = 0.01, Range = 0-15) (see Table 5). This procedure accounted for differences across days in food diary self-reporting.

Table 5. Means and Cross-Level Correlations

Variable		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Average Calories Per Day	1855.55																	
Individual-Level Predictors																		
2. Apples Per Day (A)	0.83	.10**																
3. Bananas Per Day (B)	1.31	.13**	.31**															
4. Oranges Per Day (O)	0.36	.07**	.27**	.22**														
5. Chocolate Donuts Per Day (D)	0.08	.12**	-.01	.05**	.00													
Individual-Level Controls																		
6. Gender (Females)	1.53	-.40**	.02	.02	.030*	.01												
7. Age	41.73	-.07**	-.01	.15**	.06**	-.06**	.01											
8. BMI	26.61	.16**	-.10**	-.02	-.03*	-.05**	.00	.35**										
9. Ethnicity	1.20	.02	.02	.02	-.01	.05**	.03**	-.05**	.									
10. Exercise Diversity	1.23	.03**	.11**	.11**	.08**	-.03*	.07**	-.05**	-.09**	.01								
11. Exercise History	2.90	.025*	.10**	.11**	.08**	-.03*	.05**	.07**	-.09**	-.01	.57**							
12. Dieting	0.35	-.03**	.04**	.07**	.03*	-.01	.06**	.22**	.16**	.02*	.08**	.08**						
13. Medical Condition(s)	0.66	-.05**	-.02	.05**	.02	-.02	.02	.45**	.30**	-.03*	-.03*	.02*	.36**					
14. Nutrient Rich Foods Index[a]	-30.80	-.22**	.22**	.25**	.17**	.02	.06**	-.10**	-.31**	-.02	.15**	.11**	.01	-.07**				
15. Year Participation (2009)	0.55	-.01	.01	.01	-.03*	.02	.00	-.08**	-.04**	.08**	.00	.01	-.01	-.05**	.01			
Household-Level Variables																		
16. Lay Lean Health Beliefs[b]	4.10	-.04**	.01	.05**	.02	.02	.01	.07**	.05**	.05**	.04**	.01	.12**	.07**	.03*	-.01		
17. Household Size	3.23	.11**	.02	-.08**	-.02	.05**	-.01	-.49**	-.16**	.04**	-.01	-.08**	-.14**	-.25**	-.01	.02	-.04**	
18. Household Income	5.37	-.01	.06**	.05**	.03**	-.06**	-.06**	.13**	-.08**	-.11**	.04**	.12**	-.01	-.03*	.07**	.13**	.07**	-.01

Notes: Level 1: n = 6,957 (individuals). Level 2: n = 3,116 (households)

[a]The Nutrient Rich Foods Index was modified excluding protein, saturated fat and added sugar from the measure. Cholesterol was added to the maximum recommended value portion of the NRF measure.

[b]Lay Lean Health Beliefs was measured with 3-item nutritional attitude measures.

*p <.1

**p <.05

Apples, bananas, and oranges are healthy food sources for vitamins and minerals. Whereas an unhealthy item should elicit higher calorie consumption that has a higher caloric value. Thus, chocolate doughnuts (as this proxy calculated exactly the same as the apples, bananas, and oranges consumed per day) was included. A chocolate doughnut was selected because of its relative shape comparable to apples and oranges. Doughnuts unlike an ice cream sundae, for instance, are easily eaten without utensils. Participants consumed at least one apple and one doughnut (n = 104); at least one banana and one doughnut (n = 159), at least one orange and one doughnut (n = 72); and at least one of each of the fruit and one doughnut (n = 30). Participants consumed approximately 0.08 chocolate doughnuts/10 days (SE = 0.01, Range = 0-9) following the same procedures to calculate fruit consumed over ten days. Participants consumed one (n = 234), two (n = 67), or three (n = 16) doughnuts across their food diary participation.

Moderator Lay Lean Health Beliefs

Heads of households completed nutritional attitude measures representing household-level beliefs. Three nutritional attitudinal items on 5- to 7-point Likert scales historically designed were converted to z-scores, formed the lay lean health beliefs scale: 'I eat leaner cuts of red meat', 'I would like to lose at least twenty pounds', 'I am actively trying to consume less cholesterol in my diet'. These items measured health attitudes towards becoming leaner. They reflect common beliefs to consume less for better health that have permeated in society over time.

Individual-Level and Household-Level Controls

Individuals vary biologically and physiologically. The researcher controlled for age, gender, body mass index (BMI), exercise diversity, exercise history, ethnicity, dieting, number of medical conditions, and year of participation. Data was collected in batches over two week periods from 2009

to 2011. The researcher controlled for the year of the start of their participation which was either 2009 or 2010.

Estimated calorie intake varies based on age (U.S. Department of Health and Human Services and U.S. Department of Agriculture, 2015). The researcher classified participants into five age groups (1 = 13 y/o or less, 2 = 14-18 y/o, 3 = 19-29 y/o, 4 = 30-50 y/o, 5 = 51+ y/o) as dummy variables following similar federal reporting practices (U.S. Department of Health and Human Services and U.S. Department of Agriculture, 2015). Participants between 19-30 years old functioned as the reference age group. Males in this age group are recommended to consume 2400-3000 calories, while females are recommended to consume 1800-2400 calories, depending on physical activity level. The potential curvilinear relationship between calories and age suited this method because adolescences and older adults consume fewer calories on average than adults.

Additionally, the researcher classified participants into four BMI groups (1 = Underweight, BMI < 18.5; 2 = Normal, BMI 18.5-24.9; 3 = Pre-Obese, BMI 25-29.9; 4 = Obese, BMI 30+) as dummy variables (Centers for Disease Control and Prevention, 2017; World Health Organization: Global Database on Body Mass Index, 2015). Participants with BMI's between 18.5-24.9 functioned as the reference BMI group. The potential non-linear relationship between calories and BMI suited this method because of higher calorie intake from participants with BMI's over 30.

Similarly, four ethnic group classifications (1 = Caucasian, 2 = African-American, 3 = Asian-American, and 4 = Other) were dummy coded. Asian-Americans functioned as the reference ethnic group. Hispanic/Latino ethnic classification (1 = Hispanic/Latino, 0 = non-Hispanic/Latino) was dummy coded and referenced non-Hispanic/Latino.

Participants reported performing any one or more of the follow activities: walking, running/jogging, swimming, bicycle riding, aerobic exercise, weight lifting, or other (exercise diversity M = 1.23 activities). On average participants exercised within the last 4-6 months one or more of these

activities [1) < 1 month, 2) 2-3 months, 3) 4-6 months, 4) 7-12 months, 5) 1 year +] (exercise history). The researcher accounted for household income and household size across households. On average households had three members (M = 3.23) and made between $20,000-$30,000 each year.

Nutritional Quality

The researcher used the Nutrient Rich Foods (NRF) Index to control for food quality (Drewnowski, 2010). The researcher modified the NRF Index, excluding calorie elements because the outcome variable of this study was calories (i.e. fat, protein, and carbohydrates because fat yields 9 calories per gram; and protein and carbohydrates each yield 4 calories per gram). The NRF Index places a value on participant's nutrient consumption relative to federal recommended standards based on age and level of exercise (U.S. Department of Health and Human Services and U.S. Department of Agriculture, 2015). The NRF Index is calculated by subtracting consumption of healthy nutrients from unhealthy nutrients. Participants' average daily values for healthy nutrients (i.e. protein, fiber, vitamin A, vitamin C, vitamin E, calcium, iron, potassium, and magnesium) is subtracted from maximum recommended values for unhealthy nutrients (i.e. saturated fat, added sugar, and sodium) (Drewnowski, 2010). The modified NRF index excluded protein from the healthy portion of the calculation; and saturated fat and added sugar (not collected in the dataset) from the unhealthy portion of the calculation. Cholesterol was added to the unhealthy portion of the equation to keep the proportion of healthy to unhealthy closer to the original index. The researcher calculated scores for each participant based on recommended age and gender intake for the eight healthy and two unhealthy nutrients. Bootstrapped (1000) paired sample correlations evinced the modified and original NRF Index (excluding added sugar) to be significantly related ($M = 0.93$, $SE = 0.00$, $p < 0.0001$) within the sample.

Analysis: Hierarchical Linear Modeling

The researcher applied the PROC MIXED HLM procedure in SAS 9.4 (Littell, Milliken, Stroup, & Wolfinger, 1996; Singer, 1998). The researcher set maximum likelihood estimations for normal nested random effects modeling (Raudenbush, Yang, & Yosef, 2000). Degrees of freedom was approximated with the Satterthwaite method (Berkhof & Snijders, 2001; Satterthwaite, 1946). Interaction terms followed the standard interaction cross-level equations (Curran, Bauer, & Willoughby, 2006). All independent variables were mean-deviated for this study (Hofmann & Gavin, 1998).

Results

Table 5 exhibits cross-level Pearson correlations for variables in this study. The effect of apple, banana, and orange consumption per day had a significant impact on average calorie consumption $\beta_{Apples} = 17.20$, $t(363) = 4.92$, $p < .0001 < \beta_{Bananas} = 25.49$, $t(657) = 9.66$, $p < .0001 < \beta_{Oranges} = 36.39$, $t(270) = 5.93$, $p < .0001$) (see Table 6). Log-likelihood ratio testing the effect of apple, banana, and orange consumption on average calorie intake (χ^2 (1) = 86.80, $p < .001$) yielded significant results; evincing at least one of the fruits' coefficient on calorie consumption significantly differed (Hox, 1998; Snijders & Bosker, 2012). Average caloric intake associated with apples per day was significantly smaller than bananas (χ^2 (1) = 6.00, $p < .05$) and oranges (χ^2 (1) = 12.80, $p < .001$) (Hypothesis 3). Similarly, the coefficient on bananas was significantly smaller than oranges (χ^2 (1) = 5.00, $p < .05$). Supplementary, on average eating one apple per day evinced consuming the least amount of calories followed by bananas and then oranges (A < B < O).

Table 6. Two-level HLM Estimates from Individuals Nested within Households Predicting Average Daily Calorie Consumption

Variable		Parameter Estimate	SE	t-Value	
	Intercept (Average Daily Calorie Intake)	1828.97	7.15	255.75	***
Individual-Level Predictors					
	Apples Per Day (A)	17.20	3.49	4.92	***
	Bananas Per Day (B)	25.49	2.64	9.66	***
	Oranges Per Day (O)	36.39	6.14	5.93	***
	Chocolate Donuts Per Day (D) (Unhealthy Food Proxy)	86.29	18.17	4.75	***
Individual-Level Controls					
	Gender (Female)	-422.51	7.33	-57.65	***
	Age <=13 y/o	-347.84	18.79	-18.51	***
	Age 14-18 y/o	21.70	19.34	1.12	
	Age 30-50 y/o	-107.31	14.85	-7.22	***
	Age 51+ y/o	-244.15	16.31	-14.97	***
	Underweight (BMI < 18.5)	-73.65	14.62	-5.04	***
	Pre-Obese (BMI 25-30)	38.30	10.96	3.50	***
	Obese (BMI 30+)	98.33	12.14	8.10	***
	Caucasian	59.24	45.99	1.29	
	African American	87.91	52.41	1.68	*
	Hispanic/Latino	-49.87	36.11	-1.38	
	Other	50.78	61.60	0.82	
	Exercise Diversity	10.79	5.29	2.04	**
	Exercise History	8.64	2.76	3.13	**
	Dieting	-8.75	5.38	-1.63	
	Medical Condition(s)	-7.35	5.09	-1.44	
	Nutrient Rich Foods Index[a]	-3.39	0.17	-19.89	***
	Year Participation (2009)	-1.27	12.89	-0.10	
Household-Level Variables					
	Lay Lean Health Beliefs[b]	-38.57	10.97	-3.52	***
	Household Size	27.02	4.96	5.45	***
	Household Income	2.10	2.66	0.79	
Household-Level Moderators					
	Apples Per Day (A) x Lay Lean Health Beliefs	-14.30	5.60	-2.55	**
	Bananas Per Day (B) x Lay Lean Health Beliefs	1.79	4.41	0.41	
	Oranges Per Day (O) x Lay Lean Health Beliefs	8.63	9.98	0.87	
	Chocolate Donuts Per Day (D) x Lay Lean Health Beliefs	16.81	22.77	0.74	

Notes: Level 1: n = 6,957 (individuals). Level 2: n = 3,116 (households)

[a]The Nutrient Rich Foods Index was modified excluding protein, saturated fat and added sugar from the measure. Cholesterol was added to the maximum recommended value portion of the NRF measure.

[b]Lay Lean Health Beliefs was measured with a 3-item nutritional attitude measure.

Values based on SAS Proc Mixed.

Estimation method = ML; Satterthwaite degrees of freedom.

Age group results are in reference to participants between ages 19-29 years old.

BMI group results are in reference to participants within normal BMI range (18.5-25).

Ethnic group results are in reference to participants that identify as Asian.

Year Participation results are in reference to 2009 compared to 2010

*p <.1

**p <.05

***p <.001

The log-likelihood ratio test comparing the coefficients of apples, bananas, oranges, and chocolate doughnuts (χ^2 (1) = 36.80, p <.001) on average calorie intake also yield significant results; evincing at least one of the foods' coefficient on calorie consumption significantly differed. Average

caloric intake associated with oranges per day was significantly lower from chocolate doughnuts (χ^2 (1) = 13.20 p <.001), demonstrating the coefficient of the high caloric unhealthy food proxy ($\beta_{\text{Chocolate Doughnuts}}$ = 86.29, t(114) = 4.75, p <.0001) was the highest on average daily caloric intake compared to apples, bananas, and oranges.

On par with federal estimates on calories intake (U.S. Department of Health and Human Services and U.S. Department of Agriculture, 2015), female participants (β_{Female} = -422.51, t(4652) = -57.65, p <.0001) consumed fewer average daily calories than men holding all other variables constant. Likewise, children between 4-13 years old ($\beta_{\text{Ages 4-13y/o}}$ = -347.84, t(5426) = -18.51, p <.0001) consumed fewer average daily calories that adults between the ages 19-29, holding all other variables constant. Teenagers between 14-18 years old consumed more average daily calories than adults between the ages 19-29, but was not statistically significant at the 0.05 alpha level ($\beta_{\text{Ages 19-29y/o}}$ = 21.70, t(4945) = 1.12, p = .26). Adults between 31-54 years old ($\beta_{\text{Ages 31-54y/o}}$ = -107.31, t(5717) = -7.22, p <.0001) and those 55 and older ($\beta_{\text{Ages 55+y/o}}$ = -244.15, t(6313) = -14.97, p <.0001) consumed fewer calories than adults between the ages 19-29, holding all other variables constant. The results support a decline in average calorie consumption above 50 years old, which parallels national guidelines (U.S. Department of Health and Human Services and U.S. Department of Agriculture, 2015).

Further, participants considered underweight ($\beta_{\text{BMI<18.5}}$ = -73.65, t(5815) = -5.04, p <.0001) consumed significantly fewer calories than those within normal BMI range (18.5-25), holding all other variables constant. Participants considered pre-obese ($\beta_{\text{BMI=25-30}}$ = 38.30, t(5596) = 3.50, p <.001) and obese ($\beta_{\text{BMI=30+}}$ = 98.33, t(5818) = 8.10, p <.0001) consumed significantly more calories than those within normal BMI range, holding all other variables constant. The results support a positive relationship between BMI and calories.

Participants that identified as African-American ($\beta_{\text{African-American}}$ = 87.91, t(3010) = 1.68, p <.10) consumed more average daily calories than Asian-American participants, holding all other variables

constant (though at the 0.1 alpha level). Caucasian ($\beta_{Caucasian}$ = 59.24, t(2956) = 1.29, p = .20) and 'Other' (β_{Other} = 50.78, t(3033) = 0.82, p = .41) ethnic groups also consumed more average daily calories than Asian-American participants holding all other variables constant, but the relationship was not significant. Hispanic/Latino participants ($\beta_{Hispanic/Latino}$ = -49.87, t(2910) = -1.38, p = .17) consumed fewer average daily calories than non-Hispanic/Latino participants holding all other variables constant, but the relationship was also not significant.

Calorie intake across 2009 and 2010 start of participation did not significantly differ ($\beta_{2010\ Start}$ = -1.27, t(4014) = -0.10, p = .92), controlling for annual dieting fads/trends (e.g. increased kale and alkaline water consumption). Control variables: dieting ($\beta_{Dieting}$ = -8.75, t(6863) = -1.63, p = .10), medical conditions ($\beta_{Medical\ conditions}$ = -7.35, t(6550) = -1.44, p = .15), and household income ($\beta_{Household\ income}$ = 2.10, t(3273) = 0.79, p = .43) did not have a significant relationship with average daily calorie intake. Household size significantly related to more average daily calories consumed ($\beta_{Household\ size}$ = 27.02, t(3371) = 5.45, p <.0001), indicating for each additional household member an additional 27.02 daily calories were consumed per individual, holding all other variables constant.

Meanwhile, exercise diversity ($\beta_{Exercise\ diversity}$ = 10.79, t(6809) = 2.04, p <.05) and exercise history ($\beta_{Exercise\ history}$ = 8.64, t(6832) = 3.13, p <.05) significantly related to more average daily calories consumed, corresponding to national guidelines where greater exercise relates to consuming more calories to recoup energy expended (U.S. Department of Health and Human Services and U.S. Department of Agriculture, 2015). Conversely, nutritional quality ($\beta_{NRF\ Index}$ = -8.75, t(6850) = -19.89, p <.0001) related to fewer average daily calories consumed.

Calorie intake varied across households. The effect of apple (γ_{10} = 2.09, p <.05), banana (γ_{20} = 3.81, p <.001), orange (γ_{30} = 2.90, p <.05), and chocolate doughnut (γ_{40} = 3.71, p <.001) consumption per day on average calorie intake varied across households. The main effect of head of household's lay lean health beliefs related to fewer average daily calories consumed across households ($\beta_{Lay\ lean\ health}$

$_{\text{beliefs}}$ = -38.57, t(3305) = -3.52, p <.001). Cross-level moderator analysis showed the effect of apples consumed on average daily calorie intake varied across households depending on lay lean health beliefs ($\beta_{\text{Lay lean health beliefs x apples}}$ = -14.30, t(367) = -2.55, p <.05) (Hypothesis 4a). The effect of apple consumption on average daily calorie consumption was 14.30 calories less in households with higher lay lean health beliefs, controlling for all other variables. Meanwhile, lay lean health beliefs with bananas ($\beta_{\text{Lay lean health beliefs x bananas}}$ = 1.79, t(700) = .41, p = .69), oranges ($\beta_{\text{Lay lean health beliefs x oranges}}$ = 8.63, t(263) = 0.87, p = .39), and chocolate doughnuts ($\beta_{\text{Lay lean health beliefs x chocolate doughnuts}}$ = 16.81, t(149) = 0.74, p = .46) were not significant on household daily calorie consumption (Hypothesis 4b). Results indicate households possessing higher parental lay lean health beliefs and consumption of more apples per day related to a net significant reduction in average daily calorie consumption; whereas the other fruit and chocolate doughnuts did not. Despite similar nutritional composition to other fruits, greater apple consumption in households with higher lay lean health beliefs altered eating behaviors reflected in a significant net reduction in calorie intake.

Summary of study 2 results

Within the context of social learning theory and lay beliefs this study found significant differences between the effect of consuming apples, bananas, and oranges per day on average calorie intake with a large food diary panel collected over several years. Results suggest the symbolic health attributes of apples had a significant relationship on average daily calorie intake. Average additional daily calories consumed ranked from lowest to greatest among the following food items: apples, bananas, oranges, and chocolate doughnuts (controlling for individual and societal level variables). Given the three fruits are each nutrient rich (e.g. oranges with vitamin C and bananas with potassium) with approximately the same calorie composition, apples influenced eating decisions (i.e. eating less or healthier). Cross-level moderation results imply the symbolic health attributes of apples and parental

lay lean health beliefs altered eating patterns reflected in significant more than additive reduction in average calorie intake. This study found significant relative differences between similarly nutritious food, explained by symbolic societal benefits placed on one (i.e. apples). To further investigate apples' unique lay health influence compared to other fruit, study two tested associations made with apples, bananas, and oranges to healthy/unhealthy stimuli.

Discussion and Conclusions

Over two studies, the results found apples to associate with the fewest calories in a big data HLM analysis and the greatest categorizations to healthy objects compared to bananas followed by oranges. The two studies measured health in opposing directions. First, fewer average daily calorie consumption, in contemporary society where excessive eating is related to higher BMI and averse health conditions (e.g. Type 2 diabetes), is a measure of general better health. Second, greater associations to healthy words like nutritious and pictures of broccoli, is a measure of health related thoughts. The studies found apples to associate favorably over bananas and oranges to both dependent variables. This provided converging evidence using two methods.

Limitations and Future Research

Well regarded panel secondary food diary data using a HLM method with individuals nested within households was utilized to study relative fruit differences on daily calorie intake. Yet, as with all studies, there are limitations. Food diaries entries were self-reported by heads of households. The researcher aggregated values across all days of participation, which accounted for learning curve and large calorie variations across days. Although there are services to calculate dieting information (e.g. Fooducate and EatingWell), self-reporting exact amounts remains part of food diary studies (Lowe,

Fraser, & Souza-Monteiro, 2015). Perhaps with the invention of a weighing apparatus connected to a full food database, precise food entries can be analyzed in the future.

Future research could induce health consciousness. Lay health beliefs imply decisions would favor utilitarian over hedonic options; and eating less opposed to more calories. However, in society, consumers are eating more seemingly healthy foods that are more adversely unhealthy at record pace (e.g. diet colas — low calorie drinks with indigestible artificial sweeteners). This fallacious paradigm that we need to consume more of something for better health undermines the common need to lose weight. Where did this counterproductive belief emanate from? What impact has messages and marketing contributed to this paradigm? Indeed, studying consumers averse to indulging (i.e. hyperopia) to those not could elucidate differences (Haws & Poynor, 2008). Haws and Poynor (2008) found consumers high on hyperopia favored luxury products considering their long-term appeal. Consumers with forethought may readily connect food with long-term outcomes (e.g. nutritional value, functioning organs, energy later in the day).

In addition, emotional eating may explain food quantity. With diminishing natural resources to feed and supply the world population at current rates (Pimentel, Harman, Pacenza, Pecarsky, & Pimentel, 1994; Pimentel & Pimentel, 2003), mindful consumption could address consumer demands through sustainable business methods (Sheth, Sethia, & Srinivas, 2011). Mindful consumption factors consumers' personal, environmental, and economic well-being. Persons that eat mindfully will tend to eat less opposed to those that are not mindful. Mindful health consciousness may invoke purpose and reduce eating to satiate the need to feel. Related is the common practice of eating while watching television. The presence of characters and stimulation may numb the need to feel connected while eating.

Public Policy Implications

Household Level Implications

Evident from lay lean health beliefs relating to reduced average daily calories consumed, heads of households' beliefs can influence food consumption behaviors. Apple consumption in households with high lay lean health beliefs showed a strong and significant reduction on average daily calories consumed, while this interaction effect was not present with bananas, oranges, and chocolate doughnut consumption. Eating foods like apples with symbolic health properties in households with these lay beliefs can have a multiplying effect on reducing average daily calorie consumption. Parents can influence what is available to eat in households and behavioral patterns (e.g. quantity) with their beliefs. Despite the overwhelming research and rising rates of obesity, results suggest it is possible to counter the epidemic by changing beliefs and re-branding nutritious unprocessed foods rich in vitamins and minerals (e.g. fruits and vegetables).

Similar to situations of dehydration, drinking water restores a healthy body fluid homeostasis. The body needs a steady daily restoration of essential vitamins and minerals through ingestion. Government policies recommend 3-4 servings of fruits and vegetables (i.e. MyPlate), but lack perceived necessity foods pushed with marketing campaigns (e.g. 'Got Milk?' and purchasing milk at grocery stores). Investment in marketing and re-branding foods publicly recommended can increase likelihood to purchase these foods. It can also better inform the public about essential vitamins and minerals obtainable in diverse balanced diets. Evident in study one with calorie reduction associated to better nutritional quality, consumers may eat less because their body is not craving nutrients from an unbalanced narrow diet. Health outcomes could improve by eating less malnourished calories; and ingesting more vitamins and minerals necessary for daily function. Instead of under-performing (e.g. dehydrated and undernourished), overall bodily functions can operate with necessary elements.

Individual Level Implications

Not all fruit are considered equal and certain foods symbolize societal values. Over centuries, the marketed apple proverb has permeated society, influencing perceptions on what is considered healthy (e.g. nutritious foods with benefits to avoid ailments). Over time these become lay beliefs, shaping supply and demand for foods sought because of what consumers value.

The health food industry has aggrandized in the twenty-first century. For instance, energy drinks, organic labels, protein powders, vitamin supplements, new diets (e.g high-protein diet), and so forth, tap into these consumer desires. But do these products actually improve health? Medical conditions like obesity and diabetes continue to rise despite these new health food products (CDC, 2014; Ebbeling et al., 2002; Lobstein et al., 2004; Popkin et al., 2012). For example, while there are USDA standards for organic certified labels, does it give consumers the license to consume more? Researcher found "organic" labels to associate with lower food calorie estimates (Schuldt & Schwarz, 2010). Eating greater quantities of foods high with added sugar and cholesterol is not healthy despite less exposure to pesticides per serving. Manipulation of lay health beliefs may have dauntingly contributed to a society passively over-eating (Friese, Hofmann, & Wänke, 2008; Grier, Mensinger, Huang, Kumanyika, & Stettler, 2007; Prentice & Jebb, 2003) and valuing gluttonous quantities at mealtimes (Wallendorf & Arnould, 1991).

Unhealthy foods lacking nutrition, containing excess fats, added sugar, cholesterol and calories are readily available to consumers (Drewnowski, 2005; Friel, Chopra, & Satcher, 2007; T. A. Wilson, Adolph, & Butte, 2009). These products feed consumer's addictive appetites, adopted into society over time (Drewnowski, Krahn, Demitrack, Nairn, & Gosnell, 1992; Nederkoorn, Havermans, Giesen, & Jansen, 2011). Among children the effects of food advertising and commercials are clear; children are influenced by advertisements and are more likely to desire the marketed products (Borzekowski & Robinson, 2001; Coon, Goldberg, Rogers, & Tucker, 2001; M. E. Goldberg, Gorn, & Gibson, 1978;

Halford, Gillespie, Brown, Pontin, & Dovey, 2004; Halford et al., 2004; Kotz & Story, 1994; Taras & Gage, 1995). When given a choice between two similar products, videotaped preschoolers demonstrated a distinct choice for products advertised in 30-second ads (Borzekowski & Robinson, 2001). Children from households that watch more television during mealtime were studied to eat more foods lacking micro-nutrients like pizza, salty snacks, and soda while eating less fruits and vegetables (Coon et al., 2001). Although Coon et al. (2001) also found an increase in meat and decrease in juice consumption, it is apparent that marketing has relationships between eating patterns and consuming heavily advertised beverages like soda. Public policies should promote fruits and vegetables so consumption becomes more habitual.

At the core of study two, participants ate fewer additional daily calories with more apples consumed compared to other fruit, holding all other variables constant. Given lay lean health beliefs were found as a moderator, this suggests that a healthier lifestyle includes eating nutritious foods and can be enhanced by one's philosophy about eating. For example, an apple may instill beliefs to make healthier choices, but one's philosophy can influence how much and what individuals surround themselves to eats on a long-term basis.

Findings from this research imply food symbolism and lay beliefs is a suitable frame to understand calorie intake, altered by health associative food consumption and behaviors. Apples may influence a person to believe that they live healthy lifestyles. Eating and food symbolism may have a connection to identity as captured in the popularized saying 'You are what you eat' (Brillat-Savarin, 2009). Identification as a 'healthy person' may increase their participation in healthy behaviors. Promoting a culture of healthy living is beneficial to the public. Persons can reap health benefits (e.g. energy for daily functions) and reduce risk for medical conditions (e.g. heart disease and diabetes) (Fries et al., 1993). The public can save on medical services and gain productivity from employees present in the workplace with fewer ailments (Cohen, Neumann, & Weinstein, 2008).

Conclusion

While calorie consumption remains multifaceted – relating to combinations of social, environmental, and physiological factors – the researcher revealed food symbolism to alter eating behaviors. Further research using this theoretical framework for multilevel modeling can aid policy implementation. Given the rise of global food and health related crises, understanding household and individual differences to eating behaviors can help develop better food policies to reshape culturally influenced health outcomes.

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CHAPTER 2

The Impact of Hypocritical Leadership on Brand Favorability and Turnover on Social Media

Abstract

Environmental sustainable corporate social responsibility (CSR) policies are a way companies try to fulfill expected institutionalized social responsibilities while signaling to the public that they are a company that supports sustainable practices. Given the benefits of advertising sustainability, companies have signaled sustainability without true environmental integrity, called greenwashing. While the eventual discovery of corporate greenwashing as a result of negative publicity has been found to result in consumer backlash, responses to positive or negative CSR publicity when a CEO professes environmental sustainable ethical leadership is not well researched. When a CEO proclaims pro-environmental policies, but publicity contradicts their statements, the public can view this leadership as hypocritical. This can lead to a potential backlash from consumers when it appears diametrically opposed to institutional expectations for environmental sustainability. Variability of CSR policies and lack of standards within each industry also makes the cost benefit analysis hard to measure across industries. This study investigated environmentally sustainable ethical leadership on brand favorability and turnover. Environmental concern moderated the modeled relationship within the context of institutional and social exchange theory.

Keywords: greenwashing**,** hypocritical leadership, ecological concern, corporate social responsibility, brand favorability, turnover

Introduction

Given the growing depletion of natural resources, waste from production and consumption, and damage cause by emissions to the planet, sustainable business leadership is needed to preserve our planet in peril (Daily & Ehrlich, 1992; Goodland, 1995; Ress & Wackernagel, 1996). Companies underestimate the gravity of corporate decision-making, relying on marketing, speeches, and advertised corporate social responsibility (CSR) policies to buffer culpability in averse business practices (Kitzmueller & Shimshack, 2012; Vanhamme & Grobben, 2009). However, with the rapid dissemination of information, corporations are often seized in hypocritical dilemmas that are perceived negatively by the public and damage sales (Kitzmueller & Shimshack, 2012). What are the effects of a CEO caught in this ethical dilemma on brand favorability and turnover from the company? Theoretically aligned with institutional and social exchange theory, CEOs perceived to be dishonest about their company's CSR policies will arguably have a negative impact on company perceptions.

Corporate sustainable development is an integral part of modern day business practice that includes economic prosperity (promotion of reasonable quality of life), social equity (citizens have equal access to resources and opportunities), and environmental integrity (reduced consumption and restoration of the planets limited land, air, and water resources) (Bansal, 2005). This corporate sustainable practice has become a part of institutionalized expected environmental responsibility (Campbell, 2007). Environmental strategic marketing management has predominately helped companies increase profitability by reducing production costs and building reputations that are considered environmentally friendly (Bjørner, Hansen, & Russell, 2004; Bragdon Jr & Marlin, 1972; Kasim, 2007; Klassen & McLaughlin, 1996; Lewis, 2003; Pickett-Baker & Ozaki, 2008; Rao & Holt, 2005). Given the ongoing occurrence of human caused environmental disasters and subsequent public concerns, companies have found it beneficial to market themselves as environmentally-friendly despite a lack of environmental integrity; a practice known as greenwashing (Athanasiou, 1996; Cherry &

Sneirson, 2011; Dahl, 2010; Delmas & Cuerel Burbano, 2011; Furlow, 2010; Parguel, Benoît-Moreau, & Larceneux, 2011; Ramus & Montiel, 2005).

The adverse ecological costs of bottled water highlight an industry dependent on contradictory business practices (Parag & Roberts, 2009). Bottled beverages have measurable exorbitant supply-chain water footprints compared to tap water (e.g. plastic, carbon emissions, label production) (Ercin, Aldaya, & Hoekstra, 2011). Chemicals like BPA (Huang et al., 2012; Lei et al., 2008) and PET (Papong et al., 2014) in water bottle plastics are toxic to humans. Without government policies in local water bills incentivizing recycling, dual pollution in manufacturing waste to local water sources and disposal occurs (Stavins, 2010). When these companies advertise supporting the Earth while polluting local water sources (e.g. Fiji water) (McMaster & Nowak, 2009), this establishes a hypocritical gap between business sustainability and environmental integrity.

Greenwashing is not only considered unethical, but it also infuses the marketplace with mix messages that can confuse consumers and (over the long-term) reduce trust consumers have with companies (Alves, 2009). Counter-intuitively, companies with high environmental performance with green and general advertising will be perceived by consumers poorly compared to companies with no advertisement because of this distrust (Nyilasy, Gangadharbatla, & Paladino, 2013). Social media has also played an integral role in exposing companies that claim to have environmental sustainable practices, but are actually greenwashing (Lyon & Montgomery, 2013). This research investigates the layer of greenwashing when corporate leaders are exposed in this hypocritical situation and the influence of this publicity on brand favorability and turnover.

Theoretical Development

Ethical Leadership

Ethical leadership has been defined as a person's behaviors to take responsibility for one's actions, promote/reward ethical conduct, demonstrate consistent integrity, act fairly, show concern, and listen to followers (M. E. Brown, Treviño, & Harrison, 2005; de Hoogh & den Hartog, 2008; Kalshoven, Den Hartog, & De Hoogh, 2011; Trevino, Brown, & Hartman, 2003). An ethical leader is categorized as a leader driven by values that impresses moral beliefs and self-concept onto followers (M. E. Brown & Treviño, 2006). Trevino et al. (2003) explains that ethical leaders are both moral people and moral managers. Moral people exemplify trustworthiness, honesty, and integrity when making decisions, taking the well-being of others into consideration. Moral managers behave, communicate, and enforce ethical standards to followers within a work organization.

Although ethical leadership is often the perception of following a code of ethics that can sometimes be misattributed by charismatic and likeable personalities (Gardner, 2003), managerial ethical behaviors and ethical decision-making is complex multistage process (Trevino & Brown, 2004). Ethical leadership requires critical thinking that reflects on individual moral behaviors and moralities of being a manager to find a solution that best fits a given situation (Trevino & Brown, 2004; Trevino, Hartman, & Brown, 2000).

Researchers argue that these reflexive abilities that utilize critical thinking skills are a moderating factor needed in leaders to help companies remain economically viable (Hind, Wilson, & Lenssen, 2009). These reflexive abilities include: systemic thinking, embracing diversity and managing risk, balancing global and local perspectives, meaningful dialogue and developing a new language, and emotional awareness (Hind et al., 2009). Unfortunately, when there is a lack of congruence between strong moral management and morality as an individual, the leader can be perceived as hypocritical (Trevino & Brown, 2004; Trevino et al., 2000). Poor ethical decisions can

backfire because of the consequences of decisions that discount the future, ignore low-probability events, had limited stakeholder consideration, and ignore the concept that the public will find out (Messick & Bazerman, 1996).

Institutional Theory

Institutional theory posits that individuals, organizations, and social groups behave in accordance to authoritative guidelines set by society (Dacin, Goodstein, & Scott, 2002; Eisenhardt, 1988; Geels, 2004; Meyer & Rowan, 1977; Tolbert & Zucker, 1999). These expectations are reinforced by interactions, social pressures, and decisions made by different parties within institutions (Meyer & Rowan, 1977; Tolbert & Zucker, 1999) . Over time these patterns can become habitual (Tolbert & Zucker, 1999). For example, corporations can designate a particular day off as a holiday like Thanksgiving, but a change in corporate policies where the day becomes a workday can effect attitudes within and outside of the organization. Given that these patterns become routines and do not face the same challenges that opposing behaviors face from social institutions, researchers argue that organizations will become isomorphic, perform procedural rational myths, and develop legitimacy of certain practices (DiMaggio & Powell, 1983; Meyer & Rowan, 1977; Scott, 2008).

In-line with institutional theory, industry leaders are in positions to make decisions that are environmentally conscious that take into consideration environmental sustainability through CSR policies (Campbell, 2007). While some leaders use marketing techniques for greenwashing (Alves, 2009; Furlow, 2010; Nyilasy et al., 2013), other companies have CSR policies that attempt to address social or environmental issues that can improve prospects for the company through supporting global sustainability (Cherry & Sneirson, 2011). By advertising or communicating that a company is environmentally friendly, companies set up the expectation that they will behave ethically on the standards of sustainable practices. This can be evaluated through perception and publicity of a

corporation's CSR policies on consumer behavior. This study focuses on the perception of ethical leadership from management through perceived actions and company publicity to meet institutional expectations of businesses that claim environmental sustainability.

Environmentally Sustainable Corporate Social Responsibility (CSR) Company Policies

The definition of CSR is not clear or finite within each industry. Each company can have corporate social responsibility policies, but the measurements and rewards of its success are undefined. However, researchers have found that publicity about corporate social responsibility has increased consumer brand favorability (Becker-Olsen, Cudmore, & Hill, 2006). Perceived corporate social responsibility in the areas of environment and philanthropy have demonstrated increased brand favorability and the likelihood a participant would buy from the company (Mohr & Webb, 2005).

Given the ambiguity that surrounds environmentally sustainable corporate social responsibility, companies have depended on management to respond to public pressure and find reasons to support such practices that align with company goals (Babiak & Trendafilova, 2011). The growing distrust between consumers and businesses has pressured companies to develop environmentally sustainable CSR policies to build a reputation with consumers that establishes a degree of social responsibility (Lewis, 2003). For example, in the hotel industry, environmentally sustainable policies practiced by elite companies have helped retain high-end market shares by preventing small and medium sized hotels from entering this market (Kasim, 2007). Despite environmental regulations, it is also in the interest of companies to develop sustainable practices because long-term goals can still be met with sustainable practices that decrease production costs and decreases pollution (Bragdon Jr & Marlin, 1972; Freedman & Jaggi, 1982; Rao & Holt, 2005).

Some companies have used eco-labeling to distinguish products and signal to consumers that particular products are environmentally friendly (Bui, 2005; Polonsky, 1994). For example, eco-labels

include “biodegradable” or “recyclable” (Polonsky, 1994). Yet, these labels are not always effective or successful because consumers have developed distrust from media attention to claims that are not truly environmentally friendly (J. D. Brown & Wahlers, 1998; Einsmann, 1992; Fierman, 1991; Ottman, 1995). This distrust can lead to consumer backlash where consumers reject products and develop distrust for brands (Crane, 2000; K. Lee, 2008; McDaniel & Rylander, 1993; Rex & Baumann, 2007). However, it is unclear if managerial leadership on environmental sustainability can have this same effect.

The complexity and diversity of environmental sustainable practices in different industries means that companies are dependent on creating their own best practices (Christmann, 2000). A proactive environmentally sustainable corporate social responsibility policy by management can be effective in creating long-term benefits by developing an environmentally friendly brand reputation (Bjorner, Hansen, & Russell, 2004; Pickett-Baker & Ozaki, 2008), lower production costs (Rao & Holt, 2005; Zhu & Sarkis, 2004), and strategic partnerships with environmental groups (Klassen & McLaughlin, 1996). Leaders of companies design these policies and can publicize these corporate social responsibility practices through public statements.

Social Exchange Theory

Social exchange theory explains that different parties exchange goods and services for sociological and psychology transactional purposes (Blau, 1964; Cropanzano & Mitchell, 2005; Homans, 1961). Social exchange theorists state that transactions can vary from one-time only to long-term with deeper interpersonal values (Cropanzano & Mitchell, 2005). Such values include trust, integrity, and morality (Cropanzano & Mitchell, 2005). In the context of ethical leadership, followers will evaluate leaders based on how they conduct transactions with integrity, demonstrate trust, and communicate moral ideals (M. E. Brown & Treviño, 2006; Dirks & Ferrin, 2002).

Ethical leadership in social exchanges extends not only between individuals, but also between institutions and individuals (Cropanzano & Mitchell, 2005). Institutions demonstrate ethical leadership through CSR policies with respect to other social institutions and the natural environment (Campbell, 2007). If social exchanges are congruent with the intent of communicated CSR policies, then arguably a corporation can be viewed as demonstrating ethical leadership through honesty and integrity. If social exchanges lack congruence, then a corporation can be viewed as demonstrating unethical leadership. The gap between what organizations communicate and differentiating outcomes sets up a hypocritical dilemma. When social exchanges communicated through CSR policies are not met, institutional members develop distrust and have the tendency to change behaviors accordingly (Giesler & Veresiu, 2014; Humphreys & Thompson, 2014).

Organizations are motivated to take part in social exchanges through CSR policies for instrumental, relational and moral, and interactional reasons (Aguilera, Rupp, Williams, & Ganapathi, 2004). These social exchanges can help with strategic marketing and profitability (Husted & Allen, 2006). This can also engender favorability from consumers and institutions that value environmental consciousness (Aguilera et al., 2004; Husted & Allen, 2006). CEO's are spokespersons for companies that market corporate policies (Ferns, Emelianova, & Sethi, 2008; Verhoeven, Van Hoof, Ter Keurs, & Van Vuuren, 2012). Interpretations of CEO's statements can influence trust in a company's CSR policies and corporate image (Verhoeven et al., 2012). This study investigates how consumers perceive ethical/hypocritical leadership and attitudes towards a company. The focus of this study is on CEO advertisement of CSR practices and their representation of ethical leadership on behalf of a corporation.

Publicity of Environmental Sustainable CSR

Participation in CSR policies is an active attempt by companies to meet business to society social contract while appealing to the firm interests (Carroll, 1991, 1999; Garriga & Melé, 2004). The process can generate internal (employee) and external (societal) benevolence that can increase profit margins (Campbell, 2007; McGuire, Sundgren, & Schneeweis, 1988). CSR publicity and practices have also been used to control brand image and influence markets (Becker-Olsen et al., 2006; Klein & Dawar, 2004; Sen & Bhattacharya, 2001). However, lesser known is the impact of ethical behaviors of executive management on company evaluations.

Environmental awards have been studied to improve stock prices suggesting that publicity of environmental policies can improve a company's profitability (Klassen & McLaughlin, 1996). Environmental awards can signal to consumers that a particular company is environmentally sustainable and develop a reputation of corporate sustainable practices (Miles & Covin, 2000). However, these benefits have initiated an oversaturation of environmental marketing regardless of merit because of the prospective benefits (Alves, 2009; Athanasiou, 1996; Delmas & Cuerel Burbano, 2011). Many corporations assume an environmentally sustainable marketing position despite warranted justification. When consumers uncover false advertisements, it can backfire, eroding reputation and resulting in a precipitous decline in brand favorability (Crane, 2000; K. Lee, 2008; McDaniel & Rylander, 1993; Rex & Baumann, 2007). Given the overuse and misuse of promoting green initiatives, institutional and social exchange theories juxtaposed explain why consumers may react negatively. Thus, consumers have developed a distrust for corporate eco-labeling because of the continued exposure of mislabeling and environmental damage that surfaces to the public (Rex & Baumann, 2007).

CSR Brand Publicity Outcomes

Corporations use CSR policies to help build brand favorability and generate publicity (Babiak & Trendafilova, 2011; He & Li, 2011). Brand publicity is not a static dichotomous situation where positive means favorable and negative means unfavorable brand attitudes (Keller & Lehmann, 2006). There is research that finds negative publicity can help brand attitudes (Berger, Sorensen, & Rasmussen, 2010; Petkova, Rindova, & Gupta, 2013). There is also research that finds negative publicity can damage brand attitudes (Högberg Marder & Lindvall, 2014; Monga & John, 2008; Votola & Unnava, 2006). Corporations can generate modest gains with CSR campaigns that raise reputation, brand identification, and credibility through online channels (Eberle, Berens, & Li, 2013). Yet at the same time, negative responses on these online platforms can have greater negative effects reversing gains (Eberle et al., 2013). This research suggests a stronger than linear negative effect from negative publicity.

Furthermore, there are opportunities to study organizational leadership and the impact of their public actions on company evaluations. This study investigates two forms of negative leadership publicity: negative leadership publicity and hypocritical leadership publicity. Both are expected to damage brand attitudes, but leadership caught in situations where consumers have contradicting messages sets up a larger perceived gap between institutional expectations and social exchange theories involving perceptions of ethical leaders.

In an attempt to promote favorable attitudes and fulfill social expectations from an institutional perspective, corporations engage in social responsibility policies (Campbell, 2007). Then as a part of intentional or unintentional business operations, environmental or social consequences subsequently occur. Organizations have used corporate social responsibility policies to buffer this negative publicity, but this decision may have greater ill-intended negative effects on brand attitudes (Chun & Giebelhausen, 2012; Laran, Dalton, & Andrade, 2011). The negative publicity is generated from

institutional expectations of corporations that communicate to the public that the organization is supposedly an environmentally sustainable company (Giesler & Veresiu, 2014; Humphreys & Thompson, 2014). The failure to behave accordingly to social exchanges communicated to the public creates the distrust that can alter consumer behavior.

Hypotheses Development

Consumer Backlash

Consumers can develop resistance to brand messaging, negative brand attitudes, and distrust of companies when unconscious negative associations are mixed with auspicious perceptions from marketing activities (Bui, 2005; Laran et al., 2011). Subliminal fifteen second exposures to the word "slogan" was significant in unconsciously cuing participants to perceive pricing slogans as deceptive messages designed to persuade consumers to spend more money with well-known retailers known for competitive pricing such as Walmart and Dollar Store (Laran et al., 2011). Such studies and different practices in marketing, adds to the level of distrust consumers have with corporations (Laran et al., 2011).

Although consumers are also responsible for environmental impacts because of product selection and demand for goods at a low price – which results in higher environmental costs – the burden is placed on companies to develop sustainable practices that meet their demands (Smith, Palazzo, & Bhattacharya, 2010). A considerable amount of research has focused on environmental business practices because of media exposure of corporate practices and subsequent concern from the public (Crane, 2000; Saha & Darnton, 2005). Companies can position themselves as environmentally friendly with eco-labels (Rahbar & Wahid, 2011), advertising (Polonsky, 1994), and green policies (Chun & Giebelhausen, 2012) that signal sustainable practices. However, in-line with institutional and social exchange theory where a gap between ethical corporate practices and public trust is breached, it

is hypothesized that contradictory information can forfeit these favorable attitudes and produce steep repercussions.

H1: Groups will differ in brand favorability and likelihood to turnover from making purchases from the company. Support for environmental sustainable ethical leadership will be positively related with brand favorability and negatively related to turnover. Specifically, participants in the ethical leadership group will rate the company with the highest brand favorability, followed by the control group, and then the hypocritical leadership group (lowest).

H2: Inversely, support for environmental sustainable ethical leadership will be negatively related to turnover. Participants in the hypocritical leadership group will have the highest turnover rate, followed by the control group, and then the ethical leadership group (lowest).

Evaluating written social media comments will reveal positive and negative thoughts relating to perceived leadership.

H3: Participants' comments between ethical leadership and hypocritical leadership conditions are expected to significantly differ in average positive and negative thoughts. It is expected for average positive thoughts to be higher for ethical leadership opposed to the hypocritical leadership. Meanwhile, it is expected for average negative thoughts to be higher for hypothetical leadership opposed to the ethical leadership.

H4: Further, a significantly higher average number of written characters are expected in the comments from the hypocritical leadership condition compared to the ethical leadership

condition. Participants are hypothesized to write more in response to negative information (hypocritical leadership) compared to positive information (ethical leadership).

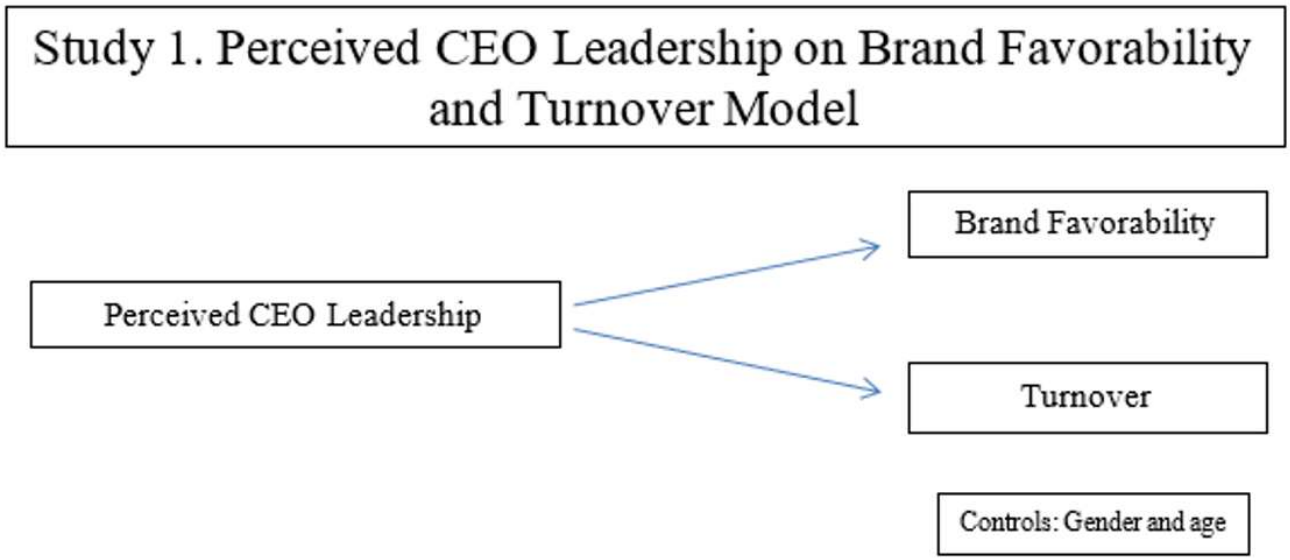
Study 1

Methodology

Research Design

The experiment was a randomized two conditions (ethical leadership and hypocritical leadership) with control design (see Figure 1). Figure 1 depicts the experiment design conditions for visual clarity.

Figure 1.



Participants

Participants from a national US sample participated in this study. Thirty-seven respondents failed to complete the study, eight failed a general attention check, twenty-six failed a manipulation check ("Early in this study you read about a housing company." Yes/No; the answer was 'No', it was a

water bottle company), and eleven failed an in-study attention check (select "Disagree"). After removing these eighty-two participants, 261 respondents remained for analysis.

Procedures

Participants started by completing consent for the study. They proceeded to see a CEO's ethical speech from a fictitious water bottle company called "H20". The speech was derived from quotes from entrepreneur and founder of Patagonia, Yvon Chouinard. This CEO has advocated for environmental sustainability and implemented CSR policies in business operations. The speech was designed to address three major areas of CSR; environmental, social, and economic support. It was exactly 534 characters (see the Appendix).

Through random assignment participants were placed into ethical and hypocritical leadership conditions. Participants in the ethical leadership condition viewed a positive news report shared on Facebook (see the Appendix). Meanwhile, participants in the hypocritical leadership condition viewed a negative news report shared on Facebook.

To set up the hypocritical perception, the positive news report affirmed the CEO's speech, while the negative news report contradicted. The contradiction was designed to create a gap in perceived leadership with strong moral management and weak moral person.

Participants then wrote a Facebook comment on the H20 Company below the Facebook news post. Manipulation checks immediately followed in these two conditions.

Then participants completed measures evaluating the CEO on ethical leadership, company brand favorability, likelihood to stop purchasing from the company (turnover) and demographic information.

Participants in the control condition moved from the consent form to a distraction task (i.e. "Please write about what you did yesterday."), to measures evaluating the CEO and the H20 company.

Control participants only viewed the image of the water bottle as any information about the company (see Figure 2). Without any prior information on this new fictitious water bottle company, participants in the control condition should produce neutral/baseline results.

Figure 2. H20 Water Bottle Stimuli Image

Manipulations and Measures

Corporate Social Responsibility publicity. CSR publicity was manipulated through exposure to a positive or negative news reports. Depending on condition, participants saw a positive, negative, no environmental news post about the company. The negative environmental publicity story countered the public statement made by the CEO on environmental sustainability, care for native populations, and

financial disclosure. The negative environmental publicity story was developed from real environmental incidents caused by bottling companies on natural resources and native people.

Each prompt contained the exact same number of words and was derived from public events that have occurred in the past for water bottle companies. Select words were chosen so there would not be a bias towards prevention or promotion sensitive participants. The "Green Leadership Award" was derived from government and business organization awards given to companies for positive environmental practices.

Ethical leadership manipulation. To verify proper priming of ethical leadership and hypocritical leadership, two questions checked this manipulation. Participants rated on a 7-point semantic differential scale (1 – Weak, 7 – Strong) the following statements: "Based on the speech, rate the CEO on moral management.", "Based on the report posted on Facebook, rate the CEO as a moral person." These questions followed the criteria established for differentiating ethical and hypocritical leadership (Trevino et al., 2000).

Ethical leadership. Brown, Trevino, and Harrison (2005) created and tested the 10-item survey on a 7-point scale to measure ethical leadership with items such as "Can be trusted" and "Sets and example of how to do things the right way in terms of ethics" (see the Appendix). Participants were asked to complete the survey after they see the manipulation. The survey was adapted from the original study and asks participants to rate the CEO of the water bottle company on the 10-items. The measure demonstrated high internal validity with a coefficient alpha score of 0.96 (Brown et al., 2005). Survey questions in this section were randomly ordered using the computer software to control for rater errors.

Dependent Variables

Brand favorability. Participants were prompted to rate brand favorability on a 9-point scale (1 – Highly Unfavorable, 9 – Highly Favorable), "Please indicate how much you favor the water bottle brand "H20"." The measure elicited responses on how favorable the company was perceived.

Turnover. For likelihood to stop patronage, participants rated on a 9-point scale (1 – Highly Unlikely, 9 – Highly Likely) the following, "Imagine of you previously purchased from the H20 company, please indicate how likely you would stop purchasing from this company." The measure captured how likelihood consumer were stop purchasing from the company.

Comment. For likelihood to comment, participants rated on a 9-point scale (1 – Highly Unlikely, 9 – Highly Likely) the following, "Indicate how likely you would comment on the H20 company on social media?"

Control variables. Ethical leadership and consumer environmental sustainability differences between gender and age groups were ruled out by controlling for these variables.

Results and Discussion

Manipulation checks. To test if the manipulation properly portrayed an ethical leader in one condition and a hypocritical leader in another, independent-sample t-tests were conducted. The results verified respondents in the ethical leadership (M = 7.12) and hypocritical leadership (M = 6.82) condition perceived the speech to demonstrate strong CEO moral management ($t(160) = 1.22$, $p = 0.224$). While perceptions of the speech were slightly lower for the hypocritical condition they did not significantly differ, but may suggesting that the negative report also slightly decrease impressions of the speech and previous perceptions of CEO's can effect subsequent information.

Meanwhile, evaluations of the CEO based on the negative news report in the hypocritical condition (M = 3.09) were significantly lower than those that viewed the positive news report in the

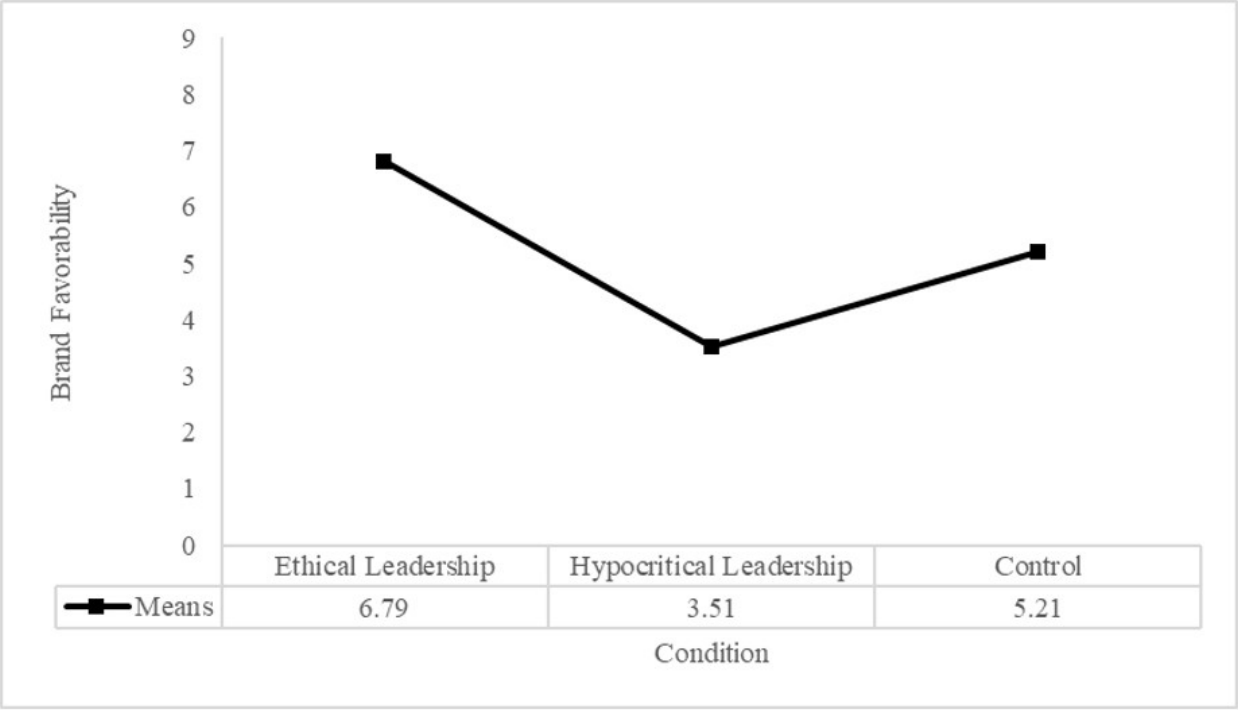
ethical leadership condition ($M = 6.94$, $t(160) = 13.17$, $p < 0.001$). The manipulation checks evinced groups were conditioned to perceive a CEO as hypocritical or ethical.

Ethical leadership. Participants in the ethical condition rated the CEO as having the highest ELS ($M = 5.28$, $SD = 1.03$), followed by those in the control condition ($M = 4.54$, $SD = 0.92$), and those in the hypocritical condition ($M = 3.38$, $SD = 1.38$). CEO leadership conditions (ethical, hypocritical, control) x perceived ethical leadership (ELS) ANOVA results evinced ELS scores significantly differed between groups ($F(2, 258) = 60.05$, $p < 0.001$). Tukey HSD post hoc comparisons evinced each group significantly differed with each other ($p < 0.001$).

A MANCOVA was conducted with brand favorability and turnover as the dependent variables. Ethical leadership served as a factor. Gender and age served as co-variates. One-way 3 (ethical, hypocritical, and control) conditions MANCOVA results indicated significant differences between groups on brand favorability and turnover (Wilks' $\Lambda = 0.56$, $F = 45.39$, $p < 0.001$).

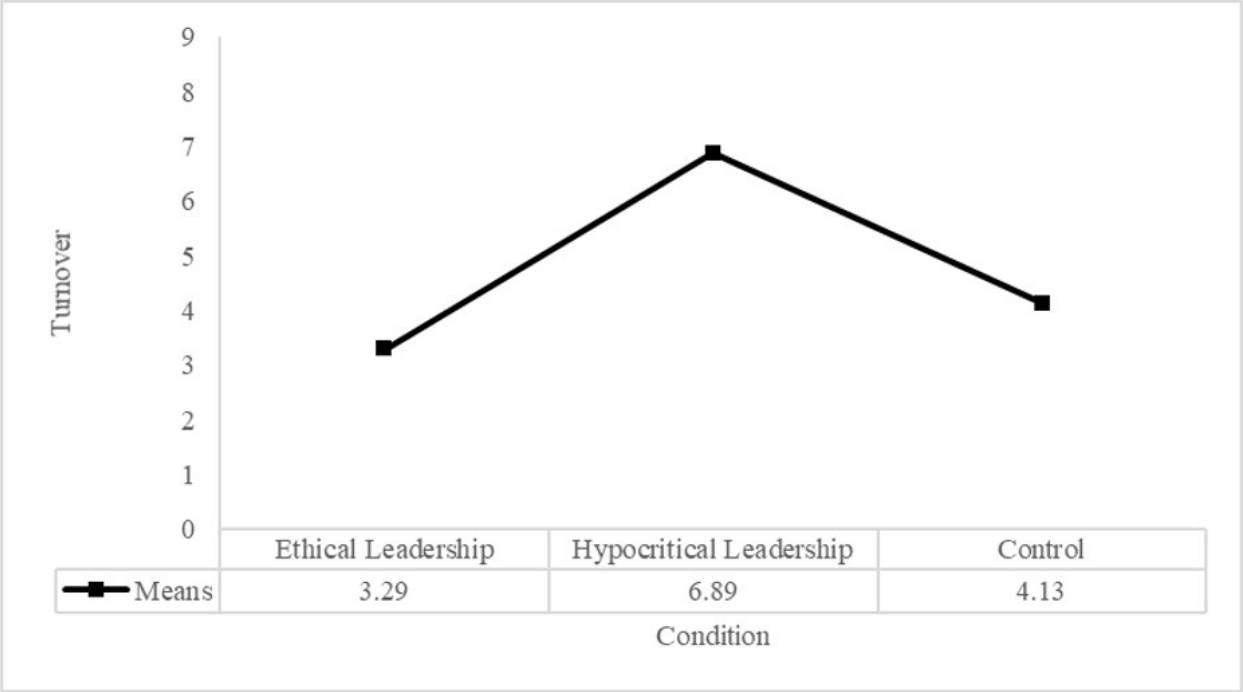
Brand Favorability. Participants in the ethical condition rated the bottle company with the highest brand favorability ($M = 6.79$, $SD = 1.70$), followed by those in the control condition ($M = 5.21$, $SD = 1.51$), and those in the hypocritical condition ($M = 3.51$, $SD = 2.00$) (lowest brand favorability) (see Figure 3). Bonferroni post hoc comparisons evinced each group significantly differed with each other ($p < 0.001$) in brand favorability.

Figure 3. Study 1 Brand Favorability Means



Turnover. Meanwhile participants in the ethical condition were least likely to turnover from the bottling company (M = 3.29, SD = 2.35), followed by those in the control condition (M = 4.13, SD = 1.79), and those in the hypocritical condition (M = 6.89, SD = 2.03) (most likely to turnover) (see Figure 4). Bonferroni post hoc comparisons evinced each group significantly differed with each other ($p < 0.05$) in likelihood to turnover.

Figure 4. Study 1 Turnover Means



Comment. Further, the pattern repeated for ANOVA results on likelihood to comment on social media regarding the news report for each condition ($M_{ethical\ condition}$ = 4.75, SD = 2.553, $M_{control\ condition}$ = 3.68, SD = 2.401, $M_{hypocritical\ condition}$ = 3.99, SD = 2.505; F (2, 269) = 4.327, p = 0.014).

Results demonstrated perceptions of the CEO's ethical leadership was influenced distinctly by manipulations. Directionally opposing dependent variables (brand favorability and turnover) had expected results where ethical leadership related to higher brand favorability and lower turnover; whereas hypocritical leadership related to lower brand favorability and higher turnover. Additionally, participants were more likely to comment when a CEO is perceived hypocritical.

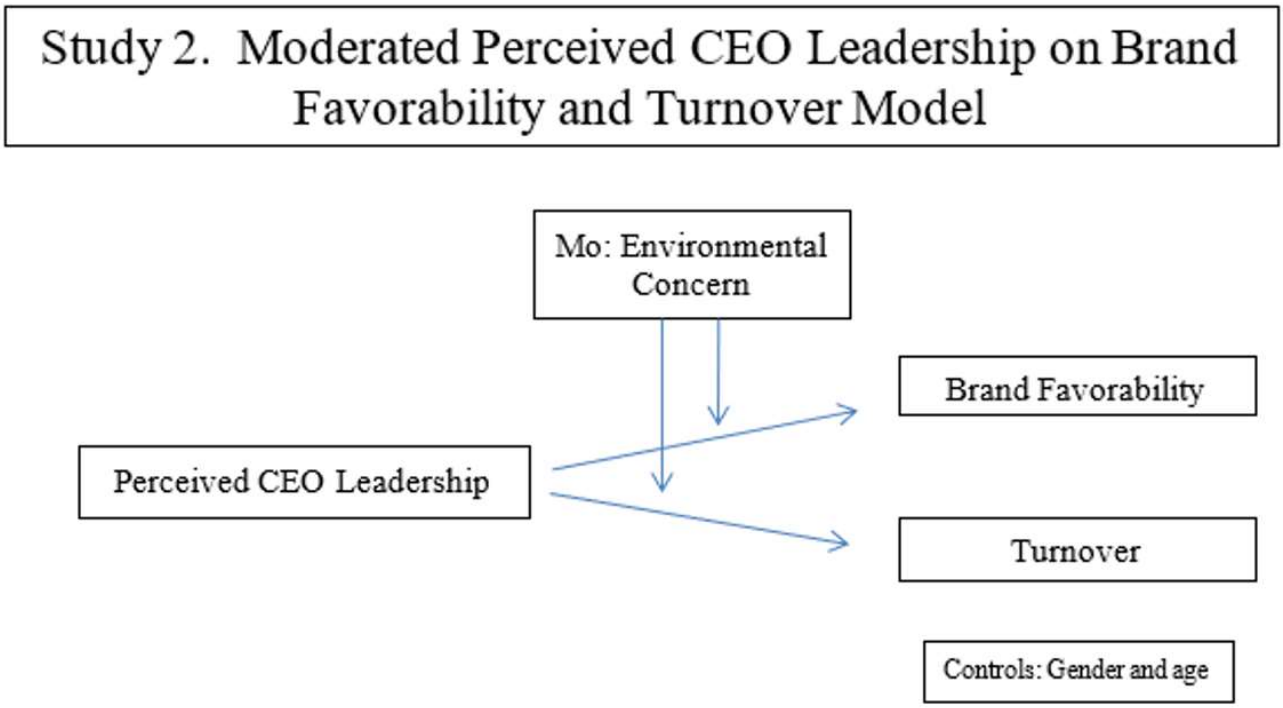
Study 2

To replicate results from study one and investigate explanations for differences, study two was conducted. The scenario of a water bottle company may elicit individual differences between those with high and low levels of environmental concern.

Environmentally Concerned Consumers

A considerable amount of research exists on profiling and identifying determinants of environmentally conscious consumers (Bui, 2005; Dembkowski & Hanmer-Lloyd, 1994; Laroche, Bergeron, & Barbaro-Forleo, 2001; J. A. Lee & Holden, 1999; Roberts, 1996; Roberts & Bacon, 1997; Schlegelmilch, Bohlen, & Diamantopoulos, 1996; Stone, Barnes, & Montgomery, 1995; Straughan & Roberts, 1999). Dembkowski and Hanmer-Lloyd (1994) explain that environmentally conscious consumers place value in protecting the natural environment. Lee and Holden (1999) argue that these consumers will alter behaviors when they experience internal distress and empathy. Straughan and Roberts (1999) explain that past literature examining demographic differences is insufficient criteria and altruistic beliefs may play a role. While some researchers have found inconsistencies in profiling environmental sustainability conscious consumers and a full profile may not be finite (Holmbom, Sarlin, Yao, Eklund, & Back, 2013; Ukenna, Nkamnebe, Nwaizugbo, Moguluwa, & Olise, 2012), authors tend to coalesce around certain attributes. Values include knowledge, beliefs, motives, and attitudes towards environmental issues (Laroche et al., 2001; Roberts, 1996; Roberts & Bacon, 1997; Schlegelmilch et al., 1996; Stone et al., 1995). Bui (2005) proposed that preexisting values, beliefs/knowledge, needs and motivations, attitudes, and demographics predicate intervening variables in determining company evaluations for the environmentally conscious consumer. Figure 5 illustrates the relationship model for this study.

Figure 5.



However, absent in the literature is the influence of executive leadership and the impact on selecting environmentally friendly product at a higher cost. Will publicity of environmentally unethical leadership decisions exponentially diminish returns? Will environmentally unethical leadership decisions cause the same consumer backlash effect observed from malpractice of eco-labeling? Following the literature discussed in this section, individual differences of environmental concern were expected to influence company evaluations between conditions.

Given the willingness of consumers to engage in social media backlash against company for misleading eco-labeling, this makes it plausible for consumers to also backlash against a company that demonstrates unethical practices through environmentally policies. In-line with institutional and social

exchange theory, this gap between CSR practices and social expectations on organizations to support environmental sustainability, justifies this paradigm.

H5a: The relationship between support for perceived ethical leadership and brand favorability will be moderated by consumers' environmental concern such that for the ethical condition, brand favorability will be greater for those with high environmental concern than for those with low environmental concern; whereas for the hypocritical condition, brand favorability will be greater for those with low environmental concern than for those with high environmental concern.

H5b: The relationship between support for perceived ethical leadership and turnover will be moderated by consumers' environmental concern such that for the ethical condition, turnover will be lower for those with high environmental concern than for those with low environmental concern; whereas for the hypocritical condition, turnover will be lower for those with low environmental concern than for those with high environmental concern

Method

Moderator Measure

Environmentally Concerned Consumers. Interest in environmentally responsible consumers led to the development of the Ecoscale (Stone et al., 1995). The scale demonstrated high internal validity with a coefficient alpha score of 0.93. A modified Ecoscale on three of the inventory's factors: 1) opinions and beliefs, 2) action taken, and 3) ability to act on a 5-point Likert scale (1 – Strongly Disagree, 5 – Strongly Agree) was used to shorten the study's length (see Appendix ###). The Ecoscale questions were randomly presented within each section.

Participants

Participants from a national US sample participated in this study. Thirty-four respondents failed to complete the study, nine failed a general attention check, twenty-five failed a manipulation check ("Early in this study you read about a mining company." Yes/No; the answer was no, it was a water bottle company), and eight failed an in-study attention check (select "Disagree"). After removing these seventy-six participants, 272 respondents remained for analysis.

Procedures

The procedures followed the steps in study one. However, participants in the ethical and hypocritical leadership conditions did not write a write Facebook comment. Instead all participants completed individual difference measures (i.e. environmental concern measure, each section counter balanced) before the demographics section.

Results and Discussion

Manipulation checks. Independent-sample t-tests showed respondents in the ethical leadership ($M = 7.48$) and hypocritical leadership ($M = 7.27$) conditions perceived the speech to demonstrate strong CEO moral management ($t(179) = 1.00$, $p = 0.32$).

Evaluations of the CEO based on the negative news report in the hypocritical condition ($M = 2.33$) were significantly lower than those that viewed the positive news report in the ethical leadership condition ($M = 7.44$, $t(179) = 21.13$, $p < 0.001$). The manipulation checks demonstrated group conditions, as in study 1 were replicated, where participants perceived a CEO as hypocritical or ethical.

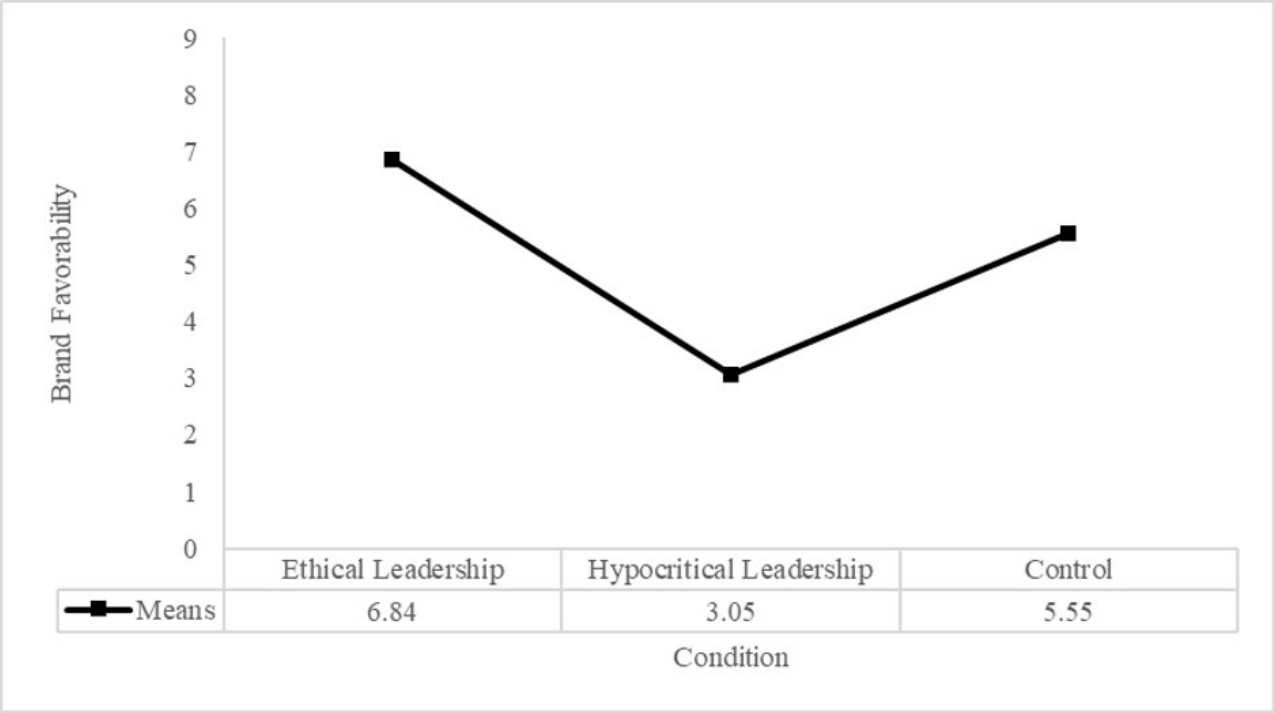
Ethical leadership. Participants in the ethical condition rated the CEO as having the highest ELS ($M = 5.35$, $SD = 1.08$), followed by those in the control condition ($M = 4.46$, $SD = 1.01$), and those in the hypocritical condition ($M = 2.91$, $SD = 1.23$). CEO leadership conditions (ethical,

hypocritical, control) x perceived ethical leadership (ELS) ANOVA results evinced ELS scores significantly differed between groups ($F(2, 258) = 110.65$, $p < 0.001$). Tukey HSD post hoc comparisons evinced each group significantly differed with each other ($p < 0.001$).

A MANCOVA with brand favorability and turnover as the dependent variables; ethical leadership and environmental concern as factors; gender and age served as co-variates was conducted. Two-way 3 (ethical, hypocritical, and control) x 2 (high environmental concern and low environmental concern) MANCOVA results indicated significant differences between groups on brand favorability and turnover (Wilks' $\Lambda = 0.42$, $F = 68.00$, $p < 0.001$).

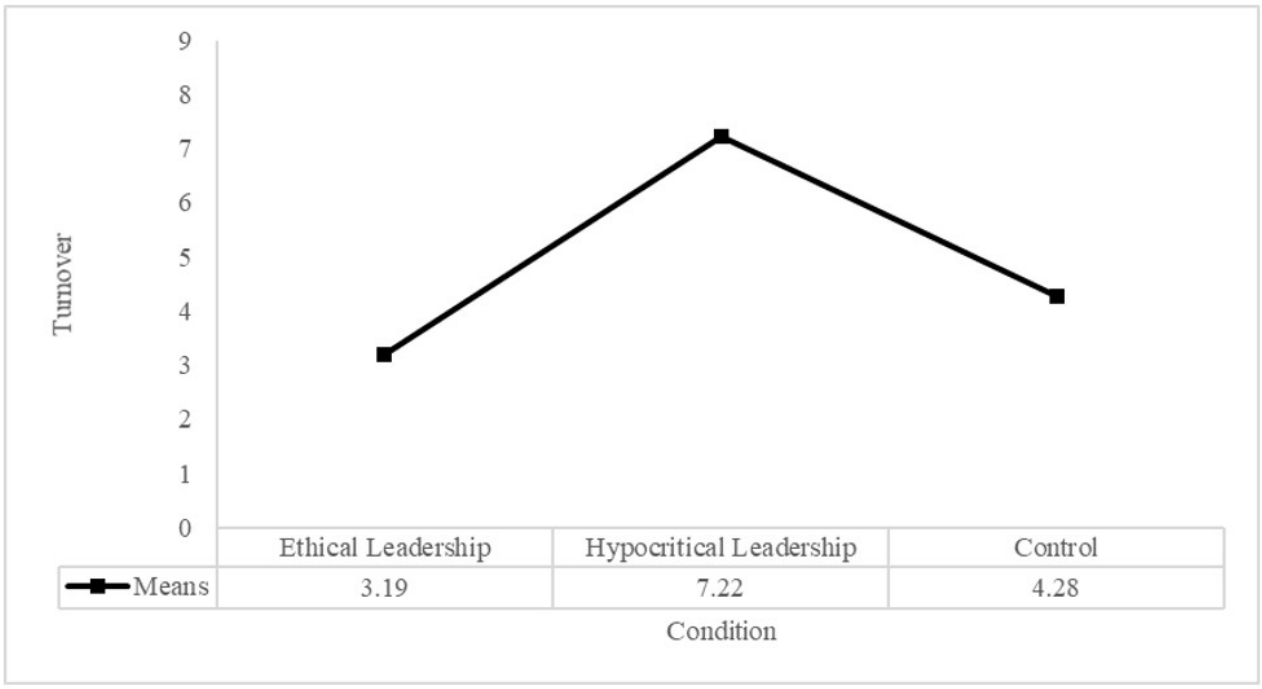
Brand Favorability. Following the similar results in study one, ethical condition participants rated the bottle company with the highest brand favorability ($M = 6.84$, $SD = 1.66$), followed by those in the control condition ($M = 5.55$, $SD = 2.34$), and those in the hypocritical condition ($M = 3.05$, $SD = 1.83$) (lowest brand favorability) (see Figure 6). Bonferroni post hoc comparisons evinced each group significantly differed with each other ($p < 0.001$) in brand favorability.

Figure 6. Study 2 Brand Favorability Means



Turnover. Conversely, participants in the ethical condition were least likely to turnover from the bottling company (M = 3.19, SD = 2.19), followed by those in the control condition (M = 4.28, SD = 1.76), and those in the hypocritical condition (M = 7.22, SD = 1.86) (most likely to turnover) (see Figure 7). Bonferroni post hoc comparisons evinced each group significantly differed with each other ($p < 0.05$) in likelihood to turnover.

Figure 7. Study 2 Turnover Means



Environmental concern. Two-way ANOVA results showed participants with high environmental concern will have a more than additive increase on brand favorability ($F (2, 251) = 11.37$, $p < 0.001$) and decrease on turnover rate ($F (2, 251) = 10.16$, $p < 0.001$) if the company professes environmental sustainability and is backed up by social media posts (ethical condition) (see Figures 8 and 9). Simple main effects analysis showed participants high on environmental concern were significantly more likely to favor the brand than those low on environmental concern in the ethical condition ($p < 0.001$) and less likely in the hypocritical condition ($p < 0.001$). Meanwhile, simple main effects analysis showed participants high on environmental concern were significantly more likely to turnover from the company than those low on environmental concern in the hypocritical condition ($p < 0.001$) and less likely in the ethical condition ($p < 0.001$).

Figure 8. Study 2 Brand Favorability Moderation Results

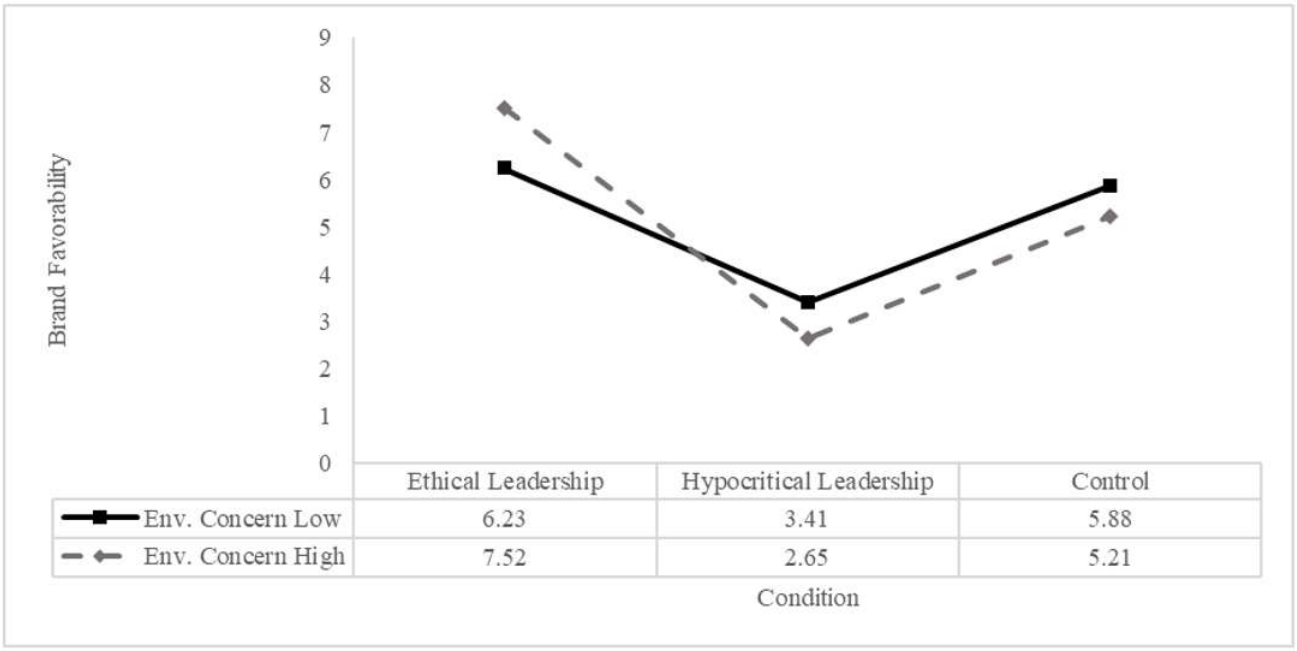
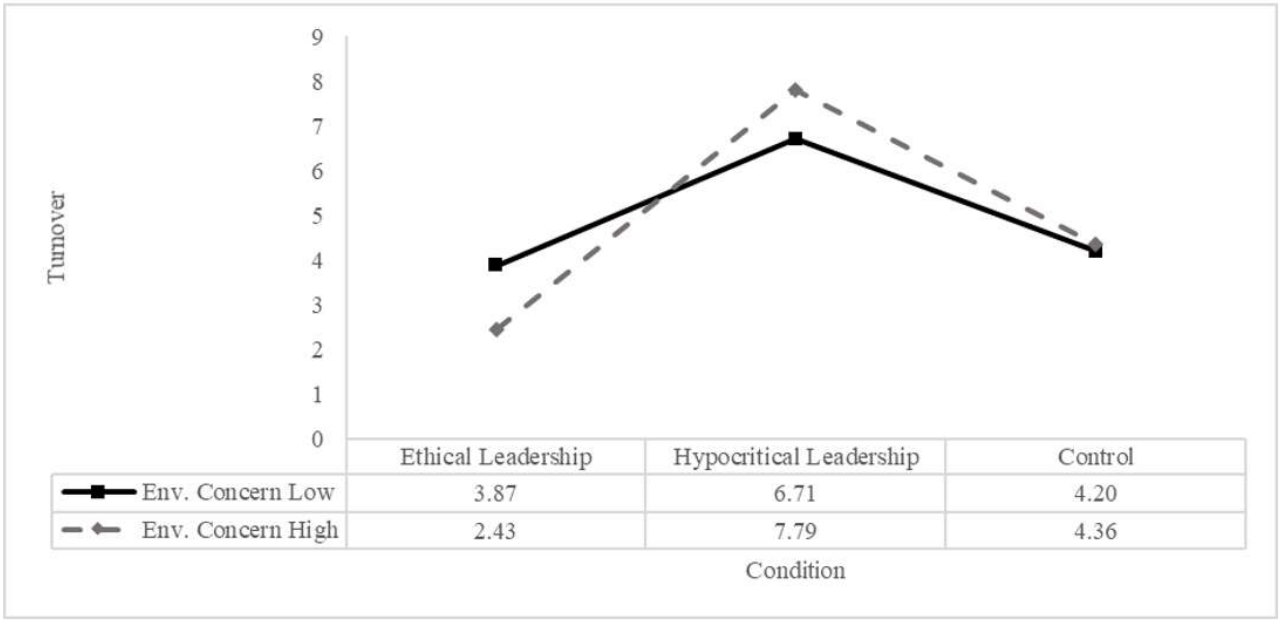


Figure 9. Study 2 Turnover Moderation Results



Study two successfully replicated findings from study one. Perceived hypocritical leadership adversely effected brand favorability, while increasing likelihood to turnover from purchasing from the

company. Successful priming also satisfied standards for established hypothetical leadership (strong moral management, weak moral person) and ethical leadership (strong moral manager, weak moral person) (Trevino et al., 2000). Moderator analysis evinced environmental concern related to a more than additive increasing effect on brand favorability and decreasing effect on turnover for participants high on environmental concern in the ethical condition.

Study 3

It is possible that the positive and negative news publicity may account for outcomes. Did the CEO's speech establish high leadership notions about a company followed by congruence (or lack there of) from the publicity report to influence perceptions? Or did the news reports primarily influence consumer perceptions? To investigate this possibility, study three was conducted adding two unethical leadership conditions conditions.

Method

Participants

Participants from a national US sample participated in this study. Forty-two respondents failed to complete the study, eight failed a general attention check, twenty-three failed a manipulation check ("Early in this study you read about a mining company." Yes/No; the answer was no, it was a water bottle company), and twelve failed an in-study attention check (select "Disagree"). After removing these eighty-five participants, 667 respondents remained for analysis.

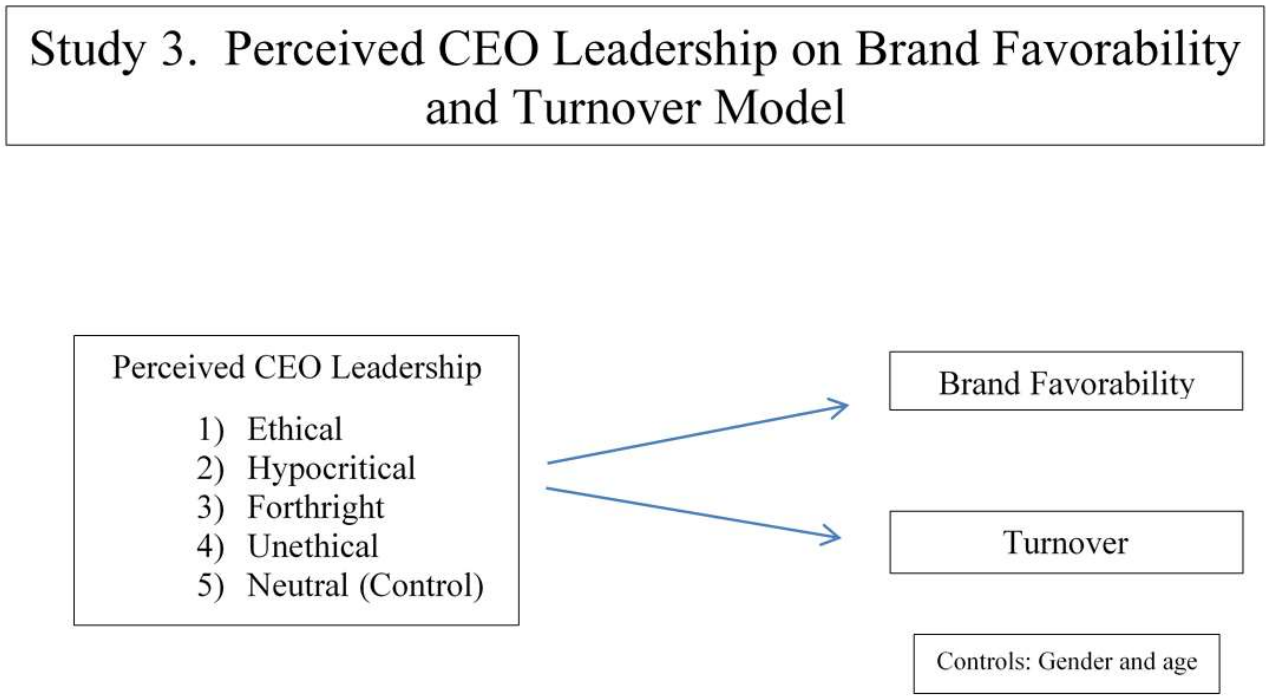
Procedures

The procedures repeated those in study two. However, random assignment to view an unethical CEO speech was added (see the Appendix). The unethical speech was exactly 534 characters; the same as the ethical speech for manipulation consistency. The speech was derived from quotes from General Electric (GE) chairman and CEO, John Francis "Jack" Welch Jr., known for some hard-line corporate stances like ranking and yanking employees performing in the bottom ten percent.

Results and Discussion

The experiment followed a two (ethical/unethical CEO speech) by two (positive/negative CSR publicity) between subject design with a control condition (see Figure 10).

Figure 10.



Manipulation checks. Participants rated the CEO on the ELS highest to lowest in the following order of conditions: ethical leadership (M = 5.47, SD = 0.84), control (M = 4.30, SD = 1.63), hypocritical (M = 3.58, SD = 1.32), forthright (M = 2.49, SD = 1.26), and unethical (M = 2.19, SD = 0.91). CEO leadership conditions (ethical, hypocritical, forthright, unethical, control) x perceived ethical leadership (ELS) ANOVA results evinced ELS scores significantly differed between groups ($F(4, 662) = 207.70$, $p < 0.001$). Tukey HSD post hoc comparisons evinced each group significantly

differed with each other ($p < 0.001$) with the exception of the comparison between the forthright and unethical conditions ($p = 0.169$).

A MANCOVA with brand favorability and turnover as the dependent variables; ethical leadership and environmental concern as factors; gender and age served as co-variates was conducted. 5 (ethical, hypocritical, forthright, unethical and control) x 2 (high environmental concern and low environmental concern) MANCOVA results indicated significant differences between groups on brand favorability and turnover (Wilks' $\Lambda = 0.29$, $F = 139.15$, $p < 0.001$)

Brand Favorability. Following the similar results in study one, ethical condition participants rated the bottle company with the highest brand favorability ($M = 7.37$, $SD = 1.49$), followed by those in the control condition ($M = 5.35$, $SD = 1.53$), then the hypocritical condition ($M = 3.35$, $SD = 1.80$), then the forthright condition ($M = 2.44$, $SD = 1.77$), and those in the unethical condition ($M = 1.71$, $SD = 1.11$) (lowest brand favorability). Bonferroni post hoc comparisons evinced each group significantly differed with each other ($p < 0.05$) in brand favorability.

Turnover. Meanwhile participates in the ethical condition were least likely to turnover from the bottling company ($M = 2.30$, $SD = 1.32$), followed by those in the control condition ($M = 4.55$, $SD = 1.73$), then the hypocritical condition ($M = 7.18$, $SD = 1.83$), then the forthright condition ($M = 7.40$, $SD = 2.10$), and those in the unethical condition ($M = 8.01$, $SD = 1.68$) (most likely to turnover). Bonferroni post hoc comparisons evinced each group significantly differed with each other ($p < 0.05$) in likelihood to turnover except between the hypocritical and forthright conditions ($p = 0.99$).

Results from study three replicated outcomes similar to study one and two. Each of the mean ratings for brand favorability were distinct between groups. Except for the hypocritical and forthright conditions, the mean ratings for turnover were distinct between groups. Participants distinguished presented CEO stimuli and attributed evaluations accordingly. These results indicate variation between

perceived leadership and how participants evaluate a company thereafter. Clear unethical leadership demonstrated the least favorable outcomes followed by forthright leadership.

Further, companies will likely fair better if they espouse CSR regardless of being caught in a hypocritical situation compared to companies that espouse forthright positions on business interests. In the forthright condition, despite the positive report, the company performed nearly poorly as the unethical company. These results indicate that consumers probably classified the company as unethical or distasteful even though positive news followed about the company.

Discussion and Implications

Results from the experiment address two major purposes of the study. First, the results demonstrated how ethical perceptions of a leader effect company brand favorability and turnover from repurchasing. Second, the study delineated the moderating role consumer environmental concern has on these outcomes. The outcomes provide evidence for institutional and social exchange theory within the context of CEOs and environmental CSR policies. CEO's play an integral role in meeting institutional expectations of ethical leadership through facilitation and articulation of CSR practices. Consumer responses to CEOs' behaviors represent consumer evaluations of social exchanges between the corporation and society.

Participants in the hypocritical condition (where the CEO espouses support, but there is negative environmental publicity) responded with the lowest brand favorability and highest likelihood to turnover compared to the control and ethical leadership conditions.

Meanwhile, in conditions where CEOs espouse support and receive positive environmental publicity, it was predicted consumers evaluate companies higher on brand favorability and exhibit a lower likelihood to turnover from the company. The relationship is expected to be directly proportional and positively correlated.

In addition, it is anticipated that environmentally conscious consumers will have a stronger reaction to negative environmental publicity compared to participants that are not as environmentally conscious. This was expected to be reflected in lower brand favorability and higher turnover.

These results would imply that CEO's take a risk in appearing hypocritical to consumers through greenwashing. The expected greater consumer backlash because of greenwashing suggests that CEO's may be better suited to remain silent about environmental sustainability if it not true. The cost of dramatic reductions compared to minimal decreases in brand favorability may not be worth the risk especially if CEO's have inside information about company practices that could eventually be exposed to the public.

However, if a company is holistically environmentally sustainable with no negative environmental publicity then companies could benefit from CEOs that tout a company's sustainable practices. This could be viewed as effective marketing of sustainable ethical leadership. If a corporation is not environmentally sustainable, it is suggested that leadership set tangible goals to reap long-term relationship benefits with consumers and environmental sustainability.

Limitations

As with all research, limitations are present. Given that the name of the water bottle company is generic (i.e. the H20 Company), generalizability to actual companies may not be present. Companies strategically position their products to differentiate against competition (Porter, 1979). Consumers value these different products for different and unique reasons. For example, a water bottle company, like Voss, may have high brand equity and loyalty from high-end consumers. Their consumers may overlook or disregard actions made by the company's CEO. Certain consumers may place a higher value for particular goods despite public information on corporate environmental practices.

Furthermore, publicity of negative CEO activity is not always present at the time consumers are making purchasing decisions. Consumers read about negative events years or moments before a consumer make purchases. There are situations of misinformation and lack of information that may influence outcomes. Some consumers only read packing information and form opinions from company messaging. Exploring time between negative publicity and decision-making on a respective product could provide more insight to temporal differences in this consumer behavior. This study looked at relatively close temporal exposure to company leadership news. Perhaps consumers need to be immediately reminded like from an accompanying shopper to influence a purchasing decision.

The product selection also limits findings. Results may be restricted to water bottle products and may not demonstrate the same correlation with other products. For example, according to the EPA, in 2009, 129 million mobile devices, 22.7 million televisions, and 29.4 million computer units were disposed ("Statistics on the Management of Used and End-of-Life Electronics. eCycling. US EPA," 2009). Awareness or interest on the impact of this electronic waste is minimal in comparison to other natural disasters. For example, millennials care about environmental issues and environmental conservation compared to non-millennials (Hanks, Odom, Roedl, & Blevis, 2008; Kotler, 2011; Straughan & Roberts, 1999). Millennials are more likely to use environmental product labels in the evaluative process of making a purchasing decision (Furlow & Knott, 2009). Yet the impact of environmental waste extends beyond labels to issues like over-consumption, recycling, reusing, and waste management. This suggests that consumers are selective in their environmental responsibility concerns and are influence by what media makes salient like in the case of millennials compared to non-millennials.

Moreover, the focus of this study is environmental sustainable CSR policies. Human exploitation, animal cruelty, and other travesties are ubiquitous. Unfortunately, because businesses provide goods or services using natural and human resources, connection to injustices are part of

business practices. Businesses can minimize malpractice, tackle the issue full-heartedly, or, as some companies behave, act in negligence while pontificating otherwise. Consumers may be more sensitive to non-environmental issues. For example, the public interest of a beached whale, cockfighting, or incidents regarding pit-bulls strike an emotional chord in humans that generates significant and swift action. Meanwhile, smartphone production in sweatshops with poor working conditions are accepted by consumers without much more than a few dissenting tweets on Twitter using a device made in such harsh working conditions. Hence, environmental sustainability issues may not generate the same response as these other issues. Attitudes towards different social and environmental issues vary to a large degree.

Future Research

Future research could investigate real instances of hypocritical and unethical actions committed by CEO's. Researchers can look at the historical data on publicity of CEO actions and stock prices of firms they represented. CEO's have taken different environmental sustainability positions leading into negative public events that have been similarly structured in this experiment's design. CEO's can have no environmentally sustainable position before a major disaster. Others have negative publicity about the company's environmental practices. Other CEO's can have strong positions on sustainability, but end up in hypocritical situations when negative publicity reaches the public.

Moreover, loyal brand consumers may be unaffected by negative environmental publicity or actions committed by a CEO. Marketers have found hard-core loyal customers to be consumers that purchase a particular brand regardless of price or additional information (Colombo & Morrison, 1989; Kamakura, Kim, Lee, & others, 1996; Yim & Kannan, 1999). If these consumers are sensitive to environmental issues, can hard-core loyal consumers be effected and persuaded by environmentally unethical leadership publicity?

Additionally, the current research manipulates environmental publicity by simply stating the prompt was seen online without an actual online user interface. Future research could simulate a social media website (i.e. a Twitter page) that is more realistic to what consumers may visualize in the real world. Such a simulation could decrease experimental error and increase accuracy of experimental results. It could also explore different ways corporations try to greenwash their products and if such strategies are detectable by consumers.

Future projects can investigate different greenwashing instances that expose CEO's in different hypocritical situations. For example, corporations of cleaning products advertise contributions to green initiatives while knowing that their product contains harmful chemicals attributed to damaging wildlife and environmental habitats. Different greenwashing scenarios may yield different results that may in fact be immune to the backlash effect described in this study.

In order to increase generalizability, it is possible to repeat the study with a larger sample that is more representative of the general population. With a large proportional sampling mix representative of the general population, it would be possible to extend findings to the region. Furthermore, perhaps repeating this study with participants from diverse backgrounds may reveal more information about different consumer behavior trends in this domain. For example, perhaps millennials are not different to non-millennials in evaluating CEO ethical practices when making a decision on products. Further research can provide additional answers and deepen the concepts of this study.

Future research could investigate long-term outcomes after CEO responses. It is quite possible that long-term outcomes are mitigated due to consumer's short-term memory. Many CEO's and companies remain in business despite unethical practices that continue. This research delineates a hypocritical ethical leadership situation and its immediate aftermath. Time and re-branding efforts may rectify public opinion.

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Appendix A

H20 Water Company Sustainable Ethical Leader CEO Public Statement

Ethical Speech Stimuli (Studies 1, 2, and 3):

The CEO of H20 (a water bottle company) spoke on the company's behalf to environmental activists and sustainable business leaders. The speech follows:
How you sail the seas is more valuable than reaching the destination. The journey is the purpose because nature gives the vital gift of self-discovery. Harm to the planet is the result of poor judgment and nearsighted financial decisions. At this company, making a profit is not our first purpose. It is to provide one of Earth's precious resources with sustainability at the helm. We believe in people first and care for the native people at the source. That is our mission, our reason for existence, and anchor in open waters.

Unethical Speech Stimuli (Study 3):

The CEO of H20 (a water bottle company) spoke on the company's behalf to environmental activists and sustainable business leaders. The speech follows:
How you take from the seas is vastly valuable to reach higher yields. The journey is the harvest because nature gives the vital gift of materialistic goods. Harm to the planet is the result of good judgment and brazen fiscal decisions. At this company, making a profit is our first purpose. It is to provide one of Earth's primary resources with production at the helm. We believe in shareholders first even at the expense of native people at the source. That is our mission, our reason for existence, and anchor in open waters.

Note: Participants in the neutral condition proceeded without seeing a speech. The ethical public statement was derived from quotes spoken by founder and former CEO of Patagonia, Yvon Chouinard. The company encourages environmental conservation. The ethical and unethical speeches are both exactly 534 characters to control for variance due to message differences.

Appendix B

Positive and Negative Environmental Publicity Message

Positive (Ethical) Environmental Publicity Prompt

While browsing the internet the next day you saw the following report:

Recently, the H20 water bottle company received the "Green Leadership Award" for their CEO's out-spoken environmental leadership on clean local drinking water and their "1% for the Earth" campaign where 1% of profits are donated to environmental groups for sustainable resources.

Negative (Hypocritical) Environmental Publicity Prompt

While browsing the internet the next day you saw the following report:
Recently, the H20 water bottle company received protests for polluting local drinking water sources linked to illnesses and is facing IRS investigation for their "1% for the Earth" campaign where 1% of profits are donated to environmental groups personally connected to the CEO.

Note: Participants in the control group did not see a publicity message. The exact number of characters is 278 in each prompt to control for variance due to message differences.

Appendix C

Survey Scales

Modified Ethical Leadership Scale (ELS) Brown et al. 2005 (1-Highly Unlikely, 7-Highly Likely)
Please rate the CEO of the water bottle company, H20, based on the following items:

Conducts his/her personal life in an ethical manner.
Defines success not just by results but also the way that they are obtained.
Listens to what employees have to say.
Disciplines employees who violate ethical standards.
Makes fair and balanced decisions.
Can be trusted.
Discusses business ethics or values with employees.
Sets an example of how to do things the right way in terms of ethics.
Has the best interests of employees in mind.
When making decisions, asks "what is the right thing to do?"

Environmental Concern (EcoScale) Stone et al. 1995 (1-Strongly Disagree, 7-Strongly Agree)
Opinions and Beliefs

The burning of the oil fields in Kuwait, the meltdown at Chernobyl, and the oil spill in Alaska are examples of environmental accidents whose impact is only short term.
Excess packaging is one source of pollution that could be avoided if manufacturers were more environmentally aware.
Economic growth should take precedence over environmental considerations.
The earth's resources are infinite and should be used to the fullest to increase the human standard of living.

Action Taken

I have my engine tuned to help stop unwanted air pollution.
I have my oil changed at installations which recycle oil.
The earth is so large that people have little effect on the overall environment.
People who litter should be fined $500 and be forced to work on road crews and pick up garbage.

Ability to Act

I do not purchase products that are known to cause pollution.
I vote for pro-environmental politicians.
I cut up plastic rings around six-packs of soft drinks.

Control Variables
Gender: What is your sex? (Male/Female)
Age: What is your age today?

CHAPTER 3

When a Hypocritical Leader Responds: The Influence of Apologizing or Doubling-Down on Social Media Likes after Negative CSR Publicity

Abstract

Companies expend excessive amounts of energy and effort to establish favorable public image. Business practices, however, are not without flaws. Reducing costs and using natural resources often conflict with tax codes (e.g. tax evasion) and ecological concerns (e.g. pollution). In response, corporations implement corporate social responsibility (CSR) policies to garner positive publicity. CEO's are often caught with contradictory statements to unsightly corporate news events. On behalf of companies, CEOs can apologize or double-down in response. This study investigates consumers' likelihood to purchase from a company and 'like' a company's social media posts after a CEO responds to apparent hypocrisy. Doubling-down significantly related to more neutral outcomes than apologizing. High social dominance orientation mitigated apology and double-down response differences on purchase intent. The researchers discuss strategic implications for ethical practice.

Keywords: ethical leadership, backlash, environmental sustainability, corporate social responsibility, purchase intent, social media likes, greenwashing

Introduction

Corporations go to great lengths to manage consumer perceptions so they are favorable (Kennedy, 1977; Kressmann et al., 2006). However, when there are transgressions, responding has demonstrated an ability to recover from loses in brand equity (Agyemang, 2011; Lohneiss & Hill, 2014). For corporations these transgressions are often contradictions to corporate social responsibility (CSR) practices that are marketed for environmental credit (Alves, 2009; Babiak & Trendafilova, 2011). This practice of green-washing, marketing a company as eco-friendly without meaningful policies that support the environment, has become rampant given heighten environmental concern from consumers (Athanasiou, 1996; Cherry & Sneirson, 2010; Dahl, 2010; Delmas & Burbano, 2011). 'Green' credentials is a growing standard for consumers to aid justifying purchase decision-making (Wong, Turner, & Stoneman, 1996).

However, given society's constant online information dissemination and social media activity, companies are increasing in positions to defend brand image from negative information (Morsing & Schultz, 2006; Vallaster & von Wallpach, 2013). While companies portray operations positively, news outlets and social media posts often report damaging information that appears to consumers as hypocritical (Wagner, Lutz, & Weitz, 2009). CEOs, representing and executing company policies, can respond to mitigate or counter this negative information. This study investigates whether apologizing or doubling-down in response to the negative information is more beneficial.

Literature Review

Corporate Brand Image and Corporate Social Responsibility

Favorable brand personality traits (e.g. cool, trendy, stylish) are marketed to consumers' to generate company perceptions (Jo Hatch & Schultz, 2003; Kennedy, 1977). These traits make companies stand out and increase the likelihood for consumers to purchase company products (Knox & Bickerton, 2003; Van Riel & Balmer, 1997). Many companies use corporate social responsibility policies as a means to increase brand image (H. He & Li, 2011). CSR policies ideally help the environment (e.g. planting trees for forest restoration), society (e.g. donation program to citizens in need), or economy (e.g. livable wages and weight loss incentive program) (Aguilera, Rupp, Williams, & Ganapathi, 2007; Babiak & Trendafilova, 2011; Montiel, 2008; Morsing & Schultz, 2006). Less studied, however, are negative traits established by hypocritical corporate events and CEO responses attempting to mitigate damage to company evaluations. Does apologizing or doubling-down salvage company evaluations? Which is a better strategy to retain customers and social media support?

Corporate Social Responsibility Hypocrisy

Businesses invest in CSR policies attempting to boost financial performance (McWilliams & Siegel, 2000). For example, the fast-casual restaurant chain, Chipotle Mexican Grill, is known for its sincere environmentally conscious CSR "Food with Integrity" program highlighting ingredient quality (e.g. non-GMO vegetables) (Ragas & Roberts, 2009). However, inconsistency in CSR practice and events can be perceived as corporate hypocrisy by consumers (Wagner et al., 2009). Even well-intentioned and ethical CSR practices are undermined by negative events. On two separate occasions in 2015, Chipotle was linked to Escherichia coli O26 infections sickening customers in eleven states in the initial outbreak and then in three more states in the second (CDC, 2016; Edmund, 2016). Though the official statement from the Center for Disease Control and Prevention included, "The investigations

did not identify a specific food or ingredient linked to illness in either outbreak." The public reduced patronage, fearing the restaurant's supposed quality ingredients were not safe (Walker & Merkley, 2017). The corporation showed concern by apologizing and doubling-down on their CSR policy practices to regain public trust (Gilliard, Hoffman, & Baalbaki, 2017; Walker & Merkley, 2017). The corporation has since recovered from tumultuous times (Gilliard et al., 2017), but it was partly because of the co-CEOs' responses to allay investor and public concerns (Walker & Merkley, 2017). This study investigates how consumers may immediately evaluate responses in a hypocritical CSR scenario.

Situational Crises and Image Restoration Discourse

Consumers search for the source of negative events to find reasons and causes (attribution theory) (Weiner, 1985, 1990, 2010). Emotions (i.e. anger and sympathy) derived from events will motivate behavioral responses (Weiner, 1985, 2006). Negative events associated to a company pose a threat to reputation and public standing (Bradford & Garrett, 1995; Härtel, McColl-Kennedy, & McDonald, 1998; Jorgensen, 1994). This threatens relationships with stakeholders and success of the business (Coombs & Holladay, 2005; McDonald & Härtel, 2000). Situational crisis communication theory posits an organization should respond to prevent anger and negative word-of-mouth behaviors (Coombs, 2004, 2007). Responses are recommended to come from a managerial team within 24-72 hours of the incident (Siomkos & Malliaris, 1992; Stockmyer, 1996). Despite corporate responses, perceptions will form about a company in the immediate aftermath (Mowen, 1980). Mowen (1980) found companies that took prior action to government intervention to be considered more responsible by consumers compared to post government intervention.

Image restoration theory explains when an act performed is perceived as offensive and the accused is held responsible, an entity has several methods to respond to repair their social standing (e.g. mortification/apologize, corrective action, reducing offensiveness of event, evasion of responsibility,

and denial) (Benoit, 1997; Dutta & Pullig, 2011). Responses are intended to defend an organization's reputation using post-crisis communication (Coombs, 2007; Coombs, Frandsen, Holladay, & Johansen, 2010). Corporations and individuals alike can fall into this compromising predicament, but the nature of the situation should dictate the type of response (Benoit, 1997; Coombs et al., 2010; Dutta & Pullig, 2011). For example, 'Were there technical issues from equipment?' (accident crisis), 'What happened to people or the organization from the crisis?' (victim crisis), 'Was there human-error in the manufacturing process' (preventable crisis), 'Did an organization conduct operations knowing ethical concerns or threats?' (intentional crisis) (Coombs, 2007). Attenuating intentional opposed to accidental crises are more difficult and expensive because consumers are most likely to reject managerial framing or perspective (Coombs, 2004; Coombs & Holladay, 2002). This study reviews an intentional crisis with ethical violations and response (apology and double-down) from a CEO on Facebook.

Social Media Marketing and Branding

Social media platforms provide a direct means to connect and share company content with consumers (De Vries, Gensler, & Leeflang, 2012; Hanna, Rohm, & Crittenden, 2011; Kietzmann, Hermkens, McCarthy, & Silvestre, 2011). Consumers participate in electronic word-of-mouth with greater trust and tie strength to a company (Chu & Kim, 2011). Microblogging on Twitter can act as an electronic word-of-mouth tool for consumers appraising brands (Jansen, Zhang, Sobel, & Chowdury, 2009). When there are controversies, consumers make judgments on social media based on company responses (Ahuja & Medury, 2010). Are companies doing something to address the problem?

Online evaluations of a company are commonly derived from the number of 'likes' and 'shares' (De Vries et al., 2012; Gerlitz & Helmond, 2013). Consumers go beyond transactions, participating in after-sale reviews and blogging that build long-term customer relationships (De Vries et al., 2012). These consumer reviews build credibility and trust for future transactions. Consumers will discern

positive and negative posts to make judgments of a company (Jansen et al., 2009). However, what is the relative impact in the kind of response made by companies? This study investigates qualitative comments and quantitative data within a social media context.

Ethical Leadership

Executive ethical leadership is the perception that a CEO is both a strong moral manager and moral person (Trevino & Brown, 2004; Trevino, Hartman, & Brown, 2000). Contrarily, a CEO perceived as a strong moral manager, but weak moral person is considered hypocritical because of contradictory information (Trevino et al., 2000). CEOs represent corporations and their actions reflect perceptions of how a company behaves on ethical standards (Mayer, Kuenzi, Greenbaum, Bardes, & Salvador, 2009). CEO's self-evaluations of ethical leadership correlated to employee perceptions of ethical climate in the workplace implying words and actions influence company wide beliefs in ethics (Shin, 2012). Ethical leadership is important because it signals to society if a corporation is following societal expectations to conduct business without undue harm to the environment, society, or workers (Turban & Greening, 1997; Wood, 1991).

With information continuing to rapidly disseminate on social media, more companies will encounter contradictory public situations. Optimizing how companies respond is vital to restore brand image from such negative publicity. Many companies, like Chipotle, have performed an all-of-the-above approach apologizing and doubling down. This creates a contradiction in itself implying some wrong-doing while shifting blame. Studying CEO responses isolated by condition, as in this study, reveals the influence on outcomes with one type of public statement.

Hypotheses Development

De Vries et al. (2012) found positive comments to correlate with likes of the company. Meanwhile, negative customer feedback weakened sales and likelihood to purchase (Chevalier & Mayzlin, 2006; Dellarocas, Zhang, & Awad, 2007). Researchers argue degree of social media engagement can be measured by the 'Like economy' or the number users that click the 'like button' (Gerlitz & Helmond, 2013). Social media return of investment should consider both short-term sales and long-term customer engagement built on forums expressing support (Hoffman & Fodor, 2010). Further, text analysis of customer posts can provide insightful customer evaluations of companies (W. He, Zha, & Li, 2013). Less studied are comments relating to CSR posts. Comment length and quality can illustrate the veracity of users trying to convince others. Comments require time and effort, capturing attitudes towards events.

H1: The number of characters in the apology response condition comments will be greater than those in the double-down response condition comments.

Responding on social media to situational crises reaches a wider audience and rapidly in contemporary times (Jin, Liu, & Austin, 2014). Researchers believed apologizing in victim crisis situations to be the most effective response method where a company forgives and accepts responsibility (Benoit, 1997; Coombs et al., 2010). However, researchers conducted further studies and found other methods to be equally effective or more effective depending on the type of crisis (Claeys, Cauberghe, & Vyncke, 2010; Coombs & Holladay, 2008, 2009). Coombs and Holladays (2008) found sympathy, compensation, and apology responses to have no significant difference on reputation. The admission of responsibility appears to make the company culpable for the crisis. Meanwhile, consumers with an external locus of control (i.e. events controlled by external forces in the

environment) preferred denial responses because attribution to outside forces were perceived as more responsible (Claeys et al., 2010). In circumstances where companies are unfamiliar and less prior information is available, consumers will attribute more uncertainty in their reasoning. A denial can exploit this skepticism and reduce reputation damage. It is expected consumers are more likely to accept a manager's framing of the crisis situation when a denial is issued because it will cast doubt on company responsibility for a crisis.

H2a: After exposure to a CEO's social media apology or double-down response on Facebook, participants in the apology and double-down conditions will significantly differ in their purchase intent. Specifically, average purchase intent will be higher for the double-down condition than in the apology condition.

H2b: Similarly, likelihood to 'like' on social media will be higher for the double-down condition than in the apology condition.

Business Sustainability

Business sustainability is the long-term belief and outlook in conserving resources that are required for business operations (Bansal, 2005; Coyne, 1986). Business sustainability is seen as a profitable future orientated practice because businesses increase efficiency and maintain a cycle of necessary supplies (Coyne, 1986). Some researchers argue sustainability is a moral issue because future generations depend on the availability of resources (Bansal & DesJardine, 2014; Vesilind, Heine, & Hamill, 2007). However, less studied on ethical leadership are consumer beliefs of how closely a leader should follow sustainability practices. Consumers may or may not believe a leader should conduct business based on sustainability (e.g. concern for natural resources).

H3a: The relationship between perceived CEO leadership and purchase intent will be moderated by moral sustainable business beliefs such that for the apology response, mean intent to purchase will be greater for those with low moral sustainability business beliefs than for those with high moral sustainability business beliefs; whereas for the double-down response, moral sustainability business beliefs will not be associated with mean intent to purchase.

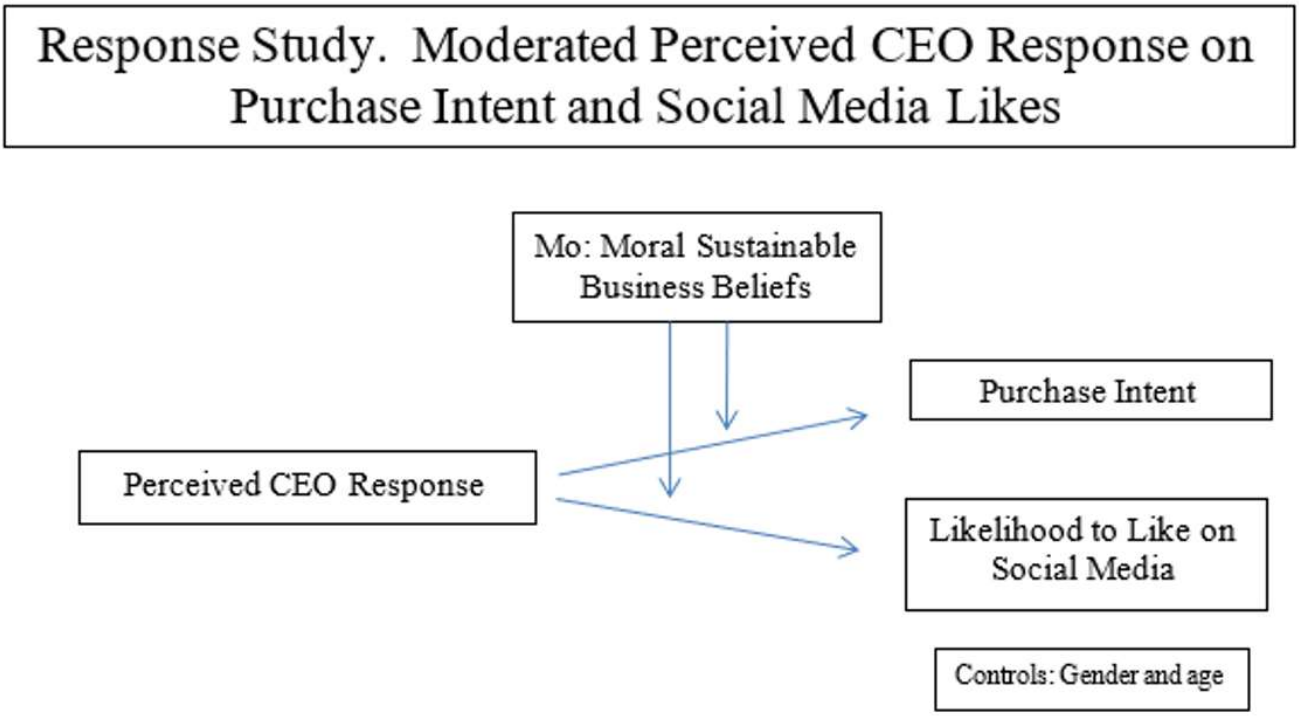
H3b: The relationship between perceived CEO leadership and likelihood to 'like' on social media will be moderated by moral sustainable business beliefs such that for the apology response, likelihood to 'like' on social media will be greater for those with low moral sustainability business beliefs than for those with high moral sustainability business beliefs; whereas for the double-down response, moral sustainability business beliefs will not be associated with mean likelihood to 'like' on social media.

Method

Research Design

The experimental design was a randomized two conditions (apology response and double-down response) with control design (see Figure 1). Figure 1 depicts the experiment design conditions for visual clarity.

Figure 1.



Participants

A national US sample participated in this study. Twenty respondents did not reach the end of the study, six failed a general attention check, seventeen failed a manipulation check ("Early in this study you read about a mining company." Yes/No; the answer was 'No', it was a water bottle company), and eleven failed an in-study attention check (select "Disagree"). After removing these fifty-six participants, 179 respondents remained for analysis.

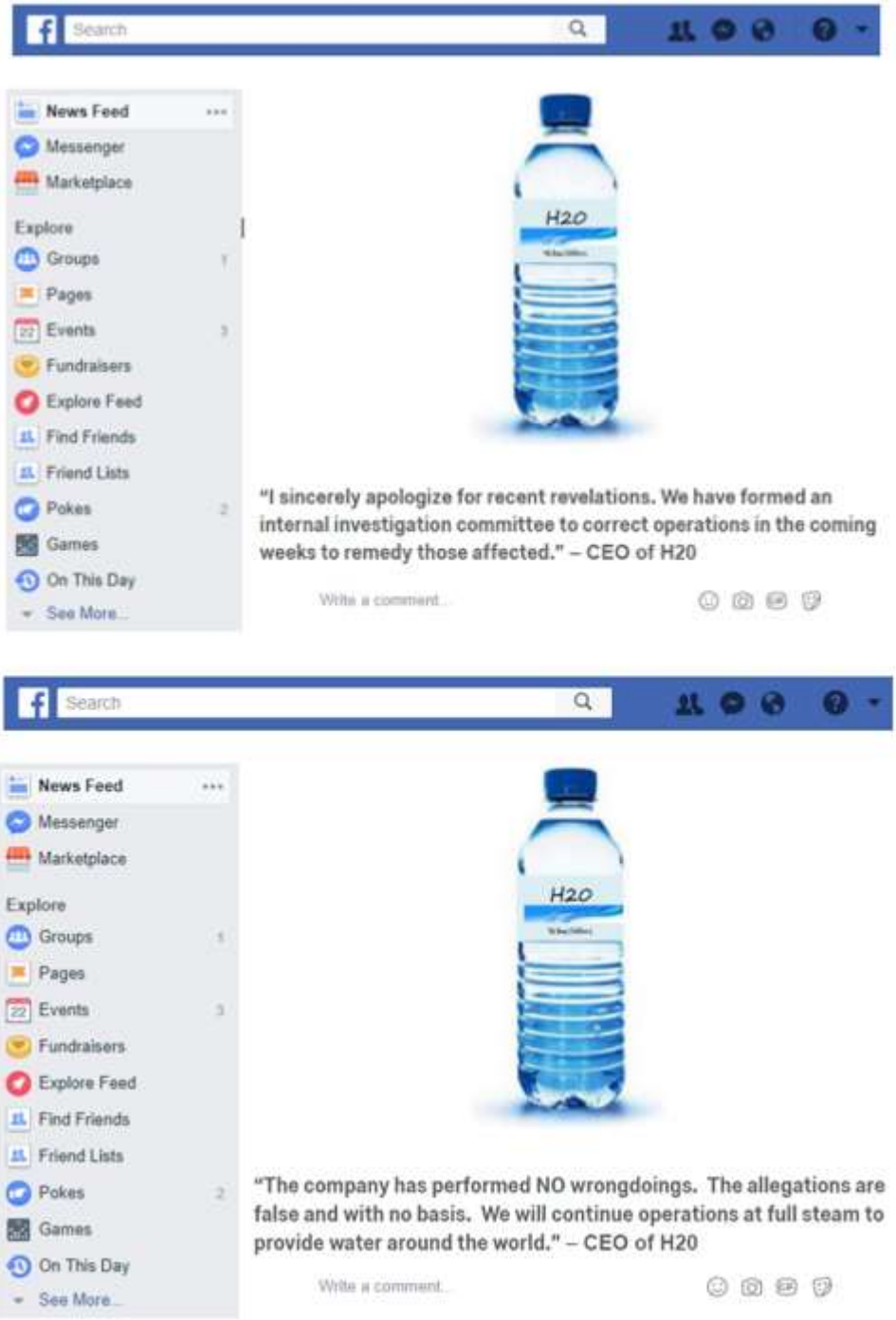
Procedures

Participants started by completing consent for the study. They proceeded to see a CEO's ethical speech from a fictitious water bottle company called "H20". Quotes from the environmental activist and founder of Patagonia, Yvon Chouinard were compiled to create the speech. The CEO incorporated

environmental CSR policies into the business model of the outdoor clothing company. The speech was designed to address three major areas of CSR; environmental, social, and economic support. It was exactly 534 characters (see the Appendix).

A hypocritical leadership perception of the CEO was established by showing a negative news report that contradicted the CEO's positive speech. Then participants were randomly assigned into apology or double-down response conditions. Participants in the apology response condition viewed an apology statement from the CEO shared on Facebook (see Figure 2). Meanwhile, participants in the double-down response condition viewed a double-down statement (denial) shared on Facebook. Participants then wrote a Facebook comment on the H20 Company below the Facebook news post.

Figure 2. Apology and Double-Down Stimuli



Notes: Both CEO statements were exactly 167 characters long.

Participants in the control condition moved from the consent form to a distraction task that asked them to write about that they did the day before. The image of the water bottle was the only information about the company these participants saw. Manipulation checks, company outcomes measures (i.e. purchase intent and likelihood to like on social media) and demographics immediately followed the writing tasks in all three conditions.

Manipulations and Measures

Hypocritical corporate social responsibility publicity. Hypocritical CSR publicity was manipulated through exposure of a positive CSR speech followed by a contradictory negative news report. The negative Facebook post countered the speech made by the CEO on care for native populations, environmental sustainability, and financial disclosure.

The Facebook post contained the identical number of words. It was derived from public events that have occurred in the past for water bottle companies negatively effecting natural resources and native people. Careful selection of words were chosen to reduce confounding biases towards prevention or promotion oriented participants. The "Green Leadership Award" was derived from government and business organization awards given to companies for positive environmental practices.

Hypocritical leadership manipulation. Two questions checked if participants were primed to identify the CEO has hypocritical. On a 7-point semantic differential scale (1 – Weak, 7 – Strong) participants rated the following statements, "Based on the speech, rate the CEO on moral management.", "Based on the report posted on Facebook, rate the CEO as a moral person." Hypocritical leaders are classified as strong moral managers and weak moral persons (Trevino et al., 2000).

Ethical leadership. This was measured using 10-items on a 7-point scale with items such as "Has the best interests of employees in mind" and "Defines success not just by results but also the way

that they are obtained." (cronbach alpha 0.96) (Brown, Trevino, & Harison, 2005) (see the Appendix). The measure was adapted from the original study and asked participants to rate the CEO of the water bottle company on the 10-items. These items were randomly ordered to control for rater errors.

Dependent Variables

Purchase Intent. Likelihood to purchase was measured using a 9-point scale (1 – Highly Unlikely, 9 – Highly Likely), "Please indicate how likely you would purchase from the H20 water bottle company."

Likelihood to 'like' on Social Media. Likelihood to 'like' was measured using a 9-point scale (1 – Highly Unlikely, 9 – Highly Likely), "Indicate how likely you would 'Like' information on the H20 company on social media?"

Moderator

Moral Sustainable Business Beliefs (MSBB). The researcher created a four-item measure that evaluates consumer beliefs on moral sustainability practices (see the Appendix). The measure captures long-term orientation and evaluations of the CEO as an ethical leader on business sustainability (Cronbach's alpha = 0.88).

Controls

*Control variables. G*ender and age information was collect and added to the model as controls.

Results and Discussion

Manipulation Check. Hypocritical leadership was successfully primed in both the apology and double-down conditions. Participants in the apology condition, perceived the speech high in moral management ($M = 6.81$) and the report significantly lower in moral person ($M = 2.74$, $t(69) = 12.85$, $p < 0.001$). Participants in the double-down condition, perceived the speech high in moral management ($M = 6.65$) and the report significantly lower in moral person ($M = 2.50$, $t(61) = 12.98$, $p < 0.001$). Perceived CEO moral management between the apology condition ($M = 6.81$, $t(130) = 0.55$, $p = 0.58$) and double-down condition ($M = 6.65$) did not significantly differ. Similarly, perceived CEO moral management between the apology condition ($M = 2.74$) and double-down condition ($M = 2.50$, $t(130) = 0.86$, $p = 0.39$) did not significantly differ.

Apology condition perceptions of moral person from the report ($M = 2.74$) to the CEO's response ($M = 4.46$, $t(69) = -6.37$, $p < 0.0001$) significantly improved. Likewise, double-down condition perceptions of moral person from the report ($M = 2.50$) to the CEO's response ($M = 5.06$, $t(61) = -8.86$, $p < 0.0001$) significantly improved. Despite this improvement, CEO's were still perceived as hypocritical. Speech perceptions on moral management ($M = 6.81$) to moral person evaluations of apology responses ($M = 4.46$, $t(69) = 7.72$, $p < 0.0001$) significantly differed. Similarly, speech perceptions on moral management ($M = 6.65$) to moral person evaluations of double-down responses ($M = 5.06$, $t(61) = 5.86$, $p < 0.0001$) significantly differed. Moral person perceptions on the double-down response ($M = 5.06$) was slightly better than apology responses ($M = 4.46$), but did not significantly differ at the 0.05 level ($t(130) = -1.78$, $p = 0.08$).

Ethical Leadership. Participants in the control condition rated the CEO with approximately neutral perceived ethical leadership ($M = 4.59$) while evaluations in the apology ($M = 3.31$) and double-down condition ($M = 3.72$) were lower. CEO leadership conditions 3 (hypocritical apology response, hypocritical double-down response, control) x (ELS) ANOVA results evinced ELS scores

significantly differed between groups ($F(2, 177) = 18.31$, $p < 0.001$). Post hoc Tukey HSD results evince perceived CEO's ethical leadership in the apology response condition did not significantly differ those in the double-down response condition ($p = 0.11$). Meanwhile, Tukey HSD post hoc comparisons to the control condition significantly differed from the apology and double-down conditions ($p < 0.001$).

Social Media Comments. Participants wrote 7,433 characters ($M = 106.19$, $SD = 75.82$) in total in the apology response condition ($n = 70$). Participants wrote 4,933 characters ($M = 80.53$, $SD = 47.31$) in total in the hypocritical leadership condition ($n = 62$). Independent-samples t-test comparing average number of characters between conditions significantly differed ($t(130) = 2.36$, $p < 0.05$), where participates in the apology response condition wrote more characters.

Independent raters were each given a five-dollar gift card in exchange for evaluating responses. Raters were instructed to count the number of positive thoughts and negative thoughts for each randomly ordered response. Inter-rater reliability evaluating apology response comments for positive thoughts ($r = 0.85$, $p < 0.001$) and negative thoughts ($r = 0.84$, $p < 0.001$) was high. Further, inter-rater reliability evaluating double-down response comments for positive thoughts ($r = 0.93$, $p < 0.001$) and negative thoughts ($r = 0.88$, $p < 0.001$) was high. These results substantiate comparing positive and negative responses between conditions.

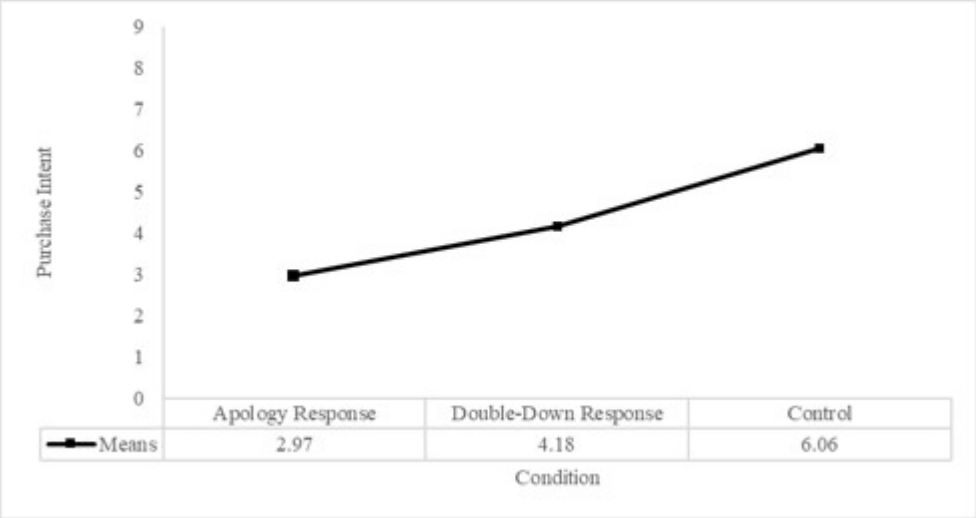
The researchers performed an independent-samples t-test to compare average positive thoughts to negative thoughts between comments in the apology response condition to the double-down response condition. There was no significant difference between average positive thoughts in the apology response condition ($M = 0.50$, $SD = 0.73$) and double-down response condition ($M = 0.57$, $SD = 0.80$, $t(130) = -0.55$, $p = 0.59$). Meanwhile, there was a significant difference between average negative thoughts in the apology response condition ($M = 1.65$, $SD = 1.33$) and double-down response

condition (M = 1.24, SD = 0.94); t(130) = 2.16, $p < 0.05$. The results evinced comments in the apology response condition to have more negative written thoughts than those in the hypocritical condition.

A MANCOVA was conducted with purchase intent and likelihood to 'like' on social media as the dependent variables. Moral sustainable business beliefs served as a factor. Gender and age served as covariates. Two-way 3 (ethical, hypocritical, and control) x 2 (high MSBB and low MSBB) MANCOVA results indicated significant differences between groups on purchase intent and likelihood to like on social media (Wilks' $\Lambda = 0.63$, $F = 22.01$, $p < 0.001$)

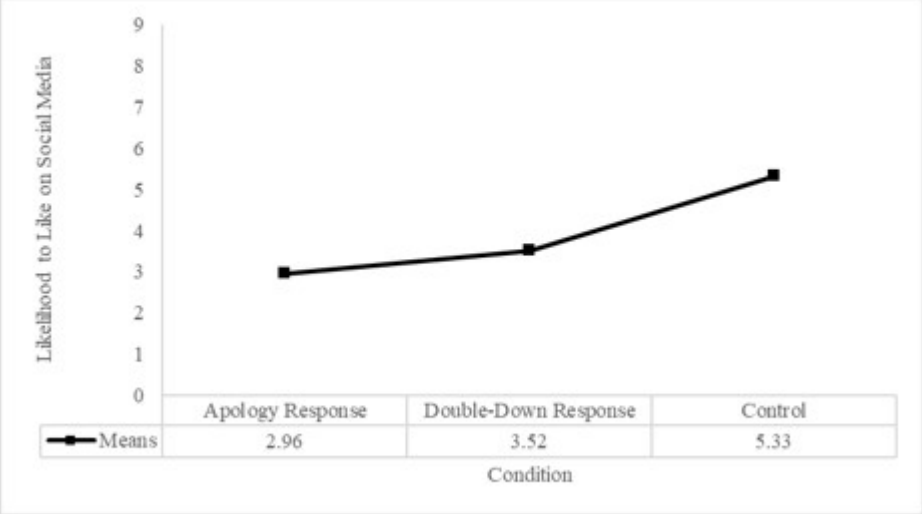
Purchase Intent. Participants in the control condition rated a higher likelihood to purchase from the water bottle company (M = 6.06, SD = 1.80), followed by those in the double-down condition (M = 4.18, SD = 1.67), and those in the apology condition (M = 2.97, SD = 1.93) (see Figure 3). One-way ANOVA results indicated at least one of the groups significantly differed ($F (2, 177) = 46.82$, $p < 0.001$). Tukey HSD post hoc comparisons evinced each group significantly differed with each other ($p < 0.001$) in purchase intent.

Figure 3. Purchase Intent Means



Social Media Like. Participants in the control condition were most likely to 'like' on social media (M = 5.33, SD = 2.38), followed by those in the double-down condition (M = 3.52, SD = 2.12), and those in the apology condition (M = 2.96, SD = 2.19) (least likely to 'like') (see Figure 4). One-way ANOVA results indicated significant differences among groups (F (2, 177) = 18.68, $p < 0.001$). Tukey HSD post hoc comparisons evinced each group significantly differed with each other ($p < 0.001$) in likelihood to like on social media.

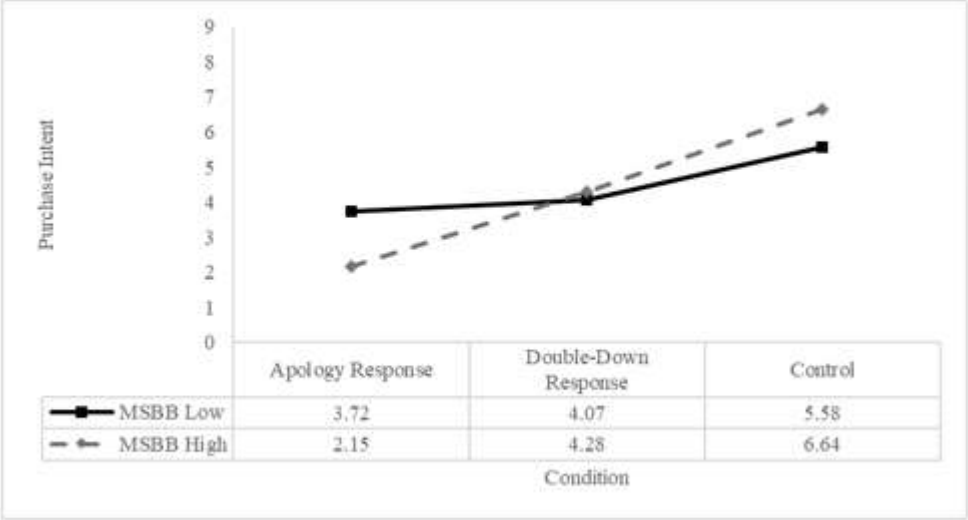
Figure 4. Likelihood to Like on Social Media Means



Moral Sustainable Business Beliefs. Two-way ANOVA results showed participants with low moral sustainable business beliefs had a more than additive increase on purchase intent (F (2,171) = 9.19, $p < 0.001$) and likelihood to 'like' on social media (F (2,171) = 5.55, $p < 0.001$) in the condition a CEO apologizes (see Figures 5 and 6). Simple main effects analysis showed participants low on moral sustainable business beliefs were significantly more likely to purchase from the company than those high on these beliefs in the apology condition ($p < 0.001$), but this was not evident in the double-down condition ($p = 0.71$). Moreover, simple main effects analysis showed participants low on moral

sustainable business beliefs were significantly more likely to 'like' the company than those high on these beliefs in the apology condition ($p < 0.05$), but this was not evident in the double-down condition ($p = 0.41$).

Figure 5. Purchase Intent Moderation Results



Both apologizing and doubling-down could not salvage negative impressions made by consumers in hypocritical circumstances. Purchase intent and likelihood to 'like' on social media were lower in both conditions compared to the control condition where participants did not see any company information except the image of the water bottle product. Further, outcomes were significantly worse after viewing the apology. These results indicate admission of guilt that was otherwise questionable in the double-down condition. The double-down appeared to produce skepticism of the Facebook news that mitigate lower company evaluations.

General Discussion and Implications

Based on results, it is not advantageous for a corporation to be caught in a hypocritical situation with the need to respond with an apology or denial. Neither had better outcomes with purchase intent or likes on social media than in instances with no company information (control condition). The impact of hypocrisy on consumer perceptions is negative and not fully repairable from statement. This suggests businesses should perform due diligence to remain accurate and comport to society's ethical standards on environmentally sustainable practices. This can help a company remain on good terms with consumers who evaluate companies by both diurnal operations and flashy news headlines.

Further, moderator analysis indicated that individual differences in moral sustainable business beliefs altered purchase intent and likelihood to 'like' on social media when an apology was presented. For participants low on moral sustainable business beliefs apologizes improved company evaluations. Given that apologizes signal guilt of wrong-doing, participants high on moral sustainable business beliefs appeared to hold the company accountable without accepting the apology.

Consumers' perceptions about a company can be shaped by presented CSR stimuli. When CSR information coalesce, consumers will attribute congruent ethical practice. Based on results, consumers expressed a high likelihood to purchase from the company that professed CSR and backed up with a news report. When CSR information contradicts, consumers attribute hypocrisy. Corporations caught in hypocritical situations can neither apologize or double-down to obtain favorable outcomes like a company publicly affirmed for their CSR.

Limitations

As with all research there are limitations. This study immediately captured impressions on evaluations of a CEO and company. A longitudinal study that captures evaluations over time with a real company could identify differences over time. As with Chipotle, stocks have rebounded and the company turned a corner on past events that were once believed the dire end (Gilliard et al., 2017). Over time, do consumers simply forget or does strategic marketing regain trust of the public? Or will these consumers disregard information even when it is presented to them at the time of a purchase decision?

Further, based on comment responses, some respondents expressed distrust in the negative news report as if it was falsified. While the Facebook post was fictitious, it suggest consumers evaluated source credibility. Researchers have measured source credibility on several measures such as trust, likeability, and attractiveness (Bhatt, Jayswal, & Patel, 2013). While the negative news report did not have any clear indication of a source, it is worthy to investigate. Other researchers have evaluated credibility of online word-of-mouth recommendations (C. M. K. Cheung & Lee, 2012; M. Cheung, Luo, Sia, & Chen, 2009). It is possible that consumers are looking for minimum 'likes' and 'shares' of a source to be credible online. In the age of rapid online information dissemination, have consumers been trained to accept information based on certain criteria?

Future Research

CEO's position in top-management of a corporation grants these leaders unique social status. Researchers expound social dominance orientation (SDO) as the degree one's in-group is considered superior and dominate to out-groups (Pratto, Sidanius, Stallworth, & Malle, 1994; Sidanius & Pratto, 2001; Whitley Jr., 1999). Social group hierarchies are maintained by proclivities for social prejudices, discriminatory behaviors, social roles, and cultural ideologies (Pratto et al., 2000, 1994, Sidanius & Pratto, 1993a, 1993b; Whitley Jr., 1999). Individuals higher on SDO are more likely to follow authoritarianism (Pratto et al., 1994; Umphress, Simmons, Boswell, & Triana, 2008; Whitley Jr., 1999). The authoritative position of CEO's at the top of organizations with employees below at varying levels depict an organizational hierarchical structure. The hierarchical nature of CEO's as authoritative personnel within organizations may evince individual differences between those high and low on social dominance orientation.

Subsequent research could also use different products to investigate this phenomenon across different product categories. Water bottles are low-end and affective based consumer products. There are also a large number of substitute products (i.e. reusable water bottles) and alternative options (i.e. tap water, soda, vitamin water) where consumers may not purchase water bottles on a regular basis. Water bottles can also be purchased in bulk. Retesting with different products could rule out issues with familiarity of a particular product and verify that the backlash effect witnessed in this study is not an isolated incident.

Additionally, the act of apologizing or double-down are perceived differently in society. For example, apologizing has nurturing tenants that imply wrong-doing happened and emotional recovery is desired. Meanwhile, double-down suggests no wrong-doing and feeling were not hurt. Research on adult facial impressions with childlike features (i.e. closer to helpless) were more likely to be associated to submissive, honesty, naivete, and less physical strength (Berry & McArthur, 1986).

Strength and nurturing has been studied in the context of female leaders who faced barriers in societal stereotypes (e.g. helping vs. leading) (Baumgartner & Schneider, 2010; Harris, 1995; Richter, 1990). The nature of apologizing or doubling down is received differently from consumers who value strength in leadership. For example, even in the face of impossible odds, some value a leader that will lead an army to battle regardless of the outcome. Surrendering as not an option has biological roots conceived from social Darwinism (Hardin, 1972). Henceforth, apologizing may lose support from followers who look to leaders for strength, even in the context of corporate leadership.

This study analyzed CEO responses on outcomes with one type of image restoration method in each condition. Many companies perform an all-of-the-above strategy deploying various statements that apology, double-down, and so forth. Future research could explore if this strategy would improve or worsen outcomes because of furthering the crisis situation with contradictions of implying wrong-doing while shifting blame. In practice it is not lucid which response consumers heard or make judgments from. In controlled conditions it is possible to add an additional condition that manipulates this all-of-the-above strategy compared to single responses.

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Appendix A

H20 Water Company Sustainable Ethical Leader CEO Public Statement

Ethical Speech Stimuli:

The CEO of H20 (a water bottle company) spoke on the company's behalf to environmental activists and sustainable business leaders. The speech follows:

How you sail the seas is more valuable than reaching the destination. The journey is the purpose because nature gives the vital gift of self-discovery. Harm to the planet is the result of poor judgment and nearsighted financial decisions. At this company, making a profit is not our first purpose. It is to provide one of Earth's precious resources with sustainability at the helm. We believe in people first and care for the native people at the source. That is our mission, our reason for existence, and anchor in open waters.

Note: Participants in the neutral condition proceeded without seeing a speech. The ethical public statement was derived from quotes spoken by founder and former CEO of Patagonia, Yvon Chouinard. The company encourages environmental conservation. The ethical and unethical speeches are both exactly 534 characters to control for variance due to message differences.

Appendix B

Positive and Negative Environmental Publicity Message

Positive Environmental Publicity Report

While browsing the internet the next day you saw the following report:

Recently, the H20 water bottle company received the "Green Leadership Award" for their CEO's outspoken environmental leadership on clean local drinking water and their "1% for the Earth" campaign where 1% of profits are donated to environmental groups for sustainable resources.

Negative Environmental Publicity Report

While browsing the internet the next day you saw the following report:

Recently, the H20 water bottle company received protests for polluting local drinking water sources linked to illnesses and is facing IRS investigation for their "1% for the Earth" campaign where 1% of profits are donated to environmental groups personally connected to the CEO.

Note: Participants in the neutral/control group did not see a publicity message. The exact number of characters is 278 in each prompt to control for variance due to message differences.

Appendix C

Variables and Corresponding Response Scales

Purchase Intent (1 = Highly Unlikely, 9 = Highly Likely)

Please indicate how likely you would purchase from the H20 water bottle company.

Likelihood to Like on Social Media (1 = Highly Unlikely, 9 = Highly Likely)

Indicate how likely you would 'Like' information on the H20 company on social media?

Modified Ethical Leadership Scale (ELS) Brown et al. 2005 (1 = Highly Unlikely, 7 = Highly Likely)

Please rate the CEO of the water bottle company, H20, based on the following items:

Conducts his/her personal life in an ethical manner.
Defines success not just by results but also the way that they are obtained.
Listens to what employees have to say.
Disciplines employees who violate ethical standards.
Makes fair and balanced decisions.
Can be trusted.
Discusses business ethics or values with employees.
Sets an example of how to do things the right way in terms of ethics.
Has the best interests of employees in mind.
When making decisions, asks "what is the right thing to do?"

Moderator Variable

Moral Sustainable Business Beliefs (MSBB) (1 = Strongly Disagree, 7 = Strongly Agree)

Companies should conduct business in an ethical manner.
Regulations are good for companies and society.
Companies have a moral obligation to conserve and restore business resources.
Good business goes hand in hand with sustainable policies.

Control Variables

Gender: What is your sex? (Male/Female)

Age: What is your age today?