Extenuating Circumstances: Justifying Unsustainable Behavior

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Extenuating Circumstances: Justifying Unsustainable Behavior

Addressing the long-standing attitude-behavior gap in pro-environmental contexts, this paper reports on a study of the justifications that consumers summon when explaining why they do or do not engage in sustainable behavior. We develop a scale for measuring the various internal and external justifications invoked by consumers. We then examine how the likelihood of each justification is a function of individual motivational values, and how these justifications in turn predict three categories of pro-environmental behaviors (PEBs). Largely confirming the hierarchy of attitudinal effects model, the more concrete justifications accounted for a larger proportion of the variance explained in PEBs, relative to motivational values.

Keywords: Sustainability, Justifications, Pro-environmental behavior

Track: Social Responsibility & Ethics

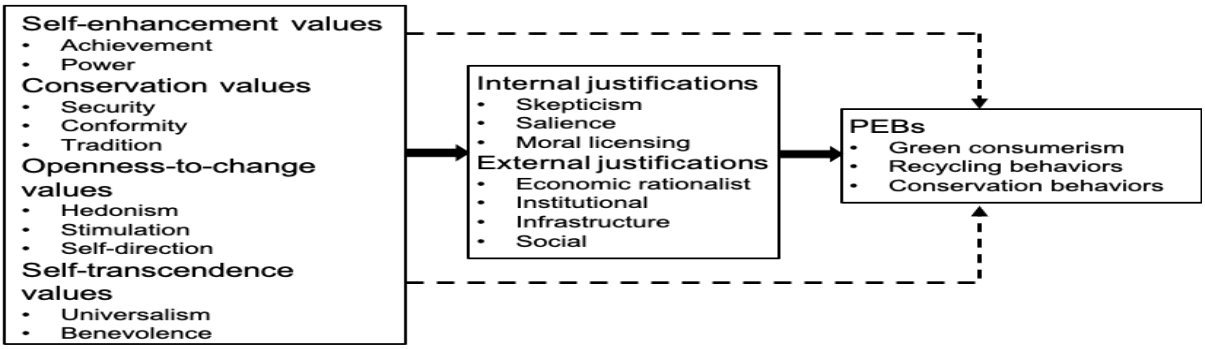
1. Introduction

Protecting the environment is a growing concern for consumers today. Yet as per *PEW Research Centre* (2017), only 1/5 Americans "make an effort to live in ways that help the environment all the time."[1] Drawing from the theory of planned behavior (Ajzen & Fishbein, 2005), research has investigated this gap (disparity) between beliefs and actions. Constructs like perceived behavioral control, perceived consumer effectiveness, and environmental locus-of-control (ELOC) explicitly consider perceptions about behavioral volition, and have been successful in predicting a range of pro-environmental behaviors (PEBs), relative to personality and demographics (Ruepert et al., 2015), where effect sizes have been small (Schultz & Zelenzny, 1998). Cognitive dissonance theory (Festinger, 1962) states that individuals strive to justify their behaviours in light of their inconsistent stated attitudes, to reduce psychological tension. Empirical inquiries into the myriad justifications *why* individuals don't engage in PEBs are lacking. Some consumers may rationalise that they simply cannot afford to be green. Or, perhaps because they believe the government is responsible for implementing legal frameworks to compel businesses to make their products and production processes more sustainable, and to coerce consumers into more environmentally-responsible consumption. Some may blame transport and retailing setups for the lack of green mobility and product alternatives, whereas others excuse their own culpability as many others are loath to incur the sacrifice, inconvenience and expenses associated with reducing one's environmental footprint. We posit that consumers' justifications (JUSTs) for environmental inaction are multifaceted. Different JUSTs could be summoned, depending on the nature, difficulty and trade-offs required for sustainable consumption. We also submit that these JUSTs relate to value systems. Values are guiding moralities, important life goals, or standards which regulate attitudes, ideologies and behaviors. Buttressing social arrangements, priorities and routines, values also underpin consumption-related attitudes and activities. Coupling values and perceived behavioral control, Schwartz's (1977) norm activation model prophesies that altruistic behaviors occur when a consumer is aware of and assume responsibility for the consequences of their potential actions. Behaviors that benefit the natural environment are altruistic: driven less by personal gain (ego-centric) and more from a desire to benefit the ecology (eco-centric) and society.

We investigate which motivational values predict what types of JUSTs, and how these inhibit or promote consumers' pro-environmental behaviour. Given the absence of an instrument for appraising these diverse excuses, we develop a scale measuring the various JUSTs.

Figure 1: Theoretical Framework

[1]Pew Research Centre. https://www.pewresearch.org/fact-tank/2017/04/20/for-earth-day-heres-how-americans-view-environmental-issues/ (accessed July, 2020).



2. Theoretical Background

Alongside perceived consumer effectiveness, ELOC has been advanced to explain how distinctive environmental dispositions affect the propensity of PEBs (Cleveland & Kalamas, 2015). As per the general theory of locus-of-control, internals feel that they have command over events occurring in their lives, whereas externals consider that their lives are guided by external forces. Those with high internal ELOC likewise believe that they are personally responsible for their environmental actions. Those having an external ELOC primarily attribute obligation for environmental outcomes to powerful others (governments, corporations) or chance/fate factors (natural causes, the will of a 'higher power'). These outside forces may serve as JUSTs for environmental inaction. Cleveland et al. (2020) found that high internal ELOC consumers were apt to perceive situational factors as enablers that facilitated the enactment of PEBs. Consistent with their reduced sense of personal obligation, those with low internal ELOC were more likely to sense situational factors as constraints impeding PEBs. Our objective is to reveal the specific rationalizations (relating to hindering extenuating circumstances) invoked to reduce the tension arising from the discrepancy between environmental dispositions and behaviors.

2.1 Justifications for Unsustainable Behavior

Inductive studies suggest that individuals are aware that their ethical attitudes frequently do not match their behaviours. Szmigin et al.'s (2009) informants stated reasons from utilitarian product attributes (quality/price/convenience) overriding ethical considerations, to transient consumer factors such as mood, variety-seeking, and fulfilling family preferences. Eckhardt et al. (2006, 2010) delineated 3 categories of JUSTs for unethical behavior: economic rationalist (ethical consumption benefits < costs), economic development reality (this is 'the way that things work'), and government dependency ('things cannot be too bad otherwise governments would enact regulations'). These interpretative studies yielded valuable insights into the reasoning of individuals but fall short of offering generalizable patterns. Building on the above explanations with respect to socially responsible consumption (SRC), d'Astous & Legendre (2009) developed a multifaceted scale for ethical JUSTs. SRC is a broad concept covering a gamut of socially responsible practices like fair trade, working conditions, compensation and labor exploitation, animal testing, counterfeit goods, as well as sustainability. While the scale does include sustainable

consumption measures, these are mingled with items tapping attitudes towards other socially responsible practices. Nowadays environmental concerns may loom larger than other ethical aspects for many consumers, and they should be scrutinized separately, given the prospect of different underlying JUSTs for inaction.

A justification is "an acceptable reason for doing something: something that justifies an act or way of behaving"[2] e.g., why consumers elect to engage in behaviors that are dissonant with their altruistic attitudes/beliefs or deemed by others as being unethical. We define environmental justifications *as the set of reasons invoked by consumers to explain why they do or do not (usually) behave in environmentally-responsible manner*. Seven are identified *a priori*, organized according to the locus of accountability. Those evoking economic, institutional, infrastructure, and social considerations are JUSTs that place the power *external* to the person ('if something(s) externally were to change, I could consume more sustainably'). JUSTs that educe environmental skepticism, ecological salience and moral licensing link to personal attributions, and are thus *internal* ('if my beliefs or perceptions were altered, I would be greener').

The *economic rationalist* JUST means refraining because sustainability is unaffordable or not worth the price premium, or that the perceived quality of eco-friendly alternatives is inferior. Eckhardt et al. (2010) reported that while some are willing to pay a premium for sustainable options for selected categories, they simply cannot do so for all their needs, given fixed budgets. The *institutional* JUST is connected to the notion of 'government dependency' (Eckhardt et al., 2010) and rests upon the claim that it is primarily the responsibility of governments and businesses to encourage and practice sustainable behaviour. Some may feel that individual actions are futile, and that real change must be driven by society's powerful forces. Statutes and taxes can coerce pro-environmental (or punish destructive) behaviour. Governments can ensure that children are educated on pro-environmental issues. Corporations can lead by setting voluntary standards for production, distribution, resource conservation, etc. By making sustainability at the core of the company's efforts, employees are apt to follow suit. Consumers supporting companies that adopt green practices may create a ripple effect among competitors. The *infrastructure* JUST focuses on structures and city layout, and stems from a perception that the way our neighborhoods and systems are planned and set-up, deters sustainable habits; e.g.,, limited recycling/composting programs, a lack of designated bike lanes. The *social* JUST relates to the notion of social loafing: individuals believing that their proenvironmental actions are futile since few other people behave in kind. Through descriptive ('typically do') and injunctive ('ought to do') norms, groups influence unsustainable behaviour.

'Greenwashing' occurs when companies mislead consumers of their products' environmental benefits, or when sustainability efforts are fostered for impression management purposes (Delmas & Burbano, 2011). The *skepticism* JUST derives from individuals' cynicism and mistrust in companies. Products labelled as 'green' or

[2] https://www.merriam-webster.com/dictionary/justification (accessed July 2020).

'environmentally-friendly' are seen as marginally 'less bad' for the ecology, used as a promotional ploy (Cleveland & Kalamas, 2015). The *salience* JUST means defending one's infrequent efforts because the environment is not customarily a pressing consideration (Szmigin et al., 2009). Without cues or normative pressures, and especially when facing time pressure or information overload, the potential harmful impact of consumption may not be top-of-mind. *Moral licensing* is when a consumer refrains from habitual sustainable efforts because they have repeatedly done so in the past (Kassin et al., 2018). Past actions cancel out present inactions. Tiefenbeck et al. (2013) administered feedback forms to apartment building residents regarding their water usage. They showed that when individuals cut down water consumption, their electricity use went up.

Whether a given JUST promotes or suppresses the likelihood of PEBs depends on the content of each construct. Since most JUSTs comprise statements that offer excuses for not (always) behaving sustainably, most PEB linkages will be negative.

2.2 Values as Antecedents of the Justifications for (Un) Sustainable Behavior

Table 1: Motivational Values and Defining Goals

Focus	Higher-order values	Comprising values	Defining goals
Social	**Self-transcendence**	Universalism	Maintaining and enhancing the well-being of one's in-group.
		Benevolence	Appreciation, understanding, forbearance, and protection for the defense of all persons & for nature.
	Conservation	Security	Well-being, harmony, and steadiness of society, of relations, and of oneself.
		Conformity	Curbing actions, proclivities, and impulses apt to distress or harm others and breach communal expectations or rules.
		Tradition	Reverence, commitment, and approval of the conventions and viewpoints provided by one's culture or religion.
Personal	**Openness-to-change**	Hedonism	Agentic pleasure or sensuous indulgence.
		Stimulation	Exhilaration, novelty, and seeking challenges.
		Self-direction	Autonomous thought and activities; choosing, creating, discovering.
	Self-enhancement	Achievement	Personal success via establishing competence relative to social standards.
		Power	Social status and esteem, dominance or control over resources and people.

Motivational values are desirable goals that transcend specific situations and actions, serving as guiding principles or judgment criteria which shape behavior. The predictive power is contingent on the value's relative importance, and the match between the focal value and the attitudinal subject (Ajzen & Fishbein 2005). JUSTs for (not) undertaking behavior are partly situational (not completely volitional), but we submit, also partly depend on deeply-held, motivational values. Norms, dispositions and mind-sets are prone to external influences, whereas values tend to be intransient. Each of Schwartz's (1992, 2012) 10 human values (Table 1) has a defining abstract goal, operationalized though specific adjectives. The values are arrayed in a quasi-circumplex structure. Adjacent values are closely related and those more distant are less associated or contrary. At a higher abstraction, values can be grouped along two continua: *openness to change* vs. *conservation*, and *self-enhancement* (advancing egotistical interests) vs. *self-transcendence*. Self-enhancement and openness-to-change have a personal focus: regulating expression of private interests/traits. Conservation and self-transcendence have a social focus: regulating how one relates to and affects others.

Self-enhancement has a personal emphasis and a focus on achievement, power and self-protection, which is suggestive of anxiety-related motivations. A person that is open to change embraces hedonism, stimulation and self-

direction. Openness is also self-focused; centred on individual growth/development. Individuals endorsing self-enhancement and openness-to-change value sets should lean more heavily on the internal JUSTs for pro-environmental inaction. Incorporating benevolence and universalism, self-transcendence entails striving for perfection through a journey of self-discovery that supersedes one's egoistic standpoint and developing a collective consciousness of the world. Although conservation is focused on maintaining security, conformity and tradition; and self-transcendence embodies both universalism and benevolence, both higher order concepts have a social focus, i.e., how others in society affect each other. This feeds into the external group of JUSTs, emphasizing the fact that external powers and people need to change in order for the person to change. Conservation-minded individuals draw their beliefs from societies' customs and rules; hence, to external factors that are beyond their own ability to shape/control. Although self-enhancement values are ego-focused (thus, internal), these partly stem from where people are situated within society. Individuals may justify their actions on external factors that will boost their achievement and authority.

H1: Conservation values (security, conformity, tradition) will *positively* predict *external* justifications of (a) economic rationalist, (b) infrastructure, (c) social, and (d) institutional.

H2: Self-enhancement values (achievement, power) will *positively* predict *external* justifications of (a) economic rationalist, (b) infrastructure, (c) social, and (d) institutional; as well as *positively* predict *internal* justifications of (e) moral licensing, (f) skepticism, and (g) salience.

Openness-to-change values have a personal focus, connected to expressing one's ego- (vs. eco-) centric interests. Individuals with high scores will tend to justify their actions in relation to their internal motivations and goals. The values comprising self-transcendence have a social (external) emphasis: suppressing one's egotistical needs to focus on how personal actions and beliefs can advance the best interests of society, including the ecology. Individuals scoring highly shouldn't invoke internal JUSTs as excuses for inaction. However, high self-transcendence consumers are apt to experience frustration with the economic/infrastructure realities of society, in terms of how these aspects, as currently set up, hinder the achievement of ego-centric initiatives. They may also express the futility of being green, given the apparent ecological apathy shown by others.

H3: Openness-to-change values (hedonism, stimulation, self-direction) will *positively* predict *internal* justifications of (a) moral licensing, (b) skepticism and (c) salience.

H4: Self-transcendence values (universalism, benevolence) will *negatively* predict *internal* justifications of (a) moral licensing, (b) skepticism and (c) salience; while *positively* predicting *external* justifications of (d) economic rationalist, (e) infrastructure, (f) social, and (g) institutional.

3. Methodology

The 56-item Schwartz (1992) value survey employs 9-point scales (-1=opposed to my values, 0=not important, 3=important, 6=very important, and 7=of supreme importance). Eighteen PEBs (Appendix) were adopted from Cleveland et al. (2020), each ranging in terms of the level of effort/involvement (1=strongly disagree/never, 7=strongly agree/always). To capture consumers' JUSTs, we adhered to Churchill's (1979) scale development steps. The first step was to specify the construct domain.

Following a thorough review of the literature, we operationalized JUSTs as *embodying consumers' multi-faceted rationalizations for why they tend to engage in, or avoid engaging in, environmentally-responsible or sustainable behaviors*, applying inductive reasoning to develop items for the 7 *a priori* dimensions discerned from our review and through discussions with colleagues. Two faculty members external to the study scrutinized the items and we pretested the scales on 10 students. Twelve items were discarded, and minor phrasing changes were made. The set comprised 75 non-redundant statements (# items) pertaining to: economic rationalist (12), institutional (9), infrastructure (11), skepticism (11), salience (10), moral licensing (10), and social (12), measured on Likert scales (1=strongly disagree, 7=strongly agree). The ordering of the question blocks and constituent measures were randomized to preclude sequencing effects. We measured sex, age, household size, employment status, birthplace, ethnic status, and languages spoken. An unrelated construct, maladaptive diet/nutrition (Helmers & Mente, 1999) assessed the threat of common method bias. Participants were recruited at a Canadian university, via posters and ads directed to students enrolled in a subject pool. Consenting respondents could anonymously respond to the online survey at their convenience. After discarding 68 incomplete/ineligible surveys (failing embedded attention-check questions), there were 301 (53%F) surveys for analysis.

4. Analyses and Results

The SVS and PEB constructs were operationalized as the mean of their items (Appendix). The data was suitability for principal components analysis (KMO=.806, Bartlett's sphericity: $\chi^2_{(2775)}$=9054.7, p<.001); conducted on the 75 justification measures. Items with poor or high cross-loadings were removed one by one. This procedure was repeated 33 rounds, retaining 42 items loading on 5 internal (intrinsic) and 7 external (situational/interpersonal) components (Table 2). Only 2/12 JUSTs (product infrastructure, salience, r=-.18, r=-.12) and 1/10 values (conformity, r=.13) yielded significant (p=.05) correlations with health-diet. Health-diet was not linked to any of the PEBs (p>.05). Common method bias is not deemed to be a serious threat.

Several *a priori* JUSTs have subcomponents. Regarding *internal* JUSTs, moral-licensing items loaded onto 2 components: one retaining the moniker; the other suggesting a moderate stance towards sustainability. The items for salience split into *indifference* about sustainability, and impracticality a chronic green consciousness (*salience*). *Skepticism* reflects the greenwashing perceptions. In terms of *external* JUSTs, there were two facets for economic rationalization. *Economic-priority* claims that green products are too expensive without explicitly expressing environmental concern. *Economic-cost* does entail concern but also that eco-prices are just too high. *Infrastructure* split into JUSTs relating to *transportation* (physical layout/mobility), and *products* (availability of green alternatives and sustainability challenges). *Social encouragement* means being green for impression management or to conform, whereas *social discouragement* means inaction out of a sense of futility. Lastly, *institutional* intimated perceptions about the need for powerful others to be at the vanguard of sustainability.

Table 2: Emergent Justifications with Consumer-centric Explanations

Justification. (*a priori* dimension)	***Consumer Narrative***	**x̄:** overall, female, male
Environmental moderation (moral licen.-1)[a]	*"Being somewhat green is better than not being green at all."*	5.78, 5.90, 5.64 **t=2.66, p=.008**
Moral licensing (moral licen.-2)[a]	*"I am not always engaged in sustainable behaviors, because I have done so repeatedly in the past, which 'makes up' for any inaction."*	3.56, 3.38, 3.78 **t=-3.39, p=.001**
Indifference (salience-1)[a]	*"Being a green consumer is just something that is not on my brain."*	4.71, 4.53, 4.92 **t=-3.15, p=.002**
Salience (salience-2)[a]	*"I care about the environment, but perhaps just not enough to take meaningful actions."*	5.17, 5.16, 5.18 t=-0.21, p=.834
Skepticism (skepticism)[a]	*"Many so-called green products are not really that ecologically-friendly. Such claims are a 'marketing gimmick' more than anything else."*	4.52, 4.48, 4.57 t=-0.81, p=.419
Transportation infrastructure (infrastr-1)[b]	*"It is hard to be green given the physical layout of my city and the transportation options available in it."*	4.49, 4.40, 4.60 t=-1.16, p=.248
Product infrastructure (infrastr-2)[b]	*"It is a challenge to be green given the lack of recyclable product options and the absence of green product alternatives at retailers."*	4.00, 4.06, 3.91 t=1.06, p=.289
Social encouragement (social-1)[b]	*"I would be more green if other people were also more green."*	5.17, 5.30, 5.02 **t=2.76, p=.006**
Social discouragement (social-2)[b]	*"Since most people are not ecologically-responsible, it is futile if I am."*	4.58, 4.61, 4.54 t=0.65, p=.516
Economic priority (econ. rationalist-1)[b]	*"Green products are just too expensive, and besides, sustainable behavior is just not a priority for me."*	4.56, 4.56, 4.56 t=-0.02, p=.986
Economic cost (econ. rationalist-2)[b]	*"I would like to engage in sustainable behavior, but given my budgetary constraints, I just can't afford to be green."*	5.62, 5.75, 5.48 **t=2.64, p=.009**
Institutional (institutional)[b]	*"Being a green consumer is pointless when governments and corporations evade responsibility for implementing sustainability."*	5.76, 5.93, 5.56 t**=4.17, p<.001**

[a]Internal, [b]External reasons. x̄=mean scores. T-test results hold regardless of whether equal variances are assumed or not.

Out of 66 (n[n-1])/2) justification inter-correlations, 37 were significant (p<.05). Out of 120 (10 values x 12 JUSTs) correlations, 49 (41%) were significant (all +). The 12 JUSTs sig. correlated with the 3 PEB categories in 17 (47%) out of 36 cases (11 neg.). The stepwise multivariate regression technique (Table 3) minimizes multicollinearity. For *external* JUSTs, achievement did not predict any rationalizations, but power was significant in 3 instances: enhancing infrastructure JUSTs (transportation and product) (H2b ✓), while decreasing economic-cost rationalization, refuting H2a. Security also stimulated social discouragement JUST (H1c ✓). Contrary to H1d, tradition mitigated institutional JUST. For self-transcendence values, only universalism was significant, driving social encouragement and institutional JUSTs (H4f/H4g ✓), and reducing economic-cost JUST (refuting H4d). Stimulation and hedonism summoned economic rationalist JUSTs (economic priorities and cost). For *internal* JUSTs, power predicted (+) moral licensing (H2e ✓) and salience-indifference (H3g ✓). Supporting H4a/H4c, universalism alleviated moral licensing and salience-indifference. Contrary to H4a, benevolence provoked environmental moderation. Supporting H3c, hedonism and achievement respectively motivated indifference and salience. Security predicted environmental moderation and indifference. The tradition findings were equivocal: encouraging moral licensing, while inhibiting environmental moderation and salience. Skepticism was not predicted by any motivational value. Neither self-direction nor conformity were sig. predictors. Support for the posited antecedent roles played by various motivational values was mixed and modest. The proportion of variance (adj. r^2) that values accounted for in the JUSTs ranged from 0 (skepticism) to 12.6% (indifference). Out of a possible 120 coefficients, 24 (9 neg.) cases were significant. Given their higher level of abstraction and situational invariance, motivational values should jointly account for a smaller proportion of the variance in PEBs vs. JUSTs (Table 4). This applied for 2 of 3 behavior categories (green consumerism/recycling, JUSTs explained 16.5/14%, vs. 8.8/6.4% by values), whereas for conservation, the variance accounted for by JUSTs (11.7%) and values (10.1%) were similar. Universalism increased likelihood of performing all 3 PEBs. The other values did not follow a consistent pattern across PEBs. For 36

possible instances, JUSTs significantly predicted PEBs in 11 cases (4+, 7-), compared to 7 cases for values (4+, 3-). For the 15 instances with sig. coefficients for the hypothesized links, 11 upheld predictions.

Table 3: Regression Analyses—Motivational Values as Antecedents of Justifications

Justification	Conf.	Trad.	Bene.	Univ.	Sedi.	Stim.	Hedo.	Achi.	Powe.	Secu.	F, AdjR²
1-Enviro-Mod[a]		-.231**	.239**H4a x							.174*	10.13** .084
2-Mor-Licens[a]		.170*		-.251**H4a ✓					.123*H2e ✓		5.91** .047
3-Indifference[a]				-.381**H4c ✓			.132**H3c ✓		.194**H2g ✓	.221**	11.80** .126
4-Salience[a]		-.263**						.165**H3c ✓			9.63** .054
5-Skepticism[a]											-
6-Transport-Infra[b]									.183**H2b ✓		10.31** .03
7-Product-Infra[b]									.163**H2b ✓		8.739** .025
8-Social-Encour[b]				.277**H4f ✓							24.77** .073
9-Social-Discour[b]										.162**H1c ✓	8.04** .023
10-Econ-Priority[b]				-.241**H4d x		.186*	.138*				4.39** .033
11-Econ-Cost[b]						.164**	.149*		-.156**H2b x		6.48** .052
12-Institutional[b]		-.173**H1d x		.415**H4g ✓							20.40** .114
#predict.(sign)	**0**	**4(2+,2-)**	**1(1+)**	**5(2+,3-)**	**0**	**2(2+)**	**3(3+)**	**1(1+)**	**5(4+,1-)**	**3(3-)**	

Significant standardized beta coefficients, **p≤0.01, *p≤0.05. [a]Internal, [b]External. Values (LtoR): conformity, tradition, benevolence, universalism, self-direction, stimulation, hedonism, achievement, power, security. ✓=supporting/x=refuting hypothesis.

Table 4: Regression Analyses—Behavioral Outcomes of Justifications vs. Values

Justifications	Gre.Cons.	Rec.Beh.	Cons.Beh.	#pred.(sign)	Values	Gre.Cons.	Rec.Beh.	Cons.Beh.	#pred.(sign)
1-Enviro-moderation-I				**0**	Conformity				**0**
2-Moral-licensing-I			-.119*	**1(1-)**	Tradition			.157*	**1(1+)**
3-Indifference-I	-.248**	-.136**	-.236**	**3(3-)**	Benevolence	-.243**			**1(1-)**
4-Salience-I	-.159**			**1(1-)**	Universalism	.422**	.270**	.288**	**3(3+)**
5-Skepticism-I				**0**	Self-direction				**0**
6-Transport-infrastructure-E				**0**	Stimulation				**0**
7-Product-infrastructure-E				**0**	Hedonism				**0**
8-Social-encouragement-E	.177**	.112*		**2(2+)**	Achievement			-.208**	**1(1-)**
9-Social-discouragement-E				**0**	Power		-.172**		**1(1-)**
10-Economic-priority-E	-.142**	-.162**		**2(2-)**	Security				**0**
11-Econ-cost-E		.325**		**1(1+)**					
12-Institutional-E			.203**	**1(1+)**					
F, Adj.R²	**15.84**, .165**	**13.19**, .140**	**14.28**,.117**	**11(7-,4+)**		**15.46**, .088**	**11.29**, .064**	**12.22**, .101**	**7(3-, 4+)**

Significant standardized beta coefficients shown, **p≤0.01, *p≤0.05. I=internal, E=external.

5. Discussion

The primary goals were to develop a scale for the justifications summoned by consumers for behaving in an unsustainable manner, and to identify motivational values associated with invoking the various JUSTs. Understanding these extenuating reasons should permit more effective segmentation and targeting strategies (e.g., managers seeking to change attitudes among consumers endorsing the first economic JUST would need to persuade the consumer about the product ecological benefits while addressing price concerns, whereas for the second economic JUST, because consumers already recognize these benefits the task is to decrease price sensitivity). The scale can be used to consider how various JUSTs operate in conjunction with personality, gender, socioeconomic background, cultural differences, etc.; as well as in various settings/countries, varying in terms of economic and infrastructure development. Ajzen and Fishbein (2005) posit an attitudinal hierarchy, beginning with general orientations to progressively specific attitudes which in turn, ultimately drive concrete behaviors. Universalism, followed by power, tradition, hedonism and security were the most frequent JUST antecedent values, whereas conformity and self-direction did not have appreciable effects. Conceived at different levels of abstraction, values were shown to be modest predictors, whereas the more specific JUSTs accounted for greater variance in the PEBS. The non-experimental design and student sample limits causal inferences and generalizability.

6. References

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Appendix: Principal Components Analyses* and Antecedent/Outcome Measures

Justification (*a priori* dimension), mean, standard deviation, cronbach alpha. Items (loading)

Environmental-moderation (moral licensing-1), $\bar{x}$=5.78, SD=0.840, α=.770 Being green sometimes is a step in the right direction (.764), It is better to sometimes practice environmentally-friendly behaviours than to never practice them at all (.753), Owning some green products is better than owning none (.736)

Indifference (Salience-1), $\bar{x}$=4.714, SD=1.091, α=.741 I do not generally go out of my way to buy sustainable products (.830), It's good if a product happens to be sustainable, but it is not the main reason that I would buy it (.773), I do not think about purchasing environmentally-friendly products when I am shopping (.698)

Transportation-infrastructure (infrastructure-1), $\bar{x}$=4.494, SD=1.434, α=.822 The physical layout of my city forces me to commute by car (.875), Because the layout of the city I live in is very spaced out, I must commute by car since other methods of transportation take too much time (e.g., public transportation, biking, walking) (.831), I would like to travel using more sustainable methods of transportation (bicycle, walking, public transportation), but the physical layout of my city requires me to travel by car (.815)

Skepticism (skepticism), $\bar{x}$=4.524, SD=0.981, α=.791 Companies are only selling "green" products because they want to make more money, not because they truly want to help the environment (.780) , Companies only create environmentally-friendly products so that they can justify charging a higher price for it (and ultimately generate more profits) (.774), Companies only adopt green practices in order to maintain a positive image in the mind of consumers. They do not actually care that much about the environment (.710) , Companies can label any product as "environmentally-friendly" even if it has not been demonstrated to actually be good for the environment (.694), I am skeptical of a company's motives when they claim to be green (.651)

Moral-licencing (moral licensing-2), $\bar{x}$=3.57, SD=1.052, α=.647 It's ok if I don't always recycle because I have done other pro-environmental initiatives (such as donating to environmental charities) (.767), When I think about how environmentally responsible, I have been in the past, I don't really feel guilty about those moments when I am less green (.758), If there are days that I don't recycle, it's not a big deal because I have generally recycled in the past (.749)

Social-encouragement (social-1), $\bar{x}$=5.169, SD=0.883, α=.679 It's easier to be green when I know my neighbours are also green (.826), It would be easier to be green if everyone else was green (.576), If I felt that the people in my community were more environmentally responsible, I would be more motivated to be environmentally responsible (.563), I would be more likely to purchase a sustainable product if I was shopping with a friend who also tends to purchase sustainable products (.509)

Economic-priority (economic rationalist-1), $\bar{x}$=4.562, SD=1.124, α=.790, Due to budget constraints, I simply cannot afford to purchase sustainable products (.803), Because I have many other financial priorities in my life (such as living expenses, debt), I'm not willing to pay more for green products (.779), In order to save money, I buy regular products instead of environmentally-friendly products (.690)

Product-infrastructure (infrastructure-2), $\bar{x}$=3.988, SD=1.191, α=.665 In the city I live in, it is challenging to efficiently recycle and dispose of products in an environmentally-friendly way (.796), I have to go out of my way to recycle and compost because where I live there is no convenient community system for recycling and composting these items (.721), Green products are not as widely available at the stores I regularly shop at (.620)

Institutional (institutional), $\bar{x}$=5.756, SD=0.802, α=.803 The government should encourage consumers to adopt sustainable practices and consume sustainable products (.743), If the government and businesses did a better job informing the population of how to be more green, more people would adopt an environmentally-friendly lifestyle (.743), Companies should encourage their employees to adopt green behaviours (.738), It is the responsibility of governments to create policies and laws that force businesses to adopt sustainable business practices (.724), Children will become more environmentally-friendly adults if they are taught these practices in school (.677)

Salience (Salience-2), $\bar{x}$=5.173, SD=0.904, α=.564 It's a challenge to always be green (.803), Although at certain moments I am very green, there are other times when I don't behave in a green manner (.597), Being a busy person, I cannot always think about the ecological implications of every action I take (.531)

Economic-cost (economic rationalist-2), $\bar{x}$=5.624, SD=0.894, α=.739 If environmentally-friendly products were more affordable, I would buy them (.716), If sustainable products were more affordable, I would buy them (.681), I would buy green products if the quality was equal to or better than that of non-green products (.629)

Social-discouragement (social-2), $\bar{x}$=4.583, SD=0.969, α=.690 Because my family members tend not to buy sustainable products, I tend not buy them either (.718), It's hard to be environmentally friendly when my friends and family aren't green (.628), Like many other people, even though I say that I am pro-environmental, I am often not behaving in a pro-environmental manner (.624), It is a challenge being environmentally-friendly when so many others are not (.599)

SCHWARTZ VALUES[a] Universalism α=.831, $\bar{x}$=4.76, SD=1.14; Power α=.759, $\bar{x}$=3.96, SD=1.36; Hedonism r=.467, $\bar{x}$=5.35, SD=1.20; Self-direction α=.702, $\bar{x}$=5.07, SD=1.02; Security α=.666, $\bar{x}$=4.95, SD=1.10; Stimulation α=.733, $\bar{x}$=4.73, SD=1.23; Conformity α=.743, $\bar{x}$=4.93, SD=1.87 ; Achievement α=.761, $\bar{x}$=5.23, SD=1.07; Tradition α=.669, $\bar{x}$=3.81, SD=1.33; Benevolence α=.815, $\bar{x}$=5.18, SD=1.11

PRO-ENVIRONMENTAL BEHAVIORS[a] Green Consumerism: α=.884, $\bar{x}$=4.09, SD=1.06 Buy food that is organically grown (i.e. without pesticides or chemicals)? Buy products that are biodegradable or that have biodegradable packaging? Buy products that are produced by environmentally responsible companies? Buy products that are certified as being environmentally safe? Buy products that are certified as being environmentally safe? **Recycling Behaviors: α=.909, $\bar{x}$=5.60, SD=1.15.** Recycle plastic bottles and containers? Recycle paper and paper products? Recycle cardboard? Use the blue/green recycling box? Recycle aluminum/tin cans and containers? Recycle used glass bottles and containers? Sort the trash for recycling purposes? **Conservation Behaviors: α=.858, $\bar{x}$=4.71, SD=1.24** I do not let the water faucet run unnecessarily. I am careful not to waste electricity in my daily activities. I try to save water when washing my dishes. I reuse office paper (for example, for notes or printing drafts). I try to save water, when I take a bath or shower. I try to save water when I wash my hands.

* oblimin rotation, Kaiser normalization. Rotation converged in 16 iterations. α=Cronbach alpha [a]"How often do you make a special effort to…".