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Understanding Consumers' Motivations and Product Preferences for Deconsumption

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Abstract

The modern era features dramatic changes in consumer attitudes and behaviors related to consumption; this article investigates the motivations and product preferences of consumers who alter their consumption habits to obtain products that cause less damage or use fewer resources. The authors offer an empirical definition of such deconsumption and compare it with other terms used in prior literature to refer to resource-restricted purchases; they also propose consumer-oriented measures of deconsumption motivations and product preferences. The results reveal ten motivation factors that help explain why people choose to deconsume. Regression analysis further shows that product choice varies across these motives. Thus, businesses, public policy makers, and non-profit organizations can modify their communication and product strategies, for both green and conventional products and services, to appeal to different subgroups of consumers that deconsume for distinct reasons.

Introduction

Discussions related to climate change, resource depletion, and global pollution continue to increase in frequency and intensity. If we meet the predicted world population increase for the next two decades, we will require the natural resources equivalent to three Earths to sustain our current lifestyles (UN, 2022). Consumer household purchases play a significant role in resource depletion, increased waste, and rising greenhouse gas emissions (Long et al., 2022; Marini et al., 2022; Pilgrimieni et al., 2020; Sun et al. 2022). In response, the modern era is marked by changes in consumer attitudes and behaviors related to consumption, in that consumers are more mindful of the impact their consumption choices have on the environment and society, and they actively seek products that are less damaging, use fewer resources, or are produced in fair labor conditions. Consumers who embrace such consumption standards take various labels, such as responsible (ORCI, 2012), green (Jansson et al., 2010), environmentally conscious (Zabkar &

Hosta, 2013), sustainably conscious (Hartman Report on Sustainability, 2007), and socially responsible (Durif et al., 2011).

Another group of consumers seeks to reduce consumption levels in general, often referred to as anti-consumers (Black & Cherrier, 2010), voluntary simplifiers (Etzioni, 1998), brand avoiders (Iyer & Muncy, 2009), or mindful consumers (Sheth et al., 2011). Extant research into the attitudes and behaviors of such consumers often centers on the reasons for their anti-consumption (Black & Cherrier, 2010; Iwata 1997, 1999) to seek a complete sense of consumption. Anti-consumers seek simpler lives, less material consumption, less work, more time with their family, and reduced impacts on the environment (Johnston & Burton, 2003). In this stream, other studies propose segmentation standards that reflect these consumer attitudes and behaviors (Etzioni, 1998; Iyer & Muncy, 2009), using the reduced consumption effort as the focal topic. But these consumers still consume, so an interesting further area of analysis relates to the products they choose to purchase. Researchers predict that such consumers prioritize the

functional aspect of products (Craig-Lees & Hill, 2002) or look for products with meaning (Black & Cherrier, 2010), and some studies indicate their overlap with green consumers and identify a specific segment of pro-social consumers (i.e., deconsumers) (Lee et al., 2009).

Table 1 summarizes a variety of perspectives and some of the commonly used descriptive terms related to reduced consumption. However, prior literature provides descriptors of reduced consumption with unique motivations, as well as distinct behaviors that reflect these motivations. Most quantitative research leaves the definition of the behaviors related to reduced consumption up to the individual consumer, leaning heavily on behavioral measures associated with environmental concerns, such as recycling, biking, and buying organic foods. We seek to advance this research domain by proposing a precise definition of deconsumption, based on both prior research and consumer input. The current study relies on the term “deconsumers” to emphasize that the

consumers being studied still consume but also avoid any adversarial connotations (e.g., as arise with terms like anti-consumption).

In contrast with some prior research in table 1, we also focus on deconsumption motivations and purchases, as opposed to lifestyles and other tangential activities such as, decreasing the number of hours worked, changing job locations or helping disadvantaged groups. Our focus on consumption provides concrete examples of the types of product categories that can help consumers decrease their overall consumption. Further, to expand prior literature, we address the product preferences and consumptive behaviors related to different deconsumption motivations. This investigation of the link between consumers’ motivations and product and behavioral strategies helps us answer more niche questions such as, what types of products do people who deconsume for simplification reasons select? Do they differ from the products preferred by those who deconsume for

Table 1
Commonly Used Descriptors Related to Reducing Consumption

Consumer Description	Definition of Segment and Connection with the Current Research
Voluntary Simplifier	Some research focuses on the consumption aspect: “the choice out of free will rather than by being coerced by poverty, government austerity programs, or being imprisoned to limit expenditures on consumer goods and services, and to cultivate non-materialistic sources of satisfaction and meaning” (Etzioni, 1998, p. 620). Other research examines this group more broadly, investigating lifestyle aspects such as turning down promotions, working part time, reading more, or watching less television (Iwata, 1997).
Anti-Consumption	This label describes people who are against consumption, either selectively or across the board: “literally means against consumption” (Lee et al., 2009, p. 145) “A practice of rejection, reduction and reuse” (Black & Cherrier, 2010, p. 438) Related research focuses on what these consumers will not consume, rather than what they might consume.
Mindful Consumption	This recently introduced term implies a “Consumer Mindset of caring for self, for community, and for nature that translates behaviorally into tempering the self-defeating excesses associated with acquisitive, repetitive and aspirational consumption” (Sheth et al., 2011, p. 21). These authors introduce a framework and recommendations to companies to use the consumer’s mindset in developing their strategies. At this point, the framework has not been tested.
Socially Responsible Consumption	“A person basing his or her acquisition, usage, and disposition of products on a desire to minimize or eliminate any harmful effects and maximize the long-run beneficial impact on society” (Mohr et al., 2001, p. 47) Early studies focused primarily on the environmental impacts of consumption. More recently, social dimensions have been added (Webb, Mohr, and Harris 2008). Studies have not focused on connecting motivations to subsequent product choices that coincide with these motivations.

environmental reasons? Etc. Overall, this study aims to address the lack of comprehensive exploration of research on reduced consumption. Three main contributions of the research are:

1. Introduce an empirically generated definition of deconsumption based on a survey designed to gather qualitative consumer input on its meaning.
2. Identify distinct reasons that people deconsume, on the basis of prior literature and consumers' inputs, which guides the development of motivation statements that can evaluate why consumers choose to deconsume.
3. Connect the reasons people deconsume with different product/behavioral strategies that they use to satisfy their deconsumptive needs.

We start with a review of relevant research that investigates consumers' interests in reducing consumption.

Deconsumers: Attitudes, Behaviors, and Segment Descriptions

Traditionally, consumption offers a means to express individual identities, values, and beliefs (Grinstein & Nisan, 2009). Simplistic consumption is not just a coping behavior but has become a preference for many consumers; even affluent consumers note their dissatisfaction with excessive consumption and seek to lead a less wasteful life (Flatters & Willmott, 2009). Despite this notable appeal of deconsumption for consumers, the perceived costs and lack of immediate evidence of environmental benefits make it difficult for consumers to change their behaviors completely, especially if the changes go beyond using green products or avoiding some products altogether. Therefore, we seek to explore the various motivations that lead consumers to deconsume.

Sustainable consumption research often attempts to explain people's attitudes or behaviors with a variety of terms; a common description referred to voluntary simplifiers (VS). For example, Iwata's (1997) VS scale suggests that these consumers only purchase necessary items, want to simplify their lives, focus on personal fulfillment rather than material purchases, and are environmentally concerned. As noted previously, other terms also have been used to describe deconsumers, such as socially responsible, ethical, or green, and some behaviors displayed by these groups are deconsumptive. However, they also might simply redirect their consumption from one product to another (e.g., electric car as an alternative to an internal combustion engine car; Sheth et al., 2011). In this sense, anti-consumption investigations may be more relevant for our study, because they pertain to people who fight against consumption (Lee et al., 2009). Iyer and Muncy (2009)

classify four anticonsumer groups according to whether they avoid all types of products or only selected ones and whether they avoid consumption for personal or societal reasons. Their brief, eight-item survey offers some initial confirmation that anti-consumptive groups vary by their reasons for anti-consuming.

Friends, family, and other external group associations also can influence individual deconsumptive motivations and behaviors. Social identity, which traditionally stems from intergroup relations, has a tremendous influence on attitudes and subsequent behaviors related to climate change and the environment. When people seek a particular social identity associated with a group whose norms are environmentally responsible, they are more likely to engage in pro-environmental decisions and behaviors too (Fieldling & Hornsey, 2016). Similarly, collective efficacy manipulations increase proenvironmental intentions at collective and individual levels, such that a greater sense of efficacy grants people more motivation to join in collective pro-environmental behaviors and display similar individuallevel behaviors (Jugert et al., 2016).

Reflecting our understanding of extant research related to consumer interests in reducing consumption, we first conceptualize deconsumption, then present the methodology we used to extract the factor structure for deconsumption motives and strategies. The next section contains an analysis of the relationships of deconsumption motivations with strategies. Finally, we offer practical insights and conclude with a discussion of future research directions.

Methods

Conceptualizing Deconsumption

As discussed, the variety of terminologies used to investigate different aspects of deconsumption implies that extant research has not reached a consensus regarding the meaning of deconsumption. Therefore, developing a deeper understanding of this term is an important contribution of the current study. With a national, web-based survey, we asked 90 respondents to define deconsumption and provide examples of deconsumptive behavior. An analysis of these data suggests that people believe that deconsumption stems from many different motives, such as simple living, money management, environmental concerns, or health concerns. Table 2 includes some example excerpts from these respondents. Accordingly, we define a deconsumer as follows: "Consuming products or services uses energy, food, or materials; a deconsumer is a person who modifies his or her consumption to use less energy, food, or materials over time."

Developing the Measurement Instrument

Using the qualitative comments and existing research, we developed an item pool to investigate consumers' motivations for deconsumption. Reflecting a combination of insights from the comments and existing scales (e.g., Iwata, 1997, 1999), such as, the Green Consumer Values (Haws et al., 2013), Socially Responsible Consumption Behavior (Antil, 1984), Voluntary Simplicity (Cowles & Crosby, 1986), and Simplifiers and Global Impact Consumers (Iyer & Muncy, 2008), the item pool explores consumers' various motivations for deconsumption.

Again, turning to extant literature, survey comments, as well as feedback from academicians, we developed measures for potential product/behavioral deconsumption strategies. Some product options reflect functional aspects (Craig-Lees & Hill, 2002), whereas others refer to more emotional meanings or peer-to-peer connections that might be achieved from consuming a product (Black & Cherrier, 2010).

Furthermore, some describe a green feature as inherent to the product (Lee et al., 2009).

The survey included 50 items, on a five-point agreement scale, to measure motives for deconsumption. To measure

product/behavioral deconsumption strategies, we asked respondents about the frequency with which they deconsumed, by using various products or behaviors. These 22 items were also measured on a five-point scale (1 = "never"; 5 = "always"). Finally, demographic variables, such as gender, age, income, ethnicity, and education, served as controls.

Procedure and Participants

We used a web survey among Amazon Mechanical Turk (MTurk) participants who were United States residents and 18 years or older. Of the total 622 responses, we deleted 122, due to excessive case-level missing data (>50%), straight-lining responses (e.g., 1 or 5 responses for the entire survey), or respondents who exited the survey after the introduction screen. The total useable sample size is 500.

In the sample collected, gender was almost equally represented (49% women). Nineteen percent of the sample was between 18 and 34 years of age, 20% were 25–34 years, 26% were 35–44 years, and 35% were 45–65 years or older. Approximately 25% of the respondents had annual household incomes above \$70,000, and the sample was predominantly

Table 2
Meaning of Deconsumption

What Does Deconsumption Mean to You?	Quotes From Respondents
Simple living	Living modestly. Not buying things I don't need. Less cluttered home which leads to a sense of freedom. Reducing the amount of unnecessary things or activities you have in your life. In a way, it is simplifying your life of all extraneous things and activities that do not enhance your life at all.
Environmental concern	An individual that works toward shrinking his or her carbon footprint. Buying food that is environmentally friendly.
Monetary concern	Lowered their spending and consumption to save money and generate less waste.
Health concern	Not using/purchasing items that could be harmful to yourself or other people. Using organic products to have healthier children.
Community buying	Pooling resources and buying something as a small group, and sharing use of that something. Example: resident-owned housing cooperative. Another example: three or four neighbors with tiny, tiny lawns share a lawn mower.
Philosophical	Using only what you NEED and not all you want. Positive influence on the people around you by increasing the positive impacts of consuming.
Other	Buying used products, selling items used instead of throwing them away, closely watchin resource use and thinking of ways to reduce it.

Caucasian (77%). Finally, 99% of the sample had at least completed high school, 46% were college graduates, and 15% had received a graduate degree.

Statistical Analyses

Before testing the relationship between consumers' motivations and strategies for deconsumption, we conducted an exploratory factor analysis (EFA) to identify the latent constructs underlying the measured variables followed by a confirmatory factor analyses (CFA). The following discussion details the procedure applied to assess motivations for deconsumption; we used a similar procedure to analyze deconsumption strategies.

With SPSS, we subjected the motivation scale of deconsumption to an EFA with principal component extraction and Varimax rotation. Factors with eigenvalues greater than 1 were retained. Indicators with factor loadings larger than .5 or cross-loadings of .3 or less remained in the further analysis (Costello & Osborne, 2005). Through this process, we dropped 18 items.

Next, we ran a CFA to analyze the final set of items corresponding to each factor in the measurement model. For the most part, the CFA results in table 3 support the factor structure identified by the EFA. For the measurement model, the key statistics $\chi^2 = 546.21$ ($df = 389$; $p \leq .00$), confirmatory fit index (CFI) = .97, incremental fit index (IFI) = .97, and root mean square error of approximation (RMSEA) = .039, indicate good model fit and unidimensionality (Anderson & Gerbing, 1988).

We tested for convergent and discriminant validity, according to the average variance extracted (AVE) and composite reliability. The reliabilities range from .64 to .91 (Fornell & Larcker, 1981), and the AVE for each construct is greater than 40%. Given the exploratory nature of this research, we considered the major factors according to the need for plausibility to identify sufficient common factors (Fabrigar et al. 1999; Fava & Velicer, 1992), thereby retaining factors with AVE of 40% and above. When we analyze deconsumption strategies, the items produce three factors. The CFA results for overall model fit are as follows: $\chi^2 = 1191.29$ ($df = 91$; $p \leq .00$), CFI = .95, IFI = .94, and RMSEA = .054. Tables 3 and 4 show the item loadings and CFA statistics for motivations and strategies, respectively.

Results

Deconsumption Motivations

The analysis reveals ten distinct deconsumption motives. The first factor describes saving resources and disliking waste.

Consumers motivated by this factor are worried about others as much as themselves, similar to Iyer and Muncy's (2009) global impact consumers, rather than simplifiers (who tend to be more internally focused). This deconsumption motivation factor is most strongly aligned with the characteristics of segments described in previous research, such as true-blue greens or greenback greens (Roper, 2002) or the lohas or resource conservers (Ottman, 2017). We refer to this factor as *resource concerns*. Another factor signals motivations that closely match general descriptors of VS in prior literature, so we name it *simplifying*. Simplifying-based reasons for deconsuming are more internal and focused on downscaling, reducing clutter, or not being materialistic. These consumers tend to both buy and spend less.

Two other factors pertain to motivations related to a company's activities or personal health. The motivations for the factor we call *corporate objections* are similar to those assigned to Iyer and Muncy's (2009) market activists, including disapproval of products from companies that pollute or whose behaviors fail to align with the individual consumer's interest in consuming less. Similarly, a set of health-related motivations for deconsumers, termed *health concerns*, appears both internally and externally focused, derived largely from a desire for clean living and avoiding harmful products. Relative to extant research, these motivations probably match most closely with classic strong environmentalists, such as true-blue greens (Roper, 2002).

Three other factors entail bonding with the community, sharing resources, or monetary constraints. First, items measuring a strong sense of community and desire to associate with like-minded others load on a single factor, which we term *community bonding*. This interesting factor refers to deconsumption behavior, as influenced by other deconsumers. We thus infer that such motives are social in nature (i.e., consume products to achieve a sense of belonging). Second, the *sharing* factor comprises items that measure the motivation to share products and beliefs in the benefits of deconsumption by buying less. Third, *monetary constraints* indicate affordability as the main reason to deconsume. We believe it is important to include this factor in our analysis, to test the general perception that some people choose to reduce their consumption for financial reasons, rather than environmental concerns or other deconsumptive motivations.

Finally, in contrast with simplifying, frugality motives reflect desires to reduce the stress associated with spending too much. Two other factors, religious concerns and political concerns, indicate the influence of people's beliefs on their deconsumption behavior. Both of these factors comprise

Table 3
Confirmatory Factor Analysis of Deconsumption Motivation

I deconsume because I believe...	FL	AVE	CR
Resource Concerns		50.44%	.86
if we could use a little less there would be more left for future generations.	.79		
we should limit our use of products made from scarce sources.	.64		
every person should reduce their buying of products so sources can last longer.	.71		
natural resources must be preserved even if we must do without some products.	.65		
we must all do our part to consume less.	.74		
if we all consume less, the world would be a better place.	.72		
Simplifying		45.13%	.71
in living a simple life by not buying articles which are not necessary.	.67		
I put less emphasis on material things than most people know.	.73		
not buying a lot of things helps me declutter my life.	.61		
Corportate Objections		64.91%	.88
in not buying products from companies that engage in activities that I do not agree with.	.79		
in avoiding products that come from companies whose products do not stand for something I believe in.	.76		
in not buying products from companies guilty of polluting the environment even though it might be inconvenient.	.84		
in avoiding products from a company that I know may be harming the environment.	.83		
Health Concerns		45.34%	.71
in avoiding household chemicals that are not environmentally friendly.	.74		
in avoiding fruits and vegetables grown with pesticides or chemicals.	.58		
in not buying products that are harmful to those around me.	.69		
Community Bonding			
in purchasing items that I think other deconsumers will approve of.	.79		
I achieve a sense of belonging by consuming like other deconsumers do.	.83		
my consumption behavior is guided by my desire to associate with deconsumers.	.79		
Sharing		60.85%	.76
in sharing items, such as bikes, cars, hedgers with others.	.79		
it makes sense for multiple people to share the benefit of an item without everyone buying one.	.77		
Monetary Constraints		46.93%	.64
I can't afford to buy lots of things.	.69		
my financial constrains reduce my ability to buy the things I want.	.68		
Religious Concerns		76.88%	.91
my religious beliefs are what lies behind my approach to deconsumption behavior.	.90		
that excessive buying is against my religious beliefs.	.87		
I try hard to carry my religion over into all other dealings in life such as deconsumption behavior.	.86		
Frugality		77.93%	.88
it reduces my financial stress.	.81		
it saves me money.	.95		

I deconsume because I believe...	FL	AVE	CR
Political Concerns		64.26%	.83
my political beliefs are what lies behind my approach to deconsumption behavior.	.82		
that excessive buying is against my political beliefs	.77		
I try hard to carry my political beliefs over into all other dealings in life such as deconsumption behavior.	.78		

FL = factory loading; AVE = average variance extracted; CR = compose reliability.

Table 4
Confirmatory Factor Analysis of Deconsumption Strategies

How often do you deconsume by...	FL	AVE	CR
Green Product Search		47.71%	.88
switching to products that-			
produce less carbon footprint	.80		
create less waste	.77		
are less harmful to the environment even if that means buying the same number of products	.74		
use less material	.72		
use less water	.67		
use less energy	.61		
buying a product that-			
has been significantly recycled from other products	.65		
can be recycled into something else (e.g., glass, paper, or some types of plastics can be made into other products)	.51		
Temporal Product Search		42.81%	.69
reusing discarded products of others (e.g., garage sale, Goodwill)	.71		
sharing or renting out something you own (e.g., Airbnb; sharing tools with others)	.63		
making my own products	.62		
Reducing Overall Consumption		44.35%	.70
spending less money on buying things	.76		
holding onto products longer (e.g., waiting longer to replace TV, phone, or cars)	.65		
buying less quantity of products	.57		

FL = factory loading; AVE = average variance extracted; CR = compose reliability.

variables that imply a more holistic view of deconsumption (e.g., “Excessive buying is against my religious or political beliefs” or “My religious or political beliefs drive my deconsumption behavior”), instead of specific product choices.

Deconsumption Strategies

The deconsumption strategies load on three main factors. We term the first factor green product search, and the deconsumption strategies contained within it are those

that most people likely think of when they consider green products. The second factor, temporal product search, comprises of items that measure people’s uses of discarded products, sharing or renting items, and making their own products. Such products generally are not owned or purchased by consumers, as is common in the new sharing economy. Finally, some product strategies focus on spending less money, buying less, and holding on to products longer, that is, reducing overall consumption.

Table 5
Means, Standard Deviations, and Correlations

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Gender	n.a.	n.a.	---														
2. Age	3.15	1.43	.17**	---													
3. Income	3.27	1.55	.03	.02	---												
4. Ethnicity	n.a.	n.a.	-.06	-.03	.11	---											
5. Education	n.a.	n.a.	.05	.24**	.36**	.01	---										
6. Frugality	3.89	1.02	-.08	-.19**	-.33**	-.01	-.16*	---									
7. Monetary concerns	4.31	.62	-.01	-.18**	-.01	.02	.03	.28**	---								
8. Corporate objections	3.74	.81	.01	-.04	.03	-.10	-.06	.04	-.03	---							
9. Resource concerns	4.08	.62	.15*	-.02	-.06	-.10	-.04	.06	.13*	.54**	---						
10. Simplifying	4.02	.72	.11	.20**	-.05	-.10	-.01	-.02	.27**	.13*	.32**	---					
11. Healthy concerns	3.75	.79	.24**	.10	.05	-.05	-.05	-.12*	.05	.52**	.50**	.30**	---				
12. Community bonding	2.38	.96	-.10	.04	-.02	.03	-.07	.05	-.04	.20**	.12*	.04	.12*	---			
13. Sharing	3.49	.97	-.14*	-.22**	-.15*	-.06	-.12	.07	.09	.26**	.41**	.20**	.23**	.24**	---		
14. Green product	3.69	.65	.02	-.04	-.02	-.07	-.08	-.03	.04	.49**	.49**	.22**	.49**	.23**	.36**	---	
15. Temporal product	3.03	.90	-.01	-.09	-.18**	.01	-.12	.10	.07	.19**	.22**	.22**	.24**	.23**	.53**	.46**	---
16. Reduce overall consumption	4.19	.54	.01	.00	-.12	.05	-.01	.18**	.35**	-.01	.23**	.33**	.16**	-.04	.14*	.29**	.22**

** $p < 0.01$, * $p < 0.05$ (two-tailed); n.a. = not applicable.

Table 5 lists the means, standard deviations, and correlations among all identified latent constructs for deconsumption motivations and strategies.

Links between Deconsumption Motives and Strategies

In this section, we seek to connect the reasons people deconsume with the different product/behavioral strategies they use. Factor items in tables 3 and 4, as well as literature will be used to support the hypothesis. Notably, though we identify religious and political concerns as motives to deconsume, a longitudinal study analyzing nationally representative polls from 1990, 1991, 1999, and 2005 – 2015 suggests that environmental concerns among U.S. Christians have been static or declining, irrespective of their level of religiosity and even after controlling for political orientation (Konisky, 2018). Thus product/behavioral choices based on religion or politics might not be identified by consumers as ways to fulfill their deconsumption motivation. Therefore, we do not believe that individuals driven by these motivations will significantly predict the strategies identified in our study and they will

not be part of the remaining discussion. We now propose hypotheses for testing which deconsumption motivations best predict the types of strategies that consumers use.

Consumers labeled green (Jansson et al., 2010) and those interested in healthy items (Prasad et al., 2008) tend to seek products as suggested by the green product search strategy factor (Borin et al., 2013). Their motivations reflect resource concerns and health concerns, as defined previously. In addition, consumers may avoid harmful or non-sustainable products, whether due to their ideological ire against a company or their shared views (Iyer & Muncy, 2009). Some of the green product strategies, such as creating less waste and producing smaller carbon footprints, might be achieved by sharing products with others or not purchasing products from companies not known for responsible activities. We anticipate that the corporate objections, sharing, and community bonding motives reflect this drive. Deconsumption motivations associated with simplifying, frugality, or monetary constraints are unlikely to match a green product strategy though, because greener products are not always cheaper, nor are they generally positioned as a means to declutter or simplify people's lives (Iwata, 1997).

Table 6
Regression Analysis of Deconsumption Strategies

	Green Product Search Model 1	Green Product Search Model 2	Temporal Product Search Model 3	Temporal Product Search Model 4	Reduce Overall Consumption Model 5	Reduce Overall Consumption Model 6
Gender	.03	-.06	.03	.15	.02	-.03
Age	-.02	-.02	-.05	.01	-.00	.00
Income	.01	-.00	-.09*	-.06	-.05	-.04
Ethnicity	0.04	-.01	.01	.03	.03	.04
Education	-.03	-.00	-.02	-.01	.01	.01
Hypothesis 1						
Corporate Objection		.16*				
Resource Concerns		.24**				
Health Concerns		.21**				
Community Bonding		.08*				
Sharing		.08*				
Hypothesis 2						
Simplifying				NS		
Resource Concerns				NS		
Frugality				NS		
Community Bonding				.11*		
Sharing				.48*		
Hypothesis 3						
Monetary Concerns						.23**
Sharing						NS
Resource Concerns						.18**
Simplifying						.16**
Frugality						NS
R ²	.01	.41	.04	.32	.02	.22
Adjusted R ²	-.01	.38	.02	.30	-.00	.20
Change in R ²	.01	.39	.04	.28	.02	.21
F (change)	.73	32.47**	2.15	25.69**	.97	16.41**

** p < 0.01, *p < 0.05 (two-tailed); NS = non-significant.

H1: The deconsumption motives - resource concerns, health concerns, corporate objections, community bonding, and sharing positively influence a green product search strategy.

In addition, temporal product search strategies should satisfy community bonding and sharing motivations well. People interested in reducing their resource utilization (resource concerns), saving money (frugality), or owning fewer things (simplifying) might use this strategy to deconsume, too (Etzioni, 1998). However, because corporate objections and health concerns reflect motives to deconsume by not buying products made by companies that harm the environment or health, these factors likely do not encourage temporal product search. Furthermore, consumers with monetary constraints might not be able to afford to make their own products or rent other products. Therefore, H2: The deconsumption motives - community bonding, sharing, simplifying, frugality, and resource concerns positively influence the temporal product search strategy.

Reducing overall consumption aligns well with motivations to deconsume due to resource concerns, frugality, monetary concerns, and simplifying (Craig-Lees & Hill, 2002; Etzioni, 1998; Iwata, 1997, 1999). Sharing is another way to reduce consumption by spending less money or buying smaller quantities. Health concerns, corporate objections, and community bonding often lead to purchases to achieve specific deconsumptive outcomes though, so they are unlikely to reduce consumption. We propose:

H3: The deconsumption motivations of sharing, simplifying, frugality, monetary concerns, and resource concerns positively influence the reducing overall consumption strategy.

As mentioned, we used sequential regressions to test these proposed hypotheses.

Regression and Results

With sequential regressions, we then test the relationship among deconsumption motivations and strategies. By calculating the mean of all items comprising each of these factors, we created motivations and strategies variables. Using the method suggested by Cohen et al. (2003), we entered the demographic variables first as control variables (Models 1, 3, and 5), followed by the deconsumption motivations for each strategy (Models 2, 4, and 6). The results are in Table 5. The R-square statistics suggest that the models with deconsumption motivations are significantly better than the demographic models. For each regression equation, the tolerance is greater

than .1 suggesting multicollinearity is not a major concern (Bowerman & O'Connell, 1990). See table 6 for details.

Green product strategies.

The overall model for green product search is statistically significant ($F(14,494) = 32.47, p < .001$) and offers good predictive power ($R^2 = .41$), in general support of H1. All five hypothesized motivations - resource concerns ($\beta = .24, p < .001$), health concerns ($\beta = .21, p < .001$), corporate objections ($\beta = .16, p < .05$), sharing ($\beta = .08, p < .05$) and community bonding ($\beta = .08, p < .05$) significantly predict green product search. The resource concerns motivation implies that consumers use green products and exhibit their concern for future generations by preserving scarce resources and consuming less. Therefore, it makes sense that this motivation predicts strategies that involve switching to products that use cleaner resources and reduce overall consumption. Health concerns also are significantly predictive of buying green products, which promise less toxic ingredients. People motivated by corporate objections purchase green products, reflecting their desire to support companies that align with their deconsumption values. The significant results for corporate objections also align with prior research that suggests social motives are significant indicators of green product consumption, such as when consumers engage in conspicuous consumption to establish their social identity (Griskevicius et al., 2010). Similar reasoning can explain the significant influence of community bonding for predicting green product strategies.

Temporal product search.

The overall model to test H2 is significant ($F(14,494) = 25.69, p < .001$), with good predictive power ($R^2 = .32$). Both sharing ($\beta = .48, p < .05$) and community bonding ($\beta = .11, p < .05$) motivations positively predict temporal product search. Surprisingly however, resource concerns, simplifying, and frugality do not appear to influence consumers' choice of temporal product searches.

The finding that sharing and community bonding motivations predict the use of temporal product search strategies is notable for practice. Between 2010 and 2013, startups focusing on connecting consumers or businesses to products and services that would otherwise go unused increased by 4% (Needleman & Loten, 2014). Consumers guided by these motivations are not deterred by the additional time required to rent or make their own products. This result also resonates with social identity theory, in that social identification leads people to engage in activities that are

congruent and supportive of the institution that it embodies (Ashforth & Mael, 1989). These consumers like recycled and discarded products that can be reused; they are interested in engaging with others in less traditional ways (Griskevicius et al., 2010).

Neither frugality nor resource concerns is significant though, contrary to our expectation. Perhaps renting or making one's own (temporal) products require more costly resources (time, money) in the long term, reducing their attraction for consumers motivated by saving money, as well as for those who seek "safer" versions of a product. The simplifying motivation also does not significantly influence temporal product searches. It appears that the simplifying motivation is truly a motivation to lead a simple life, which people achieve by spending and buying less. The motivation to live simply does not significantly predict temporal search strategies such as renting versus buying, making products, or choosing greener versions of products, which could be perceived as additional complications rather than means of simplifying.

Reducing overall consumption.

We find some support for H3 ($F(14,494) = 16.41, p < .001, R^2 = .22$). As hypothesized, this overall consumption reduction strategy is significantly driven by monetary concerns ($\beta = .23, p < .001$), simplifying ($\beta = .16, p < .001$), and resource concerns ($\beta = .18, p < .001$). However, sharing and frugality do not significantly predict a strategy of reducing overall consumption.

People who are motivated to deconsume due to monetary concerns want to spend less money and buy fewer products. Resource concerns also center on caring for future generations by preserving scarce resources and consuming less. Therefore, it makes sense that these motives predict strategies that reduce overall consumption. Not buying items, decluttering one's life, and avoiding materialism stem from simplifying, so this factor also is significant. However, sharing often requires some initial purchase, which may explain why this motivation was not significant. Interestingly, frugality did not significantly predict overall reduction in consumption, a finding that we return to in future research.

Discussion

In a review of two decades (2000 – 2020) of research conducted on sustainable consumption, Quoquab and Mohammad (2020) identify several gaps in the literature pertaining to the lack of definition, dimensions, measures,

and practice and policy implications related to the concept. Our study addresses several of these knowledge gaps. For example, the study derives a theoretically grounded and methodologically sound definition of deconsumption, "Consuming products or services uses energy, food, or materials; a deconsumer is a person who has modified his or her consumption to use less energy, food, or materials over time." Further, the study results establish two important findings for the growing field of deconsumption research. First, motivation factors indicate a vast variety of reasons people deconsume, and various stakeholders such as public policy makers, nonprofit organizations, and marketing departments can use these motivations to target their messages effectively. Second, deconsumptive motivations create new opportunities for companies to sell their products, by leveraging their ability to meet some deconsumptive motivational need. Extant research has established that individual consumption significantly impacts overall environmental issues. We believe that the empirical findings of our research give us grounds to propose strategic implications to several stakeholders to reduce their adverse effects on the environment. Although exploratory in nature, we discuss some of these possibilities for stakeholders.

Public policy makers should address the widely acknowledged gap between consumers' positive attitudes toward sustainability and their actual behavior. Forty percent of consumers say they are willing to buy "green" products; only 4% actually do (United Nations Environment Programme, 2005). This gap frustrates producers of sustainable products that rely on the positive predictions and then confront low actual demand (Prothero et al., 2011). Understanding the segments and different motives of various deconsumers can help guide policy that facilitates the success of producers of sustainable products, as well as encourage increased uses of sustainable products. Macro-institutional approaches (public policy, education, and government) to deconsumption should appear in both policy and research. Relying solely on consumers to deconsume by their own choice is not a reasonable expectation (Prothero et al., 2011).

Notably, "Sustainable Consumption and Production Plans" is one of the United Nation's 17 Sustainable Development Goals (<https://sustainabledevelopment.un.org/?menu=1300>). The overall goal is to focus businesses and consumers on the impact their consumption makes on planetary resources. Governments and policy makers can examine the motivational reasons to consume that we identify herein, then target both products and messages to the public in ways that are likely to lower their consumption. Regulatory decisions related to the new sharing economy could help

encourage consumers motivated to deconsume. Publications such as the green guide (goodguide.com) might highlight companies whose products can help consumers deconsume. Groups such as the Sierra Club or other environmental organizations can use their collective efficacy to address deconsumers motivated by community bonding interests.

Many of the products that informed our three deconsumptive product options historically have focused on green features (reducing waste, recycling, using more environmentally safe ingredients) or saving money (holding on to products longer). The results of this study reveal that many companies could benefit by adding messages that appeal to deconsumptive attitudes. As proposed by Ewing, Allen, and Ewing (2012), marketers should create visual and verbal cues to enhance the congruence between consumers' expectations and product features. They suggest cues that emphasize specific product attributes consistent with a consumer's perception of "green" can yield more favorable attitudes toward that product. According to our findings, businesses and nonprofits also could use deconsumptive cues to communicate. For example, a smaller bed may save money; due to its smaller footprint, it also supports smaller houses, which reduce energy demands. Home appliance manufacturers could appeal to a sharing motivation by communicating that the shared aspect of group at-home cooking decreases food consumption overall.

Noting the concept of "green marketing myopia" (Ottman et al., 2006), product managers should investigate product positioning that highlights not just environmental but also other, non-green benefits, such as community bonding, sharing, or corporate alignment. For example, marketers of green and recycled products could use slogans like, "Recycled products strengthen my sense of community," to appeal to the deconsumption motive of community bonding. Heirloom products such as Le Creuset pots or Vespas (handed down from one generation to another) could appeal to frugality (spending less money over time for durable products), community bonding, or health (e.g., making one's own food) motives, so an appeal to deconsume could focus on the longevity and beauty of the products.

Limitations and Further Research

We restricted the sample to a U.S. population. Additional research might investigate cultural differences in deconsumption motivations and identify any variance in these motives, as well as in the product choices and strategies that users adopt to enable themselves to deconsume. Replication of the study in different contexts can also refine the measurement items used for this study.

To move beyond the goals of the current project, further research might conduct segmentation analyses according to deconsumption motives, to determine whether the motivations are mutually exclusive and allow businesses to target specific customer groups. It also would be interesting to investigate what role collective efficacy plays among consumers motivated by sharing or bonding and whether their perceptions of collective efficacy drive specific product choices or strategies (Jugert et al., 2016). We also find it interesting that people motivated to consume for religious or political reasons do not think any of the product strategy options would help them deconsume. Perhaps, similar to community bonding, they are more external motivations. Continued work might explicitly investigate the differences between extrinsic and intrinsic motivations. Finally, the non-significant impact of frugality on overall consumption reduction is also warranted. Understanding the difference between frugality and monetary constraint can help bring in the personality aspect to this line of research.

Conclusion

The lifecycle analysis of a product evaluates the environmental impact from materials extraction, manufacturing, packaging, distribution, consumption, and disposal. These activities require resources (e.g., trees for wood) and emit carbon into the atmosphere, which has been linked to climate change. The recent report from the IPCC demonstrates that greenhouse gas emissions continue to rise and that current plans to limit temperatures to 1.5 Celsius above pre-industrial levels may not be enough.

If there is good news, it seems that multiple stakeholders are beginning to understand the seriousness of the issue. Governments are enacting legislature that increases renewable energy and holding companies responsible for gas emissions. Companies are reducing packaging while introducing less environmentally destructive products. A recent study (MasterCard Newsroom, 2021) demonstrates that "58% of adults are more mindful of their impact on the environment, and 85% said they're willing to take personal action to combat environmental and sustainability challenges in 2021", while over half said they believe they must personally reduce their carbon footprint.

As lifecycle analysis shows, consumer product consumption can dramatically impact the energy and other resources used and outputs emitted. The consumer study above also shows that consumers realize this, and many are altering their behaviors. Many studies have examined consumers who are looking into reducing their consumption. Our study

demonstrated that there is a multitude of motivations for consumer deconsumption and encouragingly that consumers believe there are many products that can help them achieve this goal. These product strategies will differentially appeal to consumers based on their deconsumption motivations.

Consumers will always buy products, but if companies continue to manufacture or sell less environmentally harmful products (e.g., green products, shared products, reused products), it would be advantageous for both them and the planet to sell their products vis-à-vis harmful products. The deconsumption motivations uncovered in this project can be a new way to do this.

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